5 Is the God Hypothesis improbable?

A response to Dawkins

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> Nothing is more simple than greatness;
> indeed, to be simple is to be great.
>
> —Ralph Waldo Emerson[1]

1. Introduction

Despite the commercial popularity of the New Atheists, professional philosophers of religion have generally declined to interact seriously with their arguments.[2] In truth, there is an astounding dearth of direct argumentation against God's existence in the New Atheists' key works. A notable exception to this trend, however, comes in Dawkins's book *The God Delusion*. Because silence is sometimes worse than criticism, in this chapter I aim to rectify the current situation. The New Atheists are a culturally significant force, and philosophers' lack of engagement has come at the cost of cultural irrelevance. So despite the misgivings of the philosophical community, I propose to analyze and critique Richard Dawkins's "Ultimate 747 Gambit," which he calls "the central argument of my book."[3]

2. Dawkins's Ultimate 747 Gambit

I focus on Dawkins's key argument—what he dubs "the Ultimate 747 Gambit."[4] This argument is not only the most important argument of the most prominent New Atheist, it has also been supported by the other New Atheists and has thus attained something of a canonical status. Dawkins is not shy about placing great confidence in this argument, claiming that it "demonstrates that God, though not technically disprovable, is very improbable"—a "very serious argument against the existence of God," which renders "the God Hypothesis . . . untenable."[5] Harris champions Dawkins's argument by name, and one finds a similar line of argument in Hitchens.[6] Dennett concurs and even describes the argument as "an unrebuttable refutation, as devastating today as when Philo used it to trounce Cleanthes in Hume's Dialogues two centuries earlier."[7]

Dawkins's confidence notwithstanding, it is common for an argument's weaknesses to remain hidden until it is laid out in explicit steps. As philosophers are wont to do, I will lay out Dawkins's argument as clearly as I can before attempting to critique it. I ask readers of all persuasions to come and reason with me. Let us see if Dawkins's chief argument against God's existence is as strong as he and the other New Atheists claim.

What follows is my best reconstruction of Dawkins's basic argument:

(1) If the following three conditions hold:

  (i) there are possible naturalistic explanations of the apparently designed features of our world,
  (ii) there are no plausible arguments for God's existence except the argument from organized complexity (i.e., the argument from design), and
  (iii) God is not a good explanation of the world's organized complexity,

  then God almost certainly does not exist.

(2) There are possible naturalistic explanations of the apparently designed features of our world.
(3) There are no plausible arguments for God's existence except the argument from organized complexity.
(4) God is not a good explanation of the world's organized complexity.
(5) Therefore, God almost certainly does not exist.

The idea is that if (i), (ii), and (iii) are all true, then the conclusion (i.e., God almost certainly does not exist) must also be true. The argument is valid, which means it has a correct structure so as to lead to its conclusion: the truth of the premises would yield the truth of the conclusion. My job, then, is to examine the key premises, for a conclusion is only as strong as the premises on which it rests.

2.1. Examining premise (1)

Regarding the first premise, I only wish to note how Dawkins understands the word "God." Philosophers and the leading monotheistic traditions have conceived of God as the *greatest possible being* (i.e., perfect in power, knowledge, and goodness). Dawkins, however, works with a different concept. He defines the "God Hypothesis" as the hypothesis that "there exists a super-human, supernatural intelligence who deliberately designed and created the universe and everything in it, including us."[8] Dawkins is even quite explicit that "[g]oodness is no part of the *definition* of the God Hypothesis, merely a desirable add-on."[9] To the philosopher of religion, this definition is quite strange.[10] It also opens Dawkins up to the otherwise petty charge that he might have shown a *particular* divine being to be improbable but not the

one in which sophisticated theists actually believe. I will set this charge aside in what follows.

2.2. Examining premise (2)

Look carefully now at premise (2): there are possible naturalistic explanations of the apparently designed features of our world. It is important to see how little of a burden Dawkins thinks atheism actually bears. Atheists need not even have very plausible or detailed stories about the naturalistic evolutionary pathways followed by many of the complex things in the biological domain; nor need it really have an explanation for the origin of the first life, the universe, consciousness, objective morality, or the fine-tuning of the laws of physics. Dawkins is quite frank that such naturalistic explanations are mostly unavailable. But if, as the other premises of the argument assert, God is not a good explanation for life or other apparently designed features of the universe, any *possible* naturalistic story will suffice to show that God is very unlikely to exist.

Dawkins is not concerned, then, that atheists don't really have very good naturalistic explanations for the fine-tuning of the laws of physics and much else. Darwinian evolution is such a powerful naturalistic theory that we should allow it to raise our consciousness;[11] if there is a theory this powerful in biology to explain away the appearance of design, then we must believe that there will be one (in the future) to explain away the appearance of design in the laws of physics. Thus, he writes:

> We don't yet have an equivalent [theory] for physics. Some kind of multiverse theory could in principle do for physics the same explanatory work as Darwinism does for biology. . . . We should not give up hope of a better [theory] arising in physics, something as powerful as Darwinism is for biology. But even in the absence of a strongly satisfying [theory] to match the biological one, the relatively weak [theories] we have at present are . . . self-evidently better than the self-defeating . . . hypothesis of an intelligent designer.[12]

The point is that if one can truly show that there are no good arguments for God's existence, including arguments from design, then atheism has the edge by default. Having argued that theistic arguments are unsuccessful, Dawkins thinks atheists can sit back, issue some promissory notes about how future science will have thoroughly detailed naturalistic explanations for everything, and call it a day. This amounts to a shifting of the burden of proof: theism can't provide a good explanation for what really needs explaining in our world, and so naturalistic explanations must be better.

Dawkins's thinking here may be bolstered by the thought that since science has a track record of success, it is most wise and reasonable to think

that science will eventually fill all gaps in a complete naturalistic story of the universe. While I understand this underlying conviction, it would be a mistake to infer that the success of science has thereby confirmed atheism or even the possibility of a full naturalistic story. Sure, science has increased our understanding of the natural world, but in doing so, it has also brought to light more puzzles for the naturalistic story. Whereas only a short time ago even great scientists like Darwin thought that the cell was basically a blob of Jell-O, we now understand it to contain a miniature world of incredible sophistication, replete with nano-technology and a digital code. Likewise, thanks to the advance of science, we now better understand the laws of physics. Yet we *now* want to know why these laws are all so finely tuned for complex life.[13] Similarly, in the twentieth century the predictive success of Big Bang cosmology won out against rival theories and increased our understanding of the beginning of our universe. But it would be absurd to suggest that Big Bang cosmology marks a win for atheism. If anything, it put twentieth-century atheists on the defensive. The renowned agnostic NASA physicist and astronomer Robert Jastrow captured the disconcerting nature of the situation at the end of the twentieth century when he wrote:

> Now we see how the astronomical evidence leads to a biblical view of the origin of the world. All the details differ, but the essential element in the astronomical and biblical accounts of Genesis is the same; the chain of events leading to man commenced suddenly and sharply, at a definite moment in time, in a flash of light and energy.[14]

In a famous passage, he continues:

> Now we would like to pursue that inquiry farther back in time, but the barrier to further progress seems insurmountable. It is not a matter of another year, another decade of work, another measurement, or another theory; at this moment it seems as though science will never be able to raise the curtain on the mystery of creation. For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountain of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries.[15]

Stephen Hawking and others have tried to reassure naturalists that they still have cards left to play.[16] But that only goes to show that the last century of cosmology has not offered anything near unequivocal support for atheism.

In *Unweaving the Rainbow* Dawkins acknowledges that scientific explanations, although advancing our understanding, often lead to even deeper mysteries. The discovery of the light spectrum, for instance, might have solved the puzzle of the rainbow. But as it led to the mind-boggling discoveries of Maxwell, Einstein, and others, it seems to have uncovered more

mysteries than it resolved. "Mysteries do not lose their poetry when solved. Quite the contrary; the solution often turns out more beautiful than the puzzle and, in any case, when you have solved one mystery you uncover others, perhaps to inspire greater poetry."[17] So although Dawkins's admiration for science and its successes is understandable, it would be overreaching to assume that the scientific advances of the future will unequivocally support atheism. If anything, physical reality is more mysterious *on naturalism* than ever—not because of our ignorance but because of our increased understanding. At the very least, it has not been established that we have, or will have, genuinely possible naturalistic explanations of all the apparently designed features of our world, including the apparent "fine-tuning for life" of the natural world itself.

2.3. Examining premise (3)

However, for the sake of charity, let us put aside these concerns with the preceding premises and turn now to a far bolder premise in Dawkins's Ultimate 747 Gambit: that there are no plausible arguments for God's existence except the argument from organized complexity. Note that even if we grant that God is not a good explanation of our world's *apparent design*, Dawkins's argument would obviously not reach its conclusion if there were good arguments for God's existence that do not rely on the appearance of design. Hence, before Dawkins presents his positive case that God does not exist, he discharges his "responsibility to dispose of the positive arguments for [theistic] belief that have been offered through history."[18] Given the long history of such arguments in the West—dating back at least to Xenophon's Socrates (Sedley 2007)—it is surprising that this duty should be considered fulfilled in a mere 33 pages.[19]

Let us have a closer look at just one of the classic arguments that Dawkins critiques. He writes:

> *The Cosmological Argument*. There must have been a time when no physical things existed. But since physical things exist now, there must have been something nonphysical to bring them into existence, and that something we call God.[20]

Dawkins rejects this argument because it makes "the entirely unwarranted assumption that God himself is immune to the regress."[21] For this reason, Dawkins thinks that positing God is futile. It is "more parsimonious to conjure up, say, a 'big bang singularity,' or some other physical concept as yet unknown."[22] Thus, "[i]t is by no means clear that God provides a natural terminator to the regresses of Aquinas."[23]

To those familiar with the writings of St. Thomas Aquinas, it is immediately apparent that Aquinas's cosmological argument (his "Third Way") is not about the temporal creation of physical things by something

nonphysical. Aquinas famously thinks that God is necessary to explain the world even if there was no temporal beginning to the physical universe.[24] Rather, Aquinas's argument rests on the *contingent* nature of physical reality.[25] By contingent, Aquinas means that it is able either to be or not to be. It is not necessary that it exist. Because physical things can either exist or not exist, he thinks there must be a reason *why* they exist. Even if they existed from eternity, they must depend on something else for their existence. It is no solution merely to say that this contingent thing Y depends on another thing X if X is also contingent; the contingent series itself has not thereby been explained. One might as well say that the reason the world is stable is because it rests on the back of a turtle and another turtle and so on to infinity. More turtles, no matter how many, are an inadequate solution to the problem. The solution, Aquinas argues, requires something that isn't part of the very contingent stack itself. Hence, there must be a noncontingent (necessary, independent) foundation of the contingent stack. In other words, something must have existence in virtue of its own necessary nature; it cannot be borrowed existence all the way down.

It should now be apparent why Dawkins's proposed singularity (or any other physicalistic account) is an insufficient solution to the problem Aquinas presents: the singularity, like every other physical entity, might not have existed at all; it is just another contingent thing.[26] God, by contrast, provides a natural terminus to the regress if we conceive of God as the greatest possible being. For a greatest possible being would be self-subsistent, having unlimited being within himself, and so wouldn't require any outside cause or explanation.

To be clear, I am not insisting that Aquinas's argument ultimately succeeds. Its merits have been the subject of an 800-year conversation. There are too many nuances to cover here, but I should note that even if Aquinas's particular argument was found to have some problematic premises,[27] the basic intuition behind this argument (that it is impossible for everything to be contingent) has been put forward in other rigorous arguments by Leibniz in the modern era[28] as well as by several thinkers today.[29] The problem of why there are any contingent beings appears to cry out for a God-shaped solution. My own verdict here is that Dawkins has not come anywhere close to establishing that no version of the cosmological argument is sound, let alone that there are *no other* good arguments for God's existence.

Regardless, in what lies ahead I aim to show that even if we grant Dawkins all the premises we've seen so far, his argument *still* doesn't succeed, for it relies on a dubious philosophical principle about the nature of explanation.

2.4. Examining premise (4)

To understand the heart of Dawkins's argument, one must apprehend his justification for premise (4). Recall that premise:

(4) God is not a good explanation of the world's organized complexity.[30]

The majority of Dawkins's focus is on defending this premise. If (4) is true, and if we grant premises (2) and (3), then God's existence would seem improbable indeed.[31] So how does Dawkins support premise (4)? He appears to reason as follows:

(6) Good explanations must be simpler than the phenomena they purport to explain.[32]
(7) God, if he existed, would not be simpler than the world's organized complexity.[33]
(4) Therefore, God is not a good explanation of the world's organized complexity.

Dawkins's argument rests on the seemingly unexamined simplicity principle seen in premise (6). It is crucial to recognize the philosophical nature of this principle; it stands or falls on whether it captures a necessary truth about the nature of explanation rather than on any empirical fact. Given Dawkins's renown, his argument may at first appear to possess all the trappings of modern science and the prestige of sophisticated empirical investigation. But at heart *Dawkins's gambit is a philosophical argument relying upon an a priori principle about the nature of explanation*. As such, the rest of our discussion will center on premises (6) and (7). I set out to show that both are false.

3. Simplicity

3.1. Syntactic simplicity

In science and the philosophy of science, simplicity is often seen as a virtue of a theory. However, simplicity is typically seen as *one of many* virtues. Leading philosopher of science Thomas Kuhn, for instance, famously lists several explanatory virtues, including accuracy, consistency, breadth of scope, fruitfulness, and simplicity.[34] Dawkins appears to see simplicity as *the* overriding theoretical virtue—a virtue so compelling that an explanation cannot be a good explanation if it lacks simplicity (or a sufficient degree of simplicity). Yet considerations of simplicity do not typically arise until an explanation is thought to possess other virtues like fit with the known facts. Simplicity is a secondary virtue, not an automatic trump card. More complex theories should not automatically be discounted. Sometimes the truth is complicated.

In the philosophical literature, there are two major understandings of simplicity. It is not at all clear which Dawkins has in mind. So I will systematically treat the major options. The first kind of simplicity is known as

"syntactic simplicity": the simplicity of the *theory* that supposedly explains a given phenomenon. That is, "it measures the number and conciseness of the theory's basic principles."[35]

What then are we to make of premise (7) if we understand premise (6) as a principle of syntactic simplicity? Is the God Hypothesis syntactically more complex than the phenomenon it is supposed to explain? God is often thought to explain the origin of life, the complexities of intracellular life, the fine-tuning of the physical constants, the origin of the universe itself, and more. In fact, in classical theism God ultimately explains everything other than himself. Recall now that Dawkins's own formulation of the God Hypothesis is so simple that it can be stated in a single sentence, some parts of which are superfluous: "there exists a super-human, supernatural intelligence who deliberately designed and created the universe and everything in it, including us."[36] And Dawkins is not alone in thinking that the God Hypothesis can be expressed concisely. The Anselmian tradition, for instance, thinks of God as "the greatest conceivable being," or "the maximally perfect being."[37] Because the theistic hypothesis can be stated so simply, if we understand simplicity in premise (6) as syntactic simplicity, theism seems like a very simple explanation indeed, rendering Dawkins's premise (7) false.

To be charitable, however, let's assume that Dawkins doesn't have in mind syntactical simplicity. Dawkins appears less concerned with the complexity or simplicity of the God Hypothesis than with the complexity or simplicity of God himself.

3.2. Ontological simplicity

The second major kind of simplicity has often been dubbed "ontological simplicity" or "parsimony." Ontological simplicity is, "roughly, the number and complexity of things postulated."[38] Occam's Razor—the dictum that we should not multiply entities beyond necessity—typically aims at capturing this notion. Again simplicity must be balanced against other virtues like explanatory power and fit with other data.[39] An explanation postulating more entities may well be preferable to simpler rivals if it holds greater consilience with other known facts.[40] When expressed carefully, parsimony principles contain *ceteris paribus* clauses to indicate that they are to be invoked only when other things (e.g., explanatory power) are equal. If God has the causal power to explain the origin of the universe but Dawkins's multiverse does not (depending on which universe-generating mechanism he adopts), then it is not clear that other things are equal; ontological simplicity would not come into play as a tie-breaker.

Within ontological simplicity, we must make a distinction between what has been called quantitative parsimony and qualitative parsimony. Quantitative parsimony considers it a virtue to be committed to the existence of fewer *individual* things, whereas qualitative parsimony considers it a virtue

to be committed to the existence of fewer *kinds* of things. Let's consider quantitative parsimony first.

3.3. Quantitative parsimony

Quantitative parsimony has not always been considered an explanatory virtue. The eminent philosopher David Lewis, for one, dismisses this constraint on explanation.[41] Is the hypothesis that a particular human brain contains x number of brain cells really automatically superior to the hypothesis that it contains $x + 1$ cells? Lewis and others maintain that such *a priori* considerations have no place in the empirical realm. Still, perhaps Dawkins might have this understanding of the virtue of simplicity in mind in premises (6) and (7).

Notice that simplicity is a comparative notion in premises (6) and (7). It is one thing to postulate God to explain a single complex feature of life on Earth. But even Dawkins notes several such features potentially explained by divine design (the origin of life, consciousness, the laws of physics, etc.). If quantitative parsimony is what Dawkins has in mind, then God is an especially parsimonious explanation for all of these features combined. Even if we are only trying to explain the designed-looking features of the world Dawkins mentions, the number of entities entailed by such features far outnumber a single God. Just think of his definition of the God Hypothesis, which says that there is one entity that explains "*the universe and everything in it*."[42] Contra premise (7), God may well be a good explanation by this standard.

Moreover, compare the God Hypothesis with Dawkins's postulation of separate contingent explanations for all of the various designed features of life and the cosmos. Think of his multiverse hypothesis—a huge ballooning of ontological commitments[43]—to explain away apparently designed features of the one known universe. In other words, if premise (6) is a principle of quantitative parsimony, it is not God, but Dawkins's multiverse, that is unparsimonious.

It is open to Dawkins to object that I am counting the quantitative complexity of entities incorrectly. Dawkins objects, for instance, to his Oxford colleague Richard Swinburne's claim that God is simple because he is a single substance.[44] In *The Blind Watchmaker*, Dawkins develops his view of complexity more thoroughly, arguing that a complex object (1) "has many parts," (2) these "constituent parts are arranged in a way that is unlikely to have arisen by chance alone," and (3) the combined parts achieve some end. So Dawkins might argue that God still seems quantitatively complex (and more so than the things God might explain) in that God has many parts.[45] Yet in the most literal and obvious sense, God does not have any parts at all because God is an immaterial substance.

In *The God Delusion*, Dawkins seems to grant that God does not have literal parts but still maintains that God is complex.[46] He cites with approval

the view of Keith Ward that "[i]t is quite coherent . . . to suppose that God, while indivisible, is internally complex," and that of Julian Huxley, who "defined complexity in terms of 'heterogeneity of parts,' by which he meant a particular kind of functional indivisibility."[47] Dawkins may think that while God does not literally have parts he must be *psychologically complex* in some sense.[48] God's activity (both mental and in the world), argues Dawkins, entails his complexity: "God, or any intelligent, decision-taking, calculating agent, would have to be highly improbable in the same statistical sense as the entities he is supposed to explain."[49] Further,

> A God capable of continuously monitoring and controlling the individual status of every particle in the universe *cannot* be simple. His existence is going to need a mammoth explanation 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—and whatever intelligent aliens there might be on other planets in this and 100 billion other galaxies.[50]

Or again:

> [A] God who is capable of sending intelligible signals to millions of people simultaneously, and of receiving messages from all of them simultaneously, cannot be, whatever else he might be, simple. Such bandwidth! God may not have a brain made of neurons, or a CPU made of silicon, but if he has the powers attributed to him he must have something far more elaborately and non-randomly constructed than the largest brain or the largest computer we know.[51]

Dawkins's delightful writing notwithstanding, it is still unclear exactly why God's *activity* necessitates his *complexity*. Perhaps Dawkins thinks God's way of knowing—for instance, his way of knowing "the emotions and prayers of every single human being"—makes him complex in that God performs a complex process of processing information and reasoning. But the greatest philosophers and theologians have long thought that God must not reason discursively as we do but in a simple manner. Following Augustine, Aquinas thinks God knows everything that can be known in a single timeless act and possesses a single mega-thought.[52] If we use this traditional understanding of God, God is far from complex. He is the simplest entity possible.

In response, one might claim that minds necessarily have certain mental "components" that, even though they are not literal parts, make a mind complex. Perhaps minds are the sorts of things that necessarily have a Platonic or Freudian tripartite structure. Still, on nearly any psychological model, even ones with many more substructures, it is still far from obvious that God is *more* complex than that which he would explain—namely,

absolutely everything that exists in the universe, including all of the billions of galaxies, stars, atoms, and subatomic particles. Moreover, prominent philosophers have thought that the divine properties reduce to one or a few properties. As Swinburne argues, because God's essential properties all flow from his having "pure, limitless, intentional power," he is "the simplest kind of person there can be."[53] Classical theism (the tradition of Maimonides, Avicenna, and Aquinas) goes even further, holding that God is so radically simple that he lacks not just physical but also metaphysical parts.

Finally, even if we count God's "parts" in this strained way, and even if we grant for the sake of argument that God is more complex in this quantitative sense, and even if God's properties are logically independent of each other, a question remains: is it true, as premise (6) claims, that an entity that is more quantitatively complex than that which it might explain is automatically a bad explanation? Consider this. Scientists routinely posit complex, new entities when the data warrant it. For example, the postulation of a unique and comparatively quite complex, hitherto unobserved object like Neptune to account for a few simple perturbations in the orbit of Uranus. Neptune has its own origin, which needs explanation; it has a unique and highly specified orbit, a multifaceted material composition, atmosphere, climate, moons, etc. Not only have scientists postulated entities more complex than that which they would explain, but they have repeatedly done so as part of the best kind of science.

3.4. Qualitative parsimony

At this point Dawkins might suggest that we count in yet another manner to discern the ontological complexity of our explanations. As mentioned earlier, some philosophers reject quantitative parsimony in favor of qualitative parsimony. Dawkins may think that the multiverse still counts as simple because the right way to count entities is not by individual tokens but by new *kinds*. He writes:

> The multiverse, for all that it is extravagant, is simple. . . . The multiverse may seem extravagant in sheer *number* of universes. But if each one of those universes is simple in its fundamental laws, we are still not postulating anything highly improbable.[54]

While the multiverse postulates more token entities, each token is fundamentally the same kind as our universe (which Dawkins somehow takes to be simple). Thus, our ontology is no larger than before we postulated the multiverse, or, at the very least, this is not the kind of increase that automatically makes for a bad explanation.

The claim that only the introduction of new kinds can bloat an ontology has been criticized by philosophers.[55] Even if there is something of a "discount" on new tokens of old kinds, it isn't a blank check: one new kind would be more than offset by infinitely many new tokens of old kinds.

Further, note that counting by kinds is notoriously difficult to do. Are new species of plants and animals or different fundamental particles new kinds? If so, different universes are likely to have *many* new natural kinds indeed, and Dawkins's multiverse will far outstrip the ontological commitments of the average theist. But if these don't count as new kinds, why not? What principled way is there to decide what counts as a new kind, given that everything resembles some other thing in *some* way?

Dawkins thinks that the postulation of many new universes does not really make the multiverse unacceptably complex, because these many new universes are all of the same general kind as our universe. By this standard, however, even if we interpret premise (6) as a principle of qualitative parsimony, there is no guarantee that God is a new kind and thus that premise (7) is true. If mind is a real part of our world, as few would deny, then the burden would be on Dawkins to explain why God (whom he conceives of as a mind or intelligence) is a fundamentally new kind of thing. Dawkins even calls God "super-human"—that is, *like a human* but greater in power. Even an unimaginably great and powerful intelligent agent still seems like an intelligent agent. In fact, the great monotheistic traditions have always believed that human beings were created as conscious, rational beings in the image and likeness of a conscious, rational being. It is difficult to see, then, why God is necessarily a new kind.[56,57]

But for the sake of argument, let us slice kinds finely and concede that God is different in kind from the intelligent agents we know. We might still wonder whether it is true that science never postulates fundamentally new kinds—not just new planets like Neptune (since we already know there are planets) but brand-new kinds. In truth, scientists do this routinely and without complaint. Physicists posit superstrings, virtual particles, and five-dimensional membranes. Such hypotheses are clearly explanatory despite postulating new kinds (where kinds are sliced finely).

Dawkins could still insist that God is a radically different kind than anything else we know simply because God is supernatural. But is this not precisely what Newton's detractors said? Gravity, with its action at a distance, was decried as an "occult force," inappropriate to scientific explanation and too different in kind from truly scientific hypotheses. Ultimately, we must postulate a cause that is adequate to explain the data. And when our data include the origin of the entire universe or the existence of contingent beings—the whole natural order—a radically different sort of cause may be the only adequate one. I conclude, then, that even if Dawkins's premises (6) and (7) are understood as referring to qualitative simplicity, these premises remain false.

3.5. Fundamental simplicity

Perhaps what bothers Dawkins most about theism is that it leaves the ultimate origin of the world unexplained.[58] But which theory truly is simpler

with respect to the number of *brute* (unexplained/fundamental) entities and properties posited? Which worldview begins with the fewest number of unexplained entities and proceeds to explain all else?

Theism's single brute fact is, arguably, a radically simple being, or at the very most the existence of a person with two properties—knowledge and power—held in the simplest possible way.[59] That is, these two properties of God are held by him essentially and without limit (which is simpler than positing any finite amount of power or knowledge). All contingent beings are explained by God's desire to bring about good things (i.e., via personal explanation, which is very familiar to us).

Naturalism appears to lack this kind of fundamental systematicity and simplicity. In naturalism there are quite a number of brute facts (e.g., brute connections between conscious states and brain states), not least of which is the existence of massive quantities of contingent beings: the fundamental particles out of which the physical universe is composed. Counting up the number of brute facts in naturalism will be difficult, but it seems that inevitably it postulates more than one brute entity with only two properties held in the simplest way.

I freely admit that there is a sense in which theism is more complex than naturalism: theists have God in their ontology. This is why Dawkins's claim that we are all atheists with regard to Zeus, Wotan, or the flying spaghetti monster has some purchase. As he entertainingly pronounces, "I just go one god further."[60] Positing God as the ultimate explanation of our universe would be an increase in the number of things naturalists take to exist. But at times we all must admit new things into our ontology (black holes, etc.). The real question is whether the existence of the postulated entity makes one's whole worldview simpler and more unified.[61] Theism is simpler in having fewer unexplained entities, and its one brute fact gives a simple, unified explanation to all other things.

4. Conclusion

Dawkins's Ultimate 747 Gambit is in deep trouble. No matter which understanding of simplicity Dawkins holds, premises (6) and (7)—which support premise (4)—are false. Whether simplicity is construed as syntactic or ontological, as qualitative parsimony or quantitative parsimony, it is simply too strong to claim that any explanation more complex than that which it potentially explains is automatically a bad explanation or that God is more complex than the world. In addition, I gave reason to think that theism is simpler than naturalism in terms of the number of *fundamental* entities postulated. Dawkins not only called this "the central argument" of his book but actually his "main reason for actively disbelieving in God's existence."[62] As Dawkins's Gambit is the New Atheists' most well-developed argument against God's existence, it is questionable whether the movement provides any new reason to think that God does not exist.[63]

Notes

1 Emerson 1903, 165.
2 Philosophers wrote a handful of book reviews, but serious engagement was sparse. Exceptions include Wielenberg 2009; Plantinga 2011, 13–30.
3 Dawkins 2006, 157. Throughout this chapter, I analyze Dawkins's central argument. For a *positive* account of the justification of theistic belief, see Gage and McAllister forthcoming.
4 The name is a reference to the alleged statement of Sir Fred Hoyle, the famed English astronomer and mathematician, to the effect that the probability of life's naturalistic origination on Earth was little greater than the probability of a tornado sweeping through a junkyard and assembling a Boeing 747.
5 Dawkins 2006, 109, 157, 158.
6 See Harris 2006, 73; Hitchens 2007, 71.
7 Dawkins 2006, 157.
8 Ibid, 31.
9 Ibid, 108.
10 Swinburne 1994, Chs. 6–7, esp. 151ff, argues forcefully that God's goodness follows necessarily from his being all-knowing and all-powerful.
11 Dawkins 2006, 114–119.
12 Ibid, 158. In this passage, I have substituted "theory" for "crane" so as to avoid confusion. Dawkins is speaking of two different kinds of theories using Dennett's terminology of "cranes" and "skyhooks." See Dennett 1995.
13 See Collins 2012.
14 Jastrow 1992, 14.
15 Ibid, 106–107.
16 Hawking 1996.
17 Dawkins 2000, 41.
18 Dawkins 2006, 73.
19 Ibid, 77–109.
20 Ibid, 77.
21 Ibid.
22 Ibid, 78.
23 Ibid.
24 Cf. *De Aeternitate Mundi*.
25 Wippel 2000, 462–469.
26 Dawkins 2006, 77 further complains that even if Aquinas's argument were conceded, there is no reason to endow the regress terminator with God's other properties like omnipotence. But readers familiar with Aquinas will see that this critique misses the mark. The Five Ways are followed, in both the *Summa Theologica* and the *Summa Contra Gentiles*, by arguments that the being proved must have a host of divine attributes (eternality, goodness, intelligence, etc.) entailed by its more basic properties like aseity.
27 See Pawl 2012, 121–122 for a helpful discussion of the Third Way and difficulties it faces. For a basic introduction to the Five Ways see Copleston 1955, 114–130. And for a closer treatment, see Wippel 2000, 442–500.
28 See Pruss 2012.
29 See Gale and Pruss 1999; Swinburne 2004, 133–152; Rasmussen 2010; Rasmussen and Weaver 2018; Pruss and Rasmussen 2018.
30 Out of charity, I have chosen to strengthen Dawkins's argument by interpreting it more modestly than he may intend. In my formulation, Dawkins claims that God is not a *good* explanation. But Dawkins may actually mean that God is *no explanation at all* of complex phenomena. He writes: "It is obviously *no solution* to postulate something even more improbable [or complex]" (Dawkins 2006, 158, emphases added). Positing theism's complex God is, then, "a total

abdication of the responsibility to find an explanation" (155). "Indeed, design is *not a real alternative* at all because it raises an even bigger problem than it solves: who designed the designer?" (121, emphasis added). "Why is God considered an explanation for anything? It's not—it's a failure to explain" (134). Because God offers a complex and therefore improbable explanation of life, "statistical science rules out a divine creator" (139). And again, "*design* certainly does not work as an explanation for life, because design is ultimately not cumulative and it therefore raises bigger questions than it answers" (141). Regarding the fine-tuning of the laws of physics, he writes: "The theist says that God, when setting up the universe, tuned the fundamental constants . . . for the production of life. . . . As ever, the theist's answer is deeply unsatisfying, because it leaves the existence of God unexplained. A God capable of calculating the Goldilocks values for the six numbers would have to be at least as improbable as the finely tuned combination of numbers itself. . . . It follows that the theist's answer has utterly failed to make any headway towards solving the problem at hand" (143). "And," he continues, "the theistic response to the riddle of improbability is an evasion of stupendous proportions. It is more than a restatement of the problem, it is a grotesque amplification of it" (144).

31 Though as a Bayesian probabilistic argument, theism could still be very likely if the naturalistic explanation was even worse.

32 Or perhaps: If X is more complex (i.e., less simple) than Y, X is not a good explanation of Y.

33 This is clearly the central premise of the "Ultimate 747" argument. See Dawkins 2006, 120, 147–150, 154–157.

34 Kuhn 1977, 321–322.

35 Baker 2011, 1. The mathematical version of syntactic simplicity is often called "elegance."

36 Dawkins 2006, 31.

37 More technically, God is thought to possess all compossible positive perfections.

38 Baker 2011, 4.

39 It may be that fit with other theories can be reduced to either simplicity or explanatory power. This is the approach Swinburne takes. Others, like Thagard 1978; Harman 1965; and Lipton 2004, maintain a multiplicity of virtues.

40 Thagard 1978, 87–89.

41 Lewis 1973, 87.

42 Dawkins 2006, 31.

43 There are two ways to think of the multiverse hypothesis: either it increases the number of universes or it increases the complexity of the one mega-universe. In either way of proceeding, the view is anything but quantitatively parsimonious.

44 Dawkins 2006, 148.

45 Ibid, 11–16.

46 When Dawkins alleges that God is more complex than that which he is invoked to explain, he is not taking issue with the doctrine of "divine simplicity." He shows no awareness of the distinction (or lack thereof) between God's essence and his existence.

47 Dawkins 2006, 150.

48 See Mackie 1982, 144; McGinn 1999, 86–87.

49 Dawkins 2006, 147.

50 Ibid, 149.

51 Ibid, 154.

52 Cf. *Summa Theologica* Ia.14.7 and Zagzebski 1991.

53 Swinburne 1994, 154; 1997; 2004, 55 argues in some detail that attributing infinite power is simpler than attributing any finite quantity and illustrates this from the history of science.

54 Dawkins 2006, 147.

55 See Nolan 1997; Huemer 2009, 216.
56 Of course, Aquinas and others thought that God is not in a genus with anything else, including persons or rational agents. But this route is unavailable to Dawkins because he keeps insisting that God, if he exists, is a rational agent performing complex thoughts and operations just like us.
57 Mackie 1982, 100 appears to think that a disembodied mind like God would be a radically new kind of person. But this assumes physicalism. Physicalism has fallen on hard times in recent years. See Chalmers 2010; Gillett and Loewer 2001; Kim 2005; Koons and Bealer 2010; Ney 2008. Hence, it would be a serious disadvantage if Dawkins's super-argument *logically required* physicalism as a premise and would only further confirm that the argument is much more philosophically than scientifically driven.
58 This is true in Swinburne's view, anyway. Plantinga holds that God is a logically necessary being.
59 Unlimited power plausibly entails perfect freedom. Swinburne 2004, 99ff argues that God's perfect knowledge, power, and freedom entail his perfect moral goodness and other essential divine attributes. See Swinburne 2010 for his latest on God and simplicity.
60 Dawkins 2006, 53. Notice that gods like Zeus and Wotan are not arbitrarily rejected by classical theists. They are not even possible explanations for contingent reality, as they are contingent themselves, requiring an explanation for their existence and composition. Not so the God of classical theism, who is radically simple and dependent on nothing outside himself.
61 See Smart 1985, 275–276.
62 Dawkins 2006, 157, 73.
63 The author wishes to thank Trent Dougherty for his previous collaboration, without which this chapter would not have been possible.

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