

ARGUMENTS FROM DESIGN: A SELF-DEFEATING STRATEGY?

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The view that science and religion are complementary has at least one significant advantage over other positions, such as the view that they are in an antagonistic relationship or the view that they are so incommensurable that they are neither complementary nor antagonistic. The advantage is that it aspires to provide a unified worldview that is sensitive to the claims of both science and religion. And surely, such a worldview, if available, would seem to be superior to one in which, say, scientific and religious claims were held despite their obvious contradictions. Given this, it should come as no surprise that many religious thinkers have been attracted to the view that science and religion are complementary. Here, I wish to consider a cluster of arguments exemplifying this position: namely, 'new design arguments' for the existence of God. These arguments rely directly on developments in late twentieth-century natural science in attempting to establish their conclusions. One question that will need to be addressed is: To what extent are they susceptible to the criticism that they only succeed by distorting the religious beliefs they claim to champion?

But before we examine new design arguments, it would be wise to consider first of all the traditional arguments from design, and note some of the problems they have faced.

Traditional Design Arguments for the Existence of God

Arguments from design consist in deducing the existence of God on the basis of evidence that the world must have been designed by an

intelligent being. Traditional design arguments rely upon our ability to recognise the place that particular natural objects purportedly occupy within the context of the providential design of the whole. Such arguments are developments of an idea that appears in the scriptures of each of the Abrahamic faiths. In the Hebrew Scriptures, for example, one reads: ‘The heavens declare the glory of God, the sky proclaims His handiwork’.¹ Likewise, the Qur’ān proclaims:

In the creation of the heavens and the earth; in the alternation of night and day; in the ships that sail the ocean with cargoes beneficial to man; in the waters which Allah sends down from the sky and with which He revives the dead earth, dispersing over it all manner of beasts; in the movements of the winds, and in the clouds that are driven between earth and sky: surely in these there are signs for rational men.²

Such passages would seem to foreshadow the later development of sophisticated design arguments, and they have ensured that arguments from design have been important to many Jews, Christians and Muslims.

Design arguments were particularly popular in the middle ages. During this period Aquinas, for example, developed an argument from design that was based upon his observation that natural objects appear to be oriented towards goals. As he writes:

Goal-directed behaviour is observed in all bodies of nature, even those lacking awareness; for we see their behaviour hardly ever varying and practically always turning out well, which shows they truly tend to goals and do not merely hit them by accident. But nothing lacking awareness can tend to a goal except it be directed by someone with awareness and understanding: arrows by archers, for example. So everything in nature is directed to its goal by someone with understanding, and this we call *God*.³

Aquinas’ argument, then, seeks to explain a purportedly observable feature of the natural world—goal-directed behaviour—by invoking an

intelligence that directs those things exhibiting it. Aquinas assumes this intelligence to be God. Design arguments like Aquinas' are examples of natural theology, and, as such, have an obvious affinity with natural science in its most basic form; for both seek to explain observable features of our world. Hence, it is no surprise that design arguments were also popular in the seventeenth and eighteenth centuries—an era when developments in natural science were revealing more about the structure of the natural world.

Prominent scientists Robert Boyle and Isaac Newton both advanced design arguments. It was William Paley, however, who drew the attention of a wider public to this genre of argument.⁴ Paley invites us to imagine that, while walking on a heath, we suddenly come across a watch lying on the ground.⁵ Upon examination we notice the complexity of the various parts of the watch and the remarkable way in which they all fit together to serve the purpose of time-keeping. Such observations, argues Paley, compel us to conclude that this object cannot have come into being by chance, and that it must, therefore, be the product of an intelligent designer—in this case a watchmaker. In short, we make an inference to the existence of the watchmaker from the observable features of the watch. The crucial step in Paley's argument, however, lies in his further claim that we are entitled to draw a similar inference from the observable qualities of natural objects, such as the eye, to the existence of an intelligent designer: namely, God. Paley holds that when we infer the existence of the watchmaker from the watch, or the existence of God from the eye, we thereby arrive at the best explanation for what we encounter in the world. This is an argument, then, which aims to track the relationship between effects and their causes; and it purports to do so by seeking the best explanation for whatever effect we are examining, irrespective of whether we are considering human-made or natural objects. Paley, then, thought that by positing God as the, so to speak, 'grand-designer', we arrive at the best explanation of certain features of the natural world.

There is no doubt that the appeal of design arguments like Paley's is that they offer an explanation for what might otherwise have seemed totally inexplicable. However, in the nineteenth century an alternative

explanation emerged as a rival to Paley's. For Charles Darwin's theory of evolution by natural selection also purports to explain why plants and animals 'work' so well in being highly adapted to their surroundings, and it does so without bringing God into the account. The core issue, then, for those seeking to prove the existence of God is which theory provides the best explanation for our observations.⁶ Unfortunately for such theists, the explanatory power of the Darwinian account came to appear to many as rendering the presumption of a designer redundant.

A further difficulty with Paley's argument is that it will only seem plausible if one agrees that human artefacts (for example, watches) and natural objects (for example, eyes) are relevantly similar, and thus require a similar explanation. In other words, the argument will only be cogent if a clear analogy between human-made and natural objects is granted. For one may well agree that Paley's inference from the watch to the watchmaker is reasonable, while balking at the inference from natural objects to the existence of a divine designer. Paley assumes that, for example, watches and eyes are sufficiently similar—in view of the complexity they both exhibit, and the way that they appear to be functional for a particular purpose—to justify one in drawing a similar conclusion about the nature of their origin.

The argument is based, then, on the assumption that there is a similarity, or analogy, between particular instances of two kinds of things: natural objects and human artefacts. Essentially, then, Paley's argument is an argument from analogy; such arguments relying on the assumption that if two objects are similar in some respects, then they are likely to be similar in others. But are natural objects, such as eyes, relevantly similar to undisputed instances of the artifactual, such as watches? Whether this mooted similarity obtains is one of the things in dispute between those who advocate traditional forms of design argument and those who reject them. And the more one notices dissimilarities between human-made and natural objects the less plausible does Paley's argument appear. As Philo, one of David Hume's characters in the *Dialogues Concerning Natural Religion*, comments:

That a stone will fall, that a fire will burn, that the earth has solidity, we have observed a thousand and a thousand times;

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and when any new instance of this nature is presented, we draw without hesitation the accustomed inference. The exact similarity of the cases gives us a perfect assurance of a similar event, and a stronger evidence is never desired nor sought after. But wherever you depart, in the least, from the similarity of the cases, you diminish proportionably the evidence; and may at last bring it to a very weak *analogy*, which is confessedly liable to error and uncertainty.⁷

But, as Hume points out, natural objects are far from being exactly similar to human-made objects. Therefore, our experience of the way that human artefacts are produced does not entitle us to infer that natural objects result from a similar type of cause—namely, that they are the products of intelligent design.

Furthermore, the argument from design relies on an even more tenuous analogy than that which its advocates suppose to exist between what is known to be artefactual, such as a chair, and natural objects. For not only do theists sympathetic to natural theology infer a divine designer in order to explain the existence and character of particular natural objects but many also believe that consideration of the totality of natural objects—particularly, of the way they cohere into a whole—merits the conclusion that the universe itself is the product of intelligent design. In this version of the argument, it is assumed that the universe as a whole is like a gigantic watch: it appears to be just like a large and complex machine, the features of which only being explicable by positing intelligent design. But as Philo argues:

If we see a house . . . , we conclude, with the greatest certainty, that it had an architect or builder; because this is precisely that species of effect which we have experienced to proceed from that species of cause. But surely you will not affirm that the universe bears such a resemblance to a house that we can with the same certainty infer a similar cause, or that the analogy is here entire and perfect. The dissimilitude is so striking that the utmost you can here pretend to is a guess, a conjecture, a presumption concerning a similar cause. . . .⁸

In the *Dialogues*, Hume expounds several other criticisms of traditional design arguments, many of them undermining the use of analogy, with others challenging the specific conclusions that proponents of such arguments claim can legitimately be drawn from them.⁹

Notwithstanding the vigorous philosophical criticism which arguments from design attracted in the eighteenth and nineteenth centuries, however, design arguments enjoyed a renaissance in the late-twentieth century. So-called 'new design arguments' are typically based on recent discoveries in science, particularly in the fields of biology, physics and biochemistry, and the hope of those who develop them is that they will be invulnerable to the criticisms that afflicted traditional forms of the argument from design.

New Design Arguments

One new argument from design is advocated by the physicist Paul Davies, who argues that traditional design arguments and other forms of natural theology fail because they rely on there being some natural facts which science has failed to explain. (In the case of Paley's argument, for instance, one relevant natural fact would be the complexity of the eye, which seemed inexplicable prior to Darwin.) The problem with this strategy is that in the long run, as Davies argues, scientists do, eventually, explain these natural facts; and when they do, God can no longer be regarded as the best explanation for them. But while it might seem that God is threatened by redundancy as scientists increasingly explain what had formerly been the preserve of theologians, Davies avers that this is not really the case, because the idea of God still has explanatory power at a deeper level. Consider the example of physics, which is regarded by many as the most fundamental of the natural sciences. What twentieth-century physicists have done, according to Davies, is discover the laws that govern natural phenomena. But, this notwithstanding, they have failed to explain why one set of laws governs the physical world rather than another. Thus, the idea of God can still be invoked as the best explanation for the particular configuration of natural laws that physicists have discovered.¹⁰

In response to arguments like Davies', scientific materialists would resist the suggestion that we should seek to explain why the universe is governed by just that set of natural laws which modern physics has described. They conceive the role of scientists as the investigation of what actually is the case in the universe, rather than in speculating about *why* the universe is the way it is. Theologians, however, tend to regard the refusal of scientists to ask the latter question as, at best, faint-heartedness and, at worst, a failure to acknowledge a real question that cannot be answered by science alone. Some argue, moreover, that, with respect to this question, scientists are simply being unreasonable in not considering the contribution that religion might make towards answering it. Keith Ward, for example, argues that the existence of a universe such as this one—one that exhibits structural simplicity, mathematical elegance and integration—is so improbable that it

would be reasonable to accept any postulate that would make it more probable. The postulate that raises its probability to the highest degree is the postulate that some mind...intends to bring into existence a physical realm which actualises a subset of elegant possibilities. That would explain with complete adequacy the extraordinary precision of the Big Bang that began this universe.¹¹

According to Ward, then, the more that science reveals about the structure of the universe, the more improbable the existence of the universe becomes, and, hence, the more it stands in need of a theological explanation.

Moreover, the feature of the universe that is most improbable is 'the precision of the mathematical structure needed to produce conscious life',¹² and this, Ward argues, would seem to demand an explanation involving the idea of design. Ward therefore argues that the theory of evolution by natural selection on its own does not allow us to conclude that the existence of sentient life-forms is more probable than not. Adding the hypothesis of a God who sets up the process of mutation with the intention of bringing sentient life into being does, however, make the existence of such life-forms probable. And, as it is the mark

of a good theory that it makes the facts to be explained probable, the God-hypothesis, argues Ward, is superior to the hypothesis of natural selection considered alone. Thus, Ward claims that

one could hold that God has designed the basic laws so that, in the long run, in one way or another, conscious beings would come to exist. One would see natural selection as the way in which God works, without interference in the laws of nature, to realise the divine purposes in creation. God would not be needed to explain why natural selection moves in the direction it does, when it could easily have moved in some other direction (or in no direction at all). But God would still have an explanatory role, in providing a reason why this set of physical laws exists, and in assigning a goal (of conscious relationship to God) to the process of evolution.¹³

In other words, Ward argues that a religious perspective can complement a scientific one by providing a higher-level explanation of the facts discovered by science. The scientific account alone, in his view, would be unsatisfactory insofar as it could only provide a description of the universe and not an explanation of it. The God-hypothesis, then, is not only compatible with the scientific account of the universe but also supplements that account by making it more reasonable to believe (that is, by showing it to be more probable).

Now, it might seem that, if Ward's argument is successful, then the traditional concept 'God' can make an important contribution to scientific theory. This appearance may, however, be deceptive. A closer look at Ward's argument reveals that the key religious concept 'God' at work in his theory has undergone a startling transformation in response to a certain scientific worldview, and the role that God is thought to play in our world, in Ward's view, is itself constrained by what is possible according to the scientific worldview in question. In short, Ward conceives God as 'the sustainer of a network of dynamic interrelated energies', and, as such, God 'might well be seen as the ultimate environing non-material field which draws from material natures a range of the potentialities

which lie implicit within them.’¹⁴ Thus, in explaining how religion and science can be complementary, Ward has been compelled to re-conceptualise ‘God’.

Ward’s theory, then, can be seen as an imaginative encounter between science and religious ideas. In this encounter, as Ward conceives it, science must surrender its claim to provide an exclusive account of the universe (which constitutes a significant transformation in the modern conception of natural science), while the religious concept ‘God’ must undergo radical transformation in response to the scientific worldview. Though intriguing, theories like Ward’s are likely to be highly controversial because, if they are to succeed, both scientists and religious believers must be sufficiently persuaded of their merits to accept the radical transformations required within both domains. As we shall see, other proponents of new design arguments require no less radical conceptual transformations.

While Ward, like Davies, focuses on the role God can play in explaining the general physical laws that govern the universe, other thinkers, such as Michael J. Behe,¹⁵ William A. Dembski¹⁶ and Holmes Rolston III,¹⁷ have attempted to revitalise design arguments by concentrating on the findings of the biological sciences. Behe and Dembski base their respective arguments upon the mooted impossibility of explaining the genesis of complex biological systems without appeal to the notion of intelligent design. Rolston, on the other hand, offers a theory that is structurally similar to Ward’s. We first consider the work of Rolston, before turning to the theories of Behe and Dembski.

Like Ward, Rolston argues that a purely scientific account of evolution lacks explanatory power. In his view, simply to assert that the mechanisms of evolution are immanent within nature explains nothing. A satisfying explanation, he claims, would provide ‘an account of the setup, an account of the generating processes; of how possibilities get actualised, of how possibility spaces come to be; of the depth sources of creativity’.¹⁸ Once science has said all that it can say about evolutionary history, there remains, according to Rolston, an intellectual challenge that must be met on a philosophical, metaphysical and theological level. In essence, the challenge is to explain the origin of the information transferred across

generations by means of DNA. But all that science seems able to say on this matter, Rolston avers, is that the information spontaneously appears.¹⁹ But this is clearly unsatisfactory, in his view, for

[i]n the course of evolutionary history, one would be disturbed to find matter or energy spontaneously created, but here is information floating in from nowhere. For lack of better explanations, the usual turn here is simply to conclude that nature is self-organizing (autopoiesis), though, since no 'self' is present, this is better termed spontaneously organized.... More comes from less, again and again.²⁰

The question for which Rolston seeks an answer—namely, how can we explain the origin of genetic information?—is one that is only possible to ask because of advances in twentieth-century biology. And it is a question that, according to Rolston, demands a religious response.²¹

This might seem to be a paradigmatic case of religion being called upon to contribute to a scientific understanding of the world. However, as with Ward's theory, science has also impacted on, and thereby transformed, the key religious concept 'God', which is employed by Rolston in answering the question science has raised. For Rolston claims that a 'more plausible explanation' of the origin of genetic information than that offered by science alone 'is that... there is a Ground of Information, or an Ambience of Information, otherwise known as God'.²² Clearly, by characterising God as the 'Ground' or 'Ambience of Information', Rolston has adapted the traditional concept 'God' in order to present it as a plausible explanation of the facts discovered by science. Moreover, as was also the case with Ward's theory, Rolston's conception of the way that God acts is shaped by the scientific worldview that he accepts. For he posits

God as a countercurrent to entropy, a sort of biogravity that lures life upwards. God would not do anything in particular but be the background, autopoietic force energizing all the particulars. The particulars would be the discoveries of the autonomous individuals. God would be the lift-up (more than the setup) that elevates creatures along their paths of

cybernetic and storied achievement. God introduces new possibility space along the way.²³

So, while there are substantial differences in the content of Ward's and Rolston's theories, they share a similar structure. Both argue that certain questions raised by science can best be answered by appealing to religious ideas. Both, moreover, are prepared to transform the traditional religious concept 'God' dramatically in order to answer the questions science raises. Perhaps it is because Ward and Rolston are both philosophers, as well as theologians,²⁴ that they have exercised a significant amount of freedom in creatively transforming religious ideas and in arguing for, what can be seen as, an integration of scientific and religious thinking. Michael Behe and William Dembski differ from Ward and Rolston in being primarily scientists rather than philosophers or theologians, and both Behe and Dembski have been vigorously criticised for, what has been seen as, their willingness to compromise the integrity of their scientific discipline by appealing to religious ideas in order to explain natural facts.²⁵

Behe and Dembski argue respectively not only that the biological sciences provide evidence for the universe being the product of intelligent design but also that a key structural feature of biological systems can only be explained as the product of such design. The feature they have focused upon is termed 'irreducible complexity' by Behe and 'specified complexity' by Dembski. Both claim that the theory of evolution by natural selection is incapable of explaining the origin of this prominent feature of the natural world. Behe deploys the system of blood coagulation as an example of 'irreducible complexity'. In his view, it is an irreducibly complex system insofar as we simply could not explain how all the required individual elements came together to form such a complex biochemical system. The argument is that unintelligent, or 'blind', evolutionary change cannot explain how such complex systems originate. There is, Behe argues, a critical point of development only after which complex systems function, and prior to this the system would be unable to function at all. What could explain the evolutionary development up to this critical point? Yet, Behe argues, many complex biochemical systems are irreducibly complex. This means that we

cannot explain their development by explaining the development of the individual parts. The problem is that the parts which make up these complex systems seem to have no function apart from their role within the system, and natural selection cannot operate on a part which has no function. We could only explain such irreducibly complex systems by giving an account of how and why the parts came together in just the way they did. But in order to give such an account, Behe insists, we need to talk about purpose and intelligent design.

Dembski regards 'irreducible complexity' as a special case of 'specified complexity', claiming to identify the latter in a wide range of natural phenomena. The theory of evolution by natural selection is powerless to explain 'specified complexity', he claims, because, according to the principles of the theory, we would expect natural selection to favour simplicity. The more complex a phenomenon, the more improbable it is, and, thus, the less susceptible to explanation by the theory of natural selection. The best explanation, then, of complex natural phenomena is not that they are the product of evolution by natural selection but that they are the product of an intelligent designer: God. Dembski clearly believes that the reason why more scientists do not agree with his conclusion is that they have been infected by scientific naturalism, which he regards as 'the intellectual pathology of our day'.²⁶ Naturalism, according to Dembski,

artificially constricts the life of the mind and shuts down inquiry into the transcendent.... The fundamental tenet of naturalism in the West (or what is typically known as scientific naturalism) is the sufficiency of undirected natural causes to account for all of reality. The only way naturalism can be proved false is if reality is in fact a much richer place than naturalism allows. Specifically reality must include intelligent causes that neither reduce to nor emerge out of undirected natural causes. Moreover the only way to refute naturalism is to show that intelligent causes are empirically detectable. In short, if we're going to show that naturalism is false, we need to locate observable features of the world that demonstrate design.²⁷

Dembski, then, and Behe along with him, go further than the other thinkers considered insofar as they believe that it is not merely the best explanation of the facts to claim that the universe is the work of an intelligent designer but, further, that intelligent design is actually empirically observable. We observe it, they insist, when we study biological systems that exhibit complexity.²⁸ Thus, their case ultimately rests on a phenomenological claim. One can observe that certain features of the natural world are designed, they assert, and those who claim not to *see* this misrepresent the facts (perhaps because they are suffering from the pathology of scientific naturalism).

From a traditional religious perspective, arguments such as Behe's and Dembski's may be more appealing than those of Ward and Rolston, for, unlike the latter pair, the former do not explicitly transform the concept 'God' in their efforts to provide an explanation of natural facts. But, as we shall see, this nevertheless leaves a large gap between the intelligent designer they posit and God as conceived by traditional theists. This gap will become apparent as we assess the various new design arguments we have considered.

Some Criticisms of New Design Arguments

Neither of the new forms of argument from design proposed by Ward and Davies, respectively, seems to be principally based on analogy. They are not, then, vulnerable to one of the key Humean criticisms to which traditional design arguments appeared vulnerable. Yet they are able to conclude that the only cogent explanation of certain features of the world is that they are the product of intelligent design. This suggests that (at least some) new design arguments represent a completely different type of argument to traditional arguments from design, which, as we have seen, hinge on there being a similarity between natural and human-made objects.²⁹ If these new design arguments are indeed invulnerable to the criticism of being based on an unacceptable analogy, do they succeed, or are there other criticisms that they face? One major difficulty that proponents of new design arguments seem to encounter, and which also tells against the traditional argument, arises from the presence of, what might be described as, 'flaws' in our world (traditionally known as 'evil').

Someone who regards the natural world as the work of God may well be embarrassed by certain features of the world that would appear to indicate that it falls far short of perfection. Indeed, nature has struck many thinkers as wantonly cruel, if not indifferent to the plight of humans and other animals. As John Stuart Mill observes:

nearly all the things that men are hanged or imprisoned for doing to one another are nature's everyday performances. Killing, the most criminal act recognized by human laws, nature does once to every being that lives, and in a large proportion of cases after protracted tortures such as only the greatest monsters whom we read of ever purposely inflicted on their living fellow creatures.... Next to the taking of life (equal to it, according to a higher authority) is taking the means by which we live; and nature does this too, on the largest scale and with the most callous indifference. A single hurricane destroys the hopes of a season; a flight of locusts, or an inundation, desolates a district; a trifling chemical change in an inedible root starves a million people.³⁰

Such considerations seem to weigh heavily against traditional arguments from design. But the problem to which Mill draws attention was not new, and theists have long sought a solution to the so-called 'problem of evil'. But Mill recognised what others, such as Paley, had failed to acknowledge: namely, that features of the world commonly described as 'evil' vitiate arguments from design. While Mill advanced this objection against traditional forms of design argument, it would seem that it is equally forceful against new design arguments. For if we were to accept that the universe is the product of intelligent design, then we would expect some explanation for, what would then appear to be, the design flaws that result in so much suffering. Worse still, what would sober consideration of the natural world allow us to infer about the character of the purported designer? Surely such consideration would not justify the conclusion that the designer possessed the attributes of omnipotence, omniscience and omnibenevolence—attributes ascribed

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to God by traditional monotheism. In fact, as we shall now see, there are problems with all of these qualities.

First, if an omnipotent and omniscient God had designed our world, then we would expect it to be a flawless creation. While an omnipotent being would have the power to create a perfect world, an omniscient being would have the knowledge required to do so. Thus, any apparent flaws in design would suggest that the designer lacks at least one of these qualities. Are there such seeming design flaws? Many people believe that there are features of the natural world that, if they were designed, are evident design-failures. Inadequacies in the human eye, a useless but potentially dangerous human appendix, weaknesses in the human spine and the pain of childbirth are clear candidates for design-flaws. Indeed, Richard Dawkins, a critic of design arguments, argues that if natural objects like the eye have been designed, then we can only laugh at the absurd design exhibited³¹ (and which, it would seem, makes a mockery of the designer). At the very least, it is hard to deny the oddity of the claim that an omnipotent, omniscient designer has deliberately designed humans to exhibit these particular features. Not surprisingly, then, Mill concludes that if the world is the product of an omnipotent and omniscient designer, then that designer must be a demon.³²

Even if we were to accept that the evidence points to a designer, then, the sort of designer who emerges from consideration of the natural world is, at best, a somewhat limited one—limited in power and in knowledge. And a God limited in this way is not the God of traditional theism, but is more akin to the demiurge envisaged by Plato: a limited god who puts the world together out of various materials already at hand. Alternatively, a theist might claim that the designer is omnipotent and omniscient but is not perfectly good (and is thus not concerned to minimise the suffering caused by a failure to design the world in a manner that would be optimal for our well-being). Either choice would clearly constitute a departure from traditional Abrahamic monotheism.

Now, an advocate of design arguments might attempt to resist this conclusion by claiming that God's goodness differs substantially from human goodness. And as we do not know what it is for God to be 'good',

we cannot claim to know that God is not ‘good’ simply on the basis of empirical observations. Mill, however, anticipates this reply:

If in ascribing goodness to God I do not mean what I mean by goodness; if I do not mean the goodness of which I have some knowledge, but an incomprehensible attribute of an incomprehensible substance, which for all I know may be a totally different quality from what I love and venerate...[, then] what do I mean by calling it goodness and what reason have I for venerating it?... To say that God’s goodness may be different in kind from man’s goodness, what is it but saying, with a slight change in phraseology, that God possibly may not be good?³³

It would seem that this argument has equal bite on both traditional and new versions of the argument from design. If any design argument is to be compelling, then it must respond to these objections. One possible response would be to argue that, despite ‘evil’ and suffering, this is, nevertheless, the best possible world; this approach having been adopted by Leibniz. Leibniz’s theory was, of course, the subject of a relentless satire by Voltaire in *Candide*. But while Voltaire has discredited Leibniz’s view, it would, nevertheless, remain open to advocates of new design arguments to present a modified version of Leibniz’s view. They might argue, for example, that once we take into account what the new science of ecology teaches us about the interrelationships between ecosystems and the organisms that inhabit them, we will see that what used to be regarded as unnecessary suffering (and hence as ‘evil’) is in fact a necessary component of nature.³⁴ In short, an appropriately sophisticated understanding of the natural world discloses that all things are indeed arranged in the best possible way; what appears to be pointless suffering actually playing a role in the greater scheme of things. The designer is then to be admired for the ecological efficiency of the world, rather than to be blamed for what, only from a short-sighted and purely anthropocentric view, appear as deficiencies.

While this response shows promise (and would, incidentally, constitute another instance of scientific ideas contributing to religious ones), it has

one drawback that may prevent many traditional theists from adopting it: namely, it implies that God's omnipotence is limited to the ability to do anything that is *causally* possible. The image becomes that of a God who arranges the natural world in the best possible way given certain causal limitations. Many theists in the Abrahamic traditions, however, understand 'omnipotence' much more widely. They claim that genuine omnipotence is only limited by an inability to do the logically impossible. And the merely causally impossible should present no obstacle to an omnipotent being, for such a being could have established different causal laws. So, acceptance of the ecological solution to the difficulties we have raised against design arguments would entail a weaker conception of omnipotence than many theists would be prepared to accept. In other words, this sort of attempt at making religion and science complementary requires some revision in how God is to be conceptualised.

It would seem, then, that, even if some version of the argument from design had been conclusive, its conclusions would have been extremely limited. For one thing, the argument would fall short of establishing the existence of an omnipotent, omniscient and omnibenevolent God.³⁵ Indeed, it would rather seem to have shown that God is not omnipotent, omniscient and simultaneously omnibenevolent. So, such an argument could not prove the existence of the sort of God who continually cares for the universe. Hence, advocates of both new and traditional design arguments tend to concede that their arguments do not establish that the designer is the God of any traditional monotheism. And as we have seen, some advocates of new design arguments, such as Ward and Rolston, arrive at a conception of God that diverges dramatically from that entertained by traditional theists. Others who favour design arguments might claim, however, that, even though no content for the concept 'God' is provided by design arguments, such arguments still have value insofar as, once a designer is accepted, appeal can then be made to revelation and other purported sources of religious knowledge. Together these can fill out the conception of God.

Needless to say, those not already committed to a traditional conception of God will have little reason to accept this move. But more important, if there is a designer, it would appear that our less than perfect

anatomy must then be described as ‘design flaws’. And this must restrict the plausible interpretations of both scripture and revelation. Indeed, because design flaws would provide evidence of a flawed designer, any reliance by traditional theists on arguments from design could be regarded as somewhat self-defeating—which seems ironic, given the hostility a number display towards Darwinism. Indeed, if one wishes to believe in a benevolent deity, it might be wiser to allow a Darwinian evolutionary process to take the blame for anatomical imperfections.

It is noteworthy that, in the closing years of the twentieth century, design arguments achieved a popularity that they had not enjoyed since the mid-nineteenth century. This, perhaps, indicates that a growing number of educated religious people are seeking a rapprochement between their religious beliefs and a scientific worldview. If the project of *rapprochement* is consistently carried through, however, the result, as we have seen, is likely to be not only a scientific worldview transformed by religious ideas but also a radical transformation of traditional religious concepts—particularly the concept ‘God’. The rapprochement at issue, then, appears to offer believers the opportunity of locating both science and religious belief within a coherent worldview, but only at the cost of transforming both.

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NOTES

- ¹ Psalm 19: 2 *JPS Hebrew-English Tanakh* (Philadelphia: The Jewish Publication Society, 1999).
- ² Sura 2: 164, translated by N. J. Dawood. See, also, Sura 88: 17–21 and Sura 6: 19.

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- ³ Thomas Aquinas, *Selected Philosophical Writings*, translated by Timothy McDermott (Oxford: Oxford University Press, 1998), pp. 201f. This argument is the last of Aquinas' celebrated five ways 'proving' the existence of God.
- ⁴ See William Paley, *Natural Theology; or, Evidences of the Existence and Attributes of the Deity: Collected from the Appearances of Nature* (Philadelphia: H. Maxwell, 1802).
- ⁵ Paley took the example of a watch from Boyle, who ruminated on the cathedral clock in Strasbourg.
- ⁶ Notice that accepting Darwin's theory of evolution by natural selection does not imply that one must deny that God exists. God may still be conceived as the one who set the process of evolution in train. Nevertheless, as James Rachels points out, Darwin's theory prevents the design argument from providing *conclusive proof* of God's existence. See James Rachels, *Created from Animals: The Moral Implications of Darwinism* (Oxford: Oxford University Press, 1990).
- ⁷ David Hume, *Dialogues Concerning Natural Religion* (Indianapolis: Bobbs-Merrill Company, 1970), p. 23.
- ⁸ *Ibid.*, pp. 23f.
- ⁹ See, particularly, *ibid.*, Parts II–VIII. Ironically, Hume's arguments were already relatively well-known long before Paley published his *Natural Theology*.
- ¹⁰ See Paul Davies, *The Mind of God: Science and the Search for Ultimate Meaning* (Harmondsworth: Penguin, 1993).
- ¹¹ Keith Ward, *God, Chance & Necessity* (Oxford: Oneworld, 1996), p. 46.
- ¹² *Ibid.*, p. 52.
- ¹³ *Ibid.*, p. 77. Ward does not, however, advocate some form of, what is known as, the 'anthropic principle'. This principle asserts that the laws and constants of nature (e.g., the chemical properties of the carbon atom and the thermal properties of water) seem to be finely-tuned to support just the kind of life which we find in the cosmos—specifically, our own humanoid life-form. The conclusion drawn by exponents of this principle, such as Michael Denton, is that the evolution of our humanoid life-form must have been the intended purpose of the universe. Ward demurs from this conclusion when he acknowledges the possibility of our current life-form evolving into something better—one which we cannot currently conceive. See *ibid.*, *passim*. Also, see Michael J. Denton, *Nature's Destiny: How the Laws of Biology Reveal Purpose in the Universe* (New York: Free Press, 1998).
- ¹⁴ Ward, *God, Chance and Necessity, op. cit.*, p. 57.

- ¹⁵ See Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: Simon and Schuster, 1998).
- ¹⁶ See William A. Dembski, *The Design Inference: Eliminating Chance through Small Probabilities* (Cambridge: Cambridge University Press, 1998), and William A. Dembski, *Intelligent Design: The Bridge Between Science and Theology* (Downers Grove, Ill.: InterVarsity Press, 1999), and William A. Dembski, *No Free Lunch: Why Specified Complexity Cannot be Purchased without Intelligence* (Lanham, Md.: Rowan & Littlefield, 2002).
- ¹⁷ Holmes Rolston III, *Genes, Genesis and God: Values and Their Origins in Natural and Human History* (Cambridge: Cambridge University Press, 1999).
- ¹⁸ *Ibid.*, p. 297.
- ¹⁹ See *ibid.*
- ²⁰ *Ibid.*, p. 359.
- ²¹ See *ibid.*, p. 296.
- ²² *Ibid.*, p. 359.
- ²³ *Ibid.*, p. 364.
- ²⁴ Rolston also enjoys a considerable reputation as a biologist.
- ²⁵ For a response to methodological criticisms of the approach adopted by Behe and Dembski *et al.*, see Stephen C. Meyer, 'The Scientific Status of Intelligent Design: The Methodological Equivalence of Naturalistic and Non-Naturalistic Origins Theories' in Michael J. Behe, William A. Dembski and Stephen C. Meyer (eds.), *Science and Evidence for Design in the Universe* (San Francisco: Ignatius Press, 2000), pp. 151–211; see, also, Michael J. Behe, 'Answering Scientific Criticisms of Intelligent Design' in *ibid.*, pp. 133–49.
- ²⁶ Dembski, *Intelligent Design, op. cit.*, p. 120.
- ²⁷ *Ibid.*
- ²⁸ See, for example, William A. Dembski, 'The Third Mode of Explanation: Detecting Evidence of Intelligent Design in the Science' in Behe, Dembski and Meyer (eds.), *Science and Evidence for Design in the Universe, op. cit.*, pp. 17–51; and Michael J. Behe, 'Evidence for Design at the Foundation of Life' in *ibid.*, pp. 113–28. For criticisms of this type of view from a scientific perspective, see Elliot Sober (with Branden Fitelson and Christopher Stephens), 'How Not to Detect Design—A Review of William Dembski's *The Design Inference*', *Philosophy of Science* 66 (1999): 472–88.
- ²⁹ Although it could be argued that new design arguments rely on analogy no less than do traditional ones, for any understanding of what it means for the universe to exhibit 'design' must surely depend on an analogy between

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- the work of a transcendent ‘designer’ and the work of a human designer.
- 30 John Stuart Mill, ‘Nature’ in John Stuart Mill, *Nature and Utility of Religion*,
edited by George Nakhnikian (New York: Bobbs-Merrill, 1958), pp. 20f.
- 31 See Richard Dawkins, *The Blind Watchmaker: Why the Evidence of
Evolution Reveals a Universe Without Design* (New York: W.W. Norton &
Co, 1996), p. 93.
- 32 Mill, ‘Nature’, *op. cit.*, p. 40.
- 33 John Stuart Mill, ‘The Infinite Goodness of God’ in Paul Helm (ed.), *Faith
and Reason* (Oxford: Oxford University Press, 1999), p. 250.
- 34 Robin Atfield develops such an argument in ‘Evolution, Theodicy and
Value’, *Heythrop Journal* XLI (2000): 281–96. See, also, Rolston, *Genes,
Genesis and God*, *op. cit.*, pp. 303–7.
- 35 Indeed, as Hume pointed out, the argument from design does not even
support the view that there is only one God, as it is also consistent with the
idea that a group of gods created the world.