

What can philosophers learn from Medieval Arguments for the Existence of God?

Some suppose that medieval philosophers developed successful *proofs* of the existence of God: consider, for example, the espousal of the kalām cosmological syllogism by William Lane Craig (in Craig (1979), Craig and Smith (1993), Craig and Sinclair (2009), and numerous other works). Others suppose that medieval philosophers discovered materials that can be fashioned into successful *proofs* of the existence of God: consider, for example, the refurbishing of Scotus' causal argument by Timothy O'Connor (in O'Connor (1993) (2008), and elsewhere). However, we need not join company with those who offer these kinds of estimations in order to defend the view that contemporary philosophers can learn valuable lessons from *some* medieval discussions of arguments about the existence of God.

For the purposes of the following discussion, I shall adopt a fairly relaxed view about the extent of the medieval period. It seems to me that there was a long period during which the primary intellectual task for philosophers was taken to be the reconciliation of Christianity—or, more generally, Abrahamic religion—with the heritage of classical Greek—and, perhaps, to a lesser extent, Roman—philosophical thought. The philosophers whom I shall consider below—Philoponus, Anselm, Maimonides, Aquinas and Scotus—can all plausibly be supposed to have self-consciously participated in this intellectual task, and so each can plausibly be supposed to have produced arguments that are proper deservers of the label 'medieval arguments for the existence of God'. In the first part of my discussion, I shall consider recent enthusiasm, for arguments for the existence of God in the works of these medieval philosophers, in the writings of Craig, Robert Maydole, Robert Koons, David Oderberg and O'Connor. After that, I shall turn to some more general reflections on the role of argument and proof in medieval thought about the existence of God.

1. Philoponus (and Craig)

Simplicius' commentaries on Aristotle's *De Caelo* and *Physics* attribute the following three proofs of the generation of the universe to John Philoponus (490-570 CE), locating them in Philoponus' now lost work *Contra Aristotelem*:

Argument 1

1. If the universe were eternal, then the generation of any non-eternal object would be preceded by an infinite series of generations of non-eternal objects.
2. An infinite series cannot be traversed.
3. (Hence) The universe is not eternal.

Argument 2

1. If the universe is eternal, then there has been an infinite number of past generations.
2. The number of generations is increasing.
3. An infinite number cannot be added to.
4. (Hence) The universe is not eternal.

Argument 3

1. The numbers of the revolutions of the planets and fixed stars are multiples of one another.
2. (Hence) If the universe were eternal, there would be infinite numbers of past revolutions in varying multiples.
3. Infinite numbers cannot be multiplied.
4. (Hence) The universe is not eternal.

As Davidson (1969) notes, these arguments were taken up by medieval Islamic and Jewish philosophers; they became mainstays of the philosophers of the kalām. Moreover, these arguments—or variants thereof—are endorsed by Craig (1979) as ‘supports’ for the kalām cosmological syllogism:

1. Everything that begins to exist has a cause.
2. The universe began to exist.
3. (Hence) The universe has a cause.

I think that it is quite implausible to suppose that the three arguments from Philoponus are successful proofs of their (shared) conclusion; and no more plausible to suppose either that the kalām cosmological syllogism is a successful proof of its conclusion or that the three arguments from Philoponus are somehow capable of providing ‘support’ for the second premise of the kalām cosmological syllogism.

The major problem that I find for each of the three arguments from Philoponus is the falsity of the premises about infinite numbers, infinite collections and infinite series.

Against Philoponus’ claim that an infinite number cannot be added to, I would make the following observations. Suppose we have a collection of infinitely many apples, with cardinality \aleph_0 . If we add an orange to our collection of apples, then we shall have a collection of infinitely many pieces of fruit, with cardinality \aleph_0 . Because it is a defining feature of infinite collections that the cardinality of some proper parts is the same as the cardinality of the whole, it is no surprise that adding the orange to the collection of apples does not increase the *cardinality* of the collection of fruit. Nonetheless, there is a perfectly good sense in which adding the orange does increase our holding: there is now a kind that is exemplified in our holding that was not previously exemplified therein. There is nothing to stop addition to an infinite collection; but, in the kind of case that Philoponus envisages, addition to an infinite collection will not increase the *cardinality* of that collection (even though there may be other, perfectly good senses in which our collection will be enlarged).

Similar considerations apply to Philoponus’ claim that infinite numbers cannot be multiplied. Because it is a defining feature of infinite collections that the cardinality of some proper parts is the same as the cardinality of the whole, it is no surprise that the *cardinality* of the rotations of the heavenly bodies in infinite time is the same, even though the heavenly bodies complete rotations at different rates. There is no impossibility in the multiplication of infinite numbers; but, as Philoponus in effect discerns, the result of multiplying \aleph_0 by q , where q is any non-zero rational number, always yields \aleph_0 . Moreover, there is *also* a perfectly good sense in which, if one body

rotates twice as fast as another, then it completes twice as many rotations in infinite time: for the limit, as n tends to ∞ , of the ratio of the number of rotations performed by the faster body in n years to the number of rotations performed by the slower body in n years, is exactly two. As in the first case, we *can* make sense of the idea that one collection of cardinality \aleph_0 is greater than another collection of the same cardinality: there is not always a unique unambiguous answer to the question *Is A larger than B?* when A and B are both infinite in size.

The claim that an infinite series cannot be traversed requires more extended discussion. The falsity of the third premises in the second and third arguments is, I think, manifest only because of developments in our understanding of the infinite in the centuries since Philoponus produced his arguments. (Cantor's investigations put transfinite set theory on secure foundations; Weierstrass laid similarly secure foundations for real analysis.) What I take to be the falsity of the second premise in the first argument is, I think, not quite so readily demonstrated.

If we set aside the possibility of 'infinity machines'—i.e. of processes in which an infinite series is realised in a finite interval because the sub-intervals occupied by successive steps in the series stand in an appropriately decreasing geometric ratio—then it seems to me to be true that an infinite series cannot be traversed, in the following sense: it cannot be that there is an infinite series of things that has both predecessors and successors. If there is an infinite series of things, then it must be open in one direction: and, in the direction in which it is open, there is nothing that is 'beyond' *all* of the things that belong to the series. If, for example, you start counting from 0, and consider forever adding 1's at a constant rate: 0, 1, 2, 3, ..., then you will never finish in the following sense: you will never reach a point at which you are doing something other than counting, with all of the numbers having been counted. However, if you keep counting forever, there is no number that remains forever unenumerated: the infinite series of numbers is traversed because every number is counted. Since, if the universe were eternal, there would be an infinite series open in the past, Argument 1 will only go through if the second premise is interpreted to mean that an infinite series that is open in one direction cannot be traversed—and that isn't so.

If what I have argued here is correct, then no one should now suppose that Philoponus' three arguments are proofs of their conclusions, and nor should anyone now suppose that Philoponus' three arguments somehow lend support to the kalām syllogism. (For an argument for the more ambitious conclusion that no one should now suppose that the kalām cosmological syllogism is a proof, see, for example, Oppy (2006a).) If we can learn anything from *these* three arguments offered by Philoponus, it can only be something about the advances that we have made in our understanding of the infinite since the time at which he wrote.

Perhaps reflection upon these arguments might also prompt some modesty or caution in our evaluations of the merits of our own *a priori* arguments. I certainly do not think that it was *silly* of Philoponus to have supposed that he had here good objections to the hypothesis of the eternity of the world. Moreover, if by 'our world' we mean 'our universe', as that expression is typically used in contemporary cosmology, then I take it that the conclusion for which Philoponus argues is actually true. However—and here I would part company with Philoponus—I take it to be an open question whether

we should suppose that the ‘natural’ past is eternal, or ‘infinite’, because it is an open question whether we should suppose that the ‘natural’ past is more extensive than the past of ‘our universe’. (For extended discussion of these matters, see Oppy (2006b). For conflicting opinion, see, for example, Craig and Sinclair (2009).)

2. Anselm (and Maydole)

In Chapter 2 of his *Proslogion*, Anselm of Canterbury (c.1033-1109) gives one of the most famous arguments in all of philosophy:

Even the fool is convinced that something than which nothing greater can be conceived is in the understanding, since when he hears this, he understands it; and whatever is understood is in the understanding. And certainly that than which a greater cannot be conceived cannot be in the understanding alone. For if it is even in the understanding alone, it can be conceived to exist in reality also, which is greater. Thus if that than which a greater cannot be conceived is in the understanding alone, then that than which a greater cannot be conceived is itself a thing than which a greater can be conceived. But surely this cannot be. Thus without doubt something than which a greater cannot be conceived exists, both in the understanding and in reality.

Opinion of this argument has always been largely negative: most who have ventured to comment upon it have taken the view that it is not a successful proof of the existence of God. Moreover, this negative opinion extends to the class of arguments to which Anselm’s argument has come to belong: most who have pronounced upon the matter have declared that there are no successful *a priori* proofs of the existence of God. Indeed, many commentators have gone further still, and insisted that there *cannot* be successful *a priori* proofs of the existence of God. (For further discussion of the history of ontological arguments, see Oppy (1996) (2006a) and Harrelson (2009).)

There are, however, some contemporary philosophers who give a more positive estimation of Anselm’s *Proslogion* 2 argument. For example, Leftow (2005) claims that it is valid, and that there is a strong case for one of its premises. About the other premise, all he says is: ‘I will not try to settle whether it is true’. Perhaps this suggests that he is not sanguine about the prospects for a non-question-begging defence of the other premise. Be that as it may, there are others who give a yet more positive estimation of the argument. According to Maydole (2010), the argument is valid, all of its premises are true, none of its premises are question-begging, and there is no successful parody that can be made of the argument, i.e. no Gaunilo-style adaptation of the line of reasoning in support of, say, an island than which no greater island can be conceived.

I think that Maydole’s position is quite implausible.

The strength of Gaunilo’s objection to Anselm’s argument is obvious upon inspection of the proper parody:

Even the fool is convinced that some island than which no greater island can be conceived is in the understanding, since when he hears this, he understands it; and

whatever is understood is in the understanding. And certainly that island than which a greater island cannot be conceived cannot be in the understanding alone. For if it is even in the understanding alone, it can be conceived to exist in reality also, which is greater. Thus if that island than which a greater island cannot be conceived is in the understanding alone, then that island than which a greater island cannot be conceived is itself an island than which a greater island can be conceived. But surely this cannot be. Thus without doubt some island than which a greater island cannot be conceived exists, both in the understanding and in reality.

It is perfectly clear that the one argument is valid just in case the other is. Moreover, it is equally clear that the premises of the one argument are no less acceptable than the premises of the other. ('Being than which no greater being can be conceived' has the same degree of 'understandability' as 'Island than which no greater island can be conceived'; and there just are no grounds for insisting that it is greater for a being than which no greater being can be conceived to exist in reality (than it is for it to exist in the understanding alone) that are not equally good grounds for insisting that it is greater for an island than which no greater island can be conceived to exist in reality (than it is for it to exist in the understanding alone).) When we observe that Maydole's formalisation of the two arguments does not deliver this verdict, the proper conclusion for us to draw is that there is clearly something wrong with his formalisation of the arguments. (For a much more detailed critique of Maydole's discussion, including identification of points at which, as I see it, his formalisations do not do justice to Anselm's text, see Oppy (forthcoming, c).)

If we agree—as we should—that the conclusion of Gaunilo's parody is unacceptable, then, given the evident strength of Gaunilo's parody of Anselm's argument, we can certainly conclude that either Anselm's argument is invalid, or else it possesses at least one unacceptable premise. However—and this is, according to taste, either the charm or the frustration of Anselm's *Proslogion 2* argument—there is no straightforward way to decide whether we should say that the argument is invalid, or that exactly one of the premises is false, or that both of the premises are false, or that more than one of these claims is correct.

There have been many attempts in the recent literature to give formal and semi-formal renderings of Anselm's *Proslogion 2* argument; and there have been numerous recent attempts to set out a theoretical framework that makes sense of his talk of 'existence in the understanding', and of his distinction between existence in the understanding and existence in reality. (For discussion of the literature up until 1994, see Oppy (1996). For discussion of some of the more recent literature, see Oppy (2007a) (2007b).) The most striking feature of this recent literature is how vastly these many renditions and theoretical frameworks differ from one another. Perhaps unsurprisingly, the next most striking feature of this recent literature is how unsatisfying most of these renditions and theoretical frameworks are as attempted *interpretations* of the text that Anselm bequeathed to us. (In this context, it is interesting to note that Maydole accuses Anselm of having been mistranslated, or of having misspoken, because our text has it that 'the fool is convinced that something than which no greater can be conceived is in the understanding' when it should say that 'the fool is convinced that the *concept* of something than which no greater can be conceived is in the understanding'. According to Maydole, Anselm supposes that it is inconceivable

that one and the same thing could exist both in the understanding and in reality. Yet the evidence of the text surely says otherwise; consider, for example, the repeated use that is made of the word ‘alone’.)

In the light of the considerations advanced here, it seems to me to be pretty evident that no one should now suppose that Anselm’s *Proslogion 2* argument is a proof of its conclusion. Of course, that’s not to say that it is inconceivable that Anselm’s text might inspire the production of a proof of the existence of God; all I have suggested here is that we have good reason to suppose that plausible interpretations of Anselm’s text have not yielded cogent arguments for its conclusion. (Elsewhere—in Oppy (1996) (2006a)—I have argued that no one has yet produced a cogent *a priori* argument for the existence of God. While that claim—if correct—may provide some inductive support for the claim that we are unlikely ever to have a cogent *a priori* argument for the existence of God, it is also consistent with the claim that someone may someday discover such a proof.) However, even if the text itself has no direct lesson for us, there is clearly much to be learned about the argument, and much to be learned from the nearly millennial discussion that has followed the initial production of the text.

3. Maimonides (and Koons)

In his *Guide for the Perplexed*, Maimonides (1135-1204) sets out a number of arguments for the existence of God. There is some debate about exactly what attitude he had towards these proofs, and about how he might have reconciled these proofs with his apophatic theological views. Nonetheless, many have supposed that Maimonides intended to defend the standing of the arguments that he sets out as proofs; and some have supposed that we can more or less follow Maimonides in supposing that the arguments that he sets out are successful proofs. So, for example, Koons (1997) sets out and defends an argument from contingency which he says ‘closely resembles Maimonides’ fourth proof’ (194).

The argument that Maimonides gives goes like this:

1. We see things pass from states of potentiality to states of actuality.
2. Whenever we see things pass from states of potentiality to states of actuality, we see agents for those transitions that are separate and distinct from those transitions.
3. Whenever agents for transitions from states of potentiality to states of actuality themselves pass from states of potentiality to states of actuality, those further transitions of those agents from states of potentiality to states of actuality themselves require agents that are separate and distinct from the initial agents and their transitions.
4. An infinite regress of agents of transition from states of potentiality to states of actuality is impossible.
5. (Hence) There must be an agent of transitions from states of potentiality to states of actuality in which there is no potentiality.

The argument that Koons gives goes like this:

1. For any x and y , x is a part of y iff everything that overlaps x overlaps y .

2. If there are some ϕ 's, then there exists a sum of all of the ϕ 's; for any x , x overlaps this sum iff x overlaps all of the ϕ 's.
3. For any x and y , $x=y$ iff x is a part of y and y is a part of x .
4. Situations necessitate the actual existence of their parts.
5. The actual existence of all of the members of a sum necessitates the actual existence of the sum.
6. Causation is a binary relation between actually existing situations.
7. Causes and effects do not overlap, i.e. they have no parts in common.
8. For any given wholly contingent situation x , there is a (defeasible) presumption that x has a cause.
9. (Therefore) If there are any contingently existing situations, then there is a necessarily existing situation that is the cause of the Cosmos, i.e. of the sum of all wholly contingent situations.

Clearly, there is room to argue about the extent to which Koons' argument really does closely resemble Maimonides' fourth proof. Moreover, the fact that there is such room points to some problematic features of contemporary discussions of arguments about the existence of God. I think that the only useful way to individuate arguments is in terms of the premises and conclusions: argument A is the same as argument B just in case (i) argument A and argument B have exactly the same premises; and (ii) argument A and argument B have exactly the same conclusion. After all, even the very smallest changes in the formulation of premises and conclusion of an argument can make an enormous difference to the standing of an argument: changing one word at one point in an argument can render a valid argument invalid (and vice versa), a true premise false (or vice versa), a non-question-begging argument question-begging (and vice versa), and so on. Moreover, I think, the only useful way to sort arguments into families is in terms of commonality of premises and/or conclusions: so, for example, there is the family of arguments that share the conclusion 'God exists'; and, within that family, there is the sub-family of arguments that share the premise 'All wholly contingent situations have causes'; etc. One consequence of the application of these standards is that labels like 'the ontological argument' and 'the cosmological argument' are poorly formed, since there is no premise that is common to all ontological arguments, and no premises that is common to all cosmological arguments. And, of course, another consequence is that it isn't true that Maimonides' fourth proof and Koons' argument from contingency belong to even one common family: the conclusions of these arguments are distinct, and there is no premise that is shared between them.

Even if I am right to think that we should not be too keen to follow Koons in thinking that his argument 'closely resembles' Maimonides' fourth proof, we can still ask ourselves whether either the argument of Maimonides' fourth proof or the argument that Koons develops—which is, perhaps, in some sense, inspired by Maimonides' fourth proof—is a successful argument. If scrutiny of medieval arguments for the existence of God inspires contemporary authors to produce successful arguments for the existence of God, then, one might think, that, in itself, would be good reason to prompt further consideration of those medieval arguments. So we turn, albeit briefly, to a consideration of the merits of the arguments developed by Maimonides and Koons.

On the one hand, it seems to me that no one should be keen to claim that the argument that we have attributed to Maimonides is such that contemporary naturalists ought to be persuaded by it. Naturalists are committed to something like the following view: causal reality is exhausted by natural reality; natural reality decomposes into (maximal) parts under the causal relation. Now, plausibly, if one part of natural reality under the causal relation ('A') is causally downstream from another part of natural reality under the causal relation ('B'), then the causing of A by B involves a transition from a state of potentiality to a state of actuality. But, of course, *ex hypothesi*, on the naturalist view, there is no agent for this transition: there is nothing beyond, or apart from, the states of natural reality and the causal relationships that hold between them. To insist on the truth of the third premise in the argument that Maimonides gives is simply to beg the question against naturalism. (Of course, we don't 'see' transitions between global states of natural reality; so naturalists are not automatically committed to the denial of the second premise in Maimonides' argument. Perhaps naturalists might want to deny that second premise as well; but it would take us well beyond the confines of the present discussion to explore this suggestion properly.) The proper conclusion to draw is that, at least for us in the twenty-first century, it is perfectly clear that Maimonides' argument is not a successful proof of its conclusion.

On the other hand, it is, at the very least, controversial whether we should suppose that Koons' argument is a successful proof of the existence of God. No doubt unsurprisingly, it seems to me that there is no reason for contemporary naturalists to suppose that Koons' argument provides them with good reason to revise their beliefs in the non-existence of God. The key question to ask is what naturalists might think about the global shape of natural reality. Is there an initial state of natural reality; and, if there is an initial state of natural reality, what is the modal status of that initial state? If naturalists suppose that there is no initial state, or if they suppose that there is a contingently obtaining initial state, then, at the very least, they will insist that the causal principle upon which Koons relies requires modification:

8'. For any given contingently existing *non-initial* situation, there is a (defeasible) presumption that x has a cause.

(If there is no initial state of natural reality, then an initial situation is any situation that overlaps with an infinite initial segment of natural reality.) And, of course, from this revised principle, you cannot get out the conclusion that there is a cause of the Cosmos. On the other hand, if naturalists suppose that there is a necessarily obtaining initial state of natural reality, then naturalists will insist that what Koons calls 'the Cosmos' is not quite the whole of natural causal reality—since, by definition, 'the Cosmos' is wholly contingent—and will accept with equanimity the conclusion that 'the Cosmos' has a necessarily obtaining cause (taking it that this necessarily obtaining cause is just the necessarily obtaining initial state of natural reality).

As in the preceding discussions, I must, of course, note that the views that I have stated here are controversial. For further considerations on the one side of the debate about the standing of Koons' argument, see Koons (1996) (2000) (2001) (2008); for considerations on the other side of this debate, see Oppy (1999) (2004) (2006a) (2010).

4. Aquinas (and Oderberg)

The treatment of arguments for the existence of God in the *Summa Theologiae* of Thomas Aquinas (c.1225-74) has become one of the staple topics in introductory philosophy. Generations of students have been invited to engage in detailed critical analyses of the Five Ways (*Summa Theologiae*, Part One, Question Two). Here, I shall just make some brief observations about the First Way (an argument that has some obvious affinities with Maimonides fourth proof, discussed in the section above):

1. Some things change.
2. Whatever changes is changed by something else.
3. There is no infinite regress of changing things.
4. (Hence) There is something that changes other things but that is not itself changed (which all call 'God').

While estimation of this argument has not been as consistently negative as estimation of Anselm's *Proslogion* 2 argument, nonetheless it has long been majority philosophical opinion that the argument fails. And, in recent times, the view has got about that this argument has been killed by Kenny. (Kenny (1969) claims that all of the Five Ways are marred both by argumentative errors—equivocations, fallacies, and so forth—and by reliance on outdated physics and cosmology.)

There are, however, some contemporary philosophers who give a much more positive estimation of the First Way. For example, Davies (2004) gives a very sympathetic exposition of a 'causal argument' that has affinities with each of the first three ways; while he does not explicitly claim that the First Way is a successful argument for its conclusion, it seems plausible to conjecture that he is sympathetic to that opinion. Other contemporary philosophers are even more forthright. Oderberg (2010) claims that the First Way has far more going for it than is commonly supposed: it is not tied to outdated cosmology, nor is it vitiated by the fallacies that Kenny levels at it. Indeed, in Oderberg's estimation, the First Way is a very strong argument, ripe for reinvestigation and reappraisal. He argues in detail that the second premise of the argument is 'plausible, defensible, and immune to the many ... criticisms fired at it by Kenny'; and he at least implicates that he also thinks that the same can be argued for the third premise, and for the claim that the First Way is a valid argument.

I think that it is quite implausible to suppose that the First Way is a cogent argument for the existence of God. If it were a cogent argument, it would have to defeat naturalism: the view that causal reality is exhausted by natural reality. Naturalists suppose that there is a fundamental causal relation that applies to the global states of natural reality: global states of natural reality are caused by antecedent global states of natural reality (except in the case of the initial global state of natural reality, if there is such a state). Naturalists suppose that the global state of natural reality changes—but, of course, they do not suppose that it is changed by something else. Does this mean that naturalists must deny premise 2 of the First Way? No. Naturalists suppose that change in the global state of natural reality is constituted by changes in states of local parts of natural reality—and so it remains open to them to insist that all changes in states of local parts of natural reality are changes in things that are brought about by changes in other things.

Here is a simple—non-quantum, non-relativistic—model that may help to fix ideas. Suppose that a global state of natural reality consists of a collection of massive particles distributed over a spatial manifold. Each of the massive particles is both a contributor to the gravitational field over the manifold, and something that is acted on by the gravitational field over the manifold. The evolution of the gravitational field over the manifold depends upon the evolution of the positions of the particles; and the evolution of the positions of the particles depends upon the evolution of the gravitational field. But the gravitational field has no existence independently of the existence of the massive particles: in the absence of the particles, there is no gravitational field over the spatial manifold.

In this simple model, there are only two things that change: the positions of the particles and the local values of the gravitational field. Moreover, in this model, it is true that the local values of the gravitational field entirely depend upon the positions of the massive particles; and, in this model, it is also true, for each of the massive particles, that the evolution of its position depends upon the evolution of the positions of all of the other particles—change in position of any one of the particles is brought about by the gravitational field (which, at the location of the particle in question can be thought of as the net gravitational effect that the other particles exert on it). So, in the model, Premise 2 of the First Way is true.

We can add to our simple model a specification of an initial state—an initial distribution of massive particles over the manifold. If we do this, then, in our simple model, Premise 3 of the First Way will also be true. And, of course, in our simple model, Premise 1 of the First Way is true. Yet, in our simple model, it is not obviously true that there is something that changes other things but that is not itself changed (never mind something that deserves to be called ‘God’).

Of course, so far, we have only considered a simple model. But it is easy to see that a fully developed naturalist view will preserve all of the essential features of the simple model. Naturalists may well be undecided about the question of infinite regress. Naturalists may well be undecided whether, if there is an initial natural state, then that initial natural state is necessary (and hence involving things that exist of necessity). However, naturalists will insist that there is no need to postulate an external ‘changer’ for natural reality: instead, we need only suppose that the evolution of natural reality is mutually interactive, in the manner of the massive particles and the gravitational field in our simple model. (Perhaps it might be said that mass is an unchanging changer in the simple model. Even if that is right—and even if it is also said that, in reality, there are certain ‘conserved quantities’ that are unchanging changers—it will remain the case that there are no grounds for identifying this unchanging changer—or those unchanging changers—with God.)

Kenny (1969) includes a discussion of a two-body universe that has some affinity to the simple model discussed above. Against Kenny, Oderberg (2010: 152-3) argues that Premises 2 and 3 of the First Way are false in Kenny’s two-body universe because, either it is in principle impossible to say whether either body is really being moved by something distinct from itself, or else there is an infinite loop of causal influence (since the influence of one body on the other influences the influence that the other body has on the one). Setting aside any consideration of the justice of these claims as criticisms of Kenny, it is clear that these criticisms get no purchase against

our simple model (and hence, also, that these criticisms get not purchase against the kind of naturalism that I have sketched). At the very least, we would need to be given very much more in order to defeat the suspicion that First Way is actually undermined by its reliance on outdated physics and cosmology.

Of course, there is much more to be said about the Five Ways. (For some of that further discussion, see, Oppy (2006a), and, of course, Kenny (1969).) However, I think that no one should now suppose that the First Way—or, indeed, any of the Five Ways—is a proof of its conclusion. Moreover, while, for all that I have argued here, it remains possible that the First Way might inspire a proof of the existence of God, I think that there are very good grounds for supposing that there are no extant successful causal cosmological arguments for the existence of God. (I argue for this conclusion in Oppy (2006a). Meyer (1989) provides an example of an interesting argument inspired by the Five Ways.) As before, I must add that I do not think that Aquinas's arguments are silly: if we have reason to think that the First Way is not a successful argument, this is in large part because of subsequent developments in our understanding of physics and cosmology.

5. Scotus (and O'Connor)

John Duns Scotus (1266-1308) provides a very complicated proof of the existence of God in his *De Primo Principio* (and elsewhere). In outline, the overall proof goes something like this:

1. There is exactly one first efficient cause.
2. There is exactly one first final cause, i.e. an ultimate goal of all activity.
3. There is exactly one first 'pre-eminent' being, i.e. a maximally excellent being.
4. Anything that is a first efficient cause is also a first final cause; anything that is a first final cause is also a first 'pre-eminent' being; and anything that is a first 'pre-eminent' being is also a first efficient cause.
5. (Hence) There is exactly one being that is a first efficient cause, a first final cause, and a first 'pre-eminent' cause. (From 1-4)
6. Anything that is a first efficient cause, a first final cause, and a first 'pre-eminent' cause is infinite, and endowed with will and intellect.
7. There is at most one being that is a first efficient cause, a first final cause, and a first 'pre-eminent' cause, infinite, and endowed with will and intellect.
8. (Hence) There is exactly one being that is a first efficient cause, a first final cause, and a first 'pre-eminent' cause, infinite, and endowed with will and intellect. (From 5-7)
9. (Hence) God exists. (From 8)

Each of the premises in this overall argument is supported by detailed sub-proofs. So, for example, the outline of the argument in support of the first premise goes something like this:

1. Some nature among beings can produce an effect.
2. Something able to produce an effect is simply first, i.e. it neither can be produced by an efficient cause nor does it exercise efficient causality in virtue of anything other than itself.

3. If what is able to cause effectively is simply first, then it is itself incapable of being caused, since it cannot be produced and is independently able to produce its effects.
4. A being able to exercise efficient causality which is simply first actually exists, and some nature actually existing is capable of exercising such causality.
5. A being unable to be caused is of itself necessarily existent.
6. It is the characteristic of but one nature to have necessary being of itself.
7. (Hence) There is exactly one first efficient cause. (From 1-6.)

And, of course, each of the premises in this sub-argument—and in all of the other sub-arguments—is supported by detailed sub-proofs. (I shall not exhibit further details of Scotus' argument here.)

I think that Scotus' proof is magisterial. I also think that it is pretty clear that no one should now regard it as a successful proof of the existence of God. As I indicated in my discussion in the previous section of this paper, it is not clear that naturalists need to object to the first premise in Scotus' overall argument; and not is it clear that naturalists need to object to any of the details in the sub-proof set out above. However, naturalists will certainly object to the second and third premises in Scotus' argument; and I think—though I cannot argue for this here—that the arguments that Scotus offers for his second and third premises are quite evidently not cogent. (There is, for example, no reason at all for naturalists to grant that there are final causes in nature.)

O'Connor (2008) defends an argument for the existence of God that has interesting affinities with Scotus' derivation. O'Connor divides his proof into two stages: the 'Existence' stage and the 'Identification' stage. The 'Existence' stage is quite similar to the sub-argument that Scotus gives for his first premise. However, in the 'Identification'—the stage that is meant to do the work of identifying the first efficient cause with God—O'Connor appeals, instead, to considerations about the apparent fine-tuning of the universe for life: at least roughly speaking, he claims that the apparent fine-tuning of the universe for life is best explained by the activity of a being endowed with will and intellect.

As I have argued in detail elsewhere—Oppy (2011) (forthcoming, b)—O'Connor's argument is no more cogent than Scotus' derivation: naturalists can plausibly and reasonably claim that, on any view that one might take about the *scope* of the fine-tuning for life of causal reality, the naturalist hypothesis affords at least as good an explanation of that apparent fine-tuning at no greater theoretical cost. (Very crudely: If the fine-tuning is present throughout the whole of causal reality, then it might be necessary or it might be brutally contingent: but, either way, there is no theoretical advantage that accrues to theism but not to naturalism. And, if the fine-tuning is present only in part of causal reality, then, on any account, it is ultimately a matter of objective chance—and so, again, there is no theoretical advantage that accrues to theism but not to naturalism.)

Of course, even if I am right about the standing of O'Connor's argument, it remains open that there might be some *other* way of forging an identification between a first efficient cause and God. Perhaps, for example, considerations about the presence of consciousness and the presence of reason in the universe might be thought to do the trick. However, as things now stand, it seems to me that it is quite clear that no one

has yet produced a cogent argument of this kind. (For detailed defence of this claim, see Oppy (2006a).) While the derivation of *De Primo Principio* is clearly a major intellectual achievement, no one has found a way to update it to make it a compelling argument for twenty-first century (naturalistic) philosophers.

6. Standards

Here is a natural thought that one might have about the standards that an argument must achieve if it is to be counted as *cogent*: the argument must be such that it ought to convince anyone who does not already accept the conclusion of the argument to embrace that conclusion. So, for example, a cogent argument for the existence of God must be such that it ought to convince any atheist to accept the conclusion that God exists.

Some might suppose that this standard sets the bar too high. Perhaps it is too much to expect that a cogent argument ought to convince those who are already firmly of the opinion that the conclusion of the argument is false. Perhaps, instead, we should insist only that a cogent argument must be such that it ought to convince anyone who is undecided about the conclusion of the argument. On this apparently weaker standard, a cogent argument for the existence of God must only be such that it ought to convince any agnostic to accept the conclusion that God exists. (For a detailed discussion of these standards, see Oppy (forthcoming, a).)

On either view about the standards that an argument must achieve if it is to be counted as cogent, it is clear that the standard directs us to consider the views of those who do not already accept the conclusion of the argument: in order to determine whether we have a cogent argument for the existence of God, we need to consider whether that argument rules out worldviews that deny the existence of God, and we need to consider whether that argument establishes that worldviews that deny the existence of God are less probable or credible than worldviews that affirm the existence of God. But, in order to do either of these things, we need to give detailed consideration to the nature of the competing worldviews: we can't determine whether an argument rules out worldviews that deny the existence of God unless we have a clear view of the commitments of those worldviews; and we can't determine whether an argument establishes that worldviews that deny the existence of God are less probable or credible than worldviews that affirm the existence of God unless we have a clear view of the commitments of those worldviews.

For us, in the twenty-first century, naturalism—the view that causal reality is exhausted by natural reality—is one of the significant competitors to theism. If an argument neither rules out naturalism nor establishes that naturalism is less probable or credible than theism, then that argument simply cannot be a cogent argument for the existence of God. Because naturalism is a leaner theory than theism, i.e. a theory with fewer ontological and theoretical commitments, a cogent argument for theism needs either to show that naturalism is incoherent, or else to point to explanatory deficiencies in naturalism: explanatory gaps that both need to be filled and are filled by theism, and the like. However, when we consider medieval arguments for the existence of God, they are not plausible candidates to fit this bill: they are not plausible demonstrations that naturalism is incoherent, and nor are they plausible demonstrations that naturalism suffers from explanatory deficiencies that theism can

remedy. The above discussions of arguments from Philoponus, Anselm, Maimonides, Aquinas and Scotus are illustrations of this point; but I do not think that there are any arguments from the period that point to a different conclusion.

Doubtless it will be said that this result is hardly surprising: our authors did not frame their arguments in the light of a clear understanding of twenty-first century naturalism. Indeed, it is a plausible conjecture that our authors did not even entertain the possibility of coherent and comprehensive naturalistic conceptions of the world (let alone proceed to attempts to try to figure out the details of such conceptions). When we try to think seriously about the range of theories that our authors did take seriously, and about the conceptual resources that were available to them for the evaluation of that range of theories, then perhaps it should not seem so strange to us that they supposed that the arguments that they presented really were proofs of, or demonstrations of, or cogent arguments for, the existence of God. It is, I think, not too hard to see how Scotus' argument could seem quite compelling against a background in which, for example, the full schedule of Aristotelian causes is simply taken for granted. (Of course, there is more to say about the full range of things that need to be taken for granted in order to find Scotus' argument compelling. However, for the purposes of the current discussion, it is sufficient to have one example of an unargued assumption that is reasonably rejected by twenty-first century naturalists.)

If there is something to the considerations that I have just rehearsed, then I think that we are driven to the conclusion that no one should now expect to be able to take over the argumentative component of natural theology from medieval authorities. No one should now think that we can prove the existence of God by using the same arguments—or modified versions of the same arguments—that were current in medieval times. We cannot learn how to prove the existence of God from medieval arguments for the existence of God. However, as I have already insisted, this does not mean that we cannot learn anything from an examination of medieval arguments for the existence of God. Apart from learning something about things that we have ceased to take for granted since medieval times, we might also be encouraged to recognise and acknowledge limitations in our own abilities to construct proofs and cogent arguments in connection with perennially disputed philosophical questions.

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