Divine Causation

Many theists suppose that God belongs to the causal order. In particular, many theists suppose that God is the ultimate cause of everything else: everything else that exists, and everything that happens.

A good many theists suppose that considerations about the causal order provide reasons for thinking that God exists. Famously, Aquinas provided several proofs of the existence of God drawn from considerations about the causal order. According to Aquinas, it can be established that there is an unchanging cause of change—and that unchanging cause of change is God.

A good many theists also suppose that Aquinas' proofs are securely founded in Aristotelian principle: *ex nihilo nihil fit*. Since nothing comes from nothing, naturalistic worldviews—which maintain that the causal order is exhausted by the natural order—stand refuted.

Often enough, theists observe that the Aristotelian principle is universally confirmed by experience: none of us ever observes things popping into existence uncaused. Sometimes, theists maintain that no principle has stronger support from experience than the principle that nothing comes from nothing.

However, there are other causal principles that are also universally confirmed by experience, and which are in tension with widely accepted theistic claims. In particular, it is plainly true that none of us has ever observed a case in which one thing causes a change in a second thing without itself undergoing any change. In the domain of putative fundamental explanatory principles, no *causing without changing* is just as well-credentialed as *nothing comes from nothing*. And this fact has various interesting consequences. Or so I shall argue.

1

Craig (1979) provides a three-fold defence of the principle that *nothing comes from nothing*. He argues: (1) that it is intuitively obvious that nothing comes from nothing; (2) that Hume's attempt to show that the universe could have come from nothing fails to show this to be a real possibility; and (3) that the principle that nothing comes from nothing admits of two more elaborate defences.

First, he says that the principle is so intuitively obvious—particularly when applied to the entire universe—that no one really believes it to be false. 'That something should spring into existence out of nothing is so counter-intuitive that to attack Maimonides and Aquinas at this point seems to colour one's intellectual integrity. The principle *ex nihilo nihil fit* appears to be so manifestly true that a sincere denial of this axiom is well-nigh impossible.'

Second, he says that it is a mistake to suppose that imaginability entails real possibility. 'We can, in our mind's eye, picture the universe springing into existence uncaused; but the fact that we can construct and label such a mental picture does not mean that the origin of the universe could really have come about in this way.'

Third—the first of the two 'more elaborate defences'—he claims that the principle that nothing comes from nothing can be defended as an empirical generalisation based on the widest sampling of experience. 'Constantly verified and never falsified, the causal proposition may be taken as an empirical generalisation enjoying the strongest support experience affords.'

Fourth—the second of the two 'more elaborate defences'—he claims that the principle that nothing comes from nothing, while synthetic, is knowable *a priori*. 'Since the categories are objective features of both thought and reality, and since causality is one of these categories, the causal relation must hold in the real world, and the causal principle is a synthetic *a priori* proposition. It is *a priori* because it is universal and necessary, being a pre-condition of thought itself. But it is synthetic because the concept of an event does not entail the concept of being caused.'

2

As a warm-up exercise, we note that we can provide a rather similar—and clearly no less compelling—defence of the principle that there is *no causing without changing*. We shall claim—in synchrony with Craig—that: (1) it is intuitively obvious that there is no causing without changing; (2) Humean attempts to show that the universe could have been caused by something that never changes fails to show this to be a real possibility; and (3) the principle that there is no causing without changing admits of two more elaborate defences.

First, the principle that nothing brings about effects without itself undergoing change is so intuitively obvious—no matter to which subject matter it is applied—that no one really believes it to be false. That something should cause something else without itself changing is so counter-intuitive that to deny this principle seems to colour one's intellectual integrity. The principle that nothing brings about effects without itself changing appears to be so manifestly true that a sincere denial of this axiom is well-nigh impossible.

Second, it is just a mistake to suppose that imaginability entails real possibility. Sure, in our mind's eye, we can picture God bringing the universe into existence without there being any change in God. But the fact that we can construct and label such a mental picture does not mean that the universe could really have come about in this way.

Third—the first of two more elaborate defences—the principle that nothing brings about effects without itself changing can be defended as an empirical generalisation based on the widest sampling of experience. Constantly verified, and never falsified, the proposition that nothing brings about effects without itself changing may be taken as an empirical generalisation enjoying the strongest support experience affords.

Fourth—the second of two more elaborate defences—the principle that nothing brings about effects without itself changing is synthetic and yet knowable *a priori*. Since the categories are objective features of both thought and reality, and since causality is one of these categories, the causal relation must hold in the real world, and the principle that nothing brings about effects without itself changing must be a synthetic *a priori* proposition. It is *a priori* because it is universal and necessary,

being a condition of thought itself. But it is synthetic because the concept of an event does not entail the concept of being caused.

3

Aguinas' First Way runs as follows:

The first and most obvious way is based on change. It is certain, as a matter of senseobservation, that some things in this world undergo change. Now, whatever undergoes change is changed by something else. For nothing undergoes change except in so far as it is in potentiality with respect to the terms according to which it changes. Something brings about change, on the other hand, in so far as it is in actuality with respect to the terms according to which it brings about change. This is because to bring about change is precisely to bring something from potentiality to actuality; but a thing cannot be brought from potentiality to actuality except by something which is itself in actuality. Thus, something which is actually hot, like fire, makes something which is potentially hot—say, wood—to be actually hot, and, in that way, it changes it. Now it is not possible for the same thing to be, at the same time and in the same respect, in actuality and in potentiality, for what is actually hot cannot simultaneously be potentially hot, though it may simultaneously be potentially cold. So it is impossible that in the same respect and in the same manner, anything should be both that which brings about change and that which undergoes change, or that it should change itself. So whatever undergoes change must be changed by something else. Moreover, that something else, if it too undergoes change, must itself be changed by something else; and that in turn by yet another thing. But this cannot go on forever: because, if it did, there would be no first changer, and consequently, no changer at all, since second changers do not change except when caused to change by a first changer, just as a stick does not change the state of motion of anything, except when its state of motion is changed by a hand. And so we reach a first changer which is not changed by anything else—and this all men call God. (Adapted from Kenny (1969:6-7).)

The conclusion of the *First Way* entails that there is causing without changing: there is something that causes other things to change while not itself changing. Thus, the conclusion of the *First Way* directly contradicts the claim that there is no causing without changing. If we suppose that there is no causing without changing, then we must suppose that there is something seriously wrong with the argument of the First Way.

The principle that whatever undergoes change is changed by something else seems obviously mistaken. Consider causal reality: the sum of all causal items. Global states of causal reality are ordered under the causal relation. Since transition between global states of causal reality is itself causal, it follows immediately that the global state of causal reality undergoes change without there being anything else that causes this change.

Perhaps it will be objected that there are no global states of causal reality because there is no global foliation of causal reality under the causal relation. However, even if there is no global foliation of

causal reality under the causal relation, the conclusion remains the same: even if there is no global foliation of causal reality under the causal relation, there is—and can be—no causal entity outside of causal reality that causes the changes that occur within causal reality.

Aquinas argues for the claim that whatever undergoes change is changed by something else by appealing to the principle that a thing cannot be brought from potentiality to actuality, in a certain respect and manner, by something that it is not itself in actuality, in that same respect and manner. But this principle also seems obviously mistaken. Consider the following example. I am sitting on a chair holding a ball. The ball is potentially located on the bed across the other side of the room, even though it is actually located with me on the chair. But I do not need to make it the case that I am actually located on the bed—by moving across the room carrying the ball—in order to bring it about that the ball is actually located on the bed. Instead, I can simply throw the ball onto the bed. If I do this, then the ball changes from potentially lying on the bed to actually lying on the bed—but not as the result of anything that was already actually lying on the bed. (Kenny (1969:21-3) provides a more extensive catalogue of counterexamples to the principle that a thing cannot be brought from potentiality to actuality, in a certain respect and manner, by something that it is not itself in actuality, in that same respect and manner.)

While there is much more that might be said against the *First Way*, I think that I have already said enough to show that we should not look to the *First Way* for a defence of the claim that there is—or can be—causing without changing.

4

Here is a controversial claim about causes and changes in our universe: whenever an item A is a cause of a change in an item B, there is transfer of conserved quantities—mass-energy, linear momentum, angular momentum, electric charge, colour charge, weak isospin, etc.—from item A to item B. When a golf ball is projected down the fairway after being struck by a five iron, there is transfer of mass-energy and linear momentum from the five iron to the golf ball. When the sun causes growth in plants, there is transfer of mass-energy (and linear momentum) from the sun to the plants via light emitted from the sun and absorbed by the plants. When I deliberately raise my arm, events in my brain cause events in my arm, and there is transfer of mass-energy and electric charge along the nerves connecting my brain to my arm. And so on.

If it is true that, whenever an item A is a cause of a change in item B, there is transfer of conserved quantities from item A to item B, then it is true that there is no causing without changing: there can only be transfer of mass-energy—or linear momentum, or angular momentum, or electric charge, or colour charge, or weak isospin, etc.—from item A to item B if there is change in the mass-energy—or linear momentum, or angular momentum, or electric charge, or colour charge, or weak isospin, etc.—of item A.

Some may say that there are quantum causes in which there is no transfer of conserved quantities. However, even if we accept the controversial claim that quantum entanglement provides cases of causation in which there is no transfer of conserved quantities, this will not give us cases in which an

item A causes a change in item B even though there is no change in item A. For, in the kind of case in question, measurements on—i.e. changes to—an item A are found to be correlated with subsequent measurements on an item B. At least on standard interpretations, measurements on item A collapse the state of—and hence change—both item A and item B.

Some may say that there are cases of mental causation in which there is no transfer of conserved quantities. However, even if we accept the controversial claim that mental causes are cases of causation in which there is no transfer of conserved quantities, this will not give us cases in which an item A causes a change in item B even though there is no change in item A. Even on the dualistic assumption in which there is two-way interaction between mental events and neural events, there are no cases in which minds cause behaviour without there being any changes in minds. Whenever an action is performed, there are changes in mind—e.g. transitions in mental state that constitute the making of relevant decisions—among the causes of that action.

The overwhelming majority of causings of change in our universe involve transfers of conserved quantities or—if these do not involve transfers of conserved quantities—quantum entanglement or changes in states of minds. Thus, the overwhelming majority of causings of change in our universe are cases in which there is change in the items that do the causing. But this understates matters. As far as I have been able to determine, there is not even one plausible case of a causing of change in our universe in which there is no change in items that do the causing. One could hardly wish for a more "complete proof from experience".

5

The principle that nothing comes from nothing—that there are no cases in which things "pop into existence" in our universe without any prior cause—has a "proof from experience" that is no less "complete" then the "proof from experience" that there are no cases of causes of change in our universe where there is no change in the items that do the causing. When we trace back the causal histories of things that exist now to the point at which those things began to exist, we inevitably find causes for the beginning of existence of those things. No atoms, molecules, plants, animals, artefacts, cities, planets, stars, or galaxies have begun to exist without some cause of their beginning to exist.

Some may say that there are quantum cases in which things "pop into existence" without any prior cause. However—at least as far as I can tell—the quantum cases are of two kinds. On the one hand, there are cases in which real particles come into existence as a result of indeterministic causal processes. In these kinds of cases, it is not true that the particles come into existence without any cause; rather, all that is true is that the particles come into existence as a result of merely probabilistic causes. Probabilistic causes are causes; things that "pop into existence" without any cause whatsoever do not have probabilistic causes. On the other hand, there are cases in which it is said that virtual particles come into existence without any cause whatsoever. Here, there may be some division of opinion. Those who think that virtual particles are real assimilate this case to the first: virtual particles have probabilistic causes of their coming into existence, and so do not "pop into existence" without any cause. But others deny that virtual particles are real: on this view, virtual

particles are mere mathematical artefacts that facilitate calculation of the properties of real particles. Either way, quantum cases provide no support for the claim that there are things that "pop into existence" without any prior cause.

Some may say that there are mental entities—ideas, decisions, feelings, etc.—that "pop into existence" without any prior cause. Of course, those who suppose that mental entities are physical entities—e.g. those who suppose that mental events are neural events—will immediately deny that it is ever the case that mental states have no cause whatsoever. But even dualists who suppose that there is two-way interaction between mental events and neural events should accept that ideas, decisions, feelings and the like at least have probabilistic causes. It is no more plausible to suppose that the idea of a large hadron collider might have "popped into existence" uncaused in Socrates' mind than it is to suppose that a large hadron collider might have "popped into existence" uncaused in Socrates' backyard.

The overwhelming majority of cases of coming into existence in our universe are cases in which there are prior causes of the coming into existence. But this understates matters. As far as I have been able to determine, there is not even one plausible case of something coming into existence in our universe without some cause of its coming into existence. The "proof from experience" is, indeed, "complete".

6

Even if it is true that there are no cases in which things "pop into existence" uncaused in our universe, it might—for all that has been argued to this point—be possible for things to "pop into existence" uncaused in our universe.

I think that there is a compelling argument for the conclusion that it is not possible for physical things to "pop into existence" uncaused in our universe. Suppose that it is claimed that it is possible for a certain kind of physical thing—an F-thing—to "pop into existence" uncaused in our universe. Given that F-things are physical objects, they have certain kinds of spatial properties including, most importantly for our purposes, shape. Whenever and wherever an F-thing exists, it occupies a volume of space that has exactly the same shape as the F-thing itself. Moreover, whenever and wherever an F-thing exists, it occupies a volume of space that is not occupied by anything that would make it impossible for an F-thing to occupy that volume of space. Consider any F-thing-shaped space. In order for it to come to be the case that that F-thing-shaped space is occupied by an F-thing, it must come to be the case that the F-thing-shaped space is not occupied by anything that would make it impossible for an F-thing to occupy that volume of space. But any F-thing-shaped space that is not currently occupied by an F-thing is occupied by things that would make it impossible for an F-thing to occupy that F-thing-shaped space. So, in order to make it possible for an F-thing to "pop into existence" in the F-thing-shaped space under consideration, we must first remove from that F-thingshaped space the things that currently make it impossible for an F-thing to occupy it. But, in the event that an F-shaped-thing "popped into existence" in the F-shaped-thing space, the removal from the F-thing-shaped space of things that currently make it impossible for an F-thing to occupy

that space would be a cause of that "popping into existence". Whence it follows that the "popping into existence" would not, after all, be an *uncaused* "popping into existence". (For further discussion of this argument—including replies to possible objections—see Oppy (2010) (forthcoming).)

The argument that I have just given reaches the conclusion that it is not possible for physical things to "pop into existence" *uncaused* in our universe. It is not an argument for the conclusion that it is not possible for physical things to "pop into existence" in our universe. I do not think that it is possible for physical things to "pop into existence" in our universe; but it is beyond the scope of the present article to try to argue for that further claim.

7

Even if it is true that there are no causes of change in our universe in which there is no change in the items doing the causing, it might—for all that has been argued to this point—be possible for there to be causes of change in our universe in which there is no change in the items doing the causing. However, it seems to me that there is an argument for the conclusion, that it is not possible for there to be causes of change in our universe in which there is no change in the items doing the causing, that is about as compelling as the argument given in the previous section for the conclusion that that it is not possible for physical things to "pop into existence" uncaused in our universe.

Consider a case in which a physical item, A, causes a change in the properties of a physical item, B. In order for A to cause a change in the properties of B, it must be that A exerts a physical force on B. But, if A exerts a physical force on B, then B exerts a physical force on A. (There can be no action without reaction.) And, if B exerts a physical force on A, then B brings about a physical change in A. Elementary considerations about the action of forces establish that there can be no causes of change in our universe in which there is no change in the items doing the causing.

The argument just given is a very close cousin of the argument given in Section 4 above: *no causing without exchange of conserved quantities* and *no action without reaction* are very closely aligned principles. So the same 'hard' cases—quantum mechanics and dualistic mental states—need to be considered again. However, the story goes the same way as it did before: it is not the case that there is causing without changing in the case of quantum entanglement; and it is not the case that there is causing without changing in the case of dualistic mental causation. We have the best of reasons for thinking that it is not possible for there to be causing of change in our universe in which there is no change in the items doing the causing.

8

Some may be tempted to object to the claim that it is not possible for physical things to "pop into existence" *uncaused* in our universe with something like the following argument: It is clearly possible to conceive of a rabbit coming into existence without a cause. But, given that it is possible to

conceive of a rabbit coming into existence without a cause, it is possible for a rabbit to come into existence without a cause. So it is clearly possible for a rabbit to come into existence without a cause.

In response to this argument, Anscombe (1974:150) says:

The trouble about it is that it is very unconvincing. For if I say I can imagine a rabbit coming into being without a parent rabbit, well and good: I imagine a rabbit coming into being, and our observing that there is no parent rabbit about. But what am I to imagine if I imagine a rabbit coming into being without a cause? Well, I just imagine a rabbit coming into being. That this is the imagination of a rabbit coming into being without a cause is nothing but, as it were, the *title* of the picture. Indeed, I can form an image and give my picture that title. But from my being able to do that, nothing whatever follows about what is possible to suppose 'without contradiction or absurdity' as holding in reality. (Italics in the original)

Taken straight up, this doesn't seem very convincing. If it were true that imagining a rabbit coming into being without a parent rabbit were imagining a rabbit coming into being while observing that there is no parent rabbit about, then imagining a rabbit coming into being without a cause would be imagining a rabbit coming into being while observing that there is no cause in the offing. And, if the first were fine, then surely the second would be so as well.

Suppose that imagining a rabbit coming into being without a parent rabbit is just imagining a rabbit coming into being while observing that there is no parent rabbit about. That is, suppose that, if—for example—you imagine a rabbit coming into existence as a result of cloning or genetic engineering, then you're doing much more than merely imagining a rabbit coming into being without a parent rabbit. Then, I take it, nothing at all follows about whether your imagining a rabbit coming into being without a parent rabbit gives you grounds for supposing that it is possible that a rabbit come into being without a parent rabbit. If you are at all persuaded by the idea that the imagination of a rabbit coming into being without a cause is nothing but, as it were, the *title* of a picture, then it seems to me that you should be persuaded by the idea that the imagination of a rabbit coming into being without a parent rabbit is also nothing but, as it were, the *title* of a picture.

The right thing to say here, I think, is that imaginability—or conceivability—is a very poor guide to possibility, particularly if the imagining or conceiving contains nothing by way of detail. That there is no contradiction or formal absurdity in the claim that there is a rabbit that came into being without a parent is not a good ground for maintaining that it is a real live possibility that a rabbit come into being without a parent; and, equally, that there is no contradiction or formal absurdity in the claim that there is a rabbit that came into being without a cause is not a good ground for maintaining that it is a real live possibility that a rabbit come into being without a cause.

Of course, you can tell a story about a rabbit that "materialises out of thin air", i.e. that suddenly appears in a particular spatio-temporal location, not having occupied any earlier spatio-temporal location (either in objective time or in the rabbit's "personal" time); and it can be part of the story that there is no explanation of the appearance of the rabbit. But—as we have already seen—we have the best of reasons for thinking (a) that this kind of thing does not happen in our universe; and (b) that this kind of thing could not happen in our universe. Moreover, if we suppose that other

universes are suitably similar to universe—say, because operating according to the same laws as our universe, sharing some initial history with our universe, and diverging from our universe only as a result of the outplaying of objective chance—then we shall also suppose (c) that this kind of thing could not happen in any possible universe.

9

Some may be tempted to object to the claim that it is not possible for causes of change in our universe in which there is no change in the items doing the causing with something like the following argument: It is clearly possible to conceive of God's causing change in our universe even though there is no change in God. But, given that it is possible to conceive of God's causing change in our universe even though there is no change in God, it is possible that for God to cause change in our universe even though there is no change in God. So it is clearly possible for God to cause change in our universe even though there is no change in God.

Given the way that Anscombe responded to the case of imagining a rabbit popping into existence without a cause, it seems that Anscombe ought to respond to this argument in the following way: Your imagining—or conceiving—of God's causing change in our universe even though there is no change in God is nothing but, as it were, the *title* of a picture. Moreover, however strongly you may be inclined to think that the imagination of a rabbit coming into being without a cause is nothing but, as it were, the *title* of a picture, you should be no less strongly inclined to think that imagination of God's causing change in our universe even though there is no change in God is nothing but, as it were, the *title* of a picture.

When you imagine a rabbit coming into being without a cause, perhaps your "picture" is like this: first, you imagine an empty "picture frame"; and then you imagine the same "picture frame", but now containing a rabbit. If you like, there can be a background to your "picture": say, a corner of your backyard. In your imagination, the rabbit just "pops" into the "picture frame"; and, since there is nothing else that happens, it seems appropriate to give the whole scenario the title "rabbit popping into existence without a cause".

When you imagine God causing a rabbit to pop into existence without there being any change in God, the "picture" is perhaps like this: first, you imagine a "picture frame" that contains God. True enough, it's a bit tricky to say what God "looks like"—but it really doesn't matter for the purposes of the example. Then, you imagine the same "picture frame", unchanged except for the fact that it contains a rabbit. In your imagination, the rabbit just "pops into" the "picture frame"; and, since there is nothing else that happens, it seems appropriate to give the whole scenario the title "God causes a rabbit to pop into existence without there being any change in God".

It's an interesting exercise to compare two cases. First, imagine a case in which, in a world containing God, a rabbit "pops into existence" without a cause. Second, imagine a case in which, in a world containing God, God causes a rabbit to "pop into existence" without any intrinsic change in

God. In terms of what is "pictured", there seems to be no difference between the two cases: all that changes is, as it were, the title that is given to the picture.

10

In the discussion to this point, we have only considered how things stand within our universe. It is not very controversial to claim that, within our universe, there have been, are, and will be no cases in which things "pop into existence" without any prior cause; and nor is it very controversial to claim that, within our universe, there could be no cases in which things "pop into existence" without any prior cause. Equally, it is not very controversial to claim that, within our universe, there have been, are, and will be no cases in which items cause change in other items without undergoing change themselves; and nor is it very controversial to claim that, within our universe, there could be no cases in which items cause change in other items without undergoing change themselves. However, when we turn to consider the existence of the universe itself, matters become much more interesting. (Throughout this paper, the word "universe" is interchangeable with the expression "natural reality". If, for example, natural reality is a multiverse, then, in this paper the word "universe" refers to that multiverse.)

According to (some) naturalists, the universe exhausts causal reality: there is no causing outside of the universe. *A fortiori*, according to (those) naturalists, there is no cause of the existence of the universe.

According to (some) theists, God is the unchanging cause of the existence of the universe. *A fortiori*, according to (those) theists, there is no cause of the existence of God. (For ease of exposition, I shall suppose that our theists maintain that there is nothing that God causes to exist other than our universe.)

Consider, first, the principle that nothing "pops into existence" without a cause. If the universe "pops into existence", then—on pain of inconsistency—our naturalists must reject the principle. If God "pops into existence", then—on pain of inconsistency—our theists must reject the principle.

What is it for something to "pop into existence"? One way to understand this expression is to treat "existence" as a domain: to "pop into existence" is to join the (already populated) domain of existing things. On this way of understanding the expression "pop into existence", our naturalists deny that the universe "pops into existence", and our theists deny that God "pops into existence". Given this understanding of the expression "pop into existence", our naturalists and our theists can both accept the principle that nothing "pops into existence" without a cause.

Another way to understand this expression is to treat "popping into" as a locative device in the causal order: a thing "pops into existence" just in case there is a prior part of the causal order at which it does not exist. Again, on this way of understanding the expression "pop into existence", our naturalists deny that the universe "pops into existence", and our theists deny that God "pops into existence". Given this understanding of the expression "pop into existence", our naturalists and our theists can both accept the principle that nothing "pops into existence" without a cause.

A third way to understand the expression "pop into existence" is as a locative device in logical—or modal—space: a thing "pops into existence" just in case it is exists and it is not necessary that it exists. So far, we have left it open whether our naturalists suppose that it is necessary that the universe exists; and we have left it open whether our theists suppose that it is necessary that God exists. If our naturalists suppose that it is necessary that the universe exists, then they will deny that the universe "pops into existence", and they will be able to accept the principle that nothing "pops into existence" without a cause; however, if our naturalists suppose that it is not necessary that the universe exists, then they will accept that the universe "pops into existence", and they will reject the principle that nothing "pops into existence" without a cause. If our theists suppose that it is necessary that God exists, then they will deny that God "pops into existence", and they will be able to accept the principle that nothing "pops into existence" without a cause; however, if our theists suppose that it is not necessary that God exists, then they will accept that God "pops into existence", and they will reject the principle that nothing "pops into existence" without a cause; however, if our theists suppose that it is not necessary that God exists, then they will accept that God "pops into existence", and they will reject the principle that nothing "pops into existence" without a cause.

Perhaps there is some other way of understanding the expression "pop into existence". However, even if there is, it seems pretty clear that there will be no distinction between our naturalists and our theists in terms of their entitlement to the principle that nothing "pops into existence" without a cause. On the one hand, when we fix our attention on how things stand within our universe, theists and naturalists have common reason to accept or reject the principle; and, on the other hand, when we fix our attention on how things stand with the universe as a whole, theists and naturalists again have common reason to accept or reject the principle. (I have argued elsewhere that these kinds of considerations show that there are no successful cosmological arguments for the existence of God. See Oppy (2010) (2011) (2012) (2013) (2014) (forthcoming).)

Consider, second, the principle that there are no items that cause change in other items without themselves undergoing change. On the one hand, if—as we argued above—there is good reason to suppose that this principle holds, and must hold, within the universe, then there is good reason for naturalists to suppose that this principle is true. On the other hand, even if—as we argued above—there is good reason to suppose that this principle holds, and must hold, within the universe, theists are obliged to reject this principle if they suppose that God is an unchanging cause of change. Whereas there is no reason to suppose that the principle that *ex nihilo nihil fit* has differential impact on naturalists and theists, it is obvious that the principle that there are no items that cause change in other items without themselves undergoing change can have differential impact on naturalists and those theists who think that God is an unchanging cause of change.

11

Suppose that you are the kind of theist who supposes that God is an unchanging cause of change. Suppose—to fix ideas a little more—that you think that God is perfect, simple, eternal, impassible, absolutely independent, infinite, necessary, fundamental and incorporeal. How should you respond to the considerations advanced to this point in this paper?

One thing that you should certainly do is to repudiate the idea that the principle *ex nihilo nihil fit* is justified simply as a generalisation from experience. If it were a satisfactory strategy to infer fundamental metaphysical principles from our experience of things within the universe, then you would be saddled with contradiction—because, as we've seen, our experience supports the generalisation that no items cause change in other items without themselves undergoing change. Of course, if you buy my further claim that the principle *ex nihilo nihil fit* has no differential impact on theists and naturalists, then you have no reason to regard such repudiation as a loss: even if there is some other way of justifying acceptance of the principle, possession of the principle will not provide you with a reason to prefer theism to naturalism.

Another thing that you should certainly do is to repudiate the total package of arguments that Craig (1979) offers on behalf of the principle *ex nihilo nihil fit*. If it were a satisfactory strategy to accept that principle on the basis of the considerations that Craig advances, then you would be saddled with contradiction—because, as we've seen, it would plainly be a no less satisfactory strategy to accept the principle that no items cause change in other items without themselves undergoing change on the basis of a precisely analogous package of considerations. As before, if you buy my further claim that the principle *ex nihilo nihil fit* has no differential impact on theists and naturalists, then you have no reason to regard such repudiation as a loss: even if there is some other way of justifying acceptance of the principle, possession of the principle will not provide you with a reason to prefer theism to naturalism.

Given the considerations advanced to this point, should you be worried that the principle—that no items cause change in other items without themselves undergoing change—gives you reason to doubt that there is a perfect, simple, eternal, impassible, absolutely independent, infinite, necessary, fundamental and incorporeal being? I don't think so.

I do think that if we restrict our attention to evidence about causation and causal origins, then we do have reason to prefer naturalism to theism. Theism postulates more entities—and more kinds of entities—than naturalism, and it invokes more complicated causal principles. Both on point of ontology and ideology, naturalism has greater simplicity than theism. Yet there is no theoretical advantage that theism purchases—using its additional ontology and ideology—in connection with the data about causation and causal origins. (Again, see Oppy (2010) (2011) (2012) (2013) (2014) (forthcoming) for more elaborate development of these considerations.)

But, of course, the evidence that bears on 'choice' between naturalism and theism far outruns evidence about causation and causal origins. Weighing of naturalistic and theistic worldviews should also take account of considerations about: cosmic fine-tuning; physical law; biological evolution; consciousness; reason; abstract objects; mathematics; logic; moral requirements; moral values; aesthetic values; meaning; purpose; good and evil; reports of miracles; reports of religious experience; reports of anomalous experience; the texts of the religions of the world; and so forth. Even if it is true that evidence about causation and causal origins does not enable theism to claw back any of the ground that it loses to naturalism on account of its additional ontology and ideology, it hardly follows that total evidence does not enable theism to more than claw back all of the ground that it loses to naturalism on accounts of its additional ontology and ideology. In order to determine whether theism does more than claw back all of the ground that it loses to naturalism on accounts

of its additional ontology and ideology, there is no alternative to careful examination of all of the relevant evidence.

12

There are many loose ends in the preceding discussion. Let me wind up by tying a couple of them.

First, I expect that some will wish to dispute the claim that, if there is an initial natural state, it—or the entities that figure in it—can have the same ontological status that perfect theists wish to ascribe to God. Suppose—for the sake of simplicity—that, in the initial natural state is the initial state of a single entity: 'the initial singularity'. I maintain that naturalists can perfectly well accept that the initial singularity exists of necessity: there is no possible world in which the initial state is not an—or perhaps even the—initial state of the initial singularity.

Some theists may object that God is not merely necessarily existent: God exists *a se*, in perfect independence from anything else. But, in fact, if the story that I have just told about the initial singularity is true, then the initial singularity also exists in absolute independence from anything else. After all, there is nothing that exists prior to the initial singularity; and there is nothing else that exists in the initial natural state.

Some theists may object that, since all of the natural objects with which we are familiar are plainly contingent, we ought to believe that the initial singularity is contingent. But the very considerations that are appealed to in traditional cosmological arguments, if cogent, would undermine this objection. If we are focussed only on the causal evidence, and we bear in mind considerations about ontological and ideological economy, then we clearly do better to suppose that the initial singularity is necessary than we do to suppose that there is a perfect, simple, eternal, impassible, absolutely independent, infinite, necessary, fundamental and incorporeal creator of the initial singularity. Whether the best theory is one according to which there is a necessarily existent initial singularity is a matter to be determined in the light of total evidence, taking account of the theoretical virtues of all of the theories that are in competition with it.

Second, I expect that some will wish to object to my analysis of Aquinas' First Way on the grounds that Aquinas's argument is not concerned with historical chains of causes, but rather with contemporaneous chains of causes. If something is now in a process of change, then, right now, it is being caused to change by something else. Either that thing is not currently in process of change, or it, too, is being caused to change by something else. Since there cannot be an infinite regress, there is something right now that is not itself undergoing change, but which is causing change in other things.

This version of the argument is worse than the argument that I discussed in Section 3 above. For it is obvious that there are things that are now in process of change even though there is no other thing that is, right now, causing that change. Recall the example of the ball being thrown from the chair to the bed. Consider the ball when it is in the air, midway between the chair and the bed. Right then, the ball is undergoing real change—it is travelling horizontally from the bed to the chair. But there is

no agent that is causing the positive horizontal component of the motion of the ball—i.e. the horizontal motion of the ball from the chair to the bed—at that point: the only forces acting on the ball are the vertical force of gravity, and the frictional forces of the air, neither of which makes any positive contribution to the horizontal component of the motion of the ball.

Third, Anscombe's views about conceivability and possibility are now rather old hat, and arguably deserve shorter shrift than I gave them. Suppose that we have some fairly extensive, logically consistent theory of the world: T. Even though there is no formal logical inconsistency in the claim that rabbits sometimes pop into existence uncaused, there may well be formal logical inconsistency in the set of claims {T, rabbits sometimes pop into existence uncaused}. When we say that it is not really possible for rabbits to pop into existence uncaused, one thing that we might mean is just this: that if we add the claim—that rabbits sometimes pop into existence uncaused—to the large body of knowledge—or well-founded belief—that we have about our universe, we end in formal logical inconsistency. That we can make models for the sentence 'rabbits sometimes pop into existence uncaused' does not entail that we can make models for the set of sentences {T, rabbits sometimes pop into existence uncaused}.

Fourth, I should mention that I am well aware that not all theists believe in a perfect, simple, eternal, impassible, absolutely independent, infinite, necessary, fundamental and incorporeal creator of our universe. Some theists—e.g. process theists—accept that God changes whenever God acts. Those theists can perfectly well accept both the principle ex nihilo nihil fit and the principle that no items cause change in other items without themselves undergoing change.

13

There are many interesting questions about divine causation. I discussed a range of these questions in Oppy (2014); competing discussions may be found in Dawes (2009), Fales (2010), Johnston (2009), Koons (2000), O'Connor (2008), and Saunders (2002). In this paper, I have discussed a further question that was not examined in Oppy (2014). I do not think that anything that I have argued here makes difficulties for the claim that there is a perfect, simple, eternal, impassible, absolutely independent, infinite, necessary, fundamental and incorporeal creator of our universe. However, my aim here was not to try to provide defeaters for the claim that there is a perfect, simple, eternal, impassible, absolutely independent, infinite, necessary, fundamental and incorporeal creator of our universe. Rather my aim was to add a little more to my on-going case for the claim that considerations about causation do nothing to make theism more attractive than naturalism.

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