Leibniz’s cosmological argument

So far we have discussed two of Aquinas' arguments for the existence of God. These are each versions of the cosmological argument --- so called because they are attempts to argue from the existence of the cosmos -- the universe -- to the existence of God.

The aspects of the cosmos on which those two arguments focused were different. Aquinas' second way focused on the fact that the cosmos contained beings which have been caused to exist, while the third way focused on the fact that the cosmos contains contingent beings -- beings who could have failed to exist.

Our topic today is an attempt by a later philosopher, Gottfried Leibniz, to improve on Aquinas' third way.

Leibniz was a German philosopher, mathematician, theologian, and scientist, whose achievements included the invention of calculus. Indeed, his intellect and achievements were such that they led Diderot, a later French philosopher, to remark that

> *"When one compares the talents one has with those of a Leibniz, one is tempted to throw away one's books and go die quietly in the dark of some forgotten corner."*

As we'll see, Leibniz agreed with Aquinas that reflection on the nature of necessity and possibility was enough to show the existence of God; and, moreover, Leibniz managed to find a line of reasoning for this conclusion which avoids the two main problems we discussed with Aquinas' argument.

Leibniz's argument is best thought of as beginning with a question which he poses at the end of the first paragraph of our reading for today:

> Why is there any world at all, and why is it the way that it is?

Leibniz's core thought is that this question must have an answer, and that the only satisfactory answer to this question will involve God.

Leibniz thought that there must be some explanation of why there is a world at all because he endorsed a certain principle about explanation, known as the *principle of sufficient reason*.

The basic idea behind the principle is this:

> Take any feature of the world. If the world *could have* failed to be that way, then there must be some explanation of why the world *is* that way.

So, for example, we might notice that although the sky is blue, it might not have been -- the sky on earth could have failed to be blue. Given only this, Leibniz concludes that there must be some reason, or explanation, why the sky is blue: some reason why it is blue rather than some other color.

This sort of example suggests the following version of the principle of sufficient reason:

> Principle of sufficient reason
>
> Any contingent fact about the world must have an explanation.

Does this principle seem plausible to you? Can you think of any arguments for it?

Principle of sufficient reason

Any contingent fact about the world must have an explanation.

BEYOND THE WORLD, that is, beyond the collection of finite things, there is some One Being who rules, not only as the soul is the ruler in me, or, better, as the self is the ruler in my body, but also in a much higher sense. For the One Being who rules the universe not only rules the world, but also fashions or creates it; he is above the world, and, so to speak, extramundane, and therefore he is the ultimate reason for things. For we cannot find in any of the individual things, or even in the entire collection and series of things, a sufficient reason for why they exist. Let us suppose that a book on the elements of geometry has always existed, one copy always made from another. It is obvious that although we can explain a present copy of the book from the previous book from which it was copied, this will never lead us to a complete explanation, no matter how many books back we go, since we can always wonder why there have always been such books, why these books were written, and why they were written the way they were. What is true of these books is also true of the different states of the world, for the state which follows is, in a sense, copied from the preceding state, though in accordance with certain laws of change. And so, however far back we might go into previous states, we will never find in those states a complete explanation [*ratio*] for why, indeed, there is any world at all, and why it is the way it is.

Our next task is to understand how Leibniz uses the principle of sufficient reason to argue for the existence of God.

His key premise seems to be that if nothing existed besides the sorts of things we find in the world, there would be no explanation of why these things exist.

Principle of sufficient reason

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He illustrates this point by his example of the geometry books.

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Our next task is to understand how Leibniz uses the principle of sufficient reason to argue for the existence of God.

His key premise seems to be that if nothing existed besides the sorts of things we find in the world, there would be no explanation of why these things exist.

He illustrates this point by his example of the geometry books.

Leibniz thinks that, even we can explain the existence of each of the geometry books by the one from which it was copied, we can't explain why these books exist at all.

And what goes for the geometry books, Leibniz thinks, goes for the world as a whole. Even if we can explain one state of the world in terms of the preceding state of the world, we lack an explanation of the fact that there is a world at all.

So far, we might sum up Leibniz's key ideas as follows:

- Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

- The fact that the world exists must have an explanation.

- The fact that the world exists can't be explained by any of the things in the world.

One question you might have is: if these claims are all true, what does that show? But let's put that to the side for a second, and focus on the relationship between the first and second of these claims. What does Leibniz seem to think that the relationship between these claims is?

What must be true of the existence of the world for the second of these claims to follow from the principle of sufficient reason?

But is it true that it is contingent that the world exists? In other words, is it possible that there could have been no world? What are we imagining when we imagine there being no world?

So far, we might sum up Leibniz's key ideas as follows:

- Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

- So, the fact that the world exists must have an explanation.

- The fact that the world exists can't be explained by any of the things in the world.

But is it true that it is contingent that the world exists? In other words, is it possible that there could have been no world? What are we imagining when we imagine there being no world?

I think that what we are imagining is a world in which none of the things that now exist are around. So, for example, we imagine a world in which there are no people, or buildings, or planets, or matter, or anything. But the fact that we are inclined to describe this as a *world* in which none of these things exists means that it is perhaps not best to express what we are imagining as "there being no world."

A more precise way of putting the idea (and one which Leibniz seems to have had in mind) might be: we can imagine there being *no contingent things*.

So far, we might sum up Leibniz's key ideas as follows:

- Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

- So, the fact that the world exists must have an explanation.

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A more precise way of putting the idea (and one which Leibniz seems to have had in mind) might be: we can imagine there being *no contingent things*.

This suggests a reformulation of the claims above:

Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

The fact that there are contingent things must have an explanation.

The fact that there are contingent things can't be explained by any contingent things.

Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

The fact that there are contingent things must have an explanation.

The fact that there are contingent things can't be explained by any contingent things.

Further, we can make explicit the extra premise needed to get from the first of the above claims to the second:

It is a contingent fact that there are any contingent things.

Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

It is a contingent fact that there are any contingent things.

The fact that there are contingent things must have an explanation.

The fact that there are contingent things can’t be explained by any contingent things.

1. Any contingent fact about the world must have an explanation. (the principle of sufficient reason)

2. It is a contingent fact that there are any contingent things.

3. The fact that there are contingent things must have an explanation. (1,2)

4. The fact that there are contingent things can't be explained by any contingent things.

Once we see the premises laid out in this way, the similarity to Aquinas' argument is apparent: it follows from (3) and (4) that

> 5. The fact that there are contingent things must be explained by something which is not contingent.

And a being which is not contingent is a being which not only exists, but also could not fail to exist -- that is, a necessary being.

Leibniz's cosmological argument

1. Any contingent fact about the world must have an explanation. (PSR)
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4. The fact that there are contingent things can't be explained by any contingent things.
5. The fact that there are contingent things must be explained by something which is not contingent. (3,4)

C. There is a necessary being. (5)

Is this argument valid?

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Is this argument valid?

We have already discussed premises 1 and 2; presuming that the argument is valid (and hence that (3) and (5) really do follow from other premises) this leaves only premise 4 as open to dispute.

Suppose that the world has existed for an infinite time, and that each contingent thing was caused to exist, and hence explained, by some prior contingent thing. Would this show that premise (4) is false? Does Leibniz need a "no infinite chains" premise of the sort employed by Aquinas in his 2nd way? Does Leibniz think that we can know just by thinking about it that the universe has been around for a finite time, and so must have had a first cause?

Can you think of any positive arguments in favor of premise 4?

Let's suppose we grant 1, 2, and 4, and so agree that Leibniz has shown the existence of a necessary being. Would this suffice to show the existence of *God*? Would it provide evidence for the existence of God?

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Now that we have a grip on Leibniz's premises and some of the intuitive reasons for thinking that they are true, we are in a position to turn to consider some objections to those premises. As it happens, each of the most powerful objections to Leibniz's argument focuses on the first premise, the principle of sufficient reason.

The first might be expressed in an intuitive way like this:

> Leibniz demands that everything get an explanation -- at least that is what the first premise says. But then why is the existence of God the one thing that does not need an explanation? Surely if the existence of contingent things needs some explanation, then so does the existence of God -- but no religious believer can accept the idea that the existence of God would be explained by something else!

There is an obvious response to this objection: Leibniz does not say that *everything* needs an explanation, but only that all *contingent* things need an explanation. So the principle of sufficient reason does not imply that God needs an explanation, since God is a necessary being.

Is this a satisfying reply to the objection?

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A second objection is based on certain interpretations of quantum mechanics, our best current theory of the physical world.

According to the standard interpretations of quantum mechanics -- though not all interpretations of the theory -- the physical world is indeterministic. That is, what the laws of nature tell us in many cases is not what will happen, but rather than probabilities of various outcomes each of which is consistent with the laws of nature.

Let's imagine a case in which there are three such possible outcomes, A, B, and C, and that quantum mechanics tells us that A has a 40% chance of happening, B has a 25% chance of happening, and C has a 35% chance of happening. Now suppose C is what in fact happens, and we ask this question:

> Why did C, rather than A or B, happen?

Many people think that quantum mechnics strongly suggests that there is no answer to this question: there simply is no reason by C, rather than A or B, happened.

If this were true, would this pose a problem for the PSR? Could the principle be modified to avoid this sort of counterexample?

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A final objection is, in a way, the most worrying. We are supposing that it is contingent that there are any contingent things, and hence that by the principle of sufficient reason, there must be some explanation for the fact that there are contingent things.

Let us suppose that the fact that there are contingent beings is explained by some necessary being, whom we can call N. Then it seems as though if the cosmological argument is to be convincing, the following must be true:

N explains the fact that there are contingent things.

So far, so good, you might think. On closer examination, though, this claim leads to a dilemma.

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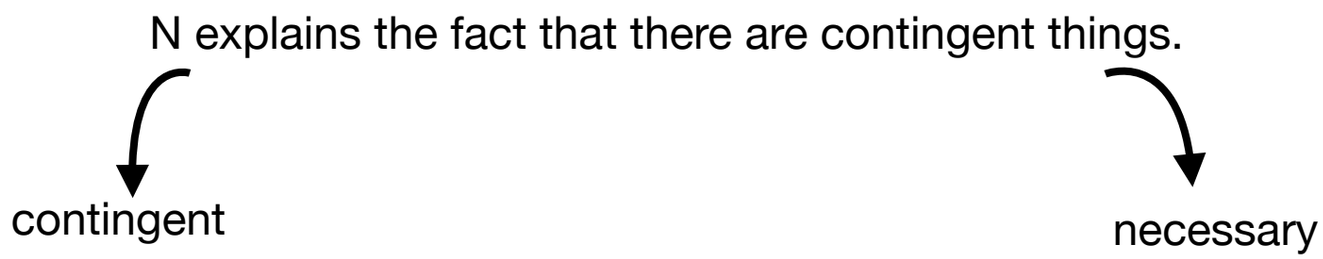
So far, so good, you might think. On closer examination, though, this claim leads to a dilemma.

If we are supposing that this claim is true, then it must be either a necessary truth or a contingent truth.



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C. There is a necessary being. (5)

N explains the fact that there are contingent things.

contingent

necessary

Let's explore the first horn of the dilemma first: suppose that the claim that N explains the existence of contingent things is itself contingent.

1. The principle of sufficient reason
2. The argument
3. Objections
   3.1 Explaining God
   3.2 Quantum mechanics
   3.3 **Collapse**

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C. There is a necessary being. (5)

N explains the fact that there are contingent things.

contingent

Then by the PSR there must be some explanation for the fact that N explains the existence of contingent things.

necessary

Let's explore the first horn of the dilemma first: suppose that the claim that N explains the existence of contingent things is itself contingent.

If this is true, then it follows from the principle of sufficient reason that there must be some explanation for this.

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N explains the fact that there are contingent things.

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Then by the PSR there must be some explanation for the fact that N explains the existence of contingent things.

But there is no such explanation.

necessary

Let's explore the first horn of the dilemma first: suppose that the claim that N explains the existence of contingent things is itself contingent.

If this is true, then it follows from the principle of sufficient reason that there must be some explanation for this.

But this sounds absurd. What could explain this? N itself can't explain the fact that N explains the existence of contingent things, since this is circular. And what else could explain this?

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Then by the PSR there must be some explanation for the fact that N explains the existence of contingent things.

But there is no such explanation.

necessary

So let's turn to the other horn of the dilemma, and suppose that this claim about N is necessary.

Then we avoid having to find an explanation for this claim, which is good.

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N explains the fact that there are contingent things.

↓

contingent

↓

Then by the PSR there must be some explanation for the fact that N explains the existence of contingent things.

↓

But there is no such explanation.

↓

necessary

↓

It is a necessary truth that there are contingent things.

So let's turn to the other horn of the dilemma, and suppose that this claim about N is necessary.

Then we avoid having to find an explanation for this claim, which is good.

But we end up with a worse problem: if it is a necessary truth that N explains the existence of contingent things, then it is a necessary truth that there are contingent things.

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↓

contingent

↓

Then by the PSR there must be some explanation for the fact that N explains the existence of contingent things.

↓

But there is no such explanation.

↓

necessary

↓

It is a necessary truth that there are contingent things.

↓

But then premise (2) of the original argument is false.

So let's turn to the other horn of the dilemma, and suppose that this claim about N is necessary.

Then we avoid having to find an explanation for this claim, which is good.

But we end up with a worse problem: if it is a necessary truth that N explains the existence of contingent things, then it is a necessary truth that there are contingent things.

Which contradicts a **premise** of our original argument.

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But there is no such explanation.

↓

necessary

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It is a necessary truth that there are contingent things.

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But then premise (2) of the original argument is false.

But if the claim that N explains the existence of contingent things is neither contingent nor necessary, it must be false. But if it is false, then it looks like (5) must be false, and the argument must have gone wrong somewhere.

How should Leibniz reply?