

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 his 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.

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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 thoughts are: (1) that this question must have an answer, and (2) that the only satisfactory answer to this question will imply the existence of 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?

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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.**

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

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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.**

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Again, it seems that two main points emerge from Leibniz's discussion here.

First, that the existence of "the individual things, or .. the entire collection and series of things" needs some explanation.

Second, that we cannot find such an explanation in the "entire collection and series of things."

But what does Leibniz have in mind when he is talking about "the individual things"? **Which** things?

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A passage later in the reading suggests an answer.

Therefore, the reasons for the world lie hidden in something extramundane, different from the chain of states, or from the series of things, the collection of which constitutes the world. And so we must pass from physical or hypothetical necessity, which determines the later things in the world from the earlier, to something which is of absolute or metaphysical necessity, something for which a reason cannot be given. For the present world is physically or hypothetically necessary, but not absolutely or metaphysically necessary.

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Here Leibniz contrasts two kinds of necessity:

physical or hypothetical necessity and **absolute or metaphysical** necessity

Physical necessity is what is necessary, given the way the laws of nature happen to be. Metaphysical, or absolute, necessity is what is necessary without qualification. Since the laws of nature could have been different than they are, something can be physically necessary without being absolutely or metaphysically necessary. Can you think of an example?

The point Leibniz emphasizes in this passage is that **the existence of things in the world is not metaphysically necessary.**

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The point Leibniz emphasizes in this passage is that **the existence of things in the world is not metaphysically necessary.**

And this, in turn, suggests an answer to our question. When Leibniz says that "the entire collection and series of things" needs some explanation, he is talking about the entire series and collection of things whose existence is not metaphysically necessary - **i.e., the collection of things which exist only contingently.**

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This enables us to reformulate Leibniz's two central points a little more clearly. The first can be stated as:

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

The second can be stated as:

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

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Principle of sufficient reason

Any contingent fact about the world must have an explanation.

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.

Why does Leibniz think that these claims are true? Let's begin with the first.

A natural thought is that this is supposed to follow from the principle of sufficient reason, since both are claims about what sorts of things must have an explanation. What assumption would be required to get from the principle of sufficient reason to the claim that the fact that there are contingent things must have an explanation?

It is a contingent fact that there are contingent things.

We'll return to the question of whether this assumption is true. But for now, let's see how these premises might be used to get to Leibniz's intended conclusion:

there must exist some one entity of metaphysical necessity, that is, there must be an entity whose essence is existence

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Or, in other words,

There is a necessary being.

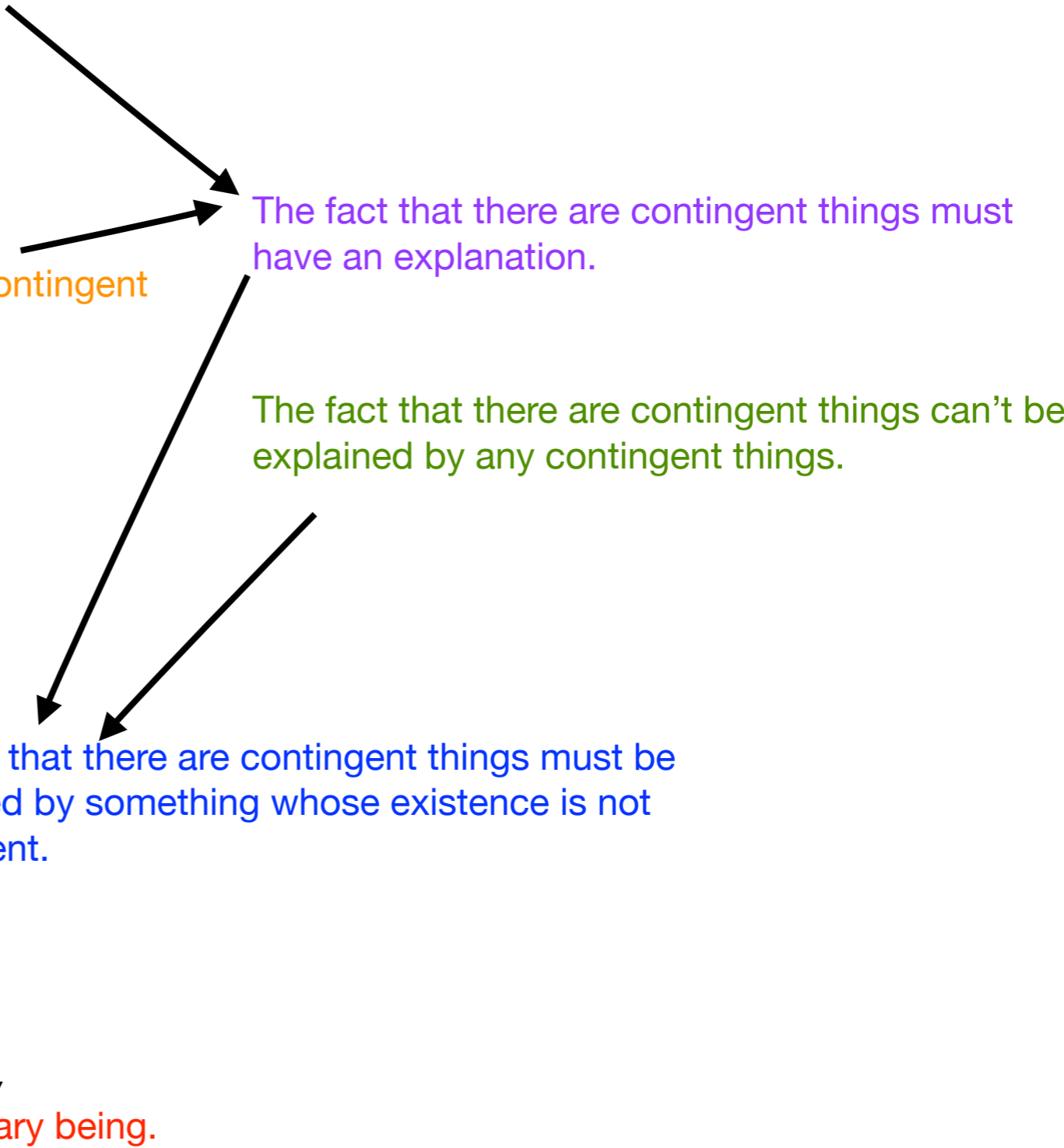
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Principle of sufficient reason
Any contingent fact about the world must have an explanation.

It is a contingent fact that there are contingent things.

From the fact that the existence of contingent things needs an explanation, plus the fact that this explanation cannot be provided by any contingent things, it follows that:

And this implies that there must be something whose existence is not contingent, which is our conclusion.



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1. Any contingent fact about the world must have an explanation. (**Principle of sufficient reason**)
2. It is a contingent fact that there are 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.
5. The fact that there are contingent things must be explained by something whose existence is not contingent. (3,4)

C. There is a necessary being. (5)

Is this argument valid?

It appears so. So let's turn to the question of whether the premises of the argument are true.

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The argument contains only three **independent premises**: 1, 2, and 4. We have already discussed 1, the principle of sufficient reason.

Let's think about premise 2. Why would Leibniz think that this is true? Perhaps because of an argument like the following one:

If something is contingent, that means that it could have failed to exist. So every individual thing in the collection of contingent things could have failed to exist. So, the whole collection of contingent things could have failed to exist, in which case there would have been no contingent things at all. Hence the existence of contingent things is itself contingent.

Is this a good argument?

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Is this a good argument?

There's a problem here, which is a version of the problem we raised for Aquinas' third way: the problem is that it does not seem to follow from the fact that every member of a collection is a certain way that the collection as a whole is that way. Why not think that every contingent thing could have failed to exist, but that it is a necessary truth that some contingent things exist? In that case, premise 2 would be false and Leibniz's argument would fail.

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Can you think of another way to argue for premise 2?

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C. There is a necessary being. (5)

Let's turn then to our last independent premise, premise 4.

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 reason for thinking that premise 4 is true?

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C. There is a necessary being. (5)

So it seems that Leibniz's argument is valid, and that we can give pretty plausible defenses of each of the independent premises. So his argument is looking pretty good.

But one might worry that this argument is open to an objection we raised for Aquinas' second way (remember our discussion of the big bang theory of the origins of the universe): even if Leibniz succeeds in showing that there is a necessary being, would this really suffice to show that **God** exists? What would Leibniz say in response to this challenge?

Let's turn, then, to some objections to the premises of Leibniz's argument.

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Let's turn, then, to some objections to the premises of Leibniz's argument.

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 an objection to premise 1, the principle of sufficient reason, and 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 mechanics strongly suggests that there is no answer to this question: **there simply is no reason why 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 creates contingent things.

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

Leibniz's cosmological argument

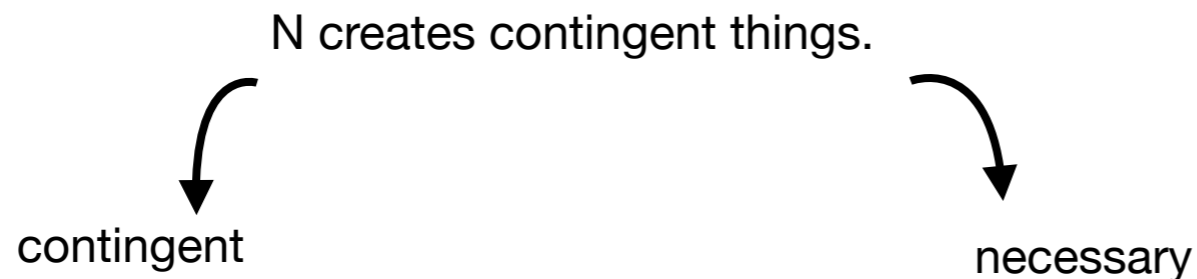
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If we are supposing that this claim is true, then it must be either a necessary truth or a contingent truth.

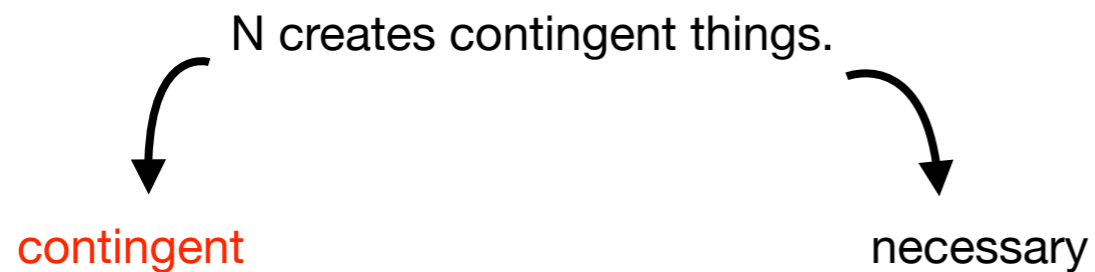


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Let's explore the first horn of the dilemma first: suppose that the claim that N explains the existence of contingent things is itself **contingent**.

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N creates contingent things.

contingent

necessary

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

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.

Leibniz's cosmological argument

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

1. Any contingent fact about the world must have an explanation. (Principle of sufficient reason)
 2. It is a contingent fact that there are 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.
 5. The fact that there are contingent things must be explained by something whose existence is not contingent. (3,4)
-
- C. There is a necessary being. (5)

N creates contingent things.

contingent

necessary

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.

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.

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.

Leibniz's cosmological argument

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1. Any contingent fact about the world must have an explanation. (Principle of sufficient reason)
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N creates contingent things.

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necessary

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

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.

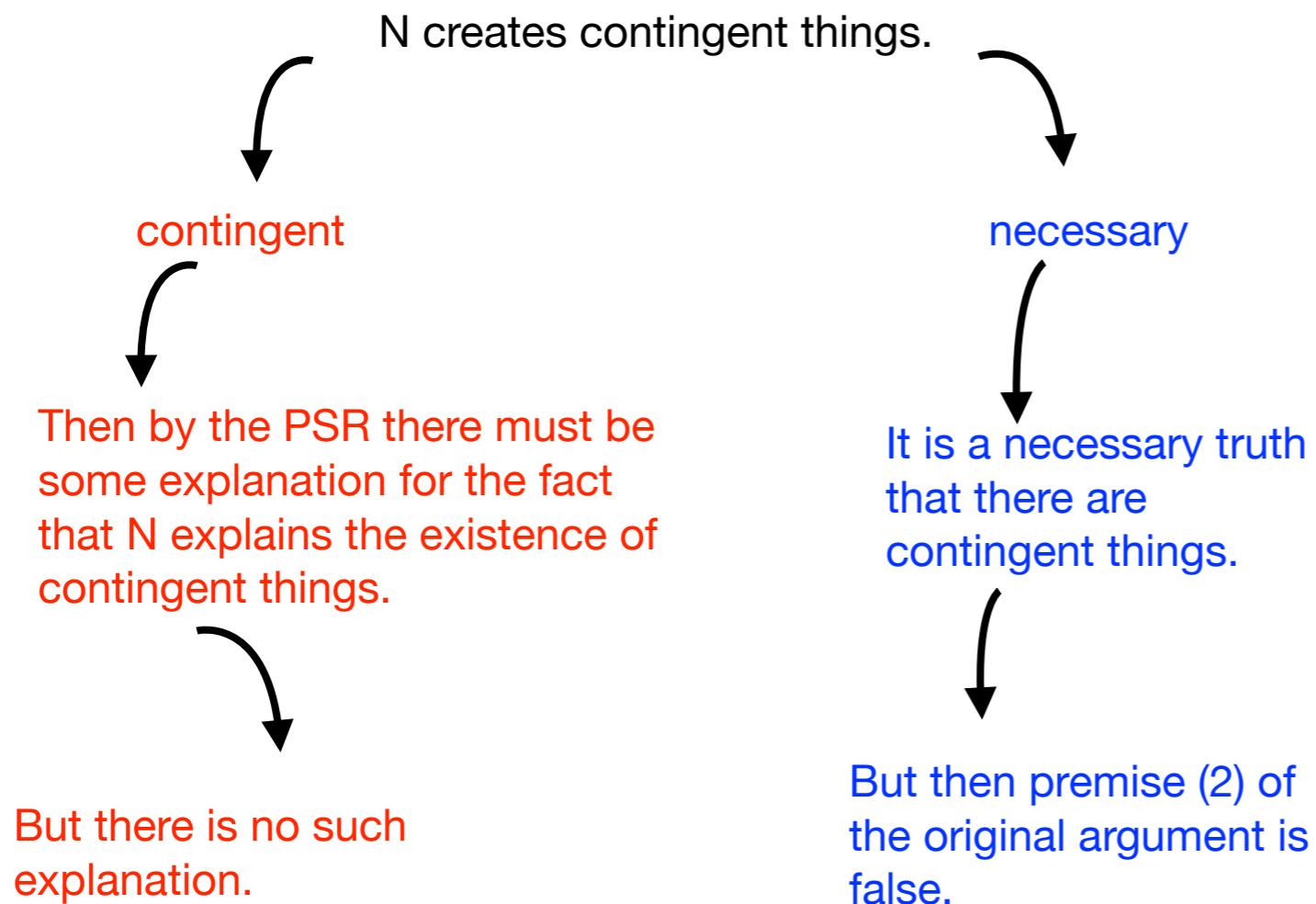
But we end up with a worse problem: if it is a necessary truth that N explains the existence of contingent things, then it is a necessary truth that there are contingent things.

But there is no such explanation.

Leibniz's cosmological argument

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1. Any contingent fact about the world must have an explanation. (Principle of sufficient reason)
 2. **It is a contingent fact that there are 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.
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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.

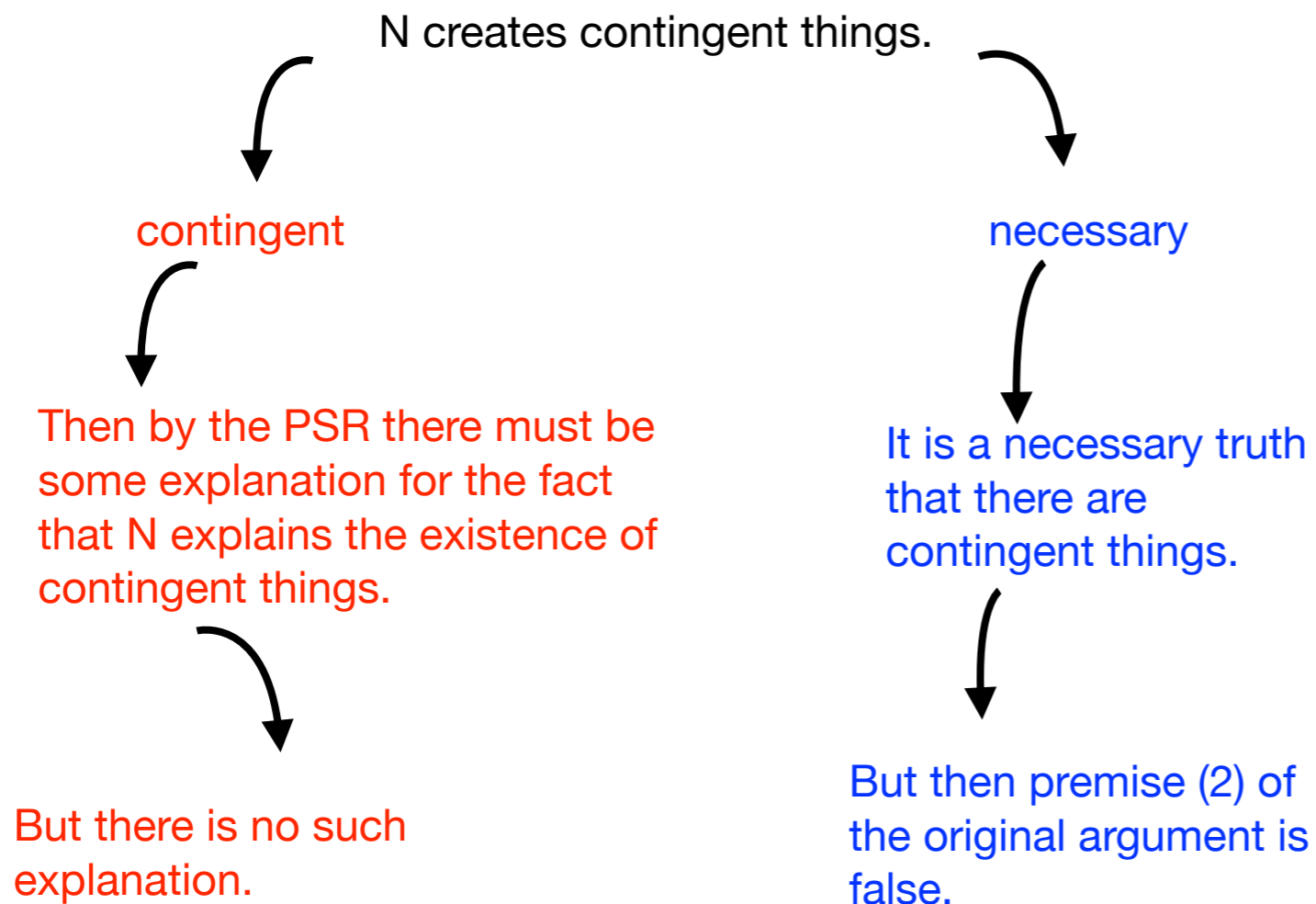
But we end up with a worse problem: if it is a necessary truth that N explains the existence of contingent things, then it is a necessary truth that there are contingent things.

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

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Leibniz's cosmological argument

1. Any contingent fact about the world must have an explanation. (Principle of sufficient reason)
 2. It is a contingent fact that there are contingent things.
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- C. There is a necessary being. (5)



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?