Does God exist?

God is the first cause

St. Thomas was born in 1225 and, while his works were extremely controversial in their time — some were condemned as heretical by the bishop of Paris — he has since come to be regarded as the greatest theologian and philosopher in the history of the Church. His *Summa Theologiae* — from which the arguments we will be discussing were taken — is regarded by many as the definitive philosophical exposition of the Catholic faith.

Here is the central argument of Aquinas' second way - the second of five proofs that Aquinas gave for the existence of God.

The second way is from the nature of efficient cause. In the world of sensible things we find there is an order of efficient causes. There is no case known (neither, indeed, is it possible) in which a thing is found to be the efficient cause of itself; for so it would be prior to itself, which is impossible. Now in efficient causes it is not possible to go on to infinity, because in all efficient causes following in order, the first is the cause of the intermediate cause, and the intermediate is the cause of the ultimate cause ... Now to take away the cause is to take away the effect. Therefore, if there be no first cause among efficient causes, there will be no ultimate, nor any intermediate, cause. But if in efficient causes it is possible to go on to infinity, there will be no first efficient cause, neither will there be an ultimate effect, nor any intermediate efficient causes; all of which is plainly false. Therefore it is necessary to admit a first cause, to which everyone gives the name of God.

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What we want to know is: Is this a good argument for God's existence? Is it valid? Is it sound?

But to answer these questions, we first need to figure out what the premises of Aquinas' argument are.

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But right away we have a problem: the text uses a phrase, ‘efficient cause,’ with which you are likely unfamiliar.

A reasonable first strategy is to try out a familiar candidate. So let’s suppose that ‘efficient cause’ just means ‘cause,’ and see how far that gets us.

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To begin our search for the premises of Aquinas' argument, let's look at the third sentence.

This seems to state a premise which we could write as follows:

Nothing is the cause of itself.

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Nothing is the cause of itself.

There are two kinds of premises in arguments: independent premises, which are supposed to stand on their own, and derived premises, which are supposed to follow from other premises. Which do you think this is?

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Nothing is the cause of itself.

He seems to argue for it in the passage immediately following this sentence, which suggests that it is a derived premise.

What premises do these passages express?

If something were the cause of itself, it would be prior to itself

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If something were the cause of itself, it would be prior to itself

Nothing is prior to itself.

Nothing is the cause of itself.

We seem to get another premise in the next sentence.

A chain of causes cannot be infinite.

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If something were the cause of itself, it would be prior to itself

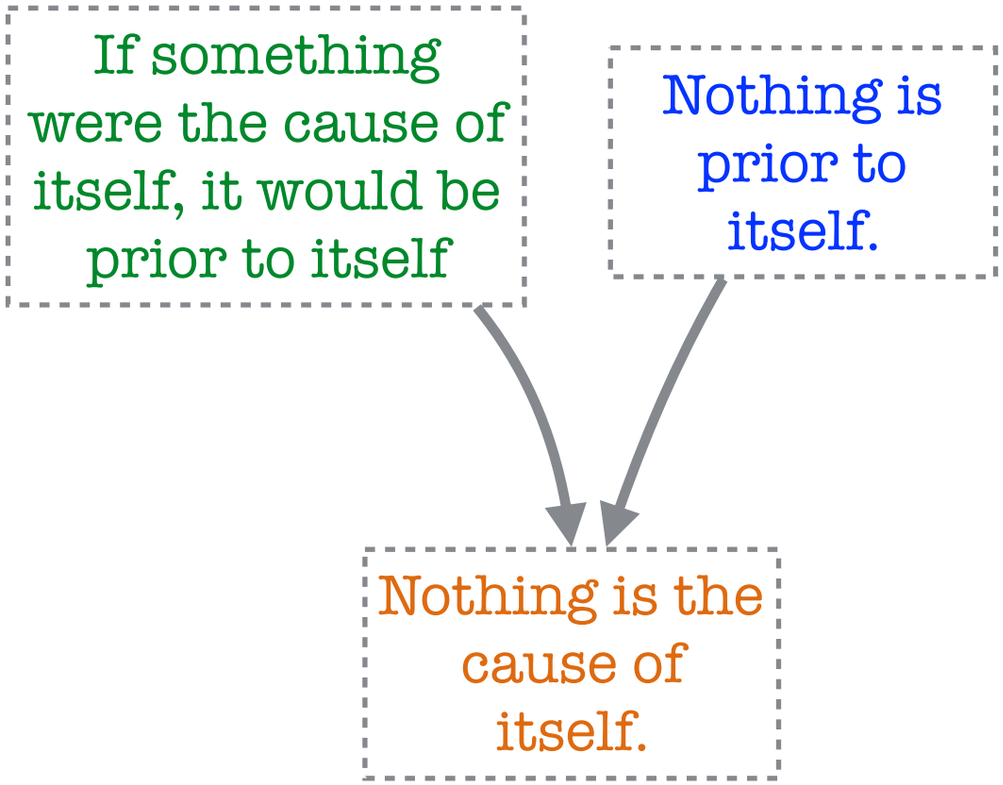
Nothing is prior to itself.

Nothing is the cause of itself.

A chain of causes cannot be infinite.

It is pretty clear that this is a derived premise, since we get a long argument for it in the passage immediately following.

Let's set this difficult passage to the side for now, and see if we can figure out the shape of Aquinas' argument.



We've now got some premises on the table. But to figure out whether they make for a valid argument, we need to first figure out what conclusion they are supposed to be an argument for.

Fortunately, it is pretty clear that at least one thing Aquinas is arguing for is the following:

A chain of causes cannot be infinite.

There is a first cause.

Let's put our proposed argument in premise/conclusion form.

1. If something were the cause of itself, it would be prior to itself.
2. Nothing is prior to itself.
3. Nothing is the cause of itself. (1,2)
4. A chain of causes cannot be infinite.

C. There is a first cause. (3,4)

Here we represent the fact that (3) is a derived premise intended to follow from (1) and (2) by writing '(1,2)' after it.

Is this argument valid? Does the conclusion follow from (3) and (4)?

It is invalid if we can describe some possible situation in which the premises are true but the conclusion false.

Imagine the following situation: nothing is ever the efficient cause of anything. If nothing ever caused anything, then the two premises of our argument would be true, since nothing would ever be the efficient cause of anything, including itself, and there would be no infinite causal chains, since there would be no causal chains of any sort. But the conclusion would be false: there would be no causes, so there would be no first cause. Hence our argument is invalid.

If your interpretation of an argument is invalid, your first question should be: was the author assuming some extra premise which, if added to the argument, would make it valid?

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And it is pretty clear if we look at the second sentence that the answer to this question is ‘Yes.’

At least one thing has a cause.

Let’s add this to our argument and see if it helps.

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2. Nothing is prior to itself.
3. Nothing is the cause of itself. (1,2)
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2. Nothing is prior to itself.
3. Nothing is the cause of itself. (1,2)
4. A chain of causes cannot be infinite.
5. At least one thing has a cause.

C. There is a first cause. (3,4,5)

Is this argument valid?

Now, at last, it seems that we have a valid argument, since the following assumption seems very plausible:

Every causal chain must be (i) circular, (ii) infinite, or (iii) have a first cause.

Since our argument seems to depend on this assumption, we may as well make this explicit by adding it as a premise to our argument — even though it is not something which Aquinas explicitly says.

1. If something were the cause of itself, it would be prior to itself.
2. Nothing is prior to itself.
3. Nothing is the cause of itself. (1,2)
4. A chain of causes cannot be infinite.
5. At least one thing has an efficient cause.
6. Every causal chain must be (i) circular, (ii) infinite, or (iii) have a first cause.

C. There is a first cause. (3,4,5,6)

Does this argument show that there is at least one first cause, or exactly one first cause?

This argument seems pretty clearly valid. But it also seems pretty clearly incomplete as an interpretation of Aquinas. Why?

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Aquinas' ultimate aim is not to argue for the existence of a first cause; his ultimate aim is to argue for the existence of God. So the thing we have labeled as a conclusion must actually just be a (derived) premise in the overall argument.

How can we get from our argument to the conclusion that God exists?

1. If something were the cause of itself, it would be prior to itself.
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How can we get from our argument to the conclusion that God exists?

The simplest way is to add a premise which Aquinas seems to assume:

If there is a first cause, then God exists.

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2. Nothing is prior to itself.
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4. A chain of causes cannot be infinite.
5. At least one thing has an efficient cause.
6. Every causal chain must be (i) circular, (ii) infinite, or (iii) have a first cause.
7. There is a first cause. (3,4,5,6)
8. If there is a first cause, then God exists.

C. God exists. (7,8)

This is a valid argument, and seems to be a plausible interpretation of the piece of text with which we began.

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2. Nothing is prior to itself.
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C. God exists. (7,8)

But who cares whether this is a valid argument for the conclusion that God exists? What we care about is whether the conclusion is true - and to be sure of that, we need to know that the argument is sound. Validity is only half the puzzle; the premises also have to be true.

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Suppose that someone objected to the argument by saying that, while it is valid, it has a single false premise — premise (7). Why would this be confused?

So to defend Aquinas' argument, we just need to defend its independent premises — (1), (2), (4), (5), (6), and (8).

Which of these look the most questionable?

I suggest that we focus in
on premises (4) and (8).

4. A chain of causes cannot be infinite.

8. If there is a first cause, then God exists.

4. A chain of causes cannot be infinite.

You might remember that I said that Aquinas gave us an argument for (4), which is expressed in the passage highlighted in yellow.

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4. A chain of causes cannot be infinite.

Aquinas says that if you take away the first cause from a causal chain, you thereby take away every subsequent cause; hence if the first cause of every actual causal chain had been taken away, there would be no caused things in existence. But, as he says, this is “plainly false” - there are caused things in existence, so the first cause of every causal chain must not have been taken away.

The problem with this argument is not that anything Aquinas says is incorrect; the problem is that the argument is simply misdirected. Infinite causal chains are not finite causal chains whose first link has been erased; they are causal chains in which every link is preceded by another. Consider the following infinite series:

…. -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, ….

Is this a finite series whose first member has been “taken away”?

4. A chain of causes cannot be infinite.

But even if Aquinas' defense of (4) is unsuccessful, (4) might still be true. Can you think of any way to argue for it?

One way to do this is to use a thought experiment called 'Thomson's lamp.'

Suppose that I told you that I have a lamp in my office which turned on and off 10 times between 8:00 and 9:00 this morning. Would this make sense?

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Now suppose that I told you that it turned on and off 1000 times during this interval. Would that make sense?

Now suppose that I told you that it turned on and off infinitely many times during this interval. Would that make sense?

Here is an argument that it would not:

If the lamp turned on and off infinitely many times during this period, then there is no last event of it turning on or off. So at 9:01 the lamp cannot be on, since every on-turning is followed by an off-turning. But it also cannot be off, since every off-turning is followed by an on-turning. So, at 9:01 the lamp is neither on nor off. But that is impossible. So an infinite series of on- and off-turnings is impossible.

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Now, you might reply that this only shows that a certain sort of infinite chain is impossible. For we can contrast two different sorts of infinite chains — those with no last member, and those with no first member. This is like the contrast between these two different infinite series of numbers:

…. -5, -4, -3, -2, -1

1, 2, 3, 4, 5, …

It looks like our argument only shows the impossibility of the second kind of infinite causal chain. But which sort would make trouble for Aquinas' argument?

However, perhaps we can adapt our argument to show that the first sort of infinite series is also impossible.

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> Suppose that the lamp turned on and off infinitely many times between 8:00 and 9:00, and that there was no first event of it being turned on or off. So at 7:59 the lamp could not have been off, since then the first event would have been an on-turning. But at 7:59 it also could not have been on, since then the first event would have been an off-turning. So, at 7:59 the lamp is neither on nor off. But that is impossible. So there had to be a first on-turning or off-turning between 8:00 and 9:00.

Is this argument convincing?

Does this argument rely on the assumption that the infinite series took place in a finite interval of time? Could a similar argument show that there can be no infinite series of on- and off-turnings in an infinite period of time?

If not, then it looks like this argument, even if it works, can only rule out the possibility of an infinite causal chain if we assume that the age of the universe is finite. Is that a reasonable assumption?

8. If there is a first cause, then God exists.

Let's turn to premise (8). Here is one hypothesis which would seem to falsify (8):

The Big Bang
The first event in the history of the universe was an explosion of an extremely dense collection of particles, with every particle moving apart from every other particle. This event had no cause - in particular, no intelligent being set it into motion - and, further, every subsequent event has been an effect of this event.

This would appear to be a description of a world in which there is a first cause, but God does not exist. So it looks as though, if we are to believe (8), we must have some reason for rejecting the above hypothesis.

8. If there is a first cause, then God exists.

Might one defend (8) by saying that this hypothesis is impossible, on the grounds that there can't be an uncaused cause, like the explosion of particles described?

One might say instead that this hypothesis must leave something out. For surely the Big Bang could have failed to occur. Hence there must be some explanation of why it did occur. And what could provide that explanation other than God?

That is just a quick sketch of an argument. To make it precise, we would need to make explicit some of the assumptions about possibility and explanation on which it depends. That will be our task next time.