



THE FIRST
CAUSE
ARGUMENT

Our first topic is the question of whether God exists.

We are going to look at some arguments for the conclusion that God exists, and some arguments for the conclusion that God does not exist.

How, in general, might we go about giving an argument that some particular thing exists?

Let's approach this question by setting aside questions about the existence of God for a minute. Suppose that you wanted to show that Santa Claus exists. How would you do it?

A natural thought is that you would begin by thinking about what Santa Claus is supposed to be like. Suppose that the key (alleged) properties of Santa are that he is a bearded jolly elf who is thousands of years old who lives at the North Pole and delivers toys to children all around the world with the help of his flying reindeer. Let's call these "the Santa properties."

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Given this, it is pretty clear how you would proceed. You would try to find a very old elf in the North Pole with some reindeer who plays an important role in Christmas. That is, you would try to show that there is some individual with the Santa properties.

Suppose that we were given proof that there is an individual with some of the Santa properties. Perhaps, for example, we have proof that there is in fact a bearded jolly elf in the North Pole with some flying reindeer, but we don't yet have any proof that he plays any important role in Christmas. Should you, on the basis of this, come to believe that Santa exists?

Suppose that we were given proof that there is an individual with some of the Santa properties. Perhaps, for example, we have proof that there is in fact a bearded jolly elf in the North Pole with some flying reindeer, but we don't yet have any proof that he plays any important role in Christmas. Should you, on the basis of this, come to believe that Santa exists?

Here I think that there are two possible responses. One response would be to say that it is pretty likely that if something has these Santa properties, he probably has all of the Santa properties. This response would conclude that Santa does exist.

A second response would be to say that while we do now know (surprisingly) that something has some of the Santa properties, this gives us no reason to think that this thing has the other Santa properties. On this view, while we should think that a Santa-ish being exists, we should deny that Santa exists.

Let's try to apply some of these lessons to the question of whether God exists.

Just as in the case of Santa, a demonstration of the existence of God will have to be a demonstration of the existence of something with certain properties associated with God.

In this class, we'll be working with the conception of God common to what are often thought of as the major monotheistic religions — Christianity, Judaism, and Islam. Here is the view of God common to these religions:

The classical conception of God

God is not part of the universe, but is the creator of the universe. God is also all-powerful, all-knowing, and perfectly good. God has always existed, and always will exist. God is the greatest being that could exist.

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

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The idea is **not** that this is the only view of God which is possible — of course there are others. But in order to sensibly enter into an inquiry whether God exists, we have to have some fixed meaning for the term “God.” This is as good a starting point as any.

With this conception of God in mind, we can state two views about the nature of reality.

Simple theism

God exists, and
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Simple atheism

The universe (or perhaps several
universes) are all that exists.
Nothing created it (or them).

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These two views are exclusive: if one is true, the other is false. Are they the only possible views?

No. One might think that the universe was created by something outside of the universe, but that that being is not God. Let's call this view 'quasi-theism':

Quasi-theism

The universe was created
by something outside of it,
but not by God.

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Many arguments for God's existence are best thought of as arguments **against** simple atheism. Whether they also amount to good arguments for the existence of God then depends in part on how seriously you take quasi-theism. This is something to which we will return.

Let's turn then to our first argument for the existence of God: the first cause argument we find in the reading from Thomas Aquinas.

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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.



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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Let's start with the second sentence. Our goal is to come up with a simple, straightforward way to state the main point of this sentence. We always want to use language which is as simple and clear as possible.


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Let's have a look at the next sentence. How would you state this claim in simple language?

Nothing is
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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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We get a hint when we look at the rest of the sentence, which seems to provide a mini-argument for the claim that nothing is the cause of itself.

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

We get one more premise in the next sentence.

There are no infinite causal chains.

Nothing is prior to itself.

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There are some causes.

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

Nothing is prior to itself.

There are no infinite causal chains.

Nothing is the cause of itself.

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.





There are no infinite causal chains.

There are some causes.

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'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:

There is a first cause.

By this Aquinas means "there is something which causes other things to exist but was not itself caused to exist by anything."



There are no infinite causal chains.

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

There are some causes.

Nothing is prior to itself.

Nothing is the cause of itself.

Does this follow from the premises that we already have on the table?

Aquinas never says that he is assuming this; but it is hard to see how the argument can work if he is not.

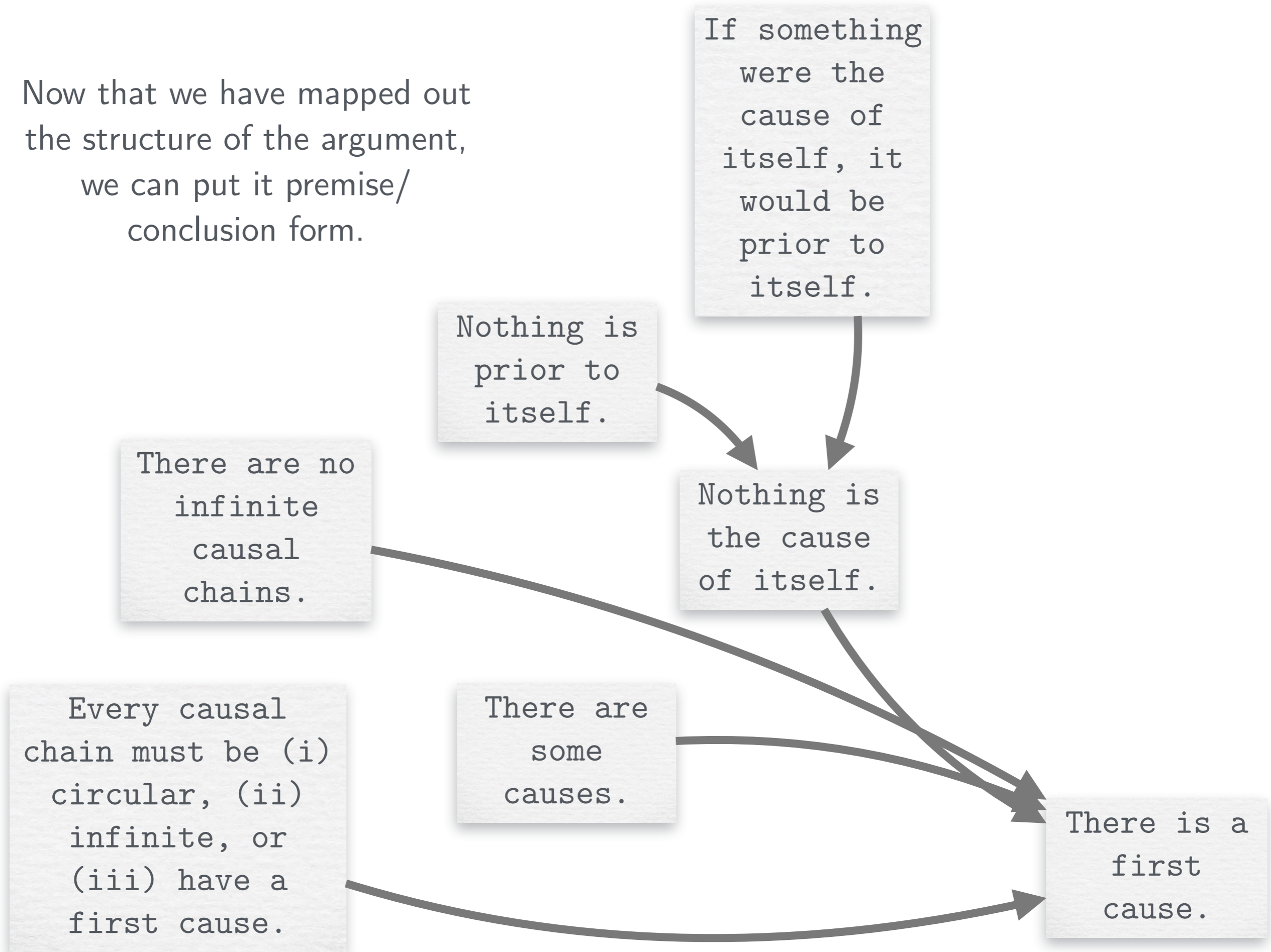
It looks like it does, if the following assumption is true:

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

There is a first cause.



Now that we have mapped out the structure of the argument, we can put it premise/conclusion form.



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

Nothing is prior to itself.

Nothing is the cause of itself.

There are no infinite causal chains.

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

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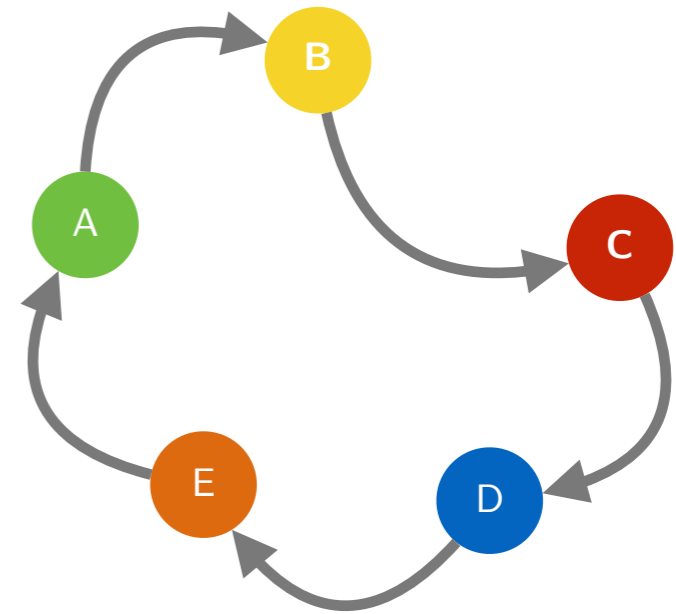
There is a first cause.

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. There are no infinite causal chains.
 5. At least one thing has a cause.
 6. Every causal chain must be (i) circular, (ii) infinite, or (iii) have a first cause.
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- C. There is a first cause. (3,4,5,6)

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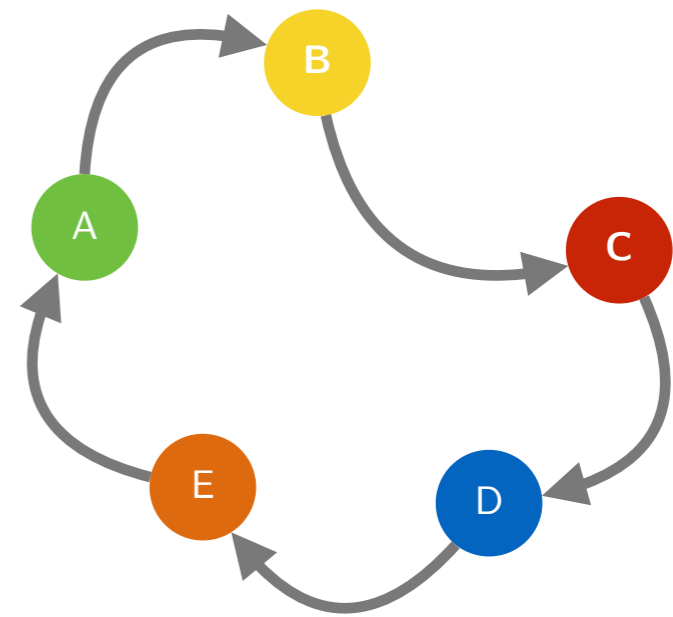
Here's an example of a causal chain which seems to show that our argument is invalid.



Nothing is the cause of itself, so (3) is true; the chain is not infinite, so (4) is true; there is at least one cause, so (5) is true; the chain is circular, so (6) is true; and yet there is no uncaused cause, so the conclusion is false.

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2. Nothing is prior to itself.
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This is a little tricky. There is a sense in which in this example nothing is the cause of itself, because nothing is **directly** the cause of itself. But it still seems like things are **indirectly** the cause of themselves. After all, if A causes B and B causes C, isn't there also a sense in which A causes C?

Let's agree to understand "causes" in our argument as meaning "directly or indirectly causes." Then the kind of causal chain pictured above is ruled out by premise (3).

So far, so good. But there is an obvious sense in which our argument so far is incomplete.

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.
2. Nothing is prior to itself.
3. Nothing is the cause of itself. (1,2)
4. There are no infinite causal chains.
5. At least one thing has a 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)

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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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)

This argument is valid, and seems to be a plausible interpretation of the piece of text we've been looking at.

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.

AQUINAS' FIRST CAUSE ARGUMENT

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2. Nothing is prior to itself.
3. Nothing is the cause of itself. (1,2)
4. There are no infinite causal chains.
5. At least one thing has a 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.

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C. God exists.

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?

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

4. There
are no
infinite
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8. If there is a
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4. There
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You might remember that, earlier, we mentioned that Aquinas gives us an argument for (4), which we set aside for simplicity at the time. Here's the relevant passage:

“... 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.”

4. There
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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”?

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4. There
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But even if Aquinas' defense of (4) is unsuccessful, (4) might still be true. When you encounter an argument in which one of the premises is insufficiently well defended by the author, you should always ask: can we do better?

One attempt to do better begins with the thought that just because certain mathematical notions make sense, it does not automatically follow that every real world scenario involving those notions makes sense.

For example, the idea of negative numbers makes sense. But would it make sense for me to say that I have -16 apples in my refrigerator?

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One might then try to make a parallel argument about infinity. Perhaps the idea of an infinite series of numbers makes sense, but the idea of an infinite causal chain does not.

One way to argue for this is to argue that, more generally, the idea of an infinite collection of things existing in space and time does not make sense.

Let's consider some curious features of infinite collections. Consider the collection of natural numbers

1, 2, 3, 4, 5, 6,

And compare this to the collection of even natural numbers

2, 4, 6, 8, ...

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1, 2, 3, 4, 5, 6,

And compare this to the collection of even natural numbers

2, 4, 6, 8, ...

Which collection is bigger?

It is very natural to say: the collection of all of the natural numbers is bigger. After all, it contains everything in the collection of even numbers, and a bunch more things besides (namely, all of the odd numbers).

But this is incorrect: the two collections are of exactly the same size. To see this, note that we can match up the two collections, so that every member of one collection is paired with a member of the other collection. 1 is paired with 2, 2 with 4, 3 with 6, etc. We never run out of even numbers!

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This example shows that you can have two infinite collections, A and B, which is such that A contains everything in B plus infinitely more things, and yet the same number of things are in the two collections.

If we think about real-world collections, this leads to some surprising results. Imagine that we had a library with infinitely many books. You walk in the front door to this library. To your left, there are as many books as there are even numbers. To your right, there are also as many books as there are odd numbers. So there are infinitely many books in both directions.

You then compare two collections of books: the collection of all of the books in the library, and the collection of books just to your left. Which collection is bigger?

The correct answer would have to be: neither. The two collections are exactly the same size. (For just the same reason as the collection of natural numbers is the same size as the collection of evens.)

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You might also consider moving one of the books from the right side of the library to the left side of the library. Would you have thereby increased the number of books on the left, and decreased the number of books on the right?

No. The collections would remain just the same size.

Reflection on examples like this might make you think: there could not be a library with these bizarre properties! But the weirdness here does not turn on anything specific to the example of library books. If a library of this kind is impossible, then it seems, more generally, that there could not be an infinite collection of real-world things, like books.

But an infinite causal chain would be just such an infinite collection. So, the argument concludes, the idea of an infinite causal chain — just like the idea of an infinite library — makes no sense, and there could not be such a thing.

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How might the believer in infinite causal chains reply?

They might just say: infinite collections are just weird, but not impossible. But they might also argue that most theists are already committed to the possibility of infinite causal chains. Isn't the afterlife supposed to be never-ending? And wouldn't that mean that there is an infinite causal chain? True, it would be infinite in the 'forward' direction' rather than the 'backward' direction — but why should that matter?

Here the theist might reply that even if the afterlife is never-ending, there is no point in the the afterlife at which there will have been an infinite series of causes. (Analogously, if you count up the natural numbers, you never get to an infinite number.)

Whether this is a good reply is something you might want to think more about.

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 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. Indeed, it appears to be entirely consistent with simple atheism. So it looks as though, if we are to believe (8), we must have some reason for rejecting the above hypothesis.

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

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

Instead, it seems like a defender of the first cause argument has to argue that nothing like the Big Bang could genuinely be a first cause. Things like the Big Bang have to have a cause; but things like God don't. But why?

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Aquinas did have things to say about this. But rather than pursue Aquinas' thought on this further, let's consider one way of developing the argument which was prominent in a school of Islamic thought which predates Aquinas. This version of the argument makes use of the following premise:

Everything which begins to exist at some time must have a cause.

This looks pretty plausible. Surely things can't just pop into existence at a certain time with no cause at all; if they come to exist at some time, something must have caused them to exist.

Let's look at what happens if we add this assumption to some of the premises from Aquinas' argument.

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

Everything which
begins to exist at
some time must have
a cause.

There are no
infinite
causal
chains.

Nothing is
the cause
of itself.

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

Let's look at what happens if we add
this assumption to some of the
premises from Aquinas' argument.

Consider Bob, some individual who
came to exist at a certain time.

We know from our new assumption
that Bob has a cause. What might
the causal chain which leads to Bob
look like?

We know that it can't be circular,
and it can't be infinite. It also can't
have a first cause which begins to
exist in time, since everything that
begins to exist in time has a cause.

Three views about the universe

Aquinas' first cause argument

Two objections to Aquinas

the kalām argument

Everything which begins to exist at some time must have a cause.

We know that it can't be circular, and it can't be infinite. It also can't have a first cause which begins to exist in time, since everything that begins to exist in time has a cause.

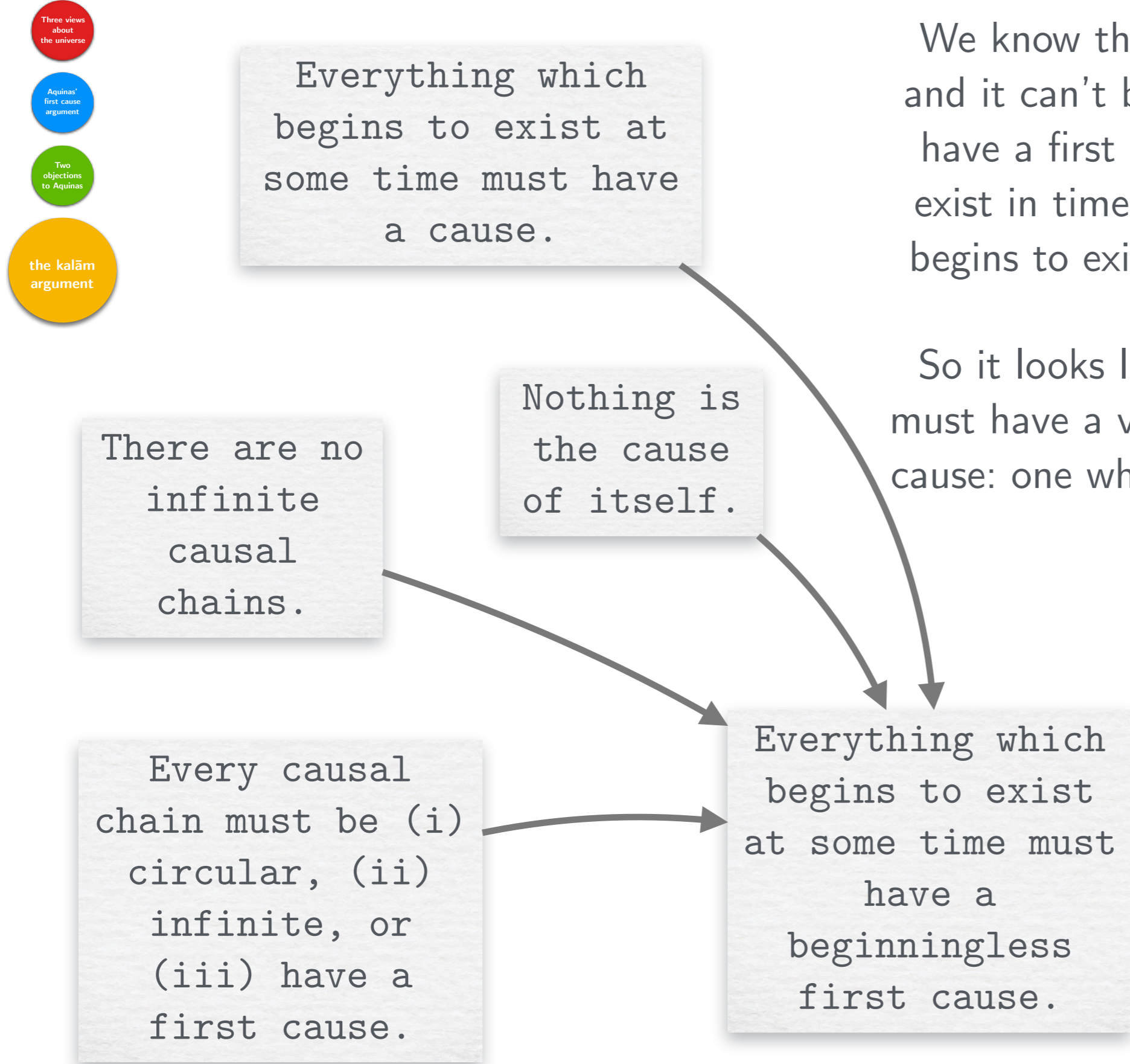
So it looks like Bob's causal chain must have a very unusual sort of first cause: one which has no beginning in time.

There are no infinite causal chains.

Nothing is the cause of itself.

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

Everything which begins to exist at some time must have a beginningless first cause.



Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

Everything which
begins to exist
at some time must
have a
beginningless
first cause.

There is a
beginningless first
cause of the
universe and
everything in it.

God exists.

The argument continues with an assumption
which is widely accepted in contemporary
cosmology:

The universe and
everything in it
began to exist at
some time.

If there is a
beginningless first
cause of the
universe and
everything in it,
then God exists.

We can put this together with pieces of the argument from Aquinas to give us the following **kalām argument** (named after the school of Islamic thinkers who developed several versions of it).

THE KALĀM FIRST CAUSE ARGUMENT

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. There are no infinite causal chains.
5. Everything which begins to exist at some time must have a cause.
6. Every causal chain must be (i) circular, (ii) infinite, or (iii) have a first cause.
7. Everything which begins to exist at some time must have a beginningless first cause. (3,4,5,6)
8. The universe and everything in it began to exist at some time.
9. There is a beginningless first cause of the universe and everything in it. (7,8)
10. If there is a beginningless first cause of the universe and everything in it, then God exists.

C. God exists. (9,10)

There are a number of questions one could raise about this argument.
But let's focus in on one premise:

10. If there is a beginningless first cause of the universe and everything in it, then God exists.

Could one object to this premise in much the way that we objected to Aquinas' assumption that if there is a first cause, then that thing must be God? How do we know that this beginningless thing which is outside of the universe and caused the universe to exist is God?

This is a reasonable question. Here is one way which a defender of the kalām argument might respond.

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

This is a reasonable question. Here is one way which a defender of the kalām argument might respond.

Many theists are less certain that God exists than they are that $2+2=4$; many atheists are less certain that God does not exist than they are that $2+2=4$. So many people think that there is some chance that God exists and some chance that God does not exist.

Keeping this in mind, recall the three hypotheses about reality with which we began.

Simple theism

God exists, and
created
the universe.

Simple atheism

The universe (or perhaps several
universes) are all that exists.
Nothing created it (or them).

Quasi-theism

The universe was created
by something outside of it,
but not by God.

If you agree that the kalām argument shows that there is a beginningless being outside of the universe which caused the universe to exist, that rules out simple atheism. So the simple atheist cannot respond to the argument just by denying (10).

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

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Does the existence of such a being rule out quasi-theism? No. So it looks like the kalām argument should not convince at least some kinds of quasi-theists that God exists.

But that does not mean that the argument should not convince many people that it is much more likely that God exists than they thought it was before encountering the argument.

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

But that does not mean that the argument should not convince many people that it is much more likely that God exists than they thought it was before encountering the argument.

Let's return to the analogy with Santa. We can distinguish three different views here. First, there is the belief that Santa exists. Second, there is Santa-skepticism: the belief that nothing exists with any of the properties ascribed to Santa. Third, there is quasi-Santa-ism: the view that something lives at the North Pole with some of the properties traditionally ascribed to Santa, but not all.

Suppose that you are a Santa-skeptic. But suppose now that you encountered a surprisingly convincing argument for the existence of an ancient jolly elf living at the North Pole who has in fact been delivering toys all around the world for centuries.

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

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Suppose that you are a Santa-skeptic. But suppose now that you encountered a surprisingly convincing argument for the existence of an ancient jolly elf living at the North Pole who has in fact been delivering toys all around the world for centuries.

Would it be reasonable for you to respond to the argument by saying: "OK, I now have to admit that Santa-skepticism is false. But I still don't believe that Santa exists. You haven't, after all, shown me that the elf is bearded, or that he has flying reindeer! I therefore adopt quasi-Santa-ism."

It is at least arguable that this would not be very reasonable. Just who is this elf supposed to be, if not Santa?

Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

One might make a parallel point about the quasi-theist response to the kalam argument.

Just to have an example, let's imagine that you are an agnostic, and that you think that simple theism has a 45% chance of being true, simple atheism has a 50% chance of being true, and quasi-theism has a 5% chance of being true.

Three views
about
the universe

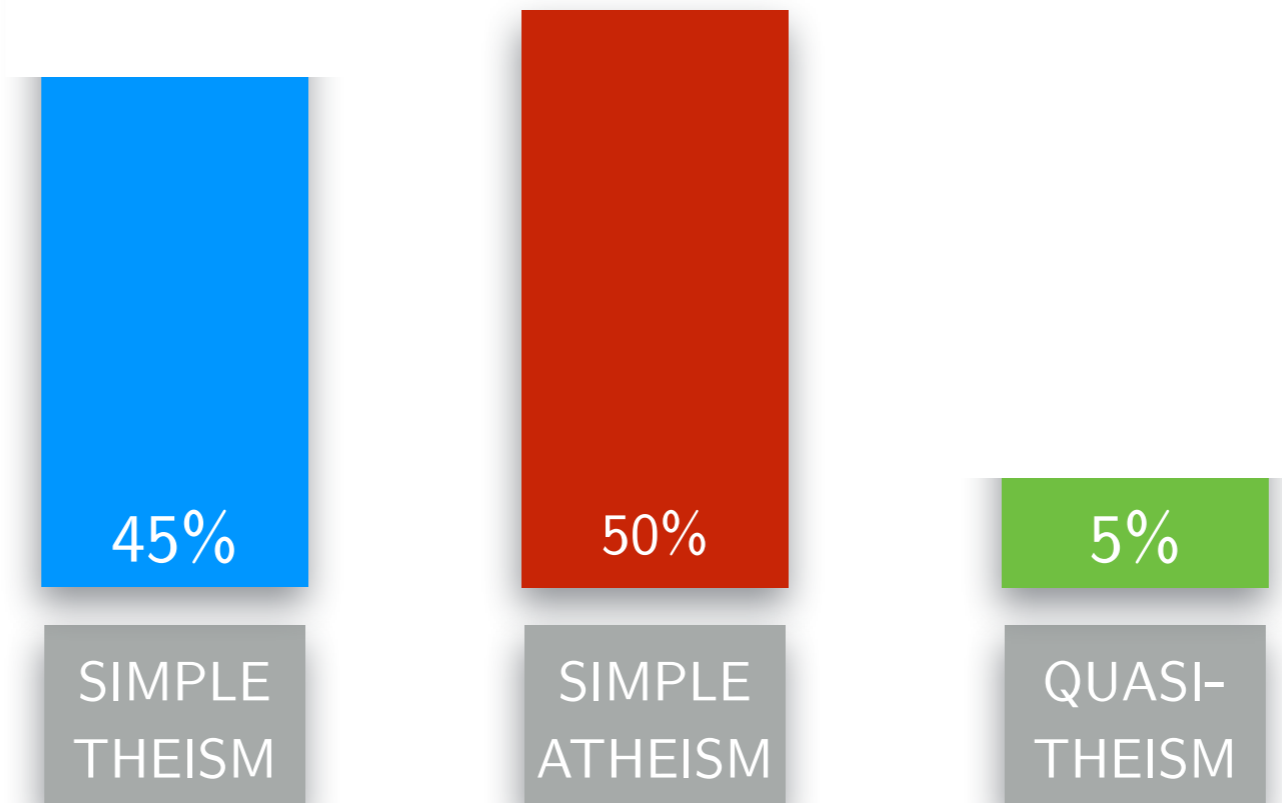
Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

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Three views
about
the universe

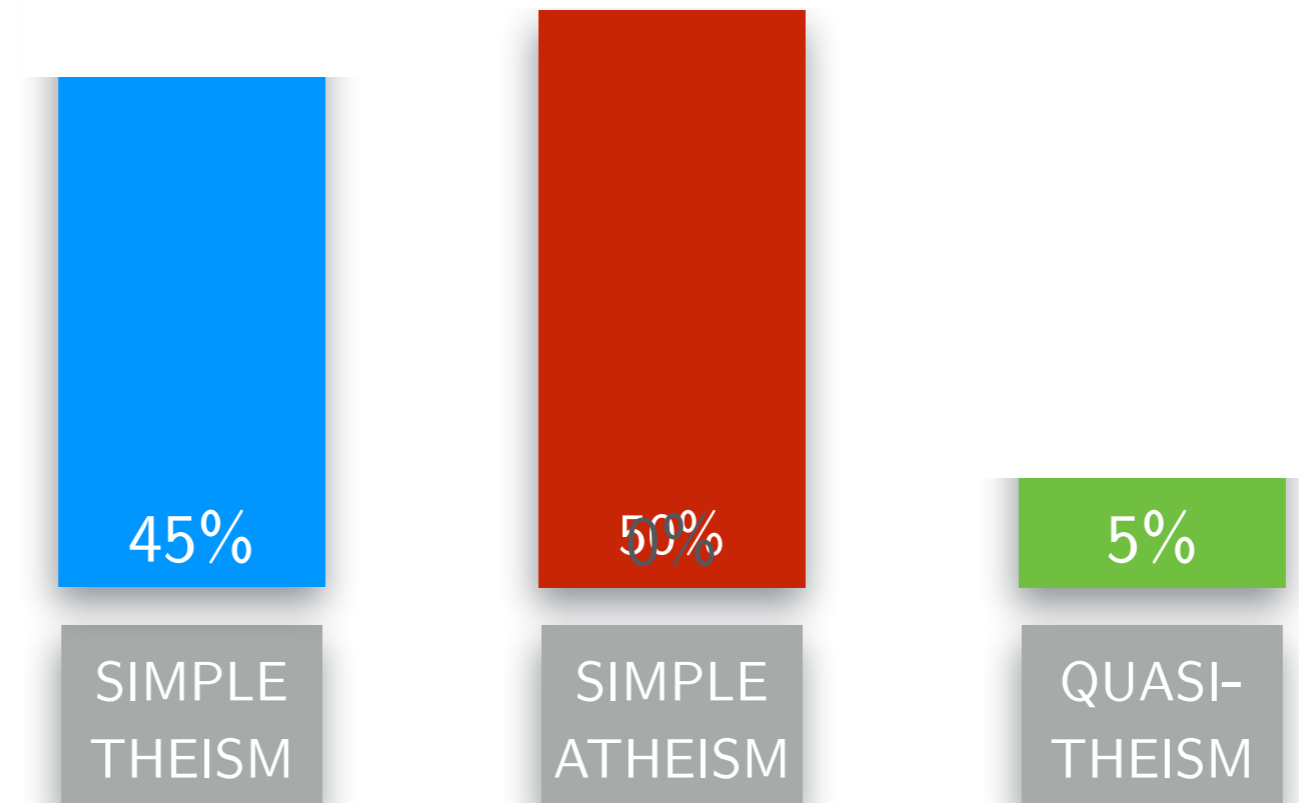
Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

Suppose now that you are convinced that every premise of the kalām argument besides (10) is true. So you are convinced that there is a beginningless first cause of the universe -- and just not sure whether that thing is God.

This rules out simple atheism. So (in this simplified example) the probability you assign to simple atheism goes down to 0%.



Three views
about
the universe

Aquinas'
first cause
argument

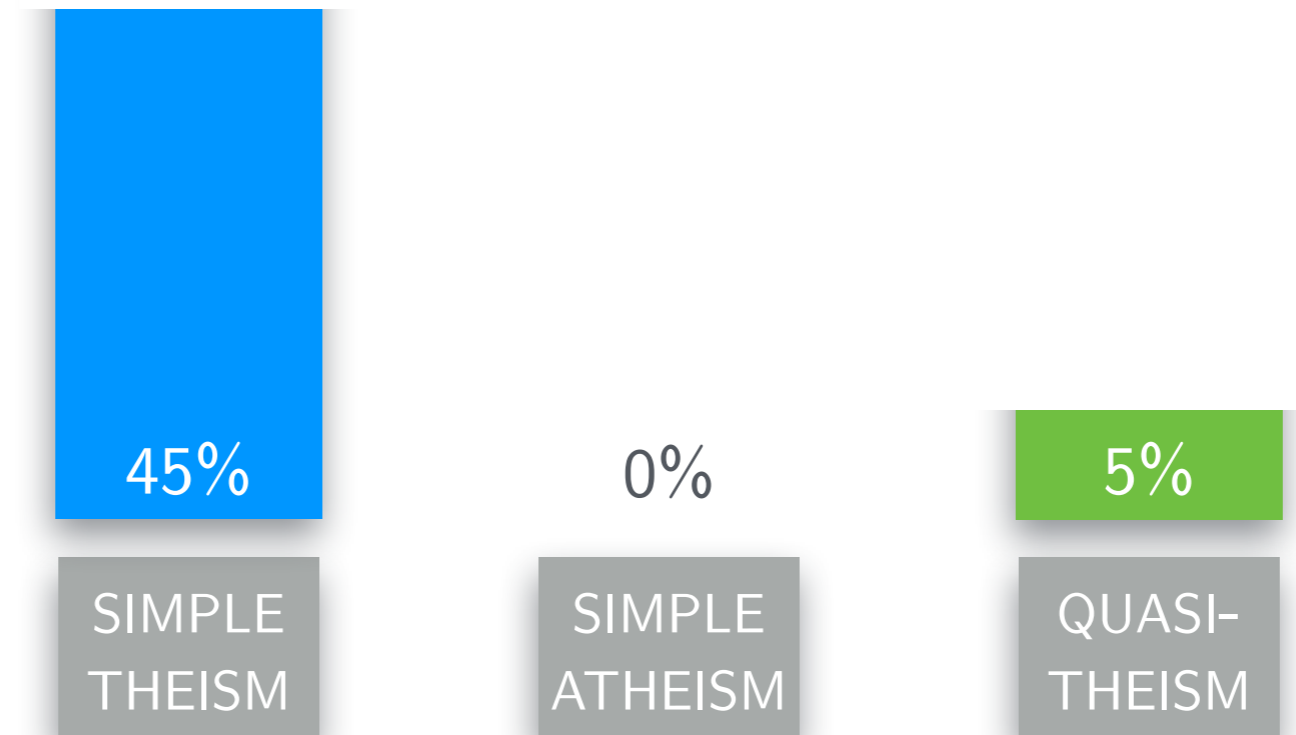
Two
objections
to Aquinas

the kalām
argument

But if you eliminate simple atheism from the picture, you have to adjust the probabilities you assign to simple theism and quasi-theism. After all, you know that one of these two theories is true -- so the probabilities you assign to them should add up to 100%.

Before encountering the kalām argument, you thought (in this example) that simple theism was 9 times more likely to be true than quasi-theism.

Nothing in that argument seems to affect this view; so perhaps you should keep it.



Three views
about
the universe

Aquinas'
first cause
argument

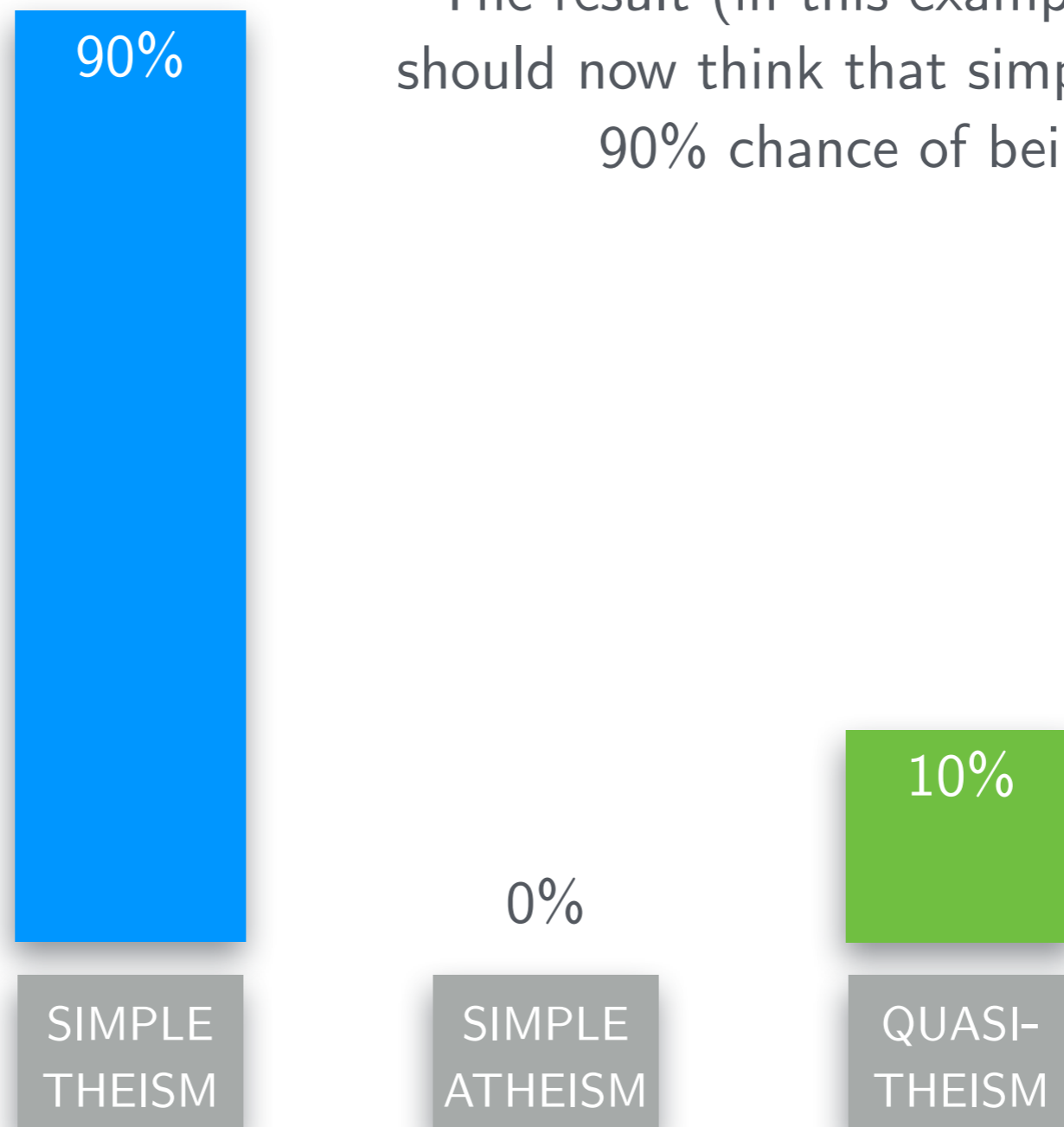
Two
objections
to Aquinas

the kalām
argument

Before encountering the kalām argument, you thought (in this example) that simple theism was 9 times more likely to be true than quasi-theism.

Nothing in that argument seems to affect this view; so perhaps you should keep it.

The result (in this example) is that you should now think that simple theism has a 90% chance of being true.



Three views
about
the universe

Aquinas'
first cause
argument

Two
objections
to Aquinas

the kalām
argument

The result (in this example) is that you should now think that simple theism has a 90% chance of being true.

This is just one example. But it illustrates how an argument might (very) substantially increase the probability you assign to its conclusion even if it does not definitively rule out every other possibility.