
Three views
about
the universe


Aquinas'
first cause
argument

Two objections to Aquinas


the kalām
argument

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?

4. There are no infinite causal chains.

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?

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, ...

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!

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. There are books to your left, and books to your right — 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.)

Suppose that you want to make the collection of books on the left bigger; so you move 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. You would neither have increased the number on the left nor decreased the number on the right.

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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grounds that there can't be an uncaused cause, like the explosion of

particles described?

Might one defend (8) by saying that this hypothesis is impossible, on the

8. If there is a

first cause, then

God exists.

Instead, it seems like Aquinas has to argue that nothing like the Big

have a cause; but things like God don't.

Bang could genuinely be a first cause. Things like the Big Bang have to

which was an uncaused cause would have to have other properties, which

God has, but the Big Bang does not.

he did not have the Big Bang in mind). He tried to argue that something

And that is, in a way, exactly what Aquinas tried to do (though of course

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?

some reason for rejecting the above hypothesis.

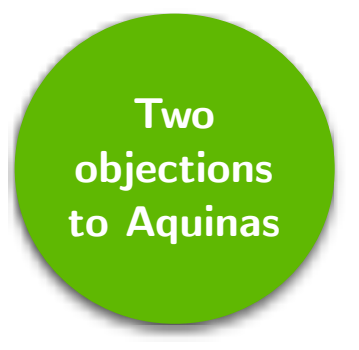
cause, but God does not exist. And it appears to be entirely consistent with

This would appear to be a description of a world in which there is a first

simple atheism. So it looks as though, if we are to believe (8), we must have

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.


Two
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the kalām argument

2. Nothing is prior to itself.

to itself.

5. At least one thing has a

of itself, it would be prior

4. There are no infinite

causal chains.

itself. (1,2)

or (iii) have a first cause.

7. There is a first cause.

3. Nothing is the cause of

1. If something were the cause

(i) circular, (ii) infinite,

cause.

6. Every causal chain must be

(3,4,5,6)

then God exists.

C. God exists. (7,8)

8. If there is a first cause,

On this view, everything which begins to exist at some time must have a

and indeed nothing in the universe can be.

cause. Because the universe — including the Big Bang — has a

Bang — must have a cause. So the Big Bang can't be the first cause —

beginning in time, the universe as a whole — again, including the Big

was caused to exist by something outside the universe.

If one accepts this extra premise, and one accepts the assumption that

the universe came to exist at some time, then it follows that the universe

And then there are just two options — that thing must be eternal, or it

must have come to exist at a certain time.

time.

then *that* thing would have to be eternal, or have come to exist a certain

If we go with the second option, then it must have had a cause. And

There are a number of questions one could raise about this argument.

But let's focus in on one premise:

be God? How do we know that this eternally existing first cause of the

Aquinas' assumption that if there is a first cause, then that thing must

Could one object to this premise in much the way that we objected to

universe is God?

Our first topic is the question of whether God exists.


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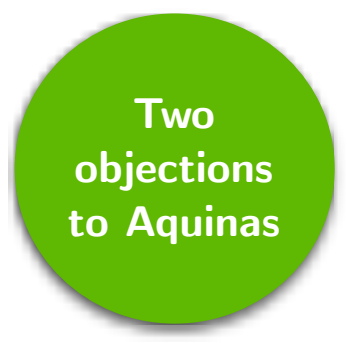
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Many arguments for God's existence are best thought of as

arguments **against** simple atheism. Whether they also amount to

we will return.

good arguments for the existence of God then depends in part on

how seriously you take quasi-theism. This is something to which

first cause argument we find in the reading from Thomas Aquinas.

Let's turn then to our first argument for the existence of God: the

Aquinas' first cause argument

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