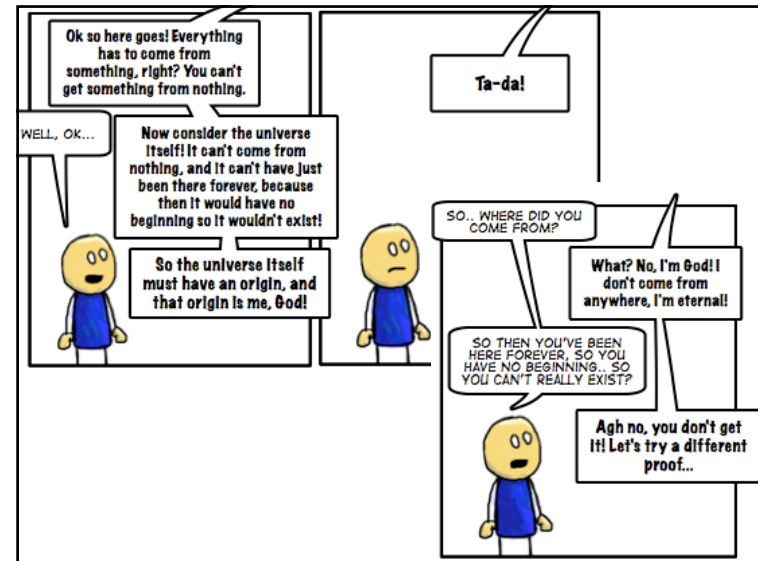


PHIL 1305

How did the **Universe** **Begin?**

Justin C. Fisher



What do we mean by “God”?

- **A person** (has thoughts, feelings, desires)
- **All-powerful** (omnipotent)
- **All-knowing** (omniscient)
- **Entirely good** (omnibenevolent)



Cosmological Arguments for God's existence

*These arguments concern
the origins of the cosmos
(i.e., of everything).*

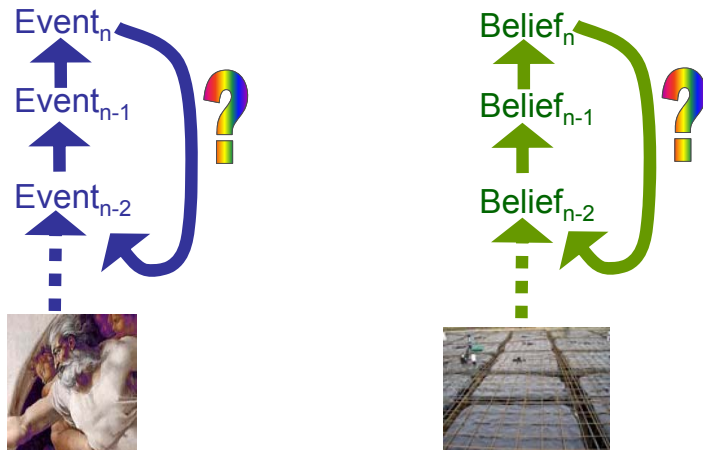


The argument we'll consider is closely related to one developed by the Kalām tradition of Islamic thought.

This is also related to St. Thomas Aquinas' “first two ways”.

And it was recently defended by Christian philosopher William Lane Craig.

Causal vs Justificatory Chains



The Cosmological Argument

1. In the natural world, events occur.
 2. Each event in the natural world is caused by another event.
 3. In the natural world, causes precede their effects.
 4. In the natural world, there aren't infinite cause/effect chains.
-
5. Hence there is an event outside the natural world (a supernatural cause).
-
6. Hence, God exists.



The Cosmological Argument

1. In the natural world, events occur.

It's hard to reject this without being a skeptic about the world around us (e.g., perhaps thinking the so-called natural world is just a dream).



-
5. Hence there is an event outside the natural world (a supernatural cause).

-
6. Hence, God exists.



The Cosmological Argument

1. In the natural world, events occur.
2. Each event in the natural world is caused by another event.

It makes sense to have a policy of looking for causes, in hopes of finding them.


But couldn't some events just happen?


- ✗ Radioactive decay?
- ✗ Quantum fluctuations?
- ✗ The Big Bang?

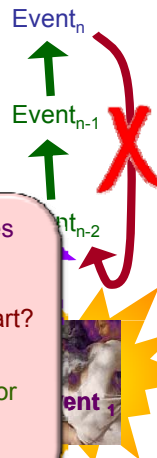


The Cosmological Argument

1. In the natural world, events occur.
2. Each event in the natural world is caused by another event.
3. In the natural world, causes precede their effects.

 Time travel could create alternate timelines (as in *Back to the Future* or *Star Trek*). If our Big Bang was set off by people from another timeline, how did their timeline start?

 Time travel might happen within a single coherent timeline (as in *Twelve Monkeys* or *The Time Traveler's Wife*). Could time travelers from our own future have set off the Big Bang?



a priori vs *a posteriori*

Prior to even looking out at the world, I can know...

- ✓ I think therefore I am.
- ✓ $2 + 2 = 4$
- ✓ Nothing can be a bachelor if it's married.

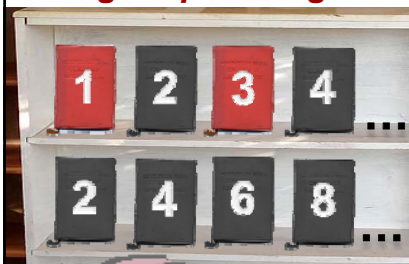
Only posterior to (i.e. after) looking at the world, can I know...

- ✓ Squirrels have tails.
- ✓ Unsupported things fall.
- ✓ Galaxies are receding from us.



Which of these could Descartes use in his argument for God's existence?

Craig's *a priori* argument against infinities



The top shelf has more books (all the red ones).
There are just as many books on bottom (one for each book on top).
These can't both be true!
So infinities can't exist.

There are multiple ways to define comparative size:

- ▶ The blue piece is longer.
- ▶ Both pieces have the same area.

There's no contradiction between being bigger in one sense, and the same in a different sense.



Craig's *a priori* argument against infinities



The top shelf has more books (all the red ones).
There are just as many books on bottom (one for each book on top).
These can't ~~X~~ both be true!
So infinities can't exist.


There are multiple ways to define comparative size:

- ▶ The bottom books are a proper subset of the top books
- ▶ These sets have the same cardinality: they can be linked one-to-one.

There's no contradiction between being bigger in one sense, and the same in a different sense.



Craig's *a priori* argument against infinities



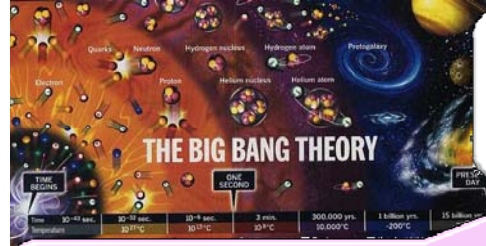
The top shelf has more books (all the red ones).
There are just as many books on bottom (one for each book on top).
These can't both be true!
So infinities can't exist.

Furthermore, many physicists embrace actual infinities:

- ▶ Space may extend infinitely.
- ▶ The future may extend infinitely.
- ▶ Infinitely many locations between you and me.
- ▶ Infinitely many times between 9:00 and 10:00.

Craig's *a priori* argument is very radical.

Craig's *a posteriori* argument



Physical evidence tells us the universe began with a Big Bang about 13 billion years ago.

There are two ways the universe could lack a beginning:

- ▶ For each time there was a preceding time a year earlier.
✗ Current physical evidence gives us reason to deny this.
- ▶ For each time, there was a preceding time half as far from the lower bound of time, but there was no time zero.
☑ Most versions of the Big Bang Theory do say this.

So it's not clear our universe actually did have a beginning.

The Cosmological Argument

Even if (5) each causal chain does lead back to a supernatural source, this wouldn't show that (6) they all lead back to a single person with all the traits God is commonly supposed to have.

- ✗ Different causal chains could have different sources.
- ✗ If there is just one source, it might not be a person.
- ✗ Or it might not be All-PKG.

5. Hence there is an event outside the natural world (a supernatural cause).

6. Hence, God exists.



So how did our universe begin?

Did the Big Bang just happen with no cause?

Will time-travelers go back and start everything?

Could causal chains extend back infinitely with each event caused by a preceding event, and no beginning?

Was our universe started by something outside it?

- A collision of M-branes?
- A committee of deities?
- A matrix architect?
- God?

And how would these begin...?

