

# SYSTEMATIC THEOLOGY





# LAST TIME

- Natural Theology
- Kalam Cosmological Argument
- Philosophical Proofs



# KALAM COSMOLOGICAL INTRO

- Muslim roots based on Christians thought.
- Kalam references medieval Islamic theology.
- al-Ghazali- 12th century Persia.
- *The Incoherence of the Philosophers*



# AL-GHAZALI'S ARGUMENT

1. Whatever begins to exist has a cause.
2. The universe began to exist.
3. Therefore, the universe has a cause.



# SCIENTIFIC CONFIRM FOR PREMISE 2

- Throughout history, people assumed the universe was unchanging.
- Einstein's *General Theory of Relativity* proved something different.
- Predicted the world is either blowing up like a balloon or collapsing in on itself.



# SCIENTIFIC CONFIRM FOR PREMISE 2

- 1917- Einstein's theory.
- 1920's- Friedman & Lemaitre predicted expanding universe- Big Bang Theory.
- 1929- Edwin Hubble- measured redshift and confirmed the expansion



# REDSHIFT

- Light coming from other galaxies was more red than it should be.
- Explanation is that they galaxies are actually moving away from us.
- The light rays are stretched, therefore appears more red.



# REDSHIFT

- Would seem to indicate that we are located at the center of the universe,
- Friedman-Lemaitre model indicated that we are not, it just seems that way.
- Balloon with buttons on it... they stay in the same place but all move away from each other.



# BIG BANG

- Mistake to think that it was an explosion at a central point of some pre-existing empty space.
- Space itself is expanding.

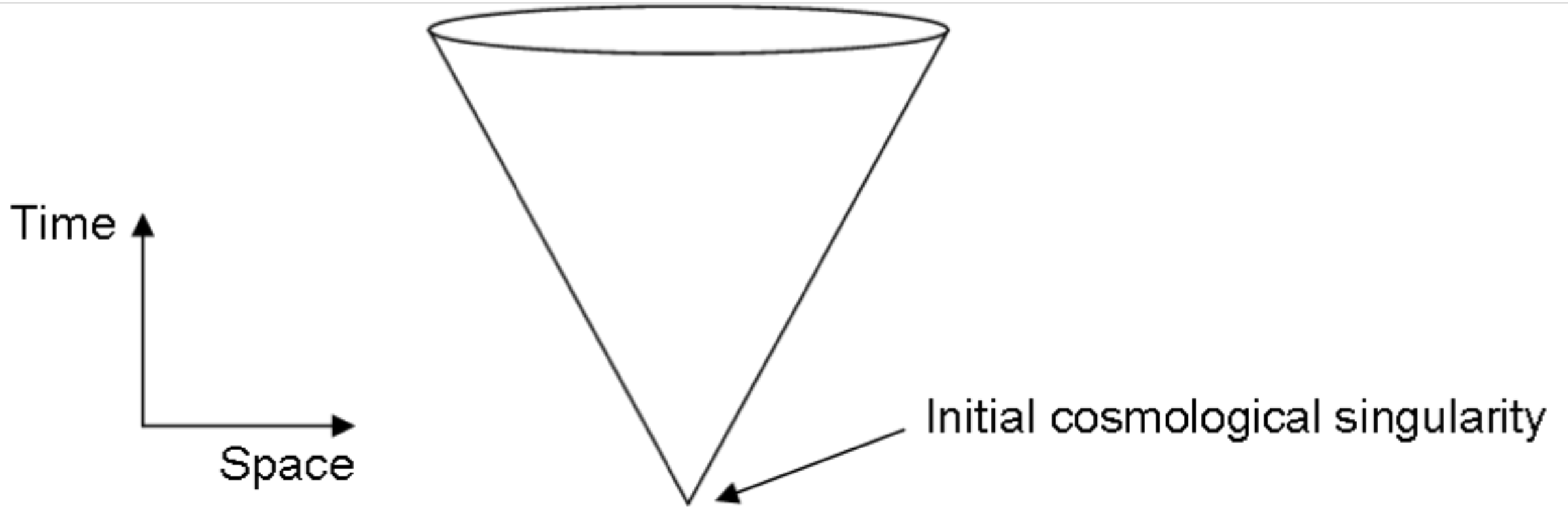


# BIG BANG

- Trace the expansion back in time.
- Everything would get closer and closer together.
- Eventually the distance between 2 points reaches 0.
- The beginning of time and space.



# BIG BANG (AS A CONE)





# CONCLUSION FOR 1ST PROOF

- The Big Bang predicts an absolute beginning of the universe at some time in the finite past.



# BIG BANG COSMOLOGY

- Is this standard model correct?
  - Redshift points to the universe being denser in the past than today.
  - Abundance of light elements, like helium, point to a dense, hot formation.
  - Microwave radiation also points to the same.



# FAILED ATTEMPTS TO DISPROVE

- Many different attempts to find solutions that will disprove a beginning of the universe, but all have failed.
- The more theories that are paraded and disproved on serves to confirm the standard model



# BORDE-GUTH-VILENKIN

- 2003- proved that any universe at all which is in a state of cosmic expansion on average throughout its history cannot be eternal in the past but must have a past space-time boundary.
- Does not rely on any previous proofs.



# BORDE-GUTH-VILENKIN

- It even proves that if our universe is part of a vast multiverse, even that multiverse would have to have an absolute beginning.



## ALEXANDER VILENKIN- MANY WORLDS IN ONE

“It is said that an argument is what convinces reasonable men and a proof is what it takes to convince even an unreasonable man. With the proof now in place, cosmologists can no longer hide behind the possibility of a past-eternal universe. There is no escape; they have to face the problem of a cosmic beginning.”



# CONCLUSION FOR BIG BANG

“... the proponent of the Kalam Cosmological Argument stands squarely within the scientific mainstream in affirming the second premise of the argument that the universe began to exist.”



# SECOND SCIENTIFIC CONFIRMATION

- 2nd Law of Thermodynamics
  - Processes going on in a closed system tend to a state of disorder.
- Since atheist see the universe and an enormous closed system, the universe will eventually run down.



# SECOND SCIENTIFIC CONFIRMATION

- If the atheists are right, then they have painted themselves into a corner.
- If the universe has existed already for an infinite amount of time, then why has it already not reached a state of heat death (equilibrium)?



# WHAT ABOUT EXPANSION?

- But if the universe is constantly expanding, then it could not actually arrive at equilibrium because there is always more room for matter and energy to move into and diffuse themselves.



# WHAT ABOUT EXPANSION?

- If the expansion was slower than the gravity there would be a Big Crunch.
- Recent discoveries show that is expansion is actually accelerating.
  - This means the universe is getting further from equilibrium.
- Infinite time would still be a problem



# ATTEMPTS TO AVOID A BEGINNING

- None have been successful.
- Oscillating Theory-
  - Actually gets you to a beginning.
  - Based on entropy, only 100 or so oscillations could have taken place.



# BUBBLES OR MULTIVERSE

- Just because our bubble had a beginning does not mean that they multiverse did.
- Borde-Guth-Vilenkin disproved this.



# BABY UNIVERSE

- Black holes get pinched off and form new universes.
- Contradicts quantum physics. Information that goes into a black hole stays in our universe.
- Even Stephen Hawking admits defeat on this.



# PHILOSOPHICAL & SCIENTIFIC

“So then, on the basis on both philosophical argument and scientific evidence, we have good reason for thinking the second premise of the Kalam Cosmological Argument is true: the universe began to exist. In conjunction with the first premise, that whatever begins to exist has a cause, the conclusion therefore follows with logical necessity: therefore, the universe has a cause.”



# CONCEPTUAL ANALYSIS

- The universe must have some sort of transcendent cause which is outside and beyond the universe.
- So what does that mean?



# PROPERTIES OF THE CAUSE

- The cause must be uncaused.
- This being must transcend both space and time because it created both.
- Must be unimaginably powers, omnipotent.
- Plausibly a personal being.



# WHY A PERSONAL BEING?

- Cannot be an abstract object.
- Must be an unembodied mind- personal being.
- al-Ghazali argued for a personal being because it is impossible to explain how you can get a temporal effect from a changeless eternal cause.



# WHY A PERSONAL BEING?

- Essentially, something has to change in order for the universe to begin existing.
- The cause must have a freedom of will, an ability to spontaneously create that is affected by nothing else.
- Nothing caused God to create, except Himself, therefore he must be personal.



# CONCLUSION

“With that we will close the Kalam Cosmological Argument. This argument is very powerful because it gives us grounds for believing in the existence of a beginningless, uncaused, timeless, spaceless, immaterial, enormously powerful, personal Creator of the universe, which is the core concept of what theists mean by “God.” “



# NEXT TIME

➤ Read:

➤ Excursus- Natural Theology- Teleological Argument  
pp. 100-133



QUESTIONS?