

## Week 2

1. Now turning to this week: we're going to look at two arguments for God's existence
  - a. The Kalam Cosmological Argument
    - i. The argument from the beginning of the universe
    - ii. My personal favorite argument and the one that convinces me the most...explain why
  - b. The Teleological or "fine-tuning" Argument
    - i. The argument from the fine-tuning of the universe
    - ii. We'll talk more about what "fine-tuning" is when we get there
    - iii. Often referred to as the best theistic argument by atheists
2. These two arguments deal with cosmology and the universe around us
  - a. Turn to Psalm 19:1 (have someone read it)
  - b. I believe this is more than just saying "I can look up and be impressed at the stars and galaxies and think there is a God"
  - c. I think there's more to it than just that and these arguments for God from cosmology will explore that more
  - d. This is known as natural theology-arguing for religious truths without appealing to direct revelation
  - e. I have my resident cosmology expert Rick Pardew here to my right so I think we are ready to dig in

## Kalam

1. Intro
  - a. Turn to Genesis 1 (read 1:1-5)
  - b. For over 3,000 years after these words were written, most if not all scientists did not believe it
  - c. That's because up until the last 100 years or so the consensus among scientists was that the universe was past eternal meaning it was without a beginning
  - d. It wasn't until after Albert Einstein presented his General Theory of Relativity in 1915 that people began to use his equations and calculated that the universe might be expanding
  - e. In 1929 Edwin Hubble provided the first empirical evidence to this claim when he "discovered that the more distant a galaxy is from us, the faster it appears to be receding into space. This means that the universe is expanding uniformly in all directions."
  - f. Why does this matter you ask? Who cares that the universe is expanding? Why does it matter that science has now discovered a beginning to the universe also known as the Big Bang?

- g. I'm glad you're wondering because it supports the first premise in the Kalam Cosmological Argument, which is the we'll cover first
2. Format
- a. The argument goes like this
    - i. The universe began to exist
    - ii. Everything that begins to exist has a cause
    - iii. The universe had a cause
3. Premises
- a. Now back to that first premise we were just talking about
  - b. The universe began to exist
    - i. By universe we mean space, time, and matter
    - ii. For reference turn to Genesis 1:
    - iii. In the beginning (time) God created the heavens (space) and the earth (matter)
  - c. There are two types of evidence for the beginning of the universe: *scientific* and *philosophical*
    - i. Firstly, the scientific evidence begins with what we were just talking about
      - 1. The fact that the universe is expanding
        - a. We've already talked about how we know it's expanding, now let's talk about how it points to a beginning
        - b. balloon example
        - c. Thus reversing the expansion rate of the universe in time shows that the universe had a point of origin
        - d. Does that make sense
      - 2. Radiant heat left over from the big bang points to the universe's point of origin
      - 3. A third piece of scientific evidence is (though there is more) the 2nd law of thermodynamics
        - a. if the universe had been here forever, it would have run out of usable energy by now
        - b. Example: You may have learned in school that the sun will burn up someday
        - c. If that's the case, the sun wouldn't be here if the universe were infinite, because it would have burned up an infinite time ago
        - d. Thus this points to a point of beginning, where the sun started burning

4. These were 3 of the reasons modern scientists believe the universe had a beginning
  - a. Expanding universe
  - b. Radiant heat
  - c. 2nd Law of Thermodynamics
- ii. Turning now to the philosophical evidence
  1. Philosophical evidence has been around much longer than the scientific evidence
  2. Philosophers have long recognized that there could not have been an infinite number of events in the past
    - a. Including an infinite number of days
  3. (Actual infinities produce logical absurdities
    - a. Hilbert's Hotel)
  4. Think of it this way
    - a. Can we reach an infinite day in the future?
    - b. To someone in the infinite past, we today on May 21st 2023 are that infinite day in the future that cannot be reached
    - c. But today is here
    - d. Thus the number of days in the past cannot be infinite
    - e. This personally for me is the most convincing argument for the beginning of time
    - f. Did I explain that well?
- iii. Concluding premise 1
  1. We have looked at the scientific and philosophical evidence that have lead people like Cosmologist Alexander Vilenkin to say:
    - a. "All (not some) the evidence we have says that the universe had a beginning"
      - i. His contemporary Stephen Hawking would echo this
  2. In fact Alexander Vilenkin was part of the Borde-Guth-Vilenkin Theorem which looked at models of the beginning of the universe and concluded that all models of the universe without a beginning failed and thus the universe must have a beginning
- d. Everything that begins to exist has a cause
  - i. This is known as the law of causality or the law of cause and effect, which many of you have probably heard of.
  - ii. It is both a scientific law and philosophical claim.

- iii. A scientific law is a description of observed phenomena in the natural world. An experiment that can be repeated over and over again.
- iv. Everyone experiences the law of cause and effect in their own life.
  - 1. Such as ice being the cause of you slipping
  - 2. You sleeping through an alarm the reason you were late
  - 3. The list goes on and on
- v. In fact nothing that you can think of has come into existence without a cause.
  - 1. Sam Walton brought about walmart
  - 2. Steve Jobs brought about iPhones
  - 3. Nothing comes into existence without a cause
- vi. This is so well agreed on that it is regarded as a scientific law,
  - 1. something that is foundational to how the natural world operates.

#### 4. Conclusion

- a. Therefore the universe had a cause
  - i. If the universe (space, matter, time) had a cause it must be
    - 1. Spaceless (space logically cannot be the cause of itself, or else it would have already existed prior it it's existence)
    - 2. Timeless (time logically cannot be the cause of itself, or else it would have already existed prior it it's existence)
    - 3. Immaterial (matter logically cannot be the cause of itself, or else it would have already existed prior it it's existence)
    - 4. Personal-talk about how the effect of a cause is almost if not always instantaneous and how the only way to have an eternal cause with a finite effect is if the cause is an agent
    - 5. Powerful (this being would have to be enormously powerful in order to be able to create something as vast and extravagant as the entire universe)
    - 6. Intelligent (this being also must be extremely intelligent in order to possess the knowledge of how to create such a complex, diverse, and finely tuned universe)
    - 7. Singular
      - a. since this being is timeless it is infinite.
      - b. What makes two beings differ from one another is one lacks something the other has.
      - c. An infinite being lacks nothing.
      - d. Therefore only one infinite being can exist.
      - e. Therefore this being must be singular

- ii. Thus the scientific and philosophical evidence points to a single spaceless, timeless, immaterial, enormously powerful, highly intelligent, personal, creator of the universe.
- iii. The title that we would ascribe to such a being is God, for such a being is what we mean by God.
- iv. It certainly possesses the traits of the God of the Bible.
- v. Now how might this argument be useful
  - 1. Story in class of kid who said he was an atheist because he believed in the big bang
  - 2. The big bang is a very common thing...

#### 5. Teleological Argument

- a. Teleology definition-understanding the purpose of things
- b. This is often considered to be the best theistic argument by many atheists
- c. Argument breakdown slide
- d. Premise 1: The universe is finely tuned for the existence of life
  - i. What does finely tuned mean?
    - 1. The fine tuning of the universe is not things like animals
    - 2. How an animal may be complex and looked designed, to this an atheist might cite evolution as the reason as to why this animal looks to be designed but is really the product of natural processes
    - 3. Instead by fine tuning we mean physical properties of the universe that make the existence of life permissible
    - 4. Such as
  - ii. What are some examples of fine tuning?
    - 1. Stephen Hawking estimates “if the expansion rate of the universe was different by one part in a hundred thousand million million one second after the big bang the universe would have either collapsed back in on itself or never developed galaxies”
      - a. Explain
    - 2. Another example is if the force of gravity were off by one part in  $10^{40}$  our sun would not exist.
      - a.  $10^{40}$  is 1 with 40 zeros behind it
      - b. On a scale as wide as the whole universe that'd be one inch
    - 3. There are a number of physical properties of the universe that have to be correct in order for the universe to be able to contain life
- e. Our second premise lists the 3 possible explanations for this:

- i. Physical Necessity
  - ii. Chance
  - iii. Intelligent Design
  - iv. Which leads us to our third premise:
- f. This fine tuning is not due to physical necessity or chance
  - i. Why not physical necessity
  - ii. Why not chance-occam's razor
- g. Therefore the universe was intelligently designed

## Review

1. We covered two arguments today
  - a. Kalam Cosmological Argument
  - b. Teleological or Fine-tuning argument
2. The Kalam goes
  - a. Argument
    - i. Everything that begins to exist has a cause
    - ii. The universe began to exist
    - iii. Therefore the universe has a cause
  - b. We talked about
    - i. The evidence for a beginning
    - ii. Why things have causes
    - iii. What the cause of the universe must be namely, spaceless, timeless, immaterial, personal, powerful, intelligent, and singular
3. The Fine Tuning or Teleological Argument
  - a. We talked about what fine tuning is
    - i. And some examples of it
      1. Force of gravity
      2. Expansion rate of the universe
  - b. We saw it's due to 3 possible reasons: physical necessity, chance, or intelligent design
  - c. We talked about why intelligent design is the best explanation of these examples of fine tuning
4. This meets our goals for the course because
  - a. We learned more about God and what we can know about Him through general revelation
    - i. Psalm 19:1 says "The heavens are telling of the glory of God; And their expanse is declaring the work of His hands."
    - ii. Today with these two arguments we plainly saw how the heavens declare his glory and the expanse of space above us provides proof His hands were involved

- b. It meets our second goal because we hopefully are now more prepared to engage unbelievers
  - i. Like the example I gave about the kid in my class
  - ii. We do not have to fear getting into conversations about the big bang or other scientific facts
  - iii. Instead we can actually provide some insight that might make the unbeliever we're conversing with to think
- c. It meets our third goal because when trials come we are aware of two more pieces of evidence that point to God
  - i. No matter how bad our subjective human experience may get