

WitnessKit 2
God And Creation

Class 7
Cosmology and Purpose

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Proverbs 8:11, 22, 27-31: God's MIND

¹¹ For wisdom *is* better than rubies,
And all the things one may desire
cannot be compared with her.

Proverbs 8:11 (NKJV)

²² "The LORD possessed me at the
beginning of His way,
Before His works of old. Proverbs 8:22 (NKJV)

²⁷ When He prepared the heavens,
I *was* there,

Proverbs 8:11, 22, 27-31: God's MIND

When He drew a circle on the face of the deep,
²⁸ When He established the clouds above,
When He strengthened the fountains of the deep,
²⁹ When He assigned to the sea its limit, So that
the waters would not transgress His command,
When He marked out the foundations of the earth,
³⁰ Then I was beside Him as a master craftsman;
And I was daily *His* delight, Rejoicing always
before Him, ³¹ Rejoicing in His inhabited world,
And my delight *was* with the sons of men. (NKJV)

Sir John Templeton, quoted in *The Case For a Creator*

“Would it not be strange... If a universe without purpose accidentally created humans who are so obsessed with purpose?”

Purpose inherent to the universe
requires a Personal Beginning.

If God created, then purpose is possible.
An impersonal beginning = no possible
purpose inherent in the universe

Cosmology=the knowledge of the cosmos, Defined more precisely:

The study of the origin, processes, structure, and dynamics of the universe is called cosmology.

The Kalam argument is an approach to cosmology within the field of philosophy.

The study of the Big Bang is within the field of science called cosmology, within the disciplines of astrophysics and astronomy.

Communication Gap

- The departments of philosophy and of astrophysics are usually in different colleges within large universities—one in the college of humanities, the other in the college of science.
- They may not communicate with each other.
 - They have different approaches to the same problems, and come to differing conclusions.
 - The Kalam argument is considered reasonable in the philosophy departments, and in the philosophy of science field.

The Kalam Argument

Anything which began to exist

Had a cause outside itself.

The universe began to exist.

The universe had a cause outside
itself.

Last Class...

- We said that the Kalam argument implies a Personal beginning for the universe, because an impersonal beginning cannot choose anything. An impersonal beginning cannot choose to cause anything.
- The information required for the function of the universe had to be **chosen—because it is so fine-tuned.**

An impersonal beginning implies **chance** as the cause for the universe.

We said that the fine tuning of the
universe...



rules out chance
as a cause for the universe.

It is time to find out what “the fine tuning of the universe” is all about.

The description of the fine tuning is from the field of science rather than the field of philosophy.

This class integrates ideas across two fields of study.
The Case for a Creator gives the following details.

We can know that Chance is NOT our creator

Fine-Tuned Constants:

Because life could not exist without the fine tuning of these constants....

- **The force of gravity**
- The energy density of empty space
- The mass of the neutron
- The rate of expansion of the universe
- **And more than thirty other fine-tuned factors.**

The Force of Gravity is Perfectly Set for Life on our planet.

- The force of gravity is absolutely necessary for holding every part of the universe together.
- If the force of gravity changed (either stronger or weaker) by a fraction of itself as small as the ratio of one inch to the diameter of the universe then...
- Life would be impossible.

The energy density of empty space

This is called “the cosmological constant.”

- If it differed by one part in 10 to the 55th power, the universe would not have formed in a way to include our type of galaxy and solar system.
- Life would not have been possible.
- This is so precise, we needed computers to have the power to calculate how important it is.

The mass of the neutron

The gigantic new supercollider in Switzerland is on a quest for the Higgs Boson – a theoretical elementary particle thought to give mass to other particles. This area of research is on the cutting edge of technology.

If the mass of the neutron were different by one part in 700, nuclear fusion in the stars would not be possible, and the universe would be cold and dead.

The rate of expansion of the universe

The universe has to expand at its exact rate, without any variation, or the universe could not support life. **It is fine tuned to one part in a trillion trillion trillion trillion trillion.**

- Think about that – the big bang—an explosion expected to be the most chance driven of events –with a resulting perfectly controlled expansion rate to produce life.

We can know that Chance is NOT our creator

Fine-Tuned Constants:

Because life could not exist without the fine tuning of these constants....

- **The force of gravity**
- The energy density of empty space
- The mass of the neutron
- The rate of expansion of the universe
- **And more than thirty other fine-tuned factors.**

Even if one such factor happened
by chance...

More than 30 such factors are fine tuned to
produce life.

Imagine a set of 30 dice,

- one with a trillion trillion trillion trillion trillion faces,
- one with 700 faces,
- one with 10 to the 55^{th} power faces.
- 27 other dice, each with many faces.

One exact face on each die needs to turn up for life to be possible on our planet.

You have one chance to roll each die.

You roll each one in turn.

- All 30 give exactly the right number.
- How can that happen by chance?

The naturalists are trying to answer that question.

- They say, well, maybe there are billions of chance universes out there, so ours could happen by chance.
- Given enough universes.... 30 precise rolls of the die in a row sounds reasonable.
- Of course the die with the trillion trillion trillion trillion faces sounds like it would need more than a few billion opportunities to hit the exact answer....

Greg Easterbrook said,

- “The multiverse idea rests on assumptions that would be laughed out of town if they came from a religious text. ... The theory requires as much suspension of belief as any religion.
- ‘Join the church that believes in the existence of invisible objects fifty billion galaxies wide.’”

I would add...

- AND believes in a universe generating machine to spin them into existence out of nothingness.
- And wouldn't that make the machine a sort of god? A mechanical god?
- This brings us right back to the question—Is the Beginning Personal or impersonal? Which is more likely, given the fine-tuning?
- If your doubts are as unlikely as one part in a trillion, trillion, trillion, trillion, trillion, you are close enough to certainty to call it knowing.

We can appreciate that God is our Creator

Location,
Location,
Location

By recognizing the special location of our planet

- in the spiral arms of the Milky Way
- near the sun
- near Jupiter
- near the moon

Our Galaxy is Spiral

Earth is in exactly the right portion of the spiral galaxy

- ▣— far enough from the center to avoid the intense radiation and danger of a black hole near the center...
- ▣—far enough inside to avoid the exploding supernovas of the arms of the spiral.
- ▣ It is in the right location for the chemicals needed to support life.

Our Galaxy is Spiral

- Of the three kinds of galaxies, only the spirals can have life-supporting planets.
- Our galaxy is in the top 1% or 2% of galaxies that might support life.

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- near the moon

Our Sun

Is in the top 10% for size in stars of our galaxy. This makes its light spectrum correct for plant life. It also makes its light more predictable.

The Sun's massiveness allows our planet to be far enough away to be out of danger from solar flares, but close enough to get the right amount of light.

Our Sun

- Our planet is just the right distance for the temperatures to support life.
- The temperatures are right for liquid water.
- The miserable temperatures at the poles and equator show that the planet is very nicely and precisely located.

Our Sun

- The sun has nice round orbits – only mildly elliptical—for its planets near ours,
- ▣ so the yearly orbit of earth is predictable, and
 - ▣ The earth is not drawn off course at times when other planets are near.

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Jupiter is a BIG Help.

- Jupiter has an unusual orbit – almost circular – unlike other giant gas planets.
- This keeps it from warping Earth's orbit, which would cause life-threatening variations in temperature on earth.

Jupiter and other planets...

- Jupiter shields Earth from comet impacts. It broke Comet Shoemaker-Levy 9 to bits by pulling it toward itself in July of 1994.
- Other planets are nice too – Mars and Venus take asteroid hits for us.

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The moon...

- The moon has exactly the right gravity, distance from earth, and orbital path to keep earth's axis stable. Otherwise the earth would tilt at different angles to the sun, and the seasons would be wildly unpredictable—this was discovered in 1993.
- Psalm 104:5, 19a “He established the earth upon its foundations so that it will not totter forever and ever....He made the moon for the seasons.”

The moon...

- The moon contributes 60% of the cause of the tides, and the tides keep the oceans circulating and keep weather predictable.
- The moon also helps the earth keep to a 24 hour day, where a bigger moon would make the earth rotate more slowly.

The moon... from the earliest book in the Bible...

- Genesis 1:14 Then God said, “Let there be lights in the expanse of the heavens to separate the day from the night, and let them be for signs, and for seasons, and for days and years; and let them be for lights in the expanse of the heavens to give light on the earth. And it was so.

The lights in the firmament

- Do exactly that list of things for us, just like the Bible says.
- By *signs*, I believe they are signs to us of God's existence and the truth of His word. The writing from about 3000 years ago tells us precise scientific truths discovered as recently as 1993.
- Any book can claim to be from God, but matching the facts of cosmology 3000 years before they become known is a pretty good test to pass. "He made the moon for the seasons" sounds poetic, but it matches reality.

We can be thankful to our Creator

Properties

:

The Size for Life

For the special properties He gave our earth.

- **The perfect size for life**
- **A finely tuned heat balance**
- **Plate tectonics and the carbon dioxide balance**
- **Plate tectonics and the cosmic ray shield**

Earth is the perfect size for life.

If larger, the rugged surface would be flattened by gravity.

That would turn earth into “water world,”

- ▣ since enough volume of water exists in the oceans to cover the entire surface if flat.

Around 1000 BC, God inspired the Psalmist to say it this way: Psalm 104:6b-9

“Thou didst cover it with the deep as with a garment; The waters were standing above the mountains. At Thy rebuke they fled; At the sound of Thy thunder, they hurried away.

The mountains rose; The valleys sank down to the place which Thou didst establish for them. Thou didst set a boundary that they may not pass over; that they may not return to cover the earth.”

How could a Psalmist

- In 1000 BC
- Know that the earth would be a water world if the surface had no mountains?
- How did he know God caused mountains to rise and valleys to form in order to set a boundary on the oceans? Once again, reality matches the poetry of Scripture.
- God inspired his poetry—a Personal God with MIND who created human minds and Who is intelligent—able to communicate.

Earth is the perfect size for life

- If smaller, the atmosphere would be a different combination of gases, less favorable to mammalian life.
- Not too big, not too small, JUST RIGHT!
- AND Just right for the heat balance—
The surface exposed to space where heat is lost is just the right size to balance all the heat sources that add heat to the earth.

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A finely tuned heat balance

The heat lost to space equals

- the heat added from sunlight
- plus the internal heating due to nuclear decay at the core of the planet,
- plus the heat generated by the motion of tectonic plates.

A marvelous feedback mechanism fine-tunes the heat balance.

A finely tuned heat balance

- Albedo is the degree of reflectivity added up from the oceans, the ice caps, and the deserts.
- When the ocean surface gets warm, more algae grows in the ocean.
 - The algae produce carbon disulfide.
 - Carbon disulfide produces cloud cover.
 - Less sunlight reaches the oceans.
 - The oceans cool.

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Plate tectonics and the carbon dioxide balance

- The motion of tectonic plates on the earth cycles limestone back under the mantle of the earth.
- The limestone is made of calcium, carbon dioxide, and oxygen.
- The heat under the mantle causes the limestone to decompose, and volcanoes release the gases.
- Plants need the carbon dioxide to live, and they recycle it. It stays in balance.

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- **Plate tectonics and the cosmic ray shield**

Plate tectonics and the cosmic ray shield

The earth's magnetic field shields the earth from cosmic radiation and solar wind particles, which are damaging to living cells.

The magnetic field is caused by convection currents in the earth's iron core.

The convection currents are kept in motion by plate tectonics.

All these factors say our planet is **VERY SPECIAL.**

They add up to design in very unexpected ways.

- Factors are kept in balance that would cause runaway temperatures or other life-threatening problems if out of balance.
- **Yet the mechanisms which balance each factor are not connected to the factor that they balance.**
- For example, the earth's magnetic core is not connected to cosmic radiation, yet it is a factor in shielding the earth from cosmic rays. Identifiable Purposes imply design.
- Design implies Mind.



Impersonal forces arising by
chance cannot have

purposes inherent to themselves.

Chance is purposeless.

Minds Can Have Purposes.

Minds Can Have Purposes.

- Another very special **external pattern** indicates purpose.
- The exact location of our planet which allows life to exist also allows the facts about the universe to be discovered by human beings.

We can learn about the universe because of ...

Total solar eclipses.

Total solar eclipses are due to the path of the moon—the moon's location and size are exactly right to perfectly block the sun—and eclipses allowed the theory of relativity to be established.

We can learn about the universe...

By using telescopes.

- Telescopic observation is available and most useful in a flat spiral galaxy—the only place possible to see other galaxies and to measure the background radiation.
- The discovery of the background radiation level confirmed the idea of the Big Bang.
- The composition of the atmosphere is just right in clarity for telescopes to work.

A GOOD GOD would be expected

To wish for us to learn about Him.

- The Big Bang leads right to Him.
- Even if we did not have verbal communication from Him, we could know a number of things.
- He is the cause of the beginning of the universe—and exists outside and before the universe.
- He is VERY INTELLIGENT.
- He is VERY POWERFUL.

What God is like:

- He is Mind/ Spirit... Not matter. He created matter.
- He is creative.
- He makes beautiful things.
- We appreciate beauty.
- We are like Him at least a little bit, because we have the capacity to appreciate the things He can do.

All of these things match

- The verbal communication about what God is like in the Bible.
- May He help us to find out more.

Homework

In 3 sets

Homework Class 7 Set 1

- Read Isaiah 40:3-8 and John 1:19-34.
- What does this passage recommend as preparation for the glory of the Lord to be revealed? How did John the Baptist apply this passage -- how did he do the preparation?
- Read Luke 4:10-14. What did John demand of people in power such as tax collectors and Roman soldiers as demonstration of repentance?

Homework Class 7 Set 1

- Read Chapter 9 in THE CASE FOR A CREATOR.
- How many molecular machines are mentioned in the formation of one protein, according to the documentary, UNLOCKING THE MYSTERY OF LIFE?
- If each machine has multiple parts and represents an example of irreducible complexity, could this choreographed assembly process have easily occurred by chance? And is it essential for sustaining life?

Homework Class 7 Set 1

- Why is the folded shape of a protein important to the discussion?
- What causes the molecule to fold in a certain way?
- Explain what Philip Gold meant, in reference to Einstein's famous quote that "God does not play dice with the universe,"
 - *"God does not play dice. He was right. He plays Scrabble."*

Homework Class 7 Set 1

- How many letters are in one of God's "Scrabble words" for producing one protein, not counting the other molecular machines in the cell that are needed for production?
- To acquire a new function or structure in a cell, what must appear?
- What are the three possible ideas other than Intelligent Design about how life could have formed initially?
- What are problems with each possibility?

Homework Class 7 Set 1

- What characteristics does “information” have in order to function as information?
- In the DNA molecule, where are there no chemical bonds?
- What does this lack of bonding allow?

Homework Class 7 Set 1

- How does looking at the Cambrian explosion in terms of information theory support the idea of Intelligent Design?
- What is “the great Darwinian paradox,” according to John F. McDonald?
- Dr. Meyer describes information as something that transcends matter and energy, and therefore that requires a transcendent source—intelligence. What does the amazing degree of information storage in a single cell imply about that transcendent source?

Homework Class 7 Set 2

Read Psalm 111: 1-10.

- How does studying the work of God relate to loving God?

Read Chapter 10 in THE CASE FOR A CREATOR.

- Contrast Descartes's quote with Ruse's question and Kurzweil's belief about the mind.
- What do these contrasting beliefs demonstrate about science's understanding of the mind?

Homework Class 7 Set 2

- Chalmers said, *“If you can get a computer to take on any kind of structure you like, and if consciousness is generated by structure, then by definition that kind of structure is going to eventually give you consciousness.”*
- Searle said, *“You can expand the power all you want, hooking up as many computers as you think you need, and they still won’t be conscious, because all they’ll ever do is shuffle symbols.”*
- How does this set up a test for philosophic materialism?

Homework Class 7 Set 2

- What evidence caused Wilder Penfield to doubt that the brain and the mind are inseparable?
- What percentage of temporarily brain-dead patients reported “well-structured, lucid thought processes with memory formation and reasoning” during the times when their brains were apparently dead?
- How did Sam Parnia theorize that this phenomenon might be possible?
- How does the phenomenon of “near death experiences” support the idea that the mind and brain are separate entities?

Homework Class 7 Set 2

- The idea that mind and brain are inseparable is called physicalism. What three conclusions did Moreland draw, if one supposes physicalism to be true?
- Is it possible to verify the reality of near death experiences as representing a mind's leaving its brain?
- Give some examples of experimental data that confirm the idea the consciousness and the self are not merely processes of the brain.
- Does brain surgery involving the removal of part of the brain remove part of the person? Is the person made up of the parts of his brain?

Homework Class 7 Set 2

- How does the idea of the human soul as invisible relate to the idea that one cannot see God?
- What did philosopher Geoffrey Medell say about consciousness?
- How does the idea of a Creator supply the answer that materialism cannot supply?
- How does the idea that mind might emerge from matter actually lead right back around to the idea of God?
- How does the idea that mind emerges from mere matter lead to doubt about the validity of logic?
- What is the “binding problem?”

Homework Class 7 Set 3

Read Psalm 33.

- What conclusions did the Psalmist draw about God, in light of His identity as Creator?

Read Chapter 11 in THE CASE FOR A CREATOR.

- What did Lee Strobel mention as negative and positive evidences that undermined his belief in Darwinism?

Homework Class 7 Set 3

- What did Lee Strobel list as six required beliefs that are corollaries of Darwinism?
- What are deficiencies of Darwinism in a nutshell?
- What six areas of knowledge did Lee Strobel search to create a big picture of the possibility of God's existence?
- Give a one or two sentence summary of his findings in each arena.

Homework Class 7 Set 3

- What characteristics of the Creator were deduced in the course of these studies?
- Several religions can be ruled out as descriptive of this kind of Creator. List them.
- Does this description match God as described in the Bible?
- What process does Lee Strobel recommend for skeptics?

Do you think *The Case for a Creator* would be a good gift for a skeptical friend? Or perhaps the DVD of the same title?