**Scientific evidence for the Existence of God- lecture notes**

Note: This document contains notes and the basic outline for a lecture and not a polished script. When I speak I usually use minimal notes. My recommendation is to listen to the recording of the presentation I gave and edit these notes for your personal use. I hope you find this helpful.

Follow me on a journey. To a place where science, logic and ration though guide belief and you will see one of the reasons I am a Christian.

Does science play a role in what you believe? (Raise the question in people’s minds before starting the talk. Repeat this question later in the talk.)

Will cover 8 categories of evidence and examples in each category.

**4 Views of nature:**

* Naturalism
* Young Earth Creationism
* Old Earth Creationism
* Theistic Evolution

News organizations usually interview YEC

**1. Formation of the Universe**

4 Views of Time:

1. Circular
2. Cyclical
3. Linear – Infinite
4. Linear - Finite

Prior to 20th century thought

* Linear Infinite
* Universe infinitely old with no beginning.
* With no beginning, no need for a beginner or God.

Conflict with views some theological views that claim a beginning.

* Could argue for a beginning philosophically
* If was a beginning, How could we Know? Can’t see back in time (prior to 20th century understanding).

Judeo-Christian:

* Single point beginning
* Transcendent cause
* Transcends time

At this point pondering the beginning of the universe is left for the philosophers and theologians.

Two things changed this:

* Red shift
* Einstein’s general relativity – predicted an expanding universe
* Run expansion backwards and you get a sudden beginning to the universe 13.7 billion years ago.

Much resistance to universe having a beginning. A beginning to the universe is blatantly theological.

Name “ Big Bang” first said by Fred Holye as a derogatory term because he resisted the idea.

Now three Views of time on the table:

* Linear Infinite – Steady State Model - Naturalism
* Linear Finite – Big Bang – Judeo-Christian
* Cyclical – Big Crunch – Eastern religions and reincarnation.

1964 discovery of cosmic microwave background radiation

Steady State goes Away

Late 1970s, Expansion rate to fast for collapse - Big church goes away.

Here is what we now know:

* Universe began 13.7 billion years ago
* Started as a single point and expanded outwards
* The universe will continue to expand and not collapse back on itself
* Matter and energy began with the big bang.
* Dimensions of space and time began with the big bang.
* The beginning was caused by something that transcends matter, energy and the dimensions of space and time. “Causal Agent”

Agrees with Judeo-Christian expectation

So what was once an area of discussion in philosophy and theology, the beginning of the universe, is now an active area of research in physics

Putting it another way:

* If universe = nature,
* Then what created our universe lies beyond nature or in the supernatural.
* Key question is “what is the nature of super natural”? Does is have a consciousness or is it something mindless and random?

The fact that our telescopes can see enough to determine the universe had a beginning is not trivial but suggests divine intention.

* Most stars reside in Globular clusters blocking their view of distance objects. Our sun does not.
* Our sun is in an area free of dust.
* Earth has a window seat in our galaxy by being by the edge.
* Most galaxies packed in clusters blocking views of far, distant objects. The Milky Way is somewhat isolated.
* Right time to see cosmic background radiation.

Something wanted us to look out in the heavens are learn something.

**2. Laws of physics:**

Do the laws of physics give us a clue as the nature of what created the universe?

* A god with a plan, purpose and meaning?
* Something random, mindless, meaningless and lacking rationality.

Two examples, one simple and visual, the other technical.

**(1) Ice, water expands when it freezes:**

* Ice floats and in the winter forms a protective layer over lakes to shield them from very low winter temperatures.
* If ice sank, lakes would fill up with ice from the bottom up during the winter and kill all the fish.
* Ice freezes at the ideal temperature.
* Breaks up rocks b water seeping into cracks and freezing. This helps prepare continents for forming topsoils.

**(2) Fine-tuning Example:**

There are four fundamental forces of nature. Two are: gravity & electromagnetic force.

Ratio of gravity to electromagnetic force: fine tuned to one part in 10^40.

Compare this to best example of human engineering.

LIGO (Laser Interferometer Gravitational Wave Observatory)

* Best example of human engineering and design
* Cost >$1/3 billion.
* Measures to one part in 10^23

This one example of nature is 100 – million – billion times more fine-tuned than the best example of human engineering.

Ratio of gravity to electromagnetic force is not the best example of fine-tuning.

**3. Initial conditions:**

False statement: “Given the laws of physics, our universe was inevitable.” This is false because besides the right laws of physics, the big bang needed the right initial conditions.

Space/mass density.

* Density to low, expansion too fast to form significant number of proper stars
* Density too high, expanding matter condenses too quickly, forming only neutron stars and black holes.

Big bang wasn’t a chaotic explosion but the most finely tuned event in the history of the universe.

**4. Formation of Stars and planets:**

We will need to Deal a deck of cards.

Compare an ordered deck of cards with one that is randomly shuffled.

Process of star/planet formation:

* Every process is explainable through natural mechanisms.
* Its just that the right combination of natural events to produce the earth demonstrates a purpose and plan.

Anthropic principle alluded:

* Appears as if this universe was designed to support human life.
* Alluded to in the 1930s
* First time written specifically on was in 1961 by someone who comes from an atheistic perspective.
* Has demonstrated predictive value.

Fine-tuning:

* Planet
* Moon
* Collection of plants in our solar system
* Sun (compared to a couple million measured)
* Stars neighboring our sun. Most stars our size form in clusters, not isolated like ours
* place in the galaxy
* galaxy ( compared to a few hundred)
* galaxy cluster.

Our sun is an idea size:

* Bigger, less stable
* Smaller, closer orbit and tidal locking.

Earth is an ideal size:

* The earth’s gravity retains water but not methane. This is optimal.
* Water molecular weight = 18
* Methane molecular mass = 16

Design factors as of 2008:

* 501 factors to sustain bacteria for a few months (10^311)
* 676 factors to sustain unicellular life for 3 billion years (10^556)
* 816 factors to sustain intelligent life globally in high tech civilization. (odds of it being by chance: 10^1032)

**5. Origin of Life:**

Is science a factor in what you believe or are you committed to a philosophical paradigm?

Need a pair of walking shoes. Going for a walk.

Origin of life = first single cell organism

* From an evolutionary perspective all life starts here.

What could have been the first life form? Types of life:

* Parasitic (500 genes). Lives off of other things.
* Heterotroph (1350 genes). Eats other things. Could not be first life form.
* Autotroph = (1500-1700 genes). Makes its own food. First life form. Examples are photosynthetic bacteria and chemoautotrophs.

DNA

* Looks like a Ladder twisted like a cork screw.
* Other example is a Zipper structure that split down the middle and reforms.
* Highly ordered
* Estimate 3,000,000 base pairs for Autotroph
* Equivalent to zipper 5 miles long. (using a zipper from blue jeans as an example with 10 teeth per inch)
* *Human genome 3,200,000,000 base pairs*

Give the audience and example of a distance that is 5 miles long and have them imagine walking that and looking at a zipper the whole way. Mensa convention was held in Boston so I used the Boston Freedom Trail – 2.5 miles long.

Where did this first life form come from?

Mythological account: “Life arose from a primordial soup over a long period of time.” Here is why that statement is mythology.

Soup:

* Explain terms, Pre-biotic vs. post-biotic
* Chemical signature in rocks is all post-biotic – No Soup. Scientists have never found evidence for a soup.

No chemistry for soup. Burden of proof is on proving a positive case.

* Cannot prove negative
* Can show strong reasoning why no soup
* Use homo-chirality problem as an example.

Why no soup.

* DNA 5-carbon sugar (ribose)
* Ring structure. Hard to get none biotic
* Chirality, right handed. Need homochirality.
* Cannot get homochiral sugars non-biologically
* DNA can not form and function without homochirality
* Same problem for all protein amino acids except simplest amino acid.

Naturalist expects:

* Life starts late
* Life starts simple and grows complex
* Life starts narrow and becomes diverse

What we see

* Life starts early
* Life starts complex
* Life starts diverse
* Fits creation plan not covered.

A naturalistic origin of life explanation anchors evolution as a possibility, unless one takes a theistic evolution scenario.

Without resolving the origin of life, there is no point defending evolution.

For me to ignore numerous aspects of intelligent design, to believe that something as sophisticated and complex as bacteria arouse from a mindless process, from a soup that by all accounts never existed - for me to believe that would require an extreme blind faith I could never sustain.

(Important to point out the blind faith to accept a naturalistic cause for the origin of life issue.)

6. Life forms

Are you willing to question the party line?

Where did life forms come from?

Was the diversity of life the product of a mindless, evolutionary process or was an intelligent agency involved.

“Evolution versus God” is not a good debate because a god could have used an evolutionary process to create.

Theistic evolution view.

If there is no God then evolution is your best bet but not the only option. (panspermia)

Concern I have is that an extensive evolution paradigm accounting for all life is presented as a fact. In reality is it a challenged paradigm.

To proceed from here is challenging. My experience has show that to dive into this topic would first require a full hour of teaching evolutionary theory, even to an educated audience.

Ultimately no one can say what an evolutionary process can or cannot do, as the mechanisms are not fully understood. One will never prove or disprove macroevolution.

The question is not did an evolutionary process contribute to the life forms we see but to what extent. Even life fully appeared through an evolutionary process, could it have happened without the hand of an intelligent agency.

Topic goal:

* Learn to think critically and not just blindly accept what you are told
* Don’t expect proof either way
* Rather appeal to what is the most rational explanation.

Here are a couple substantive things to start the thinking process.

For purpose of this talk, two types of evolution:

* Microevolution – adaptation, change
* Macroevolution – innovation, reengineering

Key points of evolutionary mechanisms

* Gradualism
* Intermediates at minimum must be survivable, in reality must have advantage
* No plan. (except theistic)

Giraffe - My definition of distinction between macro and micro

* Getting taller, microevolution
* At a point an animal requires reengineering to get taller – macroevolution.
* Neck circulation value required to stabilize blood pressure when a giraffe drinks.
* On closer look, the giraffe is a poster child for something beyond the limits of natural evolution.
* The required reengineering makes an animal getting taller to become a giraffe a step function rather than gradual process.

Cambrian Explosion:

* About 540 million years ago.
* Prior to this, first single cell, then simple multicellular
* Now complex multicellular
* All marine animals
* 50% to 80% of the phyla that ever existed show up explosively in the Cambrian Explosion.
* There was more phyla Cambrian explosion than there are now, about 50 versus 35.
* Chordates, vertebrates. Vertebrates appear 2-3 million years into the Cambrian explosion.

**7. Appearance of man**

Knuckle walker

Humanity appears roughly 100,000 years ago. Advanced civilization later.

Requirements form knuckle walker to bipedal:

* Relocating opening at the base of the scull (foremen magnum)
* Restructuring inner ear – balance
* Spine goes from bridge to column – change in curvature
* Restricting or rib cage to account for different use of arms
* Reshape pelvis
* Restructuring lower limbs
* Restructuring foot
* Reorganizing musculature.

These changes all need to happen fully and concurrently!

Any partial change would be at a disadvantage and selected out by natural selection.

A change of one aspect but not the others would be selected out.

No mechanism to allow for this.

Fossil record only shows complete, fully functional bipedalism

* Facultative
* Obligatory

8. Timing

Science:

* Does it play a role in what you believe?
* Do you place philosophical constraints on where it leads
* Do you use science selectively to justify a position
* Are you open to looking fully at what is to be learned

Thanks giving dinner. The hard part is getting all the food ready at the same time and doing this when all the guests are there and ready.

Sun’s life cycle:

* Bacteria 3.8 billion years ago, harmful radiation from sun, only bacteria could have survived.
* Since then the sun has gotten progressively more stable and benign. This will eventually reverse itself.
* Sun entered it most stable stage 50,000 years ago, around the time humanity showed up.
* This stable stage will last for the next 50,000 years.

Earth’s rotation rate:

* When life first showed up the earth was spinning 4 to 6 times faster than today – extreme wind conditions.
* Moon slowed down rotation rate to present 24 hours – optimal rate.
* 100 million years ago it was 23 hours. 100 million years from now it will be 25 hours.
* At 23 hours, stronger winds producing more hurricanes and tornadoes. Also jet stream patterns would cause wider variations in rainfall patterns making less regions of the earth habitable.
* At 25 hours greater day to night temperature variations would cause many areas to become inhabitable. Weaker jet stream would bring less rain to needed areas.
* 24 hours is optimal for advanced civilization.

If you are a guest at a Thanksgiving dinner – Get to know the host

Something went through a lot of trouble to make universe – get to know the host who made the universe.

**END**