**Is Belief In God Reasonable? Anthropic Constants (SR: Is. 45:18-19)**

As scientists continue to study the universe, the mounting evidence has many scientists being convinced in intelligent design. If we were to use our William Paley’s watch illustration from our former lesson, our world is infinitely more fine-tuned than a diamond encrusted Rolex. The Rolex is scrap in comparison.

Our universe and everything that we see has a Designer. It is unreasonable to conclude otherwise in light of the vast evidence leading us to this rational conclusion. And if we are to be true to the biblical definition of “faith”, we need to examine this evidence if we are to be faith-full. Looking at this evidence should convert the most calloused atheist. It should also further soften the heart of even the most devout Christian.

So, we transition now into one particular area in which intelligent design is illustrated: anthropic constants. Anthropic constants are highly precise and interdependent environmental conditions that make life possible. One scientist who has done much work in the indexing and explanation of these constants is an astrophysicist named Hugh Ross. He has a website where he catalogues over 120 constants that are necessary for life to exist (the number increases commensurate with scientific advancement). He has calculated that for Earth to possess all of these characteristics, that would require a 1 in 10^138 chances. Astrophysicists are agreed that there are only 10^70 atoms in the entire universe; therefore, although *theoretically* possible, these chances are impossible *in practice.*

While we do not have time to cover all of these constants, I would like to look at three large-scale areas of anthropic constants that demonstrate design & compare them to statements made in the Scriptures regarding their formation & purpose by the hand of God.

**I. Our Designed Solar System (Gen. 1:14-19 – Celestial lights created to regulate time, seasons, and direction; Col. 1:16-17 – ALL things HOLD TOGETHER in Him!)**

A. Position Of The Celestial Bodies & Their Gravity (Job 26:7)

1. *Sun-Earth Gravitational Interaction* – 92.96 million miles separate!

a. If closer, we die from heat.

b. If further, we die from cold.

c. According to research physicist A. Zweerink, if the gravitational force were different by 0.00000000000000000000000000000000000001% (that’s 37 zeros!), our sun would not exist, therefore, neither would we!

2. *Moon-Earth Gravitational Interaction* – 238,900 miles separate!

a. If it were only 1/5 of a mile closer, the continents would be covered by 30-50ft of water 2x/day!

b. If lesser/further, stagnation would kill plankton and end all life.

3. *Other Planets & Earth Gravitational Interaction* (e.g. Jupiter – if its orbit changed, we would be bombarded with asteroids and comets)

B. Interplay Between Planetary Centrifugal Force & Planetary Gravitational Force

1. If the centrifugal force of planetary movements did not precisely balance the gravitational forces, nothing could be held in orbit around the sun.

C. The Speed Of Light (Gen. 1:1-5; James 1:17; Rev. 22:5)

1. All laws of physics are related to this constant. Light travels at 299,792,458 m/s. A slight variation would alter all other constants and preclude the possibility of life.

D. Strong And Weak Nuclear Forces

1. If strong nuclear force were taken away, the universe would break down into quarks (subatomic particles). We are composed of atoms so if atoms break down, so do we.

2. *“...without the weak force...electrons would be massless particles. Atoms would be impossible and this would be a completely different universe. The only thing I can tell you for sure about that universe is that we would not be here to talk about it!”* (Frank Heile, PhD Physics @ Stanford University)

**II. Our Designed Earth (Ps. 115:16)**

A. Time Of Earth’s Rotation (about 24 hours) – Ps. 19:4-6; Eccl. 1:5

1. If longer, temperature differences would be too drastic b/w night & day.

2. If shorter, atmospheric wind velocities would be too strong for life.

B. Tilt Of The Earth (23.5 degrees) – Ps. 104:5; Prov. 8:29; Is. 40:21; et al

1. If a greater angle, temperatures become too extreme.

2. If a lesser angle, temperatures become too extreme.

C. The Thickness Of Earth’s Crust – Job 38:4; Ps. 18:7; et al

1. If thicker, too much oxygen would be transferred to the crust.

2. If it were thinner, volcanoes and tectonic shifts would make life impossible.

D. Seismic Activity (controlled by God – Num. 16; Job 9:5f; Ps. 60:2; Nah. 1:5; et al)

1. If greater, life is annihilated due to earthquakes and volcanic eruptions.

2. If lesser, nutrients on ocean floors and in river runoff would not be cycled back to the continents through tectonic uplift.

**III. Our Designed Atmosphere (Just ONE of MANY Illustrations on Earth) – Gen. 1:6-8**

A. Transparency – God has made a firmament/curtain/tent/atmosphere of protection (Ps. 104:2; Is. 40:22)

1. If the atmosphere were more opaque, not enough solar radiation would reach the Earth and life would be impossible.

2. If the atmosphere were more transparent, we would receive too much solar radiation and life would not be possible.

B. Composition (nitrogen, ozone, etc.; we’ll examine 2) – Gen. 2:7; Ps. 150:6

1. Oxygen Level – God gives breath to the people of the earth (Isaiah 42:5)

a. Oxygen comprises 21% of our atmosphere on Earth.

b. If it were 25%, there would be spontaneous combustion all over the earth and fires would cover the globe.

c. If it were 15%, humans would suffocate.

2. Carbon Dioxide Level

a. If the level were higher than it is now, a runaway greenhouse effect would actually and undeniably develop, and we would all quite literally roast to death.

b. If the level were lower than it is now, plants could not maintain efficient photosynthesis. That means a breakdown in the plant kingdom that would cause total cataclysm in all other kingdoms. Additionally, plant death would also mean plankton and phytoplankton death, which would eliminate our oxygen supply and render life impossible.

3. The relationship between CO2 and O2 is reciprocal. Humans exhale carbon dioxide and plants use it to create oxygen. Thus, we maintain the exact amount of oxygen we need & the supply is constantly remanufactured.

C. Water Vapor Levels – God separated the waters (Gen. 1:6-8; Job 36:29; 2Pet. 3:5)

1. If higher, a runaway greenhouse effect would cause temperatures to be unbearably hot.

2. If less, insufficient greenhouse effect would cause temperatures to unbearably chill.

D. Discharge Rate (i.e. Lightning) – He makes lightning (Ps. 135:7//Jer. 10:13; 51:16) and controls it (Job 28:26; 36:30, 32; 37:3f, 11, 15; 38:35).

1. If greater, too much fire destruction.

2. If lesser, too little nitrogen transference into the soil.

*“Here is cosmological proof for the existence of God—the design argument of Paley—updated and refurbished. The fine-tuning of the universe provides prima facie evidence of deistic design.”* (Cosmologist Ed Harrison) Our world displays the handiwork of God and it is our duty, privilege, and debt to glorify our Creator. Reason dictates this responsibility.

There is One to Whom we answer to. He governs the universe and as infinite and powerful as He is, He inhabited human form, and became dependent Himself on the anthropic constants He created to govern the universe. He became a baby in a manger and grew to become a man to redeem His people from the bondage of sin. He became humble to the point of death on our behalf; what a humbling thought!

We ask you to consider the evidence today. And if that evidence leads you to the rational conclusion that there is a God of the universe, we hope you will see that we worship that God of the universe as He has specifically revealed Himself in the Bible. God inhabited human form to save you from your sins of betrayal against your purpose in Him. Let your faith lead you to answer His call for reconciliation!