



This special edition
“Prewind” is used as a
companion to the live
program. Enjoy!



How Does Science Show the Existence of a Creator?

Psalms 19:4 (NASB) *The heavens are telling of the glory of God; And their expanse is declaring the work of His hands.*

Introduction:

A philosophy that permeates much of the world today is called *materialism*. Materialism is the belief that physical stuff underlies everything real. It rejects any supernatural forces as having influence in our world, so it is innately atheistic. It teaches that the universe came into existence on its own, without any intelligence or design behind it. It has proceeded randomly since. Further, it is claimed there is no natural moral code in this accidental universe other than what man comes up with. There is no reason why we are here and no hope beyond death. The material world is all there is or will be. Related to this is the concept of *scientism* which is the belief that science is the only reliable source of truth.

Kind of discouraging philosophy, isn't it? It is basically a restatement of "Eat, drink and be merry for tomorrow we will die."

Why would one want to embrace this philosophy? One answer is to remove any responsibility to a higher power to answer for one's choices. It removes all bounds, limitations and taboos on human behavior. It permits you to do whatever you want since there is no punishment or reward to doing anything. The only regulations over one's behavior are the human laws and rules of a society.

And, curiously, the appeal to scientism is made as a validating foundation for this godless philosophy. Does science really confirm this concept? Or does science show something else entirely? That is what we will be examining this morning.

Question: How probable or likely is human life in this universe?

In order for human life to exist in our universe, a large number of things are necessary. Scientific materialism teaches that human life just happened on its own. But remember, the more improbable something is, the more you need an outside force to make it happen.

The Drake Equation

Dr. Frank Drake, a SETI Institute Trustee, formulated an equation in 1961 that has become known as the Drake Equation. Commonly accepted by the scientific community it purports to calculate an estimate of the number of worlds that might harbor beings with technology sufficient to communicate across the vast gulfs of interstellar space.



Professor Frank Drake

Here is the formula:

$$N = R^* f_p n_e f_i f_c L$$

where,

N = The number of communicative civilizations

R* = The rate of formation of suitable stars (stars such as our Sun)

f_p = The fraction of those stars with planets. (Current evidence indicates that planetary systems may be common for stars like the Sun.)

n_e = The number of Earth-like worlds per planetary system

f_i = The fraction of those Earth-like planets where life actually develops

f_i = The fraction of life sites where intelligence develops

f_c = The fraction of communicative planets (those on which electromagnetic communications technology develops)

L = The "lifetime" of communicating civilizations

Frank Drake's own current solution to the Drake Equation estimates **10,000 communicative civilizations in the Milky Way**.¹ So with this rational, we would conclude the intelligent life is nothing special and is likely to occur many times in our galaxy.

This concept developed into what was called the Copernican Principle and more recently as the Principle of Mediocrity.

Sound Byte 1 – The Principle of Mediocrity from the Privileged Planet

Most people may not have heard these concepts, but the ideas were popularized in the 1980's with the TV program COSMOS with Carl Sagan.

Sound Byte 2 – The Pale Blue Dot – Carl Sagan - the Privileged Planet

Taken in 1990 by NASA's Voyager 1 spacecraft, the "pale blue dot" photo shows what our planet looks like from 4 billion miles away. Earth is the tiny speck of light indicated by the arrow and enlarged in the upper left-hand corner. The pale streak over Earth is an artifact of sunlight scattering in the camera's optics. NASA/JPL. *from* <http://www.npr.org/2010/02/12/123614938/an-alien-view-of-earth>

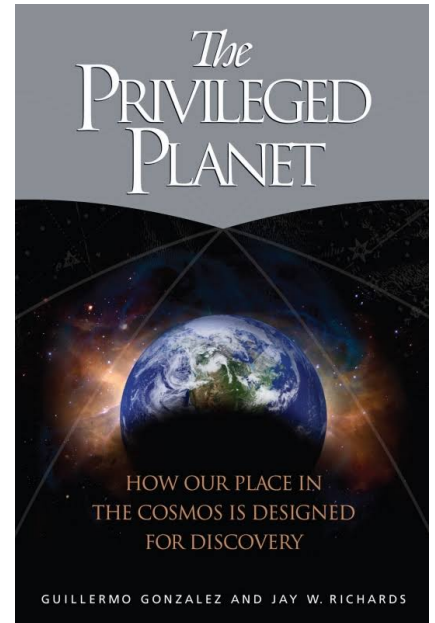


¹ <http://www.setileague.org/general/drake.htm>,
<http://www.seti.org/drakeequation>

So this is the materialist's view of the universe – we are here without purpose or significance in the universe. There is nothing special about us, and there are probably thousands of planets with civilizations out there as well. Kind of depressing, isn't it?! Let's contrast this with another perspective with a different conclusion.

The Privileged Planet

In 2004 Guillermo Gonzalez and Jay Richards wrote a book entitled, The Privileged Planet: How Our Place in the Cosmos is Designed for Discovery. The theme of the book was the special position in the universe of the earth and the coming together of a number of improbable events to produce a place where human life could thrive. Their conclusion is that the sheer improbability of it suggests not only a designer but a planner who had humanity in mind from the beginning. This philosophy has another name – the anthropic principle – the idea that the universe was made for man!



Factors Required for Life:

1. Water – Absolutely Essential for life

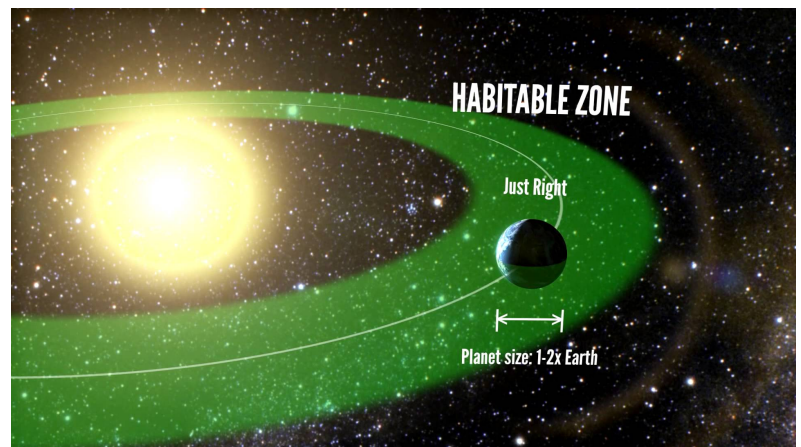
Sound Byte 3 – Water, from the Privileged Planet

The Goldilocks Zone permits liquid water

Sound Byte 4 – The Goldilocks Zone, from the Privileged Planet

5% Closer = Venus

20% Farther = Mars



The Goldilocks Zone

2. Earth's Crust Right Thickness – 4 to 30 miles
 - Thicker = no plate tectonic recycling of carbon and other elements necessary for life!
 - Thinner = Constant catastrophic volcanic activity
3. Magnetic Field
 - Lesser or no magnetic field = Solar wind would slowly strip away the atmosphere ending up much like Mars

Sound Byte 5 – The Magnetic Field, from the Case for A Creator

4. Oxygen/Nitrogen Atmosphere – necessary for complex life
 - 78% Nitrogen, 21% Oxygen, 1% Carbon Dioxide
 - insures a temperate climate, protection from the UV rays of the sun, and right composition for liquid water (and fire!)
5. Large Moon – 25% the size of earth!
 - Stabilizes the earth's tilt and rotation
 - Tidal forces circulate the waters of our oceans and seas

Sound Byte 6 – The Moon, from the Privileged Planet

6. Type of Star – G2 – right size, right spectrum
 - less massive, like 90% of the stars in the Galaxy = closer orbit for Goldilocks zone but star's gravity would degrade and stop the rotation of the planet
 - o Venus day = 243 earth days
 - o Mercury day = 58 earth days

Sound Byte 7 – The Sun's Spectrum and Mass, from the Case for a Creator

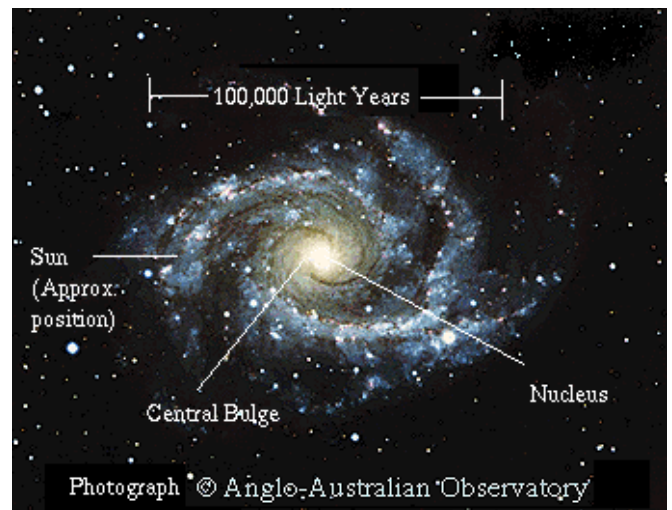
Other Factors!

7. Right Location in the Galaxy – a galactic Goldilocks Zone!

In between two arms of the galaxy!

Advantage:

- Not smothered by star and inter-galactic gas density which would prevent us from seeing out of the galaxy!
 - Safer from nearby Supernovas which could wipe out life on earth!
8. Protected by Giants gas planets (Solar System vacuum cleaners!)
 - Think Eugene-Levi Comet



So what is the probability of life with all these factors?

$$1 \times 10^{-15} = 1/1,000,000,000,000,000$$

Bottom Line: the conditions for Life on Earth are very improbable. With 100 billion stars in the Milky Way it is one chance in 10,000.

Sound Byte 8 – Complex Life in the Universe – Donald Brownlee, from the Privileged Planet

Universal Constants

Definition: Universal constants are numeric values that describe how a physical law works. Furthermore, we understand that this value is the same everywhere in the universe – i.e. a UNIVERSAL CONSTANT

- Example
 - The Speed of Light in a vacuum: 186,000 miles per second everywhere in the universe and all times.

Our interest in these is because there could be no human life in the universe if these constants were not a certain value and not a certain value to a precision which is almost unimaginable.

Sound Byte 9 – Jay Richards on Fundamental Constants and Fine Tuning, from the Privileged Planet

“The remarkable fact is that the values of these numbers [i.e. the constants of physics] seem to have been very finely adjusted to make possible the development of life.” – Stephen Hawking, A Brief History of Time, pg. 125

Fine Tuning Parameters for the Universe

1. The Strong Nuclear Force constant

The Strong Force is one of the four fundamental forces of nature. This is the force that binds the protons and neutrons together in atomic nuclei. If the strong nuclear force were very slightly weaker by just one part in 10,000 billion billion billion billion (10^{-40}), then protons and neutrons would not stick together, and the only element possible in the universe, would be hydrogen. There could be no galaxies, no stars, no planets nor any life in the universe. By contrast, if the strong nuclear force were slightly too strong by the same slight proportion, protons and neutrons would stick together so tightly that matter would be composed of only heavy elements. In this case there would be no hydrogen at all with the same result – no life because there could be no water, a necessary part of the chemistry of life.

The probability that the strong nuclear force randomly had the precisely required value in our universe is vanishingly small!

Summary of the precision of the Strong Nuclear Force:

if larger: no hydrogen would form = no life

if smaller: no elements heavier than hydrogen would form = no life

2. The Weak Nuclear Force constant

The Weak Force is also one of the four fundamental forces of nature. The weak nuclear force regulates the rates of radioactive decay and helps turn protons into neutrons in the sun. If this force were slightly stronger, the matter would decay into the heavy elements more quickly. By contrast if this force were much weaker, all matter would exist in the form of the lighter elements like hydrogen and helium and there would be almost no oxygen, carbon or nitrogen – elements essential for life.

One additional and interesting item: These heavier elements, while made in stars, are of no use while in the stars. It is through supernovas that these elements are scattered through space and eventually make up the planets in star systems. But supernova explosions can occur only because the weak nuclear force is precisely the right value.

"If the weak interaction were slightly weaker, the neutrinos would not be able to exert enough pressure on the outer envelope of the star to cause the supernova explosion. On the other hand, if it were slightly stronger, the neutrinos would be trapped inside the core, and rendered impotent" – Paul Davies, The Accidental Universe, Cambridge University Press, 1982, p.68.

Again, the probability of this value being precise by accident is very small.

Summary of the precision of the Weak Nuclear Force:

if larger: Stars would make too much matter into heavy elements making life chemistry impossible

if smaller: Stars would convert too little matter into heavy elements making life chemistry impossible

3. The Gravitational force constant

The Gravitation Force is also one of the four fundamental forces of nature. If the force of gravity were weaker, stars could not compress sufficiently for nuclear fusion to occur. Fusion is what powers a star and it is needed to produce heavier elements upon which life depends. Without fusion, there could be only hydrogen and helium in the universe and no life.

By contrast, if gravity were a bit stronger, stars would burn so energetically that they would have a lifespan of about one year!

So the precision of the gravitational force is precisely the right value to permit a star to burn for billions of years! In fact the value of the gravitation constant is so finely set for intelligent life that if you had a measuring tape with one-inch sections stretched across the known universe, it would be 14 billion billion billion inches long, and only *one or two of those inches* in the middle is the optimal strength-setting for gravity. If you moved the strength-setting to the right or left just a couple of inches, then intelligent life could not exist.² So again, the probability of gravitation being

² <http://worldview3.50webs.com/mathprfcosmos.html>

so precise is vanishingly small.

Summary of the precision of the Gravitation Force:

if larger: Stars would burn too hot and would have too short a lifespan for life.

if smaller: Stars would be too cool to ignite nuclear fusion and would not produce the heavier elements required for life.

4. The Electromagnetic Force Constant

This is the last of the four fundamental forces of nature. If this force were a bit stronger, the electrons of the atom would adhere to the nucleus of the atom so strongly that no chemical reactions could take place. It is the ability to bind to other atoms – chemical bonding – that permits molecules of infinite diversity to take place. Too strong and water, the basis for life, could not be made.

By contrast, if the electromagnetic force were a bit weaker, then atoms could not keep the electrons and again, chemical bonding could not take place since the compounds could not hold together.

Summary of the precision of the Electromagnetic Force:

if greater: Heavier element would be unstable – no life!

if lesser: Chemical bonding could not take place – no life!

5. The Cosmological Constant

We saved the best for last. This constant is a complicated concept. But we may simplify and describe it as the force that keeps the universe from collapsing in on itself due to gravity. It is an anti-gravity force, an inflationary force that has been measured and suggests a balance between gravity and unbounded expansion. The point here is that the value of the cosmological constant has a precision of 10^{120} ! Now when you consider that there are about 10^{80} atoms in the universe, you can appreciate how small this value is – a fraction of 1 over one followed by 40 zeros! There is not universal constant that is more precise than this!

Summary of the precision of the Gravitation Force:

if larger: The universe would expand too quickly to form solar-type stars

Other universal constants:

Polarity of the water molecule

if greater: heat of fusion and vaporization would be too high for life

if smaller: heat of fusion and vaporization would be too low for life; liquid water would not work as a solvent for life chemistry; ice would not float, and a runaway freeze-up would result

Velocity of light

if faster: stars would be too luminous for life support *if slower:* stars would be insufficiently

luminous for life support

Ratio of electromagnetic force constant to gravitational force constant

if larger: all stars would be at least 40% more massive than the sun; hence, stellar burning would be too brief and too uneven for life support

if smaller: all stars would be at least 20% less massive than the sun, thus incapable of producing heavy elements

Ratio of electron to proton mass

if larger: chemical bonding would be insufficient for life chemistry

if smaller: same as above

Ratio of number of protons to number of electrons

if larger: electromagnetism would dominate gravity, preventing galaxy, star, and planet formation

if smaller: same as above

Mass density of the universe

if larger: overabundance of deuterium from big bang would cause stars to burn rapidly, too rapidly for life to form

if smaller: insufficient helium from big bang would result in a shortage of heavy elements

Initial uniformity of radiation

if more uniform: stars, star clusters, and galaxies would not have formed

if less uniform: universe by now would be mostly black holes and empty space

Average distance between stars

if larger: heavy element density would be too sparse for rocky planets to form *if smaller:* planetary orbits would be too unstable for life

^{12}C to ^{16}O nuclear energy level ratio

if larger: universe would contain insufficient oxygen for life

if smaller: universe would contain insufficient carbon for life

Ground state energy level for ^4He

if larger: universe would contain insufficient carbon and oxygen for life *if smaller:* same as above

decay rate of ^8Be

if slower: heavy element fusion would generate catastrophic explosions in all the stars

if faster: no element heavier than beryllium would form; thus, no life chemistry

Ratio of neutron mass to proton mass

if higher: neutron decay would yield too few neutrons for the formation of many life-essential elements

if lower: neutron decay would produce so many neutrons as to collapse all stars into neutron stars or black holes

Supernovae eruptions

if too close, too frequent, or too late: radiation would exterminate life on the planet
if too distant, too infrequent, or too soon: heavy elements would be too sparse for rocky planets to form

Bottom Line with Universal Constants: These and many more are incredibly precise and reflect the reality that our universe was fitted for human life to exist!

Fred Hoyle (British astrophysicist): "A common sense interpretation of the facts suggests that a superintellect has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature. The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion almost beyond question."³

Multiple Universe Theory

Since the data in our universe is so strongly indicating that our existence is so extremely improbable and a rational explanation is that it was designed with human life in view – The Anthropic Principle, many scientists for whom such a conclusion is unacceptable have theorized that there must be an infinite number of universes and ours is the one that hit on the right combination of structures to make our life possible. The idea here is that if there an infinite number of universes then probability favors at least one to occur that has the right features.

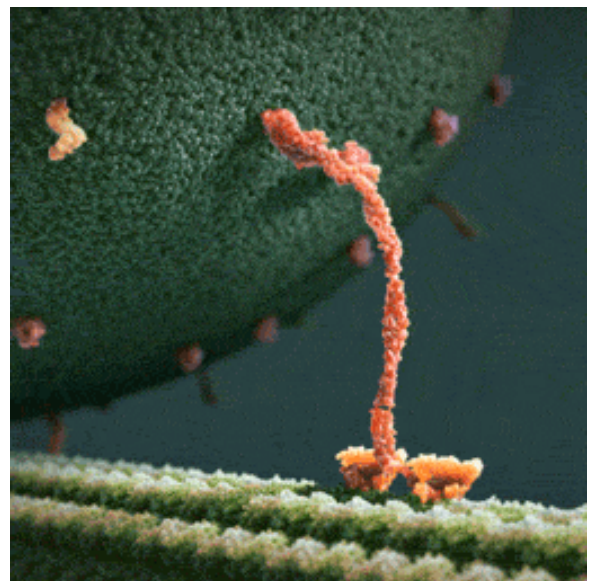
An American physics students named Hugh Everett for his doctoral dissertation in 1957 first proposed this hypothesis, known as the “many worlds interpretation of quantum mechanics.” It has generated interest and been picked up by many through the 1960s and 70s. But most physicists find it unacceptable these days. Yet many fall back on it when questions because it’s the best naturalistic answer they can come up with. Bottom line on this idea is that there is no science to back it up. It is just a philosophy!

Other interesting Things:

Inside a Living Cell

1. The Kinesin – This is a protein in the cell that transports large loads from one place to another. The protein literally steps along a microtubule to move it to where the load is needs. (see video in references)

Is this not scientific evidence of a designer!! How could such a thing come about randomly!!!



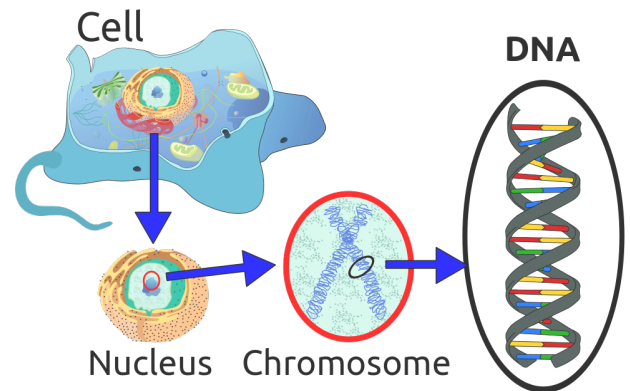
1 Hoyle, F. 1982. The Universe: Past and Present Reflections. *Annual Review of Astronomy and Astrophysics*: 20:16.

2. Mitochondrial DNA – the “Eve” hypothesis

- Mitochondrial DNA is passed from the mother to the child.
- Mitochondria is a molecule which provides energy for the cell
- Science has discovered that all of the human race is descended from a single woman long ago – thus the “EVE” hypothesis
- How long ago? 200,000 years or 6,000 years?

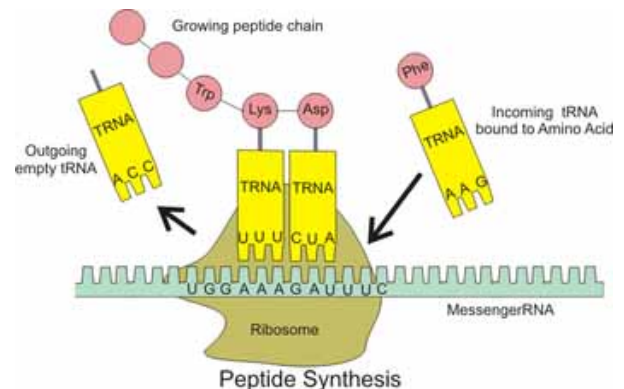
3. DNA

- Science has shown that DNA is a biological computer program.
- It is a information code! It consists of only 4 codons
 - o Adenine
 - o Thymine
 - o Guanine
 - o Cytosine
- All living creatures use this code
- It is the sequence of the code that determines what every creature is.
- Information and a computer program only come from an intelligent source.



4. The Ribosome

- This is a molecular production factory!
- Takes RNA instructions and manufactures a protein
- Chicken and Egg Story here!
 - o Ribosomes are made of about 50 proteins
 - o Ribosomes make proteins
 - o Without proteins there can be no life!
 - o How were the proteins made to make the ribosome???
- (See video in references)



Astonishing Living Creatures Reflecting Design

1. The Monarch Butterfly

Monarch butterflies go through four stages during one life cycle, and through four generations in one year.

In February and March, the final generation of hibernating monarch butterflies comes out of hibernation to find a mate. They then migrate



north and east to find a place to lay their eggs. This starts stage one and generation one of the new year for the monarch butterfly.

In March and April the eggs hatch into baby caterpillars. It takes about four days for the eggs to hatch. After about two weeks, the caterpillar will be fully-grown and find a place to attach itself so that it can start the process of metamorphosis. The incredible process takes about 10 days during which the old body parts of the caterpillar are undergoing a remarkable transformation to become the beautiful parts that make up the butterfly. The monarch butterfly will emerge and fly away, feeding on flowers and just enjoying the short life it has left, which is only about two to six weeks. This first generation monarch butterfly will then die after laying eggs for generation number two.

The second generation of monarch butterflies is born in May and June, and then the third generation will be born in July and August. These monarch butterflies will go through exactly the same four stage life cycle as the first generation did, dying two to six weeks after it becomes a beautiful monarch butterfly.

The fourth generation of monarch butterflies is different and for a good reason it is called the Lazarus generation. This fourth generation is born in September and October and goes through the same process of metamorphosis. However, this fourth generation of monarch butterflies does not die after two to six weeks. Instead, it migrates to Mexico and will live for six to eight months until it is time to start the whole process over again.

These scientific discoveries are evidence of careful design on the part of our Creator.

2. The Sea Turtle

Born from an egg on the seashore, each one starts out life smaller than the hand of a child. From the moment they are born, they use the magnetic field of the earth to determine their birth location, a process called imprinting. This imprinting continues as the young turtle make its way, a thousand miles or more, to its feeding ground. It knows where this is instinctively. It will then remain there for ten to twenty-five years growing. It will reach a weight from 80 pounds to a ton! This instinct prompts it to reproduce and it begins a journey back to the very beach it was born on! It follows the exact course it used originally but in reverse. And it will identify the exact beach through smell and other indicators it remembers from its birth and can come within meters of this location.



High level observations about DNA – this is a PLAN!!!

- a. Does a creator who plans life so precisely not have a plan for the universe?

Relevant Scriptures:

God as the Creator:

Genesis 1:1 (NASB) - ¹ In the beginning God created the heavens and the earth.

Hebrews 3:4 (NASB) - ⁴ For every house is built by someone, but the builder of all things is God.

Hebrews 11:3 (NASB) - ³ By faith we understand that the worlds were prepared by the word of God, so that what is seen was not made out of things which are visible.

Job 26:7 (NASB) - ⁷ "He stretches out the north over empty space And hangs the earth on nothing.

Luck and Life?

Isaiah 65:11 (NASB)- "11 "But you who forsake the Lord, Who forget My holy mountain, Who set a table for Fortune, And who fill *cups* with mixed wine for Destiny,"

New World Translation: "11 But you are among those forsaking Jehovah, Those forgetting my holy mountain, Those setting a table for the **god of Good Luck**, And those filling up cups of mixed wine for the **god of Destiny**."

Foolish and Without Excuse Not to see God in Nature

Romans 1:20 (NASB) - For since the creation of the world His invisible attributes, His eternal power and divine nature, have been clearly seen, being understood through what has been made, so that they are without excuse.

Psalms 14:1 (NASB) - The fool has said in his heart, "There is no God." They are corrupt, they have committed abominable deeds; There is no one who does good.

We are made of the elements of the earth!

Psalms 139:15 (NASB) - My frame was not hidden from You, When I was made in secret, And skillfully wrought in the depths of the earth;

"stretching" – The Big Bang and continuing expansion of the universe?

Job 9:8 (NASB) - Who alone stretches out the heavens and tramples down the waves of the sea;

Ps. 104:2 (NASB) - Covering Yourself with light as with a cloak, stretching out heaven like a tent curtain.

Isaiah 40:20 (NASB) – It is He who sits above the circle of the earth, and its inhabitants are like grasshoppers, Who stretches out the heavens like a curtain and spreads them out like a tent to dwell in.

Isaiah 41:5 (NASB) – Thus says God the LORD, Who created the heavens and stretched them out, Who spread out the earth and its offspring, Who gives breath to the people on it And spirit to those who walk in it,

Isaiah 44:5 (NASB) – ² Thus says the LORD, your Redeemer, and the one who formed you from the womb, I, the LORD, am the maker of all things, Stretching out the heavens by Myself And spreading out the earth all alone,

Isaiah 45:12 (NASB) – ¹² It is I who made the earth, and created man upon it. I stretched out the heavens with My hands and I ordained all their host.

Isaiah 48:13 (NASB) – ¹ Surely My hand founded the earth, And My right hand spread out the heavens; When I call to them, they stand together.

Isaiah 51:13 (NASB) – That you have forgotten the Lord your Maker, Who stretched out the heavens, And laid the foundations of the earth; That you fear continually all day long because of the fury of the oppressor, As he makes ready to destroy? But where is the fury of the oppressor?

Jeremiah 10:12 (NASB) – It is He who made the earth by His power, Who established the world by His wisdom; and by His understanding He has stretched out the heavens.

Jeremiah 51:15 (NASB) – It is He who made the earth by His power, Who established the world by His wisdom, and by His understanding He stretched out the heavens.

Zechariah 12:1 (NASB) – The burden of the word of the Lord concerning Israel. Thus declares the Lord who stretches out the heavens, lays the foundation of the earth, and forms the spirit of man within him,

Jesus Believed in Adam and Eve

Matthew 19:4 (NASB) – And He answered and said, Have you not read that He who created them from the beginning MADE THEM MALE AND FEMALE,

More Quotes from Respected Scientists:

"Amazing fine tuning occurs in the laws that make this [complexity] possible. Realization of the complexity of what is accomplished makes it very difficult not to use the word 'miraculous' without taking a stand as to the ontological status of the word."

- *George Ellis (British astrophysicist), [The Anthropic Principle](#), F. Bertola and U.Curi, ed. New York, Cambridge University Press, p. 30.*

"We are, by astronomical standards, a pampered, cosseted, cherished group of creatures.. .. If the Universe had not been made with the most exacting precision we could never have come into existence. It is my view that these circumstances indicate the universe was created for man to live in."

- *John O'Keefe (astronomer at NASA), Fred Heeren, [Show Me God](#), Searchlight Publications, 1995*

"I find it quite improbable that such order came out of chaos. There has to be some organizing principle. God to me is a mystery but is the explanation for the miracle of existence, why there is something instead of nothing."

- *Alan Sandage (winner of the Crawford prize in astronomy), Willford, J.N. March 12, 1991. [Sizing up the Cosmos: An Astronomers Quest](#). New York Times, p. B9.*

"Astronomy leads us to a unique event, a universe which was created out of nothing, one with the very delicate balance needed to provide exactly the conditions required to permit life, and one which has an underlying (one might say 'supernatural') plan."

- *Arno Penzias (Nobel prize in physics), Margenau, H and R.A. Varghese, ed. 1992. [Cosmos, Bios, and Theos](#). La Salle, IL, Open Court, p. 83.*

"When I began my career as a cosmologist some twenty years ago, I was a convinced atheist. I never in my wildest dreams imagined that one day I would be writing a book purporting to show that the central claims of Judeo-Christian theology are in fact true, that these claims are straightforward deductions of the laws of physics as we now understand them. I have been forced into these conclusions by the inexorable logic of my own special branch of physics."

- *Frank Tipler (Professor of Mathematical Physics), Frank Tipler, [The Physics of Immortality](#), New York, Doubleday, Preface, 1994.*

"For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries."

- *Robert Jastrow (self-proclaimed agnostic), Robert Jastrow, [God and the Astronomers](#). New York, W.W. Norton, p. 116, 1978*

"I find it as difficult to understand a scientist who does not acknowledge the presence of a superior rationality behind the existence of the universe as it is to comprehend a theologian who would deny the advances of science." (24)

- *Wernher von Braun (Pioneer rocket engineer), McIver, T., [Ancient Tales and Space-Age Myths of Creationist Evangelism](#). The Skeptical Inquirer 10:258-276, 1986*

Reference Data: *(Note: We do not endorse everything on these websites. We note them as good references for the subject matter of this program.)*

Internet Links:

Universal Constants

<http://www.godandscience.org/apologetics/designun.html>

<http://worldview3.50webs.com/mathprfcosmos.html>

<http://www.scienceandreligiontoday.com/2008/10/24/why-a-fine-tuned-universe/>

http://geraldschroeder.com/wordpress/?page_id=49

The Cosmological Constant

<http://www.sciencemeetsreligion.org/physics/cosmo-constant.php>

The Goldilocks Zone:

<https://tctechcrunch2011.files.wordpress.com/2016/05/habitable-zone.jpg?w=509&h=283>

The Kinesin:

Video: <https://www.youtube.com/watch?v=y-uuk4Pr2i8>

http://www.evolutionnews.org/2011/08/molecular_motors_enter_into_en049491.html

Mitochondrial DNA:

<http://www.mhrc.net/mitochondrialEve.htm>

<http://www.mhrc.net/mitochondrial.htm>

DNA:

<http://www.terravivos.com/secure/cryovaultjoinus.htm>

The Ribosome:

<https://en.wikipedia.org/wiki/Ribosome>

https://www.youtube.com/watch?v=L6V9_v_JXUk

The Monarch Butterfly:

<http://www.monarch-butterfly.com>

Video: Metamorphosis, Illustra Media, 2011

The Sea Turtle:

Video: Living Waters, Illustra Media, 2015

Books:

Fred Herren, Show Me God, Day Star Publications, 1997

Stephen C. Meyer, Signature in the Cell, HarperCollins, 2009

Paul Davies, The Accidental Universe, Cambridge University Press, 1982

Peter Ward, Donald Brownlee, Rare Earth, Copernicus Book, 2003

Douglas Axe, Undeniable, HarperCollins, 2016