

what volume size they investigate—the universe, our galaxy, planetary system, star, planets, cell, atom, and fundamental particles. On each of these size scales, evidence for extreme fine-tuning on the behalf of life and humanity persists.”¹

Philosopher and physicist Robin Collins concurs with Dr. Ross, “Modern scientific discoveries, particularly the discoveries beginning around the 1950s, [have shown] that the fundamental structure of the universe is “balanced on a razor’s edge” for the existence of life...”²

The evidence for fine-tuning of the universe for life falls into three categories:

- The fine-tuning of the laws of nature
- The fine-tuning of the constants of nature
- The fine-tuning of the initial conditions of the universe

The following are just a sampling of the 824 *fine tuned* design traits that make complex life, as we know it, possible:

- 1) The Earth is located at exactly the correct distance from the Sun to receive the proper amount of heat and radiation to permit life as we know it. If the Earth were moved just 10% closer to the Sun (about 10 million miles), far too much radiation (and heat) would be absorbed. If the Earth were moved just 10% farther from the Sun, too

little heat would be absorbed. Either scenario would spell doom for life on the Earth.

- 2) In their book *Rare Earth*, Peter Ward and Donald Brownlee state, “The underlying theme of the book is that the Earth is a very charmed planet.” “We know of no other body that is even remotely like Earth.” Factors that made advanced life possible include the Earth’s having:

- * The proper distance from the sun to allow development of habitat for complex life and ensure that water remains liquid, not vapor or ice

- * The proper mass to retain atmosphere and ocean

- * Plate tectonics, which act as a sort of atmospheric thermostat, build land masses and enhance biotic diversity

- * A neighbor the size of Jupiter, not too close and not too far away, that can use its gravity to protect planet earth from too many life-extinguishing collisions with comets and asteroids

- * A stable orbit unperturbed by giant planets

- * A large moon at the right distance to stabilize tilt, thus ensuring seasonal climate fluctuations that are not too severe

- * Enough carbon to support development of life but not so much to allow for runaway greenhouse

conditions³

- 3) Another interesting example of a finely-tuned initial condition is the critical density of the universe. In order to evolve in a life-sustaining manner, the universe must have maintained an extremely precise overall density. The precision of density must have been so great that a change of one part in 10^{15} (i.e. 0.00000000000001%) would have resulted in a collapse, or big crunch, occurring far too early for life to have developed, or there would have been an expansion so rapid that no stars, galaxies or life could have formed. This degree of precision would be like a blindfolded man choosing a single lucky penny in a pile large enough to pay off the United States’ national debt.⁴ This fine tuning trait, along with a multitude of others, suggests that we are actually balanced on the knife edge and live in a flat, yet expanding Universe.

Although we have only scratched the surface of the design traits that govern our universe, and more personally, the planet in which we live, it is certainly more than food for thought as to what or who constructed such a fine-tuned universe capable of sustaining complex life in such an intricate and inexplicable way.

When contemplating the question “why is there something, rather than nothing,”



THE “FINE-TUNED” COSMOS

**THE ULTIMATE DESIGN
—BY THE ULTIMATE DESIGNER**

In the course of our daily, busy lives, we rarely pause to contemplate all that is going on around us. Take for instance, the universe—or cosmos, as astronomers and astrophysicists refer to it. Have you ever taken the time to ask the question of how it all began or why it even exists? Seventeenth-century German mathematician and philosopher, Gottfried Leibniz, took the time to do so, and postulated the following, “The first question which should rightly be asked is, ‘Why is there something, rather than nothing?’” Of course, the question that then logically follows is, if there is something, which is self evident, then who or what created the something that we call the universe in which we live and how is it that it is so *finely tuned* to meet and sustain all our needs for existence? A world so *finely-tuned*, that to date, scientists have identified 824 design traits which are necessary to make human life possible—yes, that’s right, 824...and counting!

Astrophysicist Hugh Ross states, “It’s not just the universe as a whole that manifests design. Scientists find overwhelming design evidence no matter

Albert Einstein, theoretical physicist posited the following, “The scientist is possessed by the sense of universal causation...

His religious feeling takes the form of a rapturous amazement at the harmony of natural law, which reveals an intelligence of such superiority that, compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection.”

We conclude with the following observation from Arthur L. Schawlow (Professor of Physics at Stanford University, 1981 Nobel Prize in physics): “It seems to me that when confronted with the marvels of life and the universe, one must ask *why* and not just *how*. The only possible answers are religious. . . . I find a need for God in the universe and in my own life.”⁵

If, after reflecting on the above design traits and conclusions of some of the greatest minds of our century, you too find a need for God in your universe and life, you need look no further. The Grand Designer of it all has also created a way for you to know and connect with Him personally through receiving His Word and creative power by which all things were created and by Whom all things consist.⁶ The Word I refer to here is the very reason, intellect and Word that proceeds from God, His only Son Jesus Christ by Whom the worlds were formed.⁷ In making this connection, the Grand Designer has made the “connection” process quite simple—so simple in fact, that anyone can be a participant and recipient of this ultimate design trait of His design through

a simple prayer:

“I humbly come before You, the God and Grand Designer of both the heavens and the earth, acknowledging my need for You, my Creator. I accept your Son, Jesus Christ through whom all things were created and by whom all things consist—the One who came to this earth to reconcile me to You, through His death and resurrection. I turn to You now, Jesus, and ask You to enter my heart and illuminate my mind, opening it to your thoughts and truth so that I may understand and see your creation through new eyes, and know the reason and purpose for my life within your marvelous universe. Thank You for the beauties of your creation, and the proof of your existence through it.”

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(Endnotes)

- 1 Hugh Ross, *More Than a Theory*; Baker Books, 2009—www.reasons.org.
- 2 Robin Collins, *The Teleological Argument: An Exploration of the Fine-Tuning of the Universe*; 2009.
- 3 Peter Ward and Donald Brownlee; *Rare Earth, Copernicus Books/Springer*, 2000.
- 4 “What is the “fine-tuning” of the universe, and how does it serve as a “pointer to God”?; The Biologos Forum, <http://biologos.org/questions/fine-tuning>.
- 5 Margenau, H. and R. A. Varghese, eds. *Cosmos, Bios, Theos: Scientists Reflect on Science, God, and the Origins of the Universe, Life, and Homo Sapiens* (Open Court Pub. Co., La Salle, IL, 1992).
- 6 The Bible, John 1:1-3; Colossians 1:15-17.
- 7 The Bible, Hebrews 1:2.