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MINISTRIES

“The following is a direct script of a teaching that is intended to be presented via video, incorporating relevant text, slides, media, and graphics to assist in illustration, thus facilitating the presentation of the material. In some places, this may cause the written material to not flow or sound rather awkward in some places. In addition, there may be grammatical errors that are often not acceptable in literary work. We encourage the viewing of the video teachings to complement the written teaching you see below.”

Does God Exist? – The Design of the Universe

Imagine a giant lottery machine filled with billions and billions of white Ping-Pong balls. Mixed among all of the white balls is a single yellow Ping-Pong ball. Now, imagine being told that one ball will be randomly selected out of the batch. Also, the stakes are high: If the one yellow ball rolls down the chute, you’ll be allowed to live. However, if one of the billions and billions of white Ping-Pong balls is selected, you’ll be executed.

The odds of you surviving this game are incomprehensibly improbable. In fact, if the yellow Ping-Pong ball happened to slide down the chute instead of a white one, you’d assume that the game had been rigged in order that you would live.

This is perhaps a good comparison to the odds against life existing on earth.

For instance, scientists say that there are more than 200 known parameters required for a life-permitting planet. All of the conditions must be perfectly met or else our planet would be life-prohibiting rather than life-permitting. Astrophysicist Dr. Hugh Ross has compiled a list of 154 of these necessary parameters and has explained why each of them must be met in order for a planet to support life. (“Fine-Tuning For Life On Earth,” www.reasons.org)

For example, Dr. Ross explains that only a certain kind of galaxy—in particular, a spiral galaxy like ours—could permit life. Not only that, but the galaxy needs to be the right size, have the right mass distribution, be the right age, and be in the right location. If the galaxy’s mass were distributed too much in the central bulge, for instance, a life-supportable planet would be exposed to too much radiation. If the mass were distributed too much in the spiral arms, then a life-supportable planet would be destabilized by the gravity and radiation from adjacent spiral arms.

There are other parameters relating to everything from having the right amount of stars in the planetary system to the thickness of the planet’s crust to iron quantity in the planet’s oceans and soils.

Another important parameter is that a planet must have the right star in order to support life. The star must be the right size and mass, not too hot and not too cold. The planet must be the right distance from

the star—for instance, if earth moved just 2% closer or farther from the sun, no water would exist. Related to this, the earth’s rotation cycle is exactly perfect—if it were any slower or faster, life could not be sustained due to temperature differences or wind velocities being too extreme.

Earth’s moon is also utterly unique in the universe, and everything about it is just perfect for life to be able to exist. If anything were different, the earth would be life-prohibiting, not life-permitting. For instance, if earth’s gravitational interaction with the moon were any greater, tidal effects on the oceans, atmosphere, and rotational period would be too severe for life to exist. If any less, the magnetic field would be too weak, causing earth’s ozone shield to be inadequately protected from hard stellar and solar radiation.

To give one more specific example, the planet Jupiter actually plays a big role in life surviving on earth. Jupiter’s gravity helps to draw away asteroids and comets from earth. If Jupiter were just a little further away from earth or a little smaller, there would be too many asteroid and comet collisions for life to exist. However, if Jupiter were just a little closer or a little bigger, earth’s orbit would become unstable, and life couldn’t exist.

These are just a few of the conditions and ingredients that must be perfect in order for earth to support life. There are many, many more. (“Fine-Tuning For Life On Earth,” www.reasons.org)

Every aspect of the universe is perfectly ordered, interconnected, and interdependent—and if there were even the slightest variation in *any* of these parameters, we wouldn’t be here. The tiniest alteration to one thing would affect everything else.

By the way, all of this is just for life to exist on earth. What’s required for the universe to exist at all is even more shocking. Here’s what Eric Metaxas had to say in a recent op-ed for the Wall Street Journal:

The fine-tuning necessary for life to exist on a planet is nothing compared with the fine-tuning required for the universe to exist at all. For example, astrophysicists now know that the values of the four fundamental forces—gravity, the electromagnetic force, and the “strong” and “weak” nuclear forces—were determined less than one millionth of a second after the big bang. Alter any one value and the universe could not exist. For instance, if the ratio between the nuclear strong force and the electromagnetic force had been off by the tiniest fraction of the tiniest fraction—by even one part in 100,000,000,000,000,000 [One Hundred Quadrillion]—then no stars could have ever formed at all. Multiply that single parameter by all the other necessary conditions, and the odds against the universe existing are so heart-stoppingly astronomical that the notion that it all “just happened” defies common sense. It would be like tossing a coin and having it come up heads 10 quintillion times in a row.

-Eric Metaxas, “Science Increasingly Makes the Case for God,” www.wsj.com

Before we continue, there is an in-house debate among believers regarding certain aspects of Big Bang cosmology and whether or not this model is compatible with biblical revelation—at least regarding things like the age of the universe. Our intention here is not to get into those theological arguments but to demonstrate that even within the dominant and mainstream scientific model of the universe, the reality of fine-tuning is inescapable. Thus, when properly considered, the data leads the logical mind to an intelligent designer.

The reason we’re taking this route is that atheists and skeptics do not accept biblical revelation, and

therefore theological arguments about things like the age of the earth are not particularly meaningful to them. Once an atheist or skeptic comes to the realization that God exists and that the Bible is true, then it's worthwhile to engage in the in-house debates about such topics. But for now, when speaking with skeptics, it's best to start on common ground as much as we can so that we can first get them in the "house!" Therefore, for the purpose and intent of this teaching, we will proceed as though the mainstream scientific model of the universe is true. And the evidence of fine-tuning within the Big Bang model is overwhelming, as we'll continue to see.

For instance, life existing in the universe can occur only when certain fundamental physical constants are within a very narrow range. As Dr. William Lane Craig explains:

In recent decades, scientists have been stunned by the discovery that the initial conditions of the Big Bang were fine-tuned for the existence of intelligent life with a precision and delicacy that literally defy human comprehension. This fine-tuning is of two sorts. First, when the laws of nature are expressed as mathematical equations, you find appearing in them certain constants, like the gravitational constant. These constants are not determined by the laws of nature. The laws of nature are consistent with a wide range of values for these constants. Second, in addition to these constants, there are certain arbitrary quantities put in as initial conditions on which the laws of nature operate; for example, the amount of entropy or the balance between matter and anti-matter in the universe. Now, all of these constants and quantities fall into an extraordinarily narrow range of life permitting values. Were these constants or quantities to be altered by less than a hair's breadth, the balance would be destroyed and life would not exist.

-Dr. William Lane Craig, "Does God Exist? The Craig-Hitchens Debate,"
www.reasonablefaith.org

In other words, if only one of the many fundamental constants of our universe is altered ever so slightly, the universe would be unfit for the development of everything from matter, to stars, to planets, to chemistry.

For example, you could imagine a universe with the exact same laws of nature but a different gravitational constant. Such a universe could not be life-permitting. If gravity attracted just a little bit more strongly, you couldn't have solar systems, because everything would collapse on itself. If it didn't attract strongly enough, nothing would fall into orbits with each other.

Also consider the cosmological constant: if the expansion rate of the universe had been slightly weaker, the universe literally wouldn't exist. As physicist Stephen Hawking explains:

If the rate of expansion one second after the big bang had been smaller by even one part in a hundred thousand million million, the universe would have re-collapsed before it ever reached its present size.

-Stephen Hawking, "The Illustrated A Brief History of Time," p. 156

If the expansion rate of the universe had been ever so slightly greater than it was, the universe would have thinned out so rapidly that no galaxies, stars, or planets could have formed.

When you consider all of the finely tuned constants that form the structure of our universe, the odds of them all happening by random chance is...unbelievable.

To put it simply, the chance of life existing is less than zero, and yet here we are! All of the parameters necessary for life to exist have been met. It's really quite miraculous if you think about it.

Life exists against unfathomable odds. The single yellow Ping-Pong ball was selected out of the billions and billions of white ones. So now the only question that remains is this: Was the game rigged? That is to say, is our universe so precisely fine-tuned because it was designed that way?

In order to answer that question in the affirmative, the other options must be eliminated. The only two alternatives to intelligent design are physical necessity and chance.

Physical necessity asserts that the universe simply *must* be life-permitting. However, that would entail that a life-prohibiting universe is physically impossible. But there is simply no reason to believe that a life-prohibiting universe is impossible—in fact, according to the numbers, a life-prohibiting universe is far more likely than a life-permitting universe like ours.

Dr. Craig writes:

The constants are not determined by the laws of nature. So why couldn't they be different? Moreover, the arbitrary quantities are just boundary conditions on which the laws of nature operate. Nothing seems to make them necessary. So the opponent of design is taking a radical line that requires some proof. But there is none.

- Dr. William Lane Craig, *"On Guard: Defending Your Faith with Reason and Precision"*

Therefore, since there is no evidence that a life-permitting universe is physically necessary, that option can be reasonably discarded.

The other alternative is chance. Maybe we just got extremely lucky, and all of the constants and quantities of our universe just accidentally fell into this incredibly narrow range in order to support life. But again, the odds against this possibility are so great that it becomes unreasonable. It would be like the same person winning the lottery 10 billion times consecutively after buying only one ticket for each game. If that happened, everyone would immediately conclude that someone had rigged the game in the person's favor. When it comes to our universe, that's the exact conclusion that many scientists are coming to.

Astrophysicist and cosmologist, Fred Hoyle, writes:

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.

-Fred Hoyle, *"The Universe: Past and Present Reflections."*

Physicist Paul Davies writes:

There is for me powerful evidence that there is something going on behind it all [...] It seems as though somebody has fine-tuned nature's numbers to make the Universe [...] The impression of design is overwhelming.

-Paul Davies, "The Cosmic Blueprint: New Discoveries in Nature's Creative Ability to Order the Universe"

Indeed, since the fine-tuning of our universe is unlikely due to chance, the option that it was designed is the most plausible option, and therefore should be preferred. But this design, of course, entails a designer.

Some have attempted to rescue the "chance" option by going beyond empirical science and positing something called the multiverse hypothesis. According to this hypothesis, there is actually an infinite number of universes that have emerged by chance alone. These universes have separated into their own distinct entities and have their own properties, laws, and values of the basic constants of physics. From among these infinite universes, it is argued that perhaps a few universes might emerge that could support life.

The problem with this hypothesis is there is no evidence for it. This so-called multiverse cannot be detected nor observed. And to assert an infinite number of universes to explain our universe goes against Occam's razor. That is to say, the idea of an infinite number of universes requires far more assumptions than the idea of an intelligent designer.

As British philosopher Richard Swinburne states:

It is the height of irrationality to postulate an infinite number of universes never causally connected with each other, merely to avoid the hypothesis of theism. Given that simplicity makes for prior probability, and a theory is simpler the fewer entities it postulates, it is far simpler to postulate one God than an infinite number of universes, each differing from each other in accord with a regular formula, uncaused by anything else.

-Richard Swinburne, "The Existence of God," p. 185

Philosopher Alvin Plantinga gives this analogy to demonstrate the logical flaws in the multiverse hypothesis:

Imagine you are with members of the mafia playing poker. One player has been dealing the cards for the past twenty hands, and for each turn he has dealt himself four aces. After the last turn, the mobsters turn over the table and point a gun at the dealer, accusing him of cheating. But then the dealer defends himself by saying this:

"Possibly there is an infinite succession of universes, so that for any possible distribution of possible poker hands, there is a universe in which that possibility is realized; we just happen to find ourselves in one where someone like me always deals himself only aces and wild cards without ever cheating."

-Alvin Plantinga, "Dennett's Dangerous Idea," Books and Culture: A Christian Review, Vol. 2, No. 3 (May-June, 1996)

What is more reasonable? Accept the dealer's explanation and just keep playing, or do we realize that it's far more likely the dealer is cheating? Everyone would immediately recognize that the game had been rigged. We would recognize that intelligence was involved in the arrangement of the cards. The

aces ending up in the hand of the dealer didn't just happen by random chance.

As Christian apologist Michael Jones explains:

In everyday life when we encounter situations that seem to be rigged, we do not assume it is chance. We know intelligent design when we see it. It *could* be the case that it is just random chance, but we know the odds are never in that favor. So when we encounter odds like the ratio of Electromagnetic Force to Gravity being finely turned to $1:10^{40}$ [one part in 10 to the 40th power] or the Cosmological Constant being finely tuned to $1:10^{120}$ [one part in 10 to the 120th power], logically we shouldn't say, "Well it's possible, by accidental chance, that there is a trillion trillion trillion trillion trillion trillion trillion trillion universes and we just happen to be in the one that is capable of producing life." [...] So although the fine-tuning argument cannot "prove" the existence of an intelligent designer, it shows us that the existence of God is far more logical than everything just happening by random chance.

*-Michael Jones, "The Teleological Argument: What It Really Says,"
www.inspiringphilosophy.com*

So what is the best explanation for the single yellow Ping-Pong ball being selected out of the billions and billions of white ones? The game was rigged in order that you would live. Our universe was fine-tuned for life—and the best explanation for the fine-tuning of the universe is that there is an intelligent designer of the cosmos.

Romans 1:20 (RSV)

Ever since the creation of the world his invisible nature, namely, his eternal power and deity, has been clearly perceived in the things that have been made.

We pray you have been blessed by this teaching. Remember, continue to test everything. Shalom! For more on this and other teachings, please visit us at www.testeverything.net

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