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Is the Universe a Product of Design or Chance?

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Is the Universe a Product of Design or Chance?



WHAT ARE THE ODDS?

After Edwin Hubble's discovery that the universe had a one-time beginning, cosmologists soon realized that the universe and its laws have been perfectly fine-tuned for human life.

The fine-tuning of the universe resulting in intelligent life has scientists scratching their heads about why Earth is the only planet in our galaxy where life has been discovered. Although the Drake equation predicts there could be other intelligent life in our galaxy, so far, all efforts to discover it have been unrewarded.

For life to be possible, over a hundred parameters must be balanced on a razor's edge. If just one of them was off by just a slight degree, you wouldn't be reading this. Scientists began investigating the odds of a random big bang producing life as we know it.

Donald Page of Princeton's Institute for Advanced Study has calculated that the probability of life existing in our universe is just one out of 10^{124} , a number beyond imagination.¹

Astronomer Hugh Ross calculates that the probability for life to exist on Earth is less than 1 chance in 10^{282} .² To put that number in perspective, it would be easier to pick just one atom out the entire universe than for life on Earth to exist. (There are 10^{80} atoms in the observable universe.)

Another way to try and visualize the difficulty of life originating from a random explosion is to imagine burying one specially marked grain on a beach somewhere on Earth, and having a blindfolded person randomly discover it on his or her first pick.

The chance of a person discovering that one grain of sand on their first pick is one out of 10^{20} (one chance in 100 billion billion.) It would be astronomically easier to pick that one grain of sand from the beaches of the world than the probability of life existing on Earth.

So, what are the odds of an unplanned big bang producing human beings? Roger Penrose, Nobel Prize winning mathematician, has calculated the probability of human life resulting from natural processes alone at 10^{-1023} . That's a probability so small that it's mathematically impossible to have occurred randomly.³

To help us grasp the improbability, imagine (if it were possible) winning over a trillion trillion trillion trillion trillion trillion trillion trillion trillion trillion trillion trillion trillion trillion Power Ball lotteries successively after purchasing only one ticket for each lottery.

Absolutely impossible—unless the outcome for each lottery had been fixed by someone in control. And that is what many scientists are thinking—that the fine-tuning of our physical laws and their constraints must have been “fixed”—or programmed—by a Superintelligence.

The improbability of life prompted Physicist Paul Davies to conclude the obvious, “The conclusion must be that we live in a world of astronomical unlikelihood.”⁴

So, are we just lucky to be here, or is there something or Someone who programmed everything to make life possible? That's the big question scientists are grappling with.

Let's look at how they answer that question.

HOW DO SCIENTISTS EXPLAIN FINE-TUNING?

Science cannot answer the question of how the universe began because all laws of science break down before 10^{-43} of a second prior to the initial explosion (singularity). That means that science cannot empirically look back on what led to its birth. They can only speculate.

The origin and fine-tuning of the universe for life have divided the scientific community into those who believe there must be a Superintelligence behind everything and those who believe in a purposeless, materialistic existence. Since science itself assumes a natural, materialistic explanation for everything, some scientists are unwilling to accept a supernatural force that is behind it all. Essentially there are two opposing views regarding the origin of the universe and its fine-tuning for life: materialism and intelligent design.

- **Materialism:** The philosophy of materialism assumes that nothing exists except matter in its various forms and movements. Since materialism is contradictory to the supernatural, any inference to a superintelligence is regarded as “unscientific.”
- **Intelligent Design:** The theory of intelligent design holds that based on the evidence, certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process apart from intelligence.

In the last few hundred years, a paradigm shift has taken place in science when it comes to the question of God and creation.

The former paradigm assumed God existed. Modern science began with a desire to know how God created the universe. Great scientific minds who believed in God were Isaac Newton (laws of motion and gravity), Galileo Galilei (astronomy), Johannes Kepler (planetary motion), Robert Boyle (chemistry), and Francis Bacon (scientific method).

However, since the 18th century, science has evolved into having a materialistic worldview. That later paradigm attempted to exclude God from scientific conclusions.

It is primarily due to the arguments of 18th century English philosopher David Hume that science has dismissed any argument for intelligent design of the universe and the laws that brought it about. Hume, a materialist, claimed the universe emerged

by undirected natural causes alone, without any supernatural intelligence.

So, even if overwhelming evidence logically points to intelligent design, materialists will reject it as an explanation, calling it “unscientific.” That is because their world view rules out any evidence or inference of God or the supernatural.

However, the evidence for a one-time beginning of the universe and its fine-tuning for life has many objective scientists rethinking our origins. The improbability of human life from a big bang prompted Stephen Hawking, the British theoretical physicist to ask,

What is it that breathes fire into the equations and makes a universe for them to describe? The usual approach of science of constructing a mathematical model cannot answer the questions of why there should be a universe for the model to describe.⁵

Hawking goes on to say that the answer to that question lies beyond scientific research and needs to be addressed by philosophers. Later, when asked about the incredible fine-tuning required for life, Hawking related to a reporter,

The odds against a universe like ours emerging out of something like a big bang, are enormous. ... I think clearly there are religious implications whenever you start to discuss the origins of the universe.⁶

AVOIDING EVIDENCE FOR DESIGN

Materialists like Hawking attempted to find non-religious explanations for the improbability of life and our existence. He speculated that our universe could be just one of many other universes, thereby increasing the probability that life would exist in at least one of them.

Hawking’s Cambridge colleague Sir Martin Rees has also considered the idea that our universe might be one of many others. He writes of his reason for agreeing with Hawking,

If one does not believe in providential design, but still thinks the fine-tuning needs some explanation, there is another perspective—a highly speculative one.... It is the one I prefer, however, even though in our present state of

*knowledge any such preference can be no more than a hunch....There may be many “universes” of which ours is just one.*⁷

Like Hawking, Rees is a materialist who admits favoring the multi-universe idea because it provides an alternative to providential design.

But is the search for other universes driven by science, speculation, or materialistic bias? Charles Seife, a mathematician and journalist for *Science* magazine, explains what he believes to be the real motivation behind the multi-universe theory:

*Scientists tend to be uncomfortable with coincidences, and the many worlds interpretation gives a way out.*⁸

Even Hawking and Rees, admitted multiple universes can never be empirically verified. In *The Elegant Universe*, Brian Greene calls the multi-universe idea “a huge if.”⁹

Physicist Paul Davies explains why materialists are so fervent in their attempts to validate the multi-universe theory. In *Other Worlds*, he writes,

*Whether it is God, or man, who tosses the dice, turns out to depend on whether multiple universes really exist or not. If instead, the other universes are ghost worlds, we must regard our existence as a miracle of such improbability that it is scarcely credible.*¹⁰

In his book, *God and the New Physics*, Davies explains why many scientists reject the multi-universe idea as too speculative. Since Hawking’s hypothesis is based on imaginary time rather than scientific evidence, Davies asserts that belief in multiple universes “must rest on faith rather than observation.”¹¹

However, isn’t that the exact criticism materialists use against intelligent design? Yet, intelligent design is based on scientific discovery, whereas belief in multiple universes has no scientific evidence whatsoever to support it.

That’s the reason investigative reporter for the *Atlantic Monthly*, Gregg Easterbrook, concludes his research on the multi-universe idea by stating,

The multi-verse idea rests on assumptions that would be laughed out of town if they came from a religious text.¹²

ACCIDENT OR DESIGN?

There are only two options for why everything in our universe is so precisely fine-tuned for life:

1. **Lucky Accident:** Human life is an incredibly improbable accident—or—
2. **Intelligent Design:** It was designed by a Superintelligence.

In *Alpha & Omega*, Charles Seife summarizes how some view the fine-tuning:

It seems like a tremendous coincidence that the universe is suitable for life.¹³

Cosmologists Bernard Carr and Sir Martin Rees state in the journal *Nature*,

Nature does exhibit remarkable coincidences and these do warrant some explanation.¹⁴

In another article in *Nature*, Carr leaves the identity of the “tailor” to theologians.

One would have to conclude either that the features of the universe are only coincidences or that the universe was indeed tailor-made for life. I will leave it to the theologians to ascertain the identity of the tailor.¹⁵

Although Hawking continually tried to theorize how life could have originated naturally without Superintelligence, he admitted,

It would be very difficult to explain why the universe should have begun in just this way, except as the act of a God who intended to create beings like us.¹⁶

Albert Einstein, who also didn’t believe in a personal God, concluded that the universe must have been designed by a Superintelligence.

After he finally accepted the evidence for a beginning of the universe, as well as its incredible fine-tuning, Einstein referred to its Creator as—

*... an intelligence of such superiority that, compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection.*¹⁷

In response to the evidence, Carr, Rees, Hawking, and Einstein all allude to an intelligent designer, but their materialistic bias prevented them from accepting it as reality.

However, Cosmologist Edward Harrison speaks for more objective scientists who respond to the evidence for fine-tuning by clearly stating the obvious:

*Here is the cosmological proof of the existence of God. The fine-tuning of the universe provides prima facie evidence of deistic design.... Many scientists, when they admit their views, incline toward the design argument.*¹⁸

Although many scientists remain materialists, the evidence for fine-tuning has had its impact on those willing to look beyond the boundaries of science for an answer to why we exist. There is an increasing number who believe it confirms the biblical account of creation which teaches that human life is the focus of a supernatural plan.

Arno Penazis, Nobel Prize winner in physics, was convinced that is true. He concludes,

*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).*¹⁹

Many scientists like Harrison and Penazis believe that the remarkable fine-tuning of nature's physical laws for life can only be explained by a superintelligent Creator.

Endnotes