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A Universe Built for Us - A Science Magazine's Surprising Admission

by Warren Krug

A UNIVERSE BUILT FOR US. Printed in large bold letters, this was the title of a magazine article containing a surprising admission. This article didn't appear in a creationist or intelligent design magazine. Amazingly, it could be found instead in the December, 2008 pro-evolution *Discover* magazine beginning on page 52. Moreover, the title was not entirely misleading. The author, Tim Folger, actually says that the universe appears to be designed for human life. Still, he proceeds to describe a trick physicists use to try to get around any suggestion that there is an Intelligent Designer. The trick is bound to leave creationists and other Christians astounded at such a transparent attempt to explain away an obvious truth—that the universe without doubt testifies to the existence of a Creator.



Folger reports on a visit he had with physicist Andrei Linde in Palo Alto, California. "Everything here," Folger says, apparently in reference to the scene near Linde's office on the Stanford University campus, "bears witness to an extraordinary fact about the universe. Its basic properties are uncannily suited for life. Tweak the laws of physics in just about any way and — in this universe, anyway, — life as we know it would not exist."

Linde says, "We have a lot of really, really strange coincidences, and all of these coincidences are such that they make life possible." Sounding as if they are card-carrying members of the intelligent design community, which they apparently aren't, Folger and Linde mention several of these "coincidences" such as...

- > If the protons in atoms were just 0.2% more massive, they would be unstable and decay. Atoms wouldn't exist and neither would we.
- > If we double the mass of an electron, life as we know it wouldn't exist.
- > Life would disappear if we change the strength of the interaction between protons and electrons.
- > Having fewer than or more than three space dimensions and one time dimension would make life as we know it impossible.
- > There would be no stars and no life if the percent of the mass of hydrogen atoms in stars being converted into energy via atomic fusion was not exactly 0.007.

The idea that the universe was made just for us is known as the *anthropic principle*. It was first mentioned in 1973 by physicist Brandon Carter at a conference in Poland honoring Copernicus, the astronomer who had proposed that the sun was the center of the universe. Carter suggested that a purely random assortment of laws would have resulted in a dark and dead universe. He further suggested two versions of the anthropic principle. The "weak" anthropic principle merely says that we are living in a special time and place in the universe where life is possible. The bolder "strong" anthropic principle asserts that the laws of physics themselves are "biased" toward life, or, in other words, the "universe knew we were coming."

The anthropic principle lay dormant for years afterwards. Linde, for instance, was more interested in finding a solution to a puzzling problem with the dominant Big Bang theory, the remarkable uniformity of temperature throughout the universe. If the universe as a whole emerged from the fireball of a Big Bang, why is it that different regions separated by enormous distances all have the same temperature, 2.7 degrees Celsius? There hasn't

been enough time since the universe was born, even according to evolution timelines, for every part of the cosmos to have connected to every other part and cooled via heat exchanges to the same temperature.

In 1981 physicist Alan Guth and later Linde suggested a possible though flawed solution to that puzzle. Their attempt at a solution was called inflation, the idea that the universe experienced a huge growth spasm during the first moments of its birth, thus allowing all the regions of the universe, now billions of light-years apart, to have been close enough so they could exchange heat and reach a uniform temperature.

In the mid-1980s Linde and physicist Alex Vilenkin came up with a controversial new twist to the theory of inflation. They argued that inflation, far from being a one-time event, is an ongoing process. Different regions of the universe, they theorized, are at times undergoing inflation and budding off into what are essentially new universes. Each of these new universes will themselves experience inflation, what Linde calls chaotic inflation, and will in turn evolve their own new universes. Each of the new universes according to Linde will have laws of physics completely different from our own.

So this is the secular explanation for why our universe appears to be designed for life. We are only one of an almost infinite number of universes, all with different properties. Although the odds are extremely tiny that any one universe will have the conditions which are just right for life, if you increase the number of universes to an almost infinite number, the odds of at least one universe meeting the criteria suddenly increase. Ours just happens to be the one universe where life could have come about and exist today. Although most physicists were slow to embrace this theory, support picked up when in 1998 researchers seemed to find evidence that the universe was expanding and at an accelerating rate. Some form of energy, physicists call it dark energy, seems to be pushing everything apart. These discoveries contradicted the old ideas that the cosmic expansion must be slowing down following the Big Bang.

Moreover, dark energy is itself an example of the anthropic principle. It's strong enough to accelerate expansion, but not so much that it could rip apart the universe. "This is the one fine tuning that seems to be extreme, far beyond what you could imagine just having to accept as a mere accident," Nobel laureate Steven Weinberg says.

Dark energy, says Folger, along with the controversial string theory tends to support the multiverse theory, this idea that there are an almost infinite number of universes, ours being only one. Without getting into the details of string theory, suffice it to say that some theoretical work done in California in 2000 appeared to unravel string theory, yet some scientists still defend it and use it as evidence for the multiverse.

The problem with the multiverse theory is the difficulty in trying to confirm other universes when all experiments must be confined to our own. Still, some physicists see the Large Hadron Collider built near the Swiss-French border as possibly being able to provide evidence for both the string theory and the multiverse. Some future space missions, scientists hope, might also find some evidence.

When Folger asked Linde if physicists will ever be able to prove the existence of the multiverse, his answer implied that it is the only explanation for dark energy or for the electron's mass or for many properties of particles. In other words, it must exist because there is no other possible answer....or is there?

Many physicists see the multiverse as a desperate measure, impossible to confirm, and a step

backward to a human-centered way of looking at the universe. A theory that allows anything to be possible explains nothing. However, believers in the multiverse see it as just one step in a progressing view of the universe from geocentric to heliocentric to galactrocentric to now the multiverse.

Weinberg thinks even if this idea of a plethora of universes is ever proven that it would not destroy belief in an intelligent, benevolent creator. On the other hand, cosmologist Bernard Carr says, "If there is only one universe, you might have to have a fine-tuner. If you don't want God, you'd better have a multiverse."

That last statement appears to sum up what this whole controversy is about. Physicists are now admitting the universe is designed for human life, but many or most of them are obviously not willing to admit that it was designed by a Creator God. Perhaps they don't want to feel they need to be accountable to a higher power. This idea of a multiverse, as farfetched as it may be, exists primarily because it is the only current theory able to explain our universe apart from God. But if one wants proof for something, the multiverse theory is proof for the accuracy of Psalm 14:1: "The fool says in his heart, 'There is no God.'" (NIV) **LSI**