

**TASC**

*TASC's mission is to rebuild and strengthen the foundation of the Christian faith by increasing awareness of the scientific evidence supporting the literal Biblical account of creation and refuting evolution.*

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## THE UNIVERSE: ACCIDENT OR DESIGN

By Joe Spears

The universe is vast. The Earth seems large, yet when examined on a cosmic scale, is like a spec of dust, even less than a grain of dust. The sun itself is large enough to hold about one million Earths. And the sun is only an average star in a galaxy containing many, many stars in a universe of many, many galaxies.

If we stop to think about it, the vastness of the universe is amazing. While we go about our day-to-day business, we may think of the Earth as being the entire realm of reality. Yet this whole planet is like a spec of dust in the solar system. And the solar system is like a spec of dust when compared with the galaxy. And the galaxy—there are clusters of galaxies, and even superclusters.

The universe is undoubtedly large, almost beyond imagining. Yet, all this majestic expanse of galaxies, stars, and other celestial bodies, could not exist if certain values were not precisely what they are. There are many constants, such as the gravitational constant, that could be any value, yet they are the correct value for the universe to exist, and in some cases for life to exist.

Laws, such as Newton's Law of Gravitation, involve a constant. But the value of the constant is not determined by the Law—it could be any of a range of values. Experimental measurement is needed to show the value of these constants. (Here we are referring to constants which cannot be derived from other constants.) These constants in many cases have no reason to be what they are. Theories may involve canceling out of infinities, resulting in some finite value, but the precise value may not be specifically determined by the theory. However, that value happens to be precisely what it would have to be in order for life to exist.

The point is that theory does not determine precise values of all these constants. What does? And why is that determined value just precisely what is needed for life? There are many constants: the gravitational constant, the fine-structure constant, the masses of the proton, electron and neutron, the charge of the electron, the speed of light, Planck's constant, and so forth. And certain

constants have to be certain values for the universe and for life to exist.

Scientists tell us that if some of these constants were off, even a little bit, that atoms would not exist, or stars would not exist, or water could not exist.

This is an amazing coincidence—that the values of certain constants are exactly what would be needed for the universe and for life to exist. The probabilities of this happening by chance are small—so small, in fact, that scientists have argued about how to explain the fact that these constants do have the values needed for life and matter to exist.

Here are just a few examples of the just-right values of these constants of nature.<sup>1</sup>

- electron charge: if slightly different, stars would not be able to fuse hydrogen into helium
- nuclear strong force: if it was only 2% greater in strength, the universe would be without atoms – only 5% weaker, and there would be no stars
- gravity is millions of millions of times weaker than electromagnetism: if gravity was stronger, stars would burn out much faster
- nuclear weak force: if it had been slightly weaker, all the hydrogen in the universe would be helium now – an water would be impossible
- proton/neutron mass difference: if the were not exactly what it is, about 1/2000 the mass of a proton, we would not have chemistry or life
- density of ice: if ice didn't float on water, the oceans would freeze from the bottom up. The density of ice is related to the properties of the hydrogen atom.

How unlikely is it that the universe could exist? Roger Penrose (a mathematical physicist, one of whose students is the famous Stephen Hawking) has calculated the chances of the appearance of our universe to be one chance in a very large number.<sup>2</sup> This large number is greater than the estimated number of atoms in the universe! In fact, this number is several billion times greater than the estimated number of atoms in the universe.

This number is  $10^{10^{30}}$ , while the estimated number of atoms in the universe is a 10 with an exponent somewhere between 70 and 100.

One explanation has been offered for the extremely unlikely occurrence of the universe and life, along with all the appropriate values of the physical constants. It is called the Anthropic Principle and states that the reason all these values of important constants of physics are what they are, is simply that they would have to be what they are in order for us to exist and be able to debate their meaning.

This seems obvious. Of course, we are here, and therefore the universe and life have to exist, and also the constants had to have been such as to allow life and the universe to exist. But this merely says that it happened—that the constants did have and do have the appropriate values. It does not explain *why* the constants are what they are, against the odds.

This, in a sense, merely states the obvious without explaining *why* the obvious exists. Yes, we are here and yes, life *does* exist. And obviously, any and all conditions needful for us to be here had to have been met, since we *are* here. But still this leaves us asking, “Why? Why did it happen?” In a real sense, this merely states that it absolutely *did* happen, not why it happened. Why? One answer is that it all happens by chance. Another is that it is by design.

The values for some of these constants that have to be just so are based on assumptions of a Big Bang and/or on other assumptions. But even if the assumption is contrary to creation, even if the assumption is of an evolutionary process, it still argues for design. In such a case, consider the following. If the specific values of constants are based on assumptions of evolutionary processes, the evolutionary process must be highly unlikely, and this argues against the evolutionary process.

If one argues for creation on the basis of the unlikely chance occurrence of the precise values of certain physical constants, with these evolutionary process assumptions involved in the calculation of the likelihood of their values, someone might say, “Your argument is not valid! You are arguing *for* creation but your argument assumes evolutionary processes.”

This may be true, but consider this: If we assume those evolutionary processes, then this means we must have certain values of constants for those processes to occur—values which are *highly unlikely* to have occurred. It is not just one value of one constant—don’t misunderstand—but several different constants that *all* have to be certain values, as required by accepted evolutionary theories.

Consider what William Bradley, Ph.D., Distinguished Professor of Engineering at Baylor University, says:

“There are so many different requirements that are interrelated, it seems difficult to imagine how all of these ‘accidentally’ happened to be exactly what they need to be. Because of the many cross constraints, it appears unlikely that there is an alternative set of values for these constants which would ‘work’. Furthermore, the necessary values range over thirty orders of magnitude ( $10^{30}$ ), making their accidentally correct ‘selection’ all the more remarkable. It is quite easy to understand why so many scientists have changed their minds in the past 30 years, agreeing that it takes a great deal of faith to believe the universe can be explained as nothing more than a fortuitous cosmic accident. Evidence for an intelligent designer becomes more compelling the more we understand about our carefully crafted habitat.”<sup>43</sup>

Since the need for certain values of certain constants assumes evolutionary processes, what can be made of it? This: that the evolutionary processes require certain things to occur (or certain values of certain constants to exist) which are highly unlikely, based on current knowledge. Thus, we see the implication, *the unlikelihood of those evolutionary processes*.

There are two possibilities concerning these constants (that are needed for life to exist):

1. the values of the constants are determined by the requirements of evolutionary processes.
2. the values of the constants are *not* determined by the requirements of evolutionary processes, but are simply required in order for life (and/or the universe) to exist.

Of course, many will see some overlap in these two categories.

In the first case, the clear implication is that the *evolutionary processes* are unlikely to have occurred by chance, since the fine-tuning is so unlikely. In the second case, *the existence of life (or the universe itself)* is unlikely to have occurred by chance. In either case, we have the unlikelihood of the existence of life (or the universe) by chance or the unlikelihood of the occurrence of evolutionary processes to bring about the occurrence of the life and the universe. In both cases, the chance occurrence of the universe and of life seems unlikely.

Then, what about the *non-chance, by-design*, existence of the universe? Hear what some scientists have to say: “Cosmic constants provide the strong appearance that the universe was designed with life in mind. The prominent astronomer and former atheist, Fred Hoyle, concludes that, ‘a superintellect has monkeyed with physics, as well as with chemistry and biology.’ Similar-

ly, Paul Davies, a prominent physicist moved from promoting atheism in 1983 to conceding in 1984 that ‘the laws [of physics]...seem themselves to be the product of exceedingly ingenious design.’ One year after this statement, Davies said that there ‘is, for me, powerful evidence that there is something going on behind it all. The impression of design is overwhelming.’ Robert Jastrow, Founder-Director of NASA’s Goddard Institute of Space Studies refers to cosmic constants as ‘the most theistic result ever to come out of science.’”<sup>4</sup>

<sup>1</sup> <http://ourworld.compuserve.com/homepages/rossuk/c-anthro.htm>

<sup>2</sup> Davies, Paul. (1983) *God & the New Physics*, Simon & Schuster, Inc., New York, 178-179.

<sup>3</sup> Bradley, William L. (1999) The Designed “Just So” Universe.  
[http://www.origins.org/articles/bradley\\_justsouniverse.html](http://www.origins.org/articles/bradley_justsouniverse.html)

<sup>4</sup> Licona, Michael. God Spoke And Bang! It Happened.  
[http://www.cbn.com/spirituallife/ChurchAndMinistry/Evangelism/God\\_Spoke\\_And\\_Bang\\_It\\_Happened.asp](http://www.cbn.com/spirituallife/ChurchAndMinistry/Evangelism/God_Spoke_And_Bang_It_Happened.asp)

### “BABY” GALAXIES IN OUR NEIGHBORHOOD? HOW?

In an article entitled “Young and Near” in the January 1, 2005 *Science News* (Vol. 167, p. 4), it is reported that since 1995, astronomers have discovered over 2,000 “baby” galaxies, which, according to the standard “Big Bang”-oriented model of the universe are small galaxies with many stars forming in them at once. It is thought that merger of these galaxies forms larger galaxies like our milky way.

Most of these galaxies are far away, more than 10 billion light-years away. This is what the model “expects”. However, an ultra-violet-detecting satellite telescope has so far observed 36 such galaxies within 2 to 4 billion light-years of Earth. As we shall see, this is a problem for the standard model.

The standard model, which could also be termed the modernist creation myth (according to Phillip Johnson), goes in part like this. After the Big Bang, when the universe had expanded and cooled enough to form stars and galaxies, many billions of such baby galaxies formed. Over time, these baby galaxies collided and merged, forming the galaxies we have traditionally found nearby. By now, there should be none of the baby galaxies left. But there are!

The finding is so unexpected, that one researcher, Tim Heckman of Johns Hopkins University, put it like this.

“It’s sort of like finding a dinosaur in your backyard [sic]”.

As the telescope looks further, it is likely to find more such baby galaxies. What should be the creationist take on this? It is possible that these galaxies are there because the Big Bang model is wrong. We don’t necessarily have a complete answer to the “distant starlight” puzzle (however, see D. Russell Humphries’ book *Starlight and Time*, available at TASC meetings).

But we do have the Bible, in which Jesus tells us that Adam and Eve were alive “at the beginning” (Matt 19:4) and in which are Genesis chapters 1 and 2. A straightforward reading of these clearly would indicate a young Creation.

Michael G. Kinnaird, Ph.D.

### MEETING NEWS

Stan Atwood, a Christian scientist who holds master degrees in wildlife biology and in toxicology, spoke to us at our April 14 meeting at which 44 attended. This was a very good crowd! Fourteen of the attendees were young boys and girls whose attendance was arranged by two churches who provided field trips for fourth, fifth, and sixth graders. Stan shared his own walk of growing up as a Christian, being challenged by the naturalistic evolutionary theory taught as fact, first adopting theistic evolution to juggle his faith and evolution, eventually realizing that believing in theistic evolution was an unnecessary compromise, and rejecting it. We are grateful to Stan for providing a very good talk and being a strong testimony for these young folks to hold on to their faith in God as their Creator as they are bombarded with the teachings of atheistic, naturalistic evolution which can deceive them into giving up their Christian faith!

Mark Stephens, chairman of TASC, challenged all churches represented at the meeting to arrange a field trip like this for their young people and to start classes on creation science in their Bible curriculum. This would help to stem the statistic of more than 70% of our young people quitting church after going off to college and getting further indoctrinated into the worldviews such as atheistic, naturalistic evolution.

We all need to work toward providing all our young people a testimony of a Christian scientist standing up for God as our Creator and refuting naturalistic evolution. Arrange for one of our TASC speakers to speak to your church youth group by contacting our speaker coordinator, Phil Johnson, at 919-553-3273 or accessing

TASC through our new web site at [www.tasc-creation-science.org](http://www.tasc-creation-science.org).

### COMING EVENTS

**Thursday, May 12, 7:30 P.M., Providence Baptist Church, 6339 Glenwood Ave., Raleigh**

Joe Spears, Fossils: What they tell us and whether they support evolution.

**Thursday, June 9, 7:30 P.M., Providence Baptist Church, 6339 Glenwood Ave., Raleigh**

Dan Reynolds, Ph.D., *Starlight and Time - An Update*. This talk will be based on an updated version of the video entitled *Starlight and Time*, portions of which will be presented. Physicist Russell Humphreys explains how starlight from distant galaxies could have traveled billions of light years by day four of creation week. Dr. Humphrey's "white hole cosmology" is based on scripture, general relativity, and observational evidence which overturns the underlying assumptions of the big bang model (homogeneity and isotropy).

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(Suggested annual donation is \$10 to go to publication costs.)

I appreciate the educational outreach of *TASC* and would like to contribute to ongoing and new outreach activities.

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