
Creation Answers

Who writes this newsletter?

This newsletter is produced by Wayne Spencer on a Quarterly basis. Its purpose is to bring creation research within the reach of Christians and provide up-to-date reliable information on creation issues. Wayne Spencer is a creation author and former teacher who has presented papers at the International Conference on Creationism and has published in various creation publications, such as the Creation Research Society Quarterly, Creation magazine, the Journal of Creation, and Origins (from the Biblical Creation Society, UK).

This newsletter is meant to help people plug into creation resources and get informed about creation and evolution. It is provided free of charge on request. Using the free Adobe Acrobat Reader is necessary for viewing the newsletter. There are no restrictions in copying this newsletter or passing it on to others. To request to be placed on the e-mail list, send a request to wspencer@creationanswers.net.

More information on Wayne Spencer's education and publications can be found on the creationanswers.net web site. You'll also find many other resources. <http://creationanswers.net>
Also see the [AnswersBlog](#)

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A Personal Note from Wayne Spencer

Greetings,

Thank all of you again for your interest in my newsletter. In this issue I continue a series on the Big Bang. This article focuses on some fundamental issues important for understanding the Big Bang theory. There is a need for Christians to be more aware of what the Big Bang entails. I think some Christians accept it without considering what the Bible says. I would say the Big Bang cannot be made to agree with the Bible. The Big Bang is a stranger concept in some ways than people think. Sometimes even individuals with Ph.D. degrees in physics may not understand the Big Bang correctly. Believing it boils down to accepting it on faith. I show why that is in this issue.

August 4-8 is the International Conference on Creationism. I have made presentations at the last four of these conferences but not this time. I will attend the entire conference though and look forward to it. I have sometimes met readers of my newsletter at the ICC.

I'd like to recommend my AnswersBlog as well. My last blog post was a review of the book, "The Miracles of Exodus" by Colin Humphreys. It attempts to use science to explain events of the Exodus of the Israelites out of Egypt. Is it legitimate to apply science to explain these events in the Old Testament? Also, is there evidence confirming any of the Biblical details of the Exodus? Take a look on my website.

Wayne Spencer, M.S., Physics

What Kind of Universe is This?

In the previous newsletter I began a series on the Big Bang. I discussed how it relates to world views. I dealt with the “Fine-Tuning Argument” which says the laws and constants of physics imply there is a Creator who made the universe for us. Our worldview affects the approach we take to answering big questions about God and existence. It seems to be the case that one’s universe concept is determined by one’s God concept.

To understand the Big Bang we might begin with the question, did the formation of the universe have a cause? If so, what kind of cause was it? What would be an adequate cause to explain the beginning of the universe? Someone who believes in God would likely say that God is the First Cause. A number of Christian Apologists use this argument of the need for a First Cause to make a case for God’s existence. Dr. William Lane Craig does a very good job of defending this argument. But, scientists often take issue with this argument. Modern physics has found some strange things can happen on the atomic and subatomic level. There are spontaneous events on the subatomic level that are random. They do not have a cause as far as anyone knows. A good example would be radioactive decay. The rate of radioactive decay is about how rapid decay is for a sample containing a large number of atoms. But for one particular atom that undergoes decay of the nucleus, it is a spontaneous random event. Quantum mechanics allows for uncaused events like this. So physicists have argued that the beginning of the universe is an uncaused spontaneous event.

Before the Big Bang?

A common question that comes to people’s minds about the Big Bang is, “*What existed before the Big Bang?*” This is complicated but on one level the answer is

“There was no ‘before’ before the Big Bang. Physicists think of time and space itself beginning to exist in the Big Bang event. In the Big Bang, the laws of physics are not applicable until the universe has expanded to a certain point and temperatures drop sufficiently. So time started at the beginning of the Big Bang. There have been a number of ideas on how the Big Bang began. One view says the universe started in “empty” space as a quantum fluctuation in space. Another theory proposed that the universe started from an event known as quantum tunneling. Another interesting idea is called the “baby universe.” It is where a new universe (the “baby”) somehow gets linked to a prior universe through a black hole in the prior universe. This attempts to explain how the “baby” universe could have properties similar to the “parent” universe! There is a common view of the universe today that says there are actually many universes, and we are just lucky enough to be in one that is suited to life. In this “many-worlds” view, physicists describe the universe as like a foamy river, where bubbles just spontaneously pop-up occasionally and our universe is one of those bubbles. To most people these ideas sound very strange.

Why do physicists and astronomers look to such ideas to explain the universe? It comes from their “naturalistic” assumptions and the view that faith in a God is not a rational answer science can consider. These type of ideas tend to put faith in something in the universe that essentially replaces faith in a personal Creator-God. If a scientist is committed to the Big Bang they are saying that there is no purpose for the existence of anything. Not all scientists would say this, because not all scientists are fully committed to the all the logical implications of Big Bang theory. Big Bang theory was not put forward as an idea to encourage faith in God, but as an idea that explains things without God. That is why it depends on random events in subatomic particles and scientists talk about the universe coming from a random

fluctuation in the vacuum of space. Those of the “many-worlds” viewpoint would say that all possible universes must exist somewhere, and we just happen to be in one of the universes that were stable and suited to life.

Modern physics has found that if you could go out into outer space, in a perfect vacuum where there is no matter present, empty space still has physical properties. In other words, empty space is not nothing, it is a something. Exactly what it is is still a mystery. Physicists have theories about it consisting of many subatomic particles appearing and disappearing all the time. Empty space has an energy content and measurable properties, even with no matter in it. I would say the creation of space and time is probably alluded to in Genesis 1:1.

When scientists say that the universe came from a quantum fluctuation in space or something similar, they are making a huge leap of faith. They have to assume that something exists before the Big Bang. They would assume something is there (such as space and time) in order to have it start the Big Bang event! They also tend to assume physical laws exist prior to the Big Bang, again so that they can use physics to explain how the Big Bang event started. But the Big Bang theory says the laws of physics (for this universe), as well as space and time all began with the Big Bang process. Thus, any conceivable explanation of how the Big Bang began using physics fails because it must assume something is there to start with which has not been explained.

If you assume physical laws are present to explain the Big Bang, then you have assumed what the Big Bang purports to explain the beginning of. Also, how could something that is within the universe or that is a property of the universe explain the origin of the universe? Even if you allow for uncaused spontaneous events in the vacuum, you have to assume that quantum physics applied before the Big Bang. To put

it another way, if you want a valid explanation of the beginning of the universe, you cannot use known physics learned in this universe to model it. What then is left to explain the beginning? Only faith is left. This is why scientists operate on faith when it comes to origins, in spite of their best attempts to rationally explain things. Science cannot experimentally investigate anything that happened in the past. So scientists do not operate on reason alone.

Thus any physical naturalistic mechanism for the beginning of things is really an inadequate first cause. It has no intelligence to guide it and there is not really a plausible mechanism to make something stable from it. Basing the origin of the universe on quantum principles is implausible because spontaneous quantum events do not scale to the level of the universe. Just because you can make an electron and positron come into existence and disappear in an experiment doesn't mean you could do the same with your car, or with a star, or with the universe. Scientists are making a leap of faith to suppose that quantum effects we see on a subatomic level could have anything to do with forming a stable universe.

God and the Universe

To explain the universe you need something outside it to make something happen to form it. This is why believing in a Creator like the God of the Bible makes sense of the origin of the universe. God is self-existent and transcendent. So he does not depend on anything in the universe. He is not part of the universe as we are and is not bound by time as we are. Yet He can act into the universe from the outside. He is all-powerful and all-knowing. Thus He can create from nothing, originate the physical laws, establish the mathematical relationships, and fine-tune the properties of the universe for life. If you can accept that it takes an all-powerful transcendent God to make the universe, then there is the

question, why? It seems it was for us, and physicists today have noticed this.

The Bible does not explain things in terms of technical cosmological models. But in the way the Bible describes creation, the purpose of it was to get to man. So it would seem pointless to take millions or billions of years for stars to burn out and reform before creating man. In the Big Bang scenario, nearly 10 billion years of time went by before our solar system formed. The Big Bang is a long process of objects forming from preexisting matter and energy. Our Sun and solar system would have formed from matter left over from a prior star that exploded, and that star formed the same way from an earlier star. This sort of chain of objects forming from prior matter would go back to the Big Bang singularity, where time and space began to expand. But Scripture does not support this kind of long chain of processes leading to man walking on the Earth. Hebrews 11:3 (NIV) says, *"By faith we understand that the universe was formed at God's command, so that what is seen was not made out of what was visible."*

Genesis chapter 1 emphasizes over and over that God created without long process by command. It is emphasized in the way it describes God's acts of creation. Genesis 1:3 states, *'And God said, "Let there be light," and there was light.'* This is not being poetic, it is describing something that happened by command, on command. It is saying that it happened immediately when God commanded it. This is completely different from the Big Bang. In the Big Bang scenario, it has sometimes been argued that our planet and our lives seem so insignificant in the universe. So in the Big Bang, Earth did not form till over 9 billion years after the beginning of the universe. But in Genesis 1 God starts making the Earth in the very first creative action, because our planet has special importance to God.

Some try to make connections between Genesis 1 and the Big Bang. The

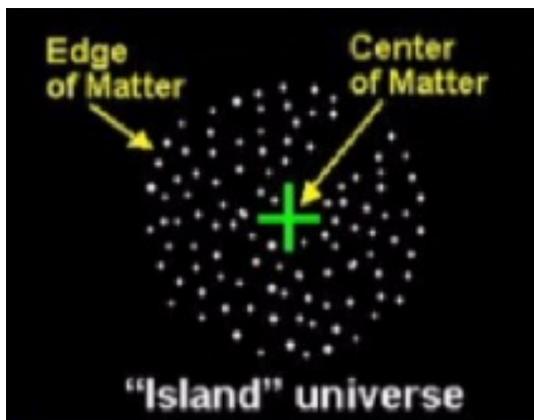
Big Bang says there was a beginning, so this may seem similar to the Bible because it also says there was a beginning. Also, Genesis 1:3 above might sound a little similar to the early moments of the Big Bang because it's talking about light. But if you read the details of Genesis 1 and compare it to the Big Bang, the order of events is completely different. Earth was created before the Sun and before other stars in Genesis 1. This is not like naturalistic origins theories about the Big Bang and formation of our solar system. There are views of Genesis 1 that attempt to avoid this problem, but I would say they are misinterpretations.

Since God is self-existent, He exists without cause and without beginning or end. So if a scientist (or a nonscientist) believes that an uncaused event led to the universe we are in, in a way it is very like my faith in God, but it is putting faith in something else. It involves putting faith in something that physicists can't even define very clearly, but it's not putting faith in any god. The Big Bang is relying on known forces and processes, the chance collisions of particles, and time, to lead to humans walking on a habitable planet like Earth. Though there are people who mix faith in God with Big Bang theory, it is an incoherent mix. It is like mixing oil and water. They don't form a good solution together. I think many Christians who go along with the Big Bang theory do not know much about it.

The Big Bang Universe

Though the Big Bang is widely accepted by scientists and non-scientists alike, people a number of misconceptions about it. First of all, the "Big Bang" name was originally a derogatory term used by astronomer Dr. Fred Hoyle. Dr. Hoyle believed the Steady State Theory and did not accept the Big Bang. But the term stuck in spite of Hoyle's criticisms of the theory. The Big Bang is often described as an explosion, but that is not really correct. The explosion idea leads to misunderstanding what

happens in the Big Bang. A simple picture in people's mind is sometimes that you have matter in a certain region, with empty space surrounding that. The matter could include subatomic particles, or gas, or even stars, depending on how long after the start of the "Bang" you're referring to. So this picture treats the matter as like an island in an empty space. This simple model is often referred to as the Island Universe. This does tend to be a common conception of the universe, especially for anyone who hasn't studied the Big Bang much.



But the Island Universe is not the way the universe is conceived of in the Big Bang. The Big Bang starts from what is called a singularity. The initial fractions of a second of the Big Bang is a long complex scenario to explain. But energy and particles at extremely high temperatures expand because of what happens to time and space. It is not matter exploding into a void but it is space and time coming into existence and expanding. Matter and energy are carried along by the expansion. So the concept is not that an eternity of time past existed where nothing happened, and then the "explosion" of matter started from a certain point. Rather, time and space rapidly erupt and so the "Bang" happens everywhere in the universe at once. But in the early moments the universe is very small. Some scientists would say that Big

Bang theory actually implies nothing from prior to the singularity could survive through the event. As space-time expands temperatures decrease. It requires a few hundred thousand years in the theory for temperatures to reach levels in which atoms can be stable.

There are other concepts in the Big Bang that are very counter-intuitive. A simple Island Universe idea might treat the universe as having a region where matter is present and beyond the matter there is a void. Then somewhere if you could go far enough from the center of the matter there would be an edge. But, again this is not the Big Bang concept. In the Big Bang, the universe has no center and no edge. The universe is assumed to be of uniform density throughout, on a big scale, and looks the same in all directions. Scientists would say the universe is homogeneous and isotropic. These assumptions make the universe easier to model mathematically. In the Big Bang cosmos, matter fills all of space.



Also, the Big Bang universe has more than three spatial dimension and time. It is a multi-dimensional surface that is expanding. You could think of this as somewhat like traveling on the surface of the Earth. Earth is of finite size but it has no edge you can fall off of. Earth does have a center but does not have an edge you see when you're traveling across it. The universe is

understood in a similar way, though it has more dimensions mathematically. There is debate over whether the universe will just expand forever from the Bang, or stop expanding and contract again. If there is enough mass in the universe, the universe could reach a point where it stops expanding and then it contracts down to a "Big Crunch." However, scientists today would usually say there is not evidence for enough matter to make the universe contract again.

You might ask what difference does it make whether the universe has a center and an edge? Young age creationist physicist Dr. Russ Humphreys has developed a cosmology that starts with assumptions that the universe does have a center and an edge, and that it used to be smaller. These assumptions can be put into the mathematics of General Relativity and the result is a young universe that seems to agree with the Bible. Humphrey's model of the universe fits the simple Island Universe idea but has some interesting aspects regarding how the Creation week events took place. Young age creationists are now developing cosmological models to be alternatives to Big Bang theory. There are always alternatives to a naturalistic approach that leaves out God.

As Christians we should be aware of how people in our culture think about origins and the universe. Before just going-along with Big Bang ideas, Christians should understand what the Big Bang theory is and how it is different from a Biblical worldview.

Cain and Seth's Wives

One of the most common questions about creation and the Bible is regarding Cain. "*Where did Cain get his wife?*" The short answer would be that Cain married a relative, possibly a sister. But to understand this we can consider Seth and some things about our genetics. The descendants of

Adam and Eve's third son, Seth, are listed in Genesis chapter 5. In that chapter it says Seth became the father of Enosh when he was 105 years old. Enosh is probably the first born son. It also says in Genesis 5:7 that Seth lived a total of 807 years. We are not told how long Cain lived. After murdering his brother, Cain moved away from Adam and Eve to an area called Nod.

Cain and Seth had a problem getting married that single men today do not have. They had to wait for women to be born and grow up! So if Seth and Cain would have had lifespans like us today it may not have been feasible for them to get married before they were too old to have children. But since Seth lived to be over 800, I think we can assume Cain had a long lifespan as well. Thus, Cain and Seth had plenty of time to get married, but they had to wait for some years. They could have married a sister, or possibly a cousin. We don't know how many children Adam and Eve had but it could have been many.

Why was it ok for Cain and Seth to marry sisters? First, the Law of Moses was not in force at the time of Adam and Eve, so apparently God did not forbid it. Second, considering genetics, at that time early in the history of the human race, there would have been few mutations and so genetic disease from mutations would have been unlikely. Just because it was acceptable for Seth and Cain to marry a close relative does not make it a good practice for today. Today it could lead to genetic disease or deformities in the children.

Universe By Design Book

If you would like a good book for explaining many difficult concepts of astronomy and cosmology, I'd recommend [Universe By Design](#). This book is written by Dr. Danny Faulkner, a physics and astronomy professor who is a young age creationist. It can be ordered from creation.com or answersingenesis.org.