

## **A thing called “God particle” and someone called God: the quest for origins and purpose in life between science and the Bible**

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According to renowned British physicist Stephen W. Hawking, “We find ourselves in a bewildering world. We want to make sense of what we see around us and to ask: What is the nature of the universe? What is our place in it and where did it and we come from? Why is it the way it is?”<sup>i</sup> These questions have had a profound impact on the human race.

Many ancient traditions across space and time have stories, in some form or another, pertaining to the origin of this world. We often call these narratives creation stories. Notable in literature are the monotheistic religion of the Jews, the Gilgamesh tablet often known as the Gilgamesh Epic, and the Popol Vuh for the Guatemalan Mayan community. These ancient literatures are best known for their sequential narration of the creation account and the origin of humanity by an act of divine power. This is a theistic interpretation of creation, or what is generally known today as Creationism. Consistently, theistic accounts of creation have maintained a cosmological understanding of the universe as purposefully created by an intelligent designer. That is to say, God created the universe, and He made it out of nothing (*ex nihilo*).

As time progressed, the theistic interpretation of the universe was challenged by the development of evolution and particle physics, that is, high-energy physics, in the twentieth century.

Prior to this era, several theories had led to the separation of God and the material world. For example, René Descartes, the French philosopher and scientist, in the seventeenth century developed his mechanistic theory of existence. The only proof of existence to Descartes was matter, i.e. the material world of experience which inherently produces its own ideas. In effect, according to Descartes, God and matter are incompatible. Consequently, the world will continue to exist even without the consciousness of God.

Descartes’ theory had its culmination in Darwinism in the nineteenth century. Charles Darwin’s theory of evolution is by natural selection. It uses the same mechanistic theory of Descartes. Darwinism postulates the origin of living organisms by a common ancestor. All living organisms are related; the trees and human beings, mosquitoes and elephants all evolved from a common ancestor. Evolution implies that the world creates itself from a non-life matter. Today, most people consider Darwin as the father of evolutionary theory.

The Big Bang is another evolutionary theory. It is commonly known as cosmic evolution. It is by far the widest and most accepted theory of the origin of the universe in

scientific cosmology. The Big Bang theory rewinds the clock way back to billions of years (approximately 13 to 18 billion years). As we may be thinking of an embedded fireball developing *through* the universe, Big Bang theorists, on the contrary, presuppose that the universe was *created* by the Big Bang at an extremely high density and temperature, known to as superhot or energetic radiation. So instead of thinking of an explosion in the universe, think of an explosion that created the universe itself. In brief, the universe began as a minuscule piece of matter (less than one milligram) of high density and highly energetic temperature. Particle scientists believe in the beginning there was nothing until a tremendous explosion of energy, matter and light created the universe from a small point called *singularity*. Beginning from “time zero”<sup>ii</sup> and at a temperature of  $10^{34}$  Kelvin, the momentous expansion began creating the universe and it was instantaneously rapid. But how can something bang out of nowhere and nothing?

According to Brad Lemley, a science and health writer and former senior correspondent for *The Washington Post* and *Discover* magazine, “to the average person it might seem obvious that nothing can happen in nothing. But to a quantum physicist, nothing is, in fact, something. Quantum theory holds that probability, not absolutes, rules any physical system.”<sup>iii</sup> So what is that something that banged out of nothingness?

### *The Higgs Boson discovery*

On July 4, 2012, scientists at the European Organization for Nuclear Research (CERN) in Geneva announced to the world the discovery of a particle that may support Peter Higgs proposition of the massive boson. The research was conducted using the 10 billion USD Large Hadron Collider (LHC) proton run or particle accelerator which “lies in a tunnel of 27 kilometres (17 mi) in circumference, as deep as 175 metres (574 ft) beneath the Franco-Swiss border near Geneva, Switzerland.”<sup>iv</sup> CERN hosts about 100,000 scientists including visiting researchers working on smashing atomic bolts to discover the particle. Higgs (after who the particle is named), who made the hypothesis in his thesis in 1964, couldn’t believe that he would be alive to witness the particle’s discovery.

The Higgs Boson, popularly called the God particle, is the first of its kind to give scientific evidence of how matter came into existence during the Big Bang. It gained the name God particle from the editors of the American experimental physicist and Nobel Prize laureate Leon Max Lederman’s book *The God particle: if the universe is the answer, what is the question?*<sup>v</sup> In this book, Lederman drew allegorical parallels between the Tower of Babel

(Genesis 11) and particle physicists' quest to "know the mind of God."<sup>vi</sup> He wrote: "In the past few decades in particle physics, we have been in a period of such curious intellectual stress that the parable of the Tower of Babel seems appropriate. Particle physicists have been using their giant accelerators to dissect the parts and processes of the universe."<sup>vii</sup> On the next page, Lederman gave his own version of Genesis 11:

"And the whole universe was of many languages, and of many speeches. And it came to pass, as they journeyed from the east, that they found a plain in the land of Waxahachie, and they dwelt there. And they said to one another, Go to, let us build a Giant Collider, whose collisions may reach back to the beginning of time. And they had superconducting magnets for bending, and protons had they for smashing. And the Lord came down to see the accelerator, which the children of men builded. And the Lord said, Behold the people are unconfounding my confounding. And the Lord sighed and said, Go to, let us go down, and there give them the God particle so that they may see how beautiful is the universe I have made—The Very New Testament 11:1."<sup>viii</sup>

Later, Lederman wrote, "The Higgs is not, of course, the be-all and end-all of the LHC... But there is a long, more speculative laundry list of objects that might be illuminated by the powerful beams of the LHC". Lederman continued, "Most of these are speculative in the extreme."<sup>ix</sup> These speculations eventually land scientists into what Lederman described as *terra incognita* "unknown territory". That means science is not all-knowing and that there are more things to discover.

What we need to understand at this point in this discussion is that the scientific quest for origins, of both evolution scientists and particle scientists, consists purely of observation; superstition has no place in science as its findings are mainly based on empirical evidence. Again, we should understand that scientists unanimously believe in the beginning of all things, even if they may not have all the details. Lastly, it should be clear that the thing that created this universe came out of nothing and hence scientists consider nothingness to be something.

The Big Bang theory, irrespective of its popularity, has its own challenges:

1. Not all scientists accept the Big Bang theory, thus there exists Big Bang heretics.
2. There is a greater amount of faith in the Big Bang theory than empirical theories.
3. Particle physicists leave us with the dilemma of "pure guessing" as with *something is created out of nothing*. How can something exist without space and time? That's mind-boggling.

4. Particle physicists have not discovered the beginning of beginnings yet. There are more speculations to be addressed.

Now what has all these got to do with us? Why should we, as Christians and for that matter Adventists, care so much about origins of life, and especially the Big Bang and the God particle?

### *The quest for origins in creationism*

Cosmology is nothing new to Christianity in the traditional sense. The two most important doctrines in Christianity are creation and recreation. Creation introduces God, not as an idea, but as someone with the power to call things out of His speech into existence. Psalm 19: 1, *“The heavens declare the glory of God and the firmament shows His handiwork”*. In Nehemiah 9:6, *“You alone are the Lord. You made the heavens, even the highest heavens, and all their starry host, the earth and all that is on it, the seas and all that is in them. You give life to everything, and the multitudes of heaven worship you.”* Revelation 21: 5, *“He who was seated on the throne said, “I am making everything new!”* God is the overlord of creation, and this interpretation of creation is known as creationism.

Now, creationism is the cosmological rival theory of evolution. It is the branch of cosmology that attributes the creation of the world to a creator. So, creationists believe that if creation is factual, then there is a creator. Though diverse models exist in creationism, such as scientific creationism, Biblical creationism is the model that underlines Christianity’s cosmology. One of the strongest arguments used by creationists is the theory of intelligent design. If life should mean anything at all, there should be a purposeful cause of it, and not accidental processes of life.

In a recent conversation with a physics student concerning whether there exists any intelligent designer of the universe, it was revealed that many scientists try to marry evolution with creationism to come to what we call theistic evolution, i.e. God is compatible with evolution. This brilliant and intelligent student, having lectured me on the Big Bang theory and how compact energy and nuclear energy forced the universe into explosion, posed his final question to me: “Don’t you think that this is the energy that *perhaps* God created to force the universe into existence?”

### *Is God compatible with evolution?*

The question we ask at this moment is whether evolution is compatible with God. The Hebrew Bible, which we use as the authoritative source of inspiration, begins with origins; both the Greek and Hebrew meaning of Genesis means “origins”. A literalistic reading of Genesis 1: 1- 31 sets out the whole formation of the heavens and earth: “In the beginning God created the heavens and the earth” (Gen. 1, 1). It is God who sets both time and matter into motion. “In the beginning” should not be understood as the beginning of the existence of God, rather, the origin of the existence of the heavens and Earth, both visible and nonvisible things.

In the succeeding verses of Genesis chapter one, we find God engaged in sequential but orderly activities. For example, “And God said let there be light, and there was light” (v. 3). Although what happened on Earth occupied the Genesis narrative, it also pointed out the composition of the heavens: “*Then God said, “Let there be lights in the firmament of the heavens to divide the day from the night; and let them be for signs and seasons, and for days and years; and let them be for lights in the firmament of the heavens to give light on the earth”; and it was so. Then God made two great lights: the greater light to rule the day, and the lesser light to rule the night. He made the stars also. God set them in the firmament of the heavens to give light on the earth, and to rule over the day and over the night, and to divide the light from the darkness. And God saw that it was good*” (Gen. 1, 14-18); God fixed the stars and all other galaxies in the universe.

Another factor in the Biblical creation accounts is the creation of humanity. Human beings were created to possess power to function according to the ways of God. Unlike other creatures, mankind was made in the image and likeness of God; “*And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. So God created man in his own image, in the image of God created he him; male and female created he them*” (Gen. 1: 26-27). The image and likeness of God confers upon human beings a numinous personality. Consequently, human beings have the ability and the right to function as managers of creation.

Creation was one-time, perfect, and completed in six literal days. How do we know that? The seventh day was marked as the Sabbath. It reads in Genesis 2: 1-3 : “*Thus the heavens and the earth, and all the host of them, were finished. And on the seventh day God ended His work which He had done, and He rested on the seventh day from all His work which He had done. Then God blessed the seventh day and sanctified it, because in it He rested from all His work which God had created and made.*”

The Sabbath is a memorial of God's creative activities. It is the basis of our worship of Him. Thus, God's fourth commandment calls to worship: *"Remember the Sabbath day, to keep it holy. Six days you shall labor and do all your work, but the seventh day is the Sabbath of the Lord your God. In it you shall do no work: you, nor your son, nor your daughter, nor your male servant, nor your female servant, nor your cattle, nor your stranger who is within your gates. For in six days the Lord made the heavens and the earth, the sea, and all that is in them, and rested the seventh day. Therefore, the Lord blessed the Sabbath day and hallowed it."* The Sabbath and God are ontic in the same sense that creation and the Creator are compatible.

### *Conclusion*

In conclusion, it is quite important to bring to bear the striking difference and similarities between evolutionary theories and Biblical creationism:

- a. Evolutionary theories are largely based on speculations and natural observations, while Biblical creationism is basically based on faith and the Bible.
- b. Both the Big Bang theory and the Bible tell that the universe was created at some point in time.
- c. The Big Bang theory is non-supernatural contrary to Biblical creationism which is supernatural.
- d. Scientists believe there are invisible objects that no one has ever seen such as dark energy, dark matter, and neutrons and protons in atoms. This appears in the same way as in the belief of an invisible God, spirits and angels in religion.
- e. Evolution is based on natural processes over millions of years whereas the Bible presents a systematic six literal days and one-time creation chronology.

Notwithstanding the similarities between evolutionary theories and creationism, the two are incompatible. The Bible gives no clue of evolutionary process in creation. Existence came by the miraculous proclamation of God. Psalm 33: 9: *"For he spoke, and it came to be; he commanded, and it stood firm."* And Hebrews 11: 3, *"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."* Accidental explosion of the universe is incompatible with Biblical creationism; creation was systematic, perfect, and finished in six literal days.

The Seventh-day Adventist Church affirms this Biblical position in its fundamental belief number, six:

God has revealed in Scripture the authentic and historical account of His creative activity. He created the universe, and in a recent six-day creation the Lord made “the heavens and the earth, the sea, and all that is in them” and rested on the seventh day. Thus He established the Sabbath as a perpetual memorial of the work He performed and completed during six literal days that together with the Sabbath constituted the same unit of time that we call a week today. The first man and woman were made in the image of God as the crowning work of Creation, given dominion over the world, and charged with responsibility to care for it. When the world was finished it was “very good,” declaring the glory of God. (Gen. 1-2; 5; 11; Exod. 20:8-11; Ps. 19:1-6; 33:6, 9; 104; Isa. 45:12, 18; Acts 17:24; Col. 1:16; Heb. 1:2; 11:3; Rev. 10:6; 14:7.)

As a Christian, I have come to think of the doctrine of creation as the root of roots of all our theologies. It tells of who owns this world. Creation reveals someone who is immutable and omnipotent, and whose command brought into existence what was not. Through the creation accounts, we come to know which God deserves our worship. The God particle of the Big Bang theory may offer glimpses of some realities that underline the origin of the universe, but it has little to offer since its models of explanations are incomplete. The question of evil, death, gender, and many other difficult human questions find few or no answers in evolutionary concepts.

If the gospel makes any sense at all, it is because of the creation accounts. The fall of humanity in Genesis chapter three alienated mankind from the Creator. When man violated divine precepts concerning the forbidden tree in the Garden of Eden, chaos descended on the perfect order of creation. Ever since, evil and its consequences of death, has become the number one enemy of all living things. The universe is subject to decay and destruction. The discord we experience in the world is nothing more than the consequences of our choices, hence, the gospel of salvation and restoration; God shall make all things new!

There is purpose in life, even though the majority of people fail to find it. God not only communicates His presence in creation but also His presence in the daily affairs of this world. Through ancient Israel, God intervened into this world as the true unique God. He spoke through the prophets with messages of hope and salvation. By the incarnation of Jesus Christ, God showed His final stage of intimacy with this world. Paul said of Jesus Christ; *“He is the image of the invisible God, the firstborn over all creation. For by him were all things created, that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers: all things were created by him, and for*

*him. He is before all things, and in him all things hold together” (Col. 1, 16-17). Jesus became man, lived among us, and showed humanity how to live again according to the ways of God. Jesus said: “For the Son of Man came to seek and to save the lost” (Luke 19: 10). Christ’s ministry on earth brought to humanity the grace and all the blessings of God.*

God is not an absentee landlord. He didn’t leave creation to anyone or something called God particle. He takes great interest in His creation and He cares for you too. In the end, God is working out something great for all of us. The apostle Paul describes this as “... *“What no eye has seen, what no ear has heard, and what no human mind has conceived” - the things God has prepared for those who love him” (1 Cor. 2: 9).*

Do you want to understand why there is evil and death? Do you need purpose today in your life? Does life make any sense to you at all? Have you lost the courage to live? Today, you have a choice. Do you think a thing called God particle can help you to find answers to these perplexing questions in your life? Or do you think someone called God can better define your life and future for you? In as much as I have great respect for scientific studies, I do believe, with all my heart, that when it comes to creation, the Bible defines who we are and why we are here better than science does. And with that in mind, belief in God as the Creator can help you to find purpose in life here and now. God bless you!

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## NOTES

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<sup>i</sup> S. W. Hawking, *A Brief History of Time—From the Big Bang to Black Holes*, Bantam Books, New York,

<sup>ii</sup> According to the Big Bang theory time, matter and energy came simultaneously into existence. Before this there was absolutely nothing.

<sup>iii</sup> Brad Lemley, “Guth’s Grand Guess”, *Discover* vol. 23, April 2002, p. 35.

<sup>iv</sup> From Wikipedia, “[http://en.wikipedia.org/wiki/Large\\_Hadron\\_Collider](http://en.wikipedia.org/wiki/Large_Hadron_Collider)” For further reading, see: James Glanz, “Will the Higgs Particle Make An Early Entrance? Science,” *New Series*, Vol. 284, No. 5423 (Jun. 25, 1999), pp. 2079-2080.

<sup>v</sup> Leon M. Lederman, *The god particle: if the universe is the answer, what is the question?* New York : Dell Publ., 1994.

<sup>vi</sup> Quote by Albert Einstein in Lederman’s book.

<sup>vii</sup> Lederman, “The God particle: If the universe is the answer, what is the question?” p. 23.

<sup>viii</sup> *Ibid*, 24.

<sup>ix</sup> *Ibid*, 311.