

From Non-Being to Being

H A R U N Y A H Y A

The questions of how the universe originated, where it leads to, and how the laws maintaining its order and balance work have always been topics of interest. Scientists and thinkers have thought about this subject endlessly and have produced quite a few theories.

The prevailing thought until the early 20th century was that the universe had infinite dimensions, that it had existed since eternity, and that it would continue to exist forever. According to this view, called the 'static universe model', the universe had neither a beginning nor an end.

Laying the groundwork for the materialist philosophy, this view denied the existence of a Creator while it maintained that the universe is a constant, stable, and unchanging collection of matter.

Materialism is a system of thought that holds matter to be an absolute being and denies the existence of anything but matter. Having its roots in ancient Greece and gaining ever-increasing acceptance in the 19th century, this system of thought became famous in the shape of the dialectical materialism of Karl Marx.

As we have stated earlier, the static universe model of the 19th century prepared the grounds for the materialist philosophy. In his book *Principes Fondamentaux de Philosophie*, George Politzer stated concerning the basis of this universe model that "the universe was not a created object", and added:

If it were, then it would have to be created instantaneously by God and brought into existence from nothing. To admit creation, one has to admit, in the first place, the existence of a moment when the universe did not exist, and that something came out of nothingness. This is something to which science cannot accede.[\(1\)](#)

When Politzer asserted that the universe was not created out of nothingness, he was relying on the static universe model of the 19th century, and thinking that he was posing a scientific claim. However, the 20th century's developing science and technology demolished primitive concepts such as the static universe model that laid the grounds for the materialists. Today, on the brink of the 21st century, modern physics has proved with many experiments, observations and calculations that the universe had a beginning and that it was created out of nothing with a big explosion.

That the universe had a beginning means that the cosmos was brought into being out of nothing, that is, that it was created. If a created thing exists (which did not exist beforehand), then it certainly should have a Creator. Being from non-being is something inconceivable by the human mind. (Man cannot practically conceive it since he has no chance of experiencing it.) Therefore, being from non-being is very different from bringing objects together to form a new object (such as works of art or technological inventions). It is a sign of Allah's creation alone that everything formed perfectly all at once and in a single moment, when the created things had no previous examples and not even time and space existed in which to create them.

The coming of the universe into being from non-being is the greatest proof possible that it has been created. Consideration of this fact will change a lot of things. It helps people understand the meaning of life and review their attitudes and purposes. This is why many scientific communities have tried to disregard the fact of creation which they could not fully comprehend, even though its evidence was clear to them. The fact that all scientific evidence points to the existence of a Creator has compelled them to invent alternatives to create confusion in the minds of people. Nevertheless, the evidence of science itself puts a definite end to these theories.

Now, let us take a brief look at the scientific developmental process through which the universe came about.

THE EXPANSION OF THE UNIVERSE

In 1929, in the California Mount Wilson observatory, an American astronomer by the name of Edwin Hubble made one of the greatest discoveries in the history of astronomy. While he observed the stars with a giant telescope, he found out that the light from them was shifted to the red end of the spectrum and that this shift was more pronounced the further a

star was from the earth. This discovery had an electrifying effect in the world of science, because according to the recognized rules of physics, the spectra of light beams travelling towards the point of observation tend towards violet while the spectra of the light beams moving away from the point of observation tend towards red. During Hubble's observations, the light from stars was discovered to tend towards red. This meant that they were constantly moving away from us.

Before long, Hubble made another very important discovery: Stars and galaxies moved away not only from us, but also from one another. The only conclusion that could be derived from a universe where everything moves away from everything else is that the universe constantly 'expands'.

To better understand, the universe can be thought of as the surface of a balloon being blown up. Just as the points on the surface of a balloon move apart from each other as the balloon is inflated, so do the objects in space move apart from each other as the universe keeps expanding.

In fact, this had been theoretically discovered even earlier. Albert Einstein, who is considered the greatest scientist of the century, had concluded after the calculations he made in theoretical physics that the universe could not be static. However, he had laid his discovery to rest simply not to conflict with the widely recognized static universe model of his time. Later on, Einstein was to identify his act as 'the greatest mistake of his career'. Subsequently, it became definite by Hubble's observations that the universe expands.

What importance, then, did the fact that the universe expands have on the existence of the universe?

The expansion of the universe implied that if it could travel backwards in time, the universe would prove to have originated from a single point. The calculations showed that this 'single point' that harbored all the matter of the universe should have 'zero volume' and 'infinite density'. The universe had come about by the explosion of this single point with zero volume. This great explosion that marked the beginning of the universe was named the 'Big Bang' and the theory started to be so called.

It has to be stated that 'zero volume' is a theoretical expression used for descriptive purposes. Science can define the concept of 'nothingness', which is beyond the limits of human comprehension, only by expressing it as 'a point with zero volume'. In truth, 'a point with no volume' means 'nothingness'. The universe has come into being from nothingness. In other words, it was created.

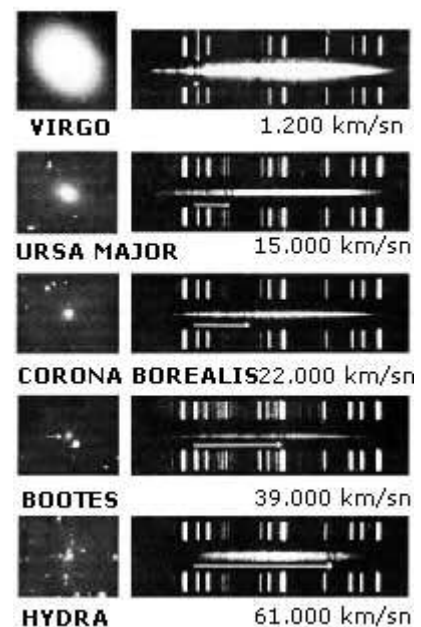
The Big Bang theory showed that in the beginning all the objects in the universe were of one piece and then were parted. This fact, which was revealed by the Big Bang theory was stated in the Qur'an 14 centuries ago, when people had a very limited knowledge about the universe:

Do not the Unbelievers see that the heavens and the earth were joined together (as one unit of creation), before We clove them asunder? We made from water every living thing. Will they not then believe? (Surat al-Anbiya, 30)

As stated in the verse, everything, even the 'heavens and the earth' that were not yet created, were created with a Big Bang out of a single point, and shaped the present universe by being parted from each other.

When we compare the statements in the verse with the Big Bang theory, we see that they fully agree with each other. However, the Big Bang was introduced as a scientific theory only in the 20th century.

The expansion of the universe is one of the most important pieces of evidence that the universe was created out of nothing. Although this fact was not discovered by science until the 20th century, Allah has informed us of this reality in the Qur'an revealed 1,400 years ago: It is We who have built the universe with (Our creative) power, and, verily, it is We who are steadily expanding it. (Surat adh-Dhariyat, 47)



Here, the difference in the remoteness of various galaxies and the extent to which they tend towards red are shown. The vertical line at the top indicates a certain point on the spectrum. In other spectra, this point tends towards the right as far as the horizontal arrows go. The tendency towards red, which is an indication of remoteness, increases as a galaxy moves farther away from the earth.

THE SEARCH FOR ALTERNATIVES TO THE BIG BANG THEORY

As clearly seen, the Big Bang theory proved that the universe was 'created from nothing', in other words, that it was created by Allah. For this reason, astronomers committed to the materialist philosophy continued to resist the Big Bang and uphold the steady-state theory. The reason for this effort was revealed in the following words of A. S. Eddington, one of the foremost materialist physicists:

'Philosophically, the notion of an abrupt beginning to the present order of Nature is repugnant to me.'[\(2\)](#)

Sir Fred Hoyle was one of those who were disturbed by the Big Bang theory. In the middle of the century, Hoyle championed a theory called the steady-state which was similar to the 'constant universe' approach of the 19th century. The steady-state theory argued that the universe was both infinite in size and eternal in duration. With the sole visible aim of supporting the materialist philosophy, this theory was totally at variance with the 'Big Bang' theory, which held that the universe had a beginning.

Those who defended the steady-state theory opposed the Big Bang for a long time. Science, however, was working against them.

Some scientists, on the other hand, looked for ways to develop alternatives.

In 1948, George Gamov came up with another idea concerning the Big Bang. He stated that after the formation of the universe by a big explosion, a radiation surplus should have existed in the universe left over from this explosion. Moreover, this radiation ought to be uniformly diffused across the universe.

This evidence which 'ought to have existed' was soon to be found.

MORE EVIDENCE: COSMIC BACKGROUND RADIATION

In 1965, two researchers by the name of Arno Penzias and Robert Wilson discovered these waves by chance. This radiation, called the 'cosmic background radiation', did not seem to radiate from a particular source but rather pervaded the whole of space. Thus, it was understood that the heat waves that were radiated uniformly from all around space were left over from the initial stages of the Big Bang. Penzias and Wilson were awarded a Nobel Prize for their discovery.

In 1989, NASA sent the Cosmic Background Explorer (COBE) satellite into space to do research on cosmic background radiation. It took only eight minutes for the sensitive scanners on this satellite to confirm the measurements of Penzias and Wilson. The COBE had found the remains of the big explosion that had taken place at the outset of the universe.

Defined as the greatest astronomic discovery of all times, this finding explicitly proved the Big Bang theory. The findings of the COBE 2 satellite which was sent into space after the COBE satellite also confirmed the calculations based on the Big Bang.

Another important piece of evidence for the Big Bang was the amount of hydrogen and helium in space. In the latest calculations, it was understood that the hydrogen-helium concentration in the universe complied with the theoretical calculations of the hydrogen-helium concentration remaining from the Big Bang. If the universe had no beginning and if it had existed since eternity, its hydrogen constituent should have been completely consumed and converted to helium.

All of this compelling evidence caused the Big Bang theory to be embraced by the scientific community. The Big Bang model was the latest point reached by science concerning the formation and beginning of the universe.

Defending the steady-state theory alongside Fred Hoyle for years, Dennis Sciama described the final position they had reached after all the evidence for the Big Bang theory was revealed. Sciama stated that he had taken part in the heated debate between the defenders of the steady-state theory and those who tested that theory with the hope of refuting it. He added that he had defended the steady-state theory, not because he deemed it valid, but because he wished that it were valid. Fred Hoyle stood out against all objections as evidence against this theory began to unfold. Sciama goes on to say that he had first taken a stand along with Hoyle but, as evidence began to pile up, he had to admit that the game was over and that the steady-state theory had to be dismissed.[\(3\)](#)

Prof. George Abel from the University of California also states that currently available evidence shows that the universe originated billions of years ago with the Big Bang. He concedes that he has no choice but to accept the Big Bang theory.

With the Big Bang's victory, the concept of 'eternal matter' that constituted the basis of the materialist philosophy is thrown into the trash-heap of history. What, then, was before the Big Bang and what was the power that brought the universe into 'being' with this big explosion when it was 'non-existent'? This question certainly implies, in Arthur

Eddington's words, the 'philosophically unfavorable' fact for the materialists, that is, the existence of a Creator. The renowned atheist philosopher Antony Flew comments on the issue:

Notoriously, confession is good for the soul. I will therefore begin by confessing that the Stratonician atheist has to be embarrassed by the contemporary cosmological consensus. For it seems that the cosmologists are providing a scientific proof of what St. Thomas contended could not be proved philosophically; namely, that the universe had a beginning. So long as the universe can be comfortably thought of as being not only without end but also without beginning, it remains easy to urge that its brute existence, and whatever are found to be its most fundamental features, should be accepted as the explanatory ultimates. Although I believe that it remains still correct, it certainly is neither easy nor comfortable to maintain this position in the face of the Big Bang story.[\(4\)](#)

Many scientists who do not blindly condition themselves to be atheists have admitted the role of an almighty Creator in the creation of the universe. This Creator must be a being Who has created both matter and time, yet Who is independent of both. Well-known astrophysicist Hugh Ross has this to say:

If time's beginning is concurrent with the beginning of the universe, as the space-theorem says, then the cause of the universe must be some entity operating in a time dimension completely independent of and preexistent to the time dimension of the cosmos. This conclusion is powerfully important to our understanding of who God is and who or what God isn't. It tells us that God is not the universe itself, nor is God contained within the universe.[\(5\)](#)

Matter and time are created by the almighty Creator Who is independent of all these notions. This Creator is Allah, Who is the Lord of the heavens and the earth.

DELICATE BALANCES IN SPACE

In truth, the Big Bang caused much greater trouble for the materialists than the above confessions of the atheist philosopher, Antony Flew. For the Big Bang not only proves that the universe was created out of nothing, but also that it was brought into being in a very planned, systematic and controlled manner.

The Big Bang took place with the explosion of the point which contained all the matter and energy of the universe and its dispersion into space in all directions with a terrifying speed. Out of this matter and energy, there came about a great balance containing galaxies, stars, the sun, the earth and all other heavenly bodies. Moreover, laws were formed called the 'laws of physics', which are uniform throughout the whole universe and do not change. All these indicate that a perfect order arose after the Big Bang.

Explosions, however, do not bring about order. All of the observable explosions tend to harm, disintegrate, and destroy what is present. For example, the atom and hydrogen bomb explosions, fire-damp explosions, volcanic explosions, natural gas explosions, solar explosions: they all have destructive effects.

If we were to be introduced to a very detailed order after an explosion - for instance, if an explosion under the ground gave rise to perfect works of art, huge palaces, or imposing houses - we might conclude that there was a 'supernatural' intervention behind this explosion and that all the pieces dispersed by the explosion had been made to move in a very controlled way.

The quote from Sir Fred Hoyle, who accepted his mistake after many years of opposition to the Big Bang Theory, expresses this situation very well:

The big bang theory holds that the universe began with a single explosion. Yet as can be seen below, an explosion merely throws matter apart, while the big bang has mysteriously produced the opposite effect - with matter clumping together in the form of galaxies.[\(6\)](#)

While stating that the Big Bang's giving way to order is contradictory, he surely interprets the Big Bang with a materialistic bias and assumes that this was an 'uncontrolled explosion'. He, however, was in reality the one who became self-contradictory by making such a statement simply to dismiss the existence of a Creator. For if a great order arose with an explosion, then the concept of an 'uncontrolled explosion' should have been set aside and it should be accepted that the explosion was extraordinarily controlled.

Another aspect of this extraordinary order formed in the universe following the Big Bang is the creation of a 'habitable universe'. The conditions for the formation of a habitable planet are so many and so complex that it is almost impossible to think that this formation is coincidental.

Paul Davies, a renowned professor of theoretical physics, calculated how 'fine tuned' the pace of expansion after the Big

Bang was, and he reached an incredible conclusion. According to Davies, if the rate of expansion after the Big Bang had been different even by the ratio of one over a billion times a billion, no habitable star type would have been formed:

Careful measurement puts the rate of expansion very close to a critical value at which the universe will just escape its own gravity and expand forever. A little slower and the cosmos would collapse, a little faster and the cosmic material would have long ago completely dispersed. It is interesting to ask precisely how delicately the rate of expansion has been 'fine-tuned' to fall on this narrow dividing line between two catastrophes. If at time 10^{-18} s (by which time the pattern of expansion was already firmly established) the expansion rate had differed from its actual value by more than 10^{-18} , it would have been sufficient to throw the delicate balance out. The explosive vigor of the universe is thus matched with almost unbelievable accuracy to its gravitating power. The big bang was not, evidently, any old bang, but an explosion of exquisitely arranged magnitude.⁽⁷⁾

The laws of physics that emerged together with the Big Bang did not change at all over a period of 15 billion years. Furthermore, these laws stand on calculations so scrupulous that even a millimetre's variation from their current values can result in the destruction of the whole structure and configuration of the universe.

The famous physicist Prof. Stephen Hawking states in his book *A Brief History of Time*, that the universe is set on calculations and balances more finely tuned than we can conceive. Hawking states with reference to the rate of expansion of the universe:

Why did the universe start out with so nearly the critical rate of expansion that separates models that recollapse from those that go on expanding forever, so that even now, ten thousand million years later, it is still expanding at nearly the critical rate? If the rate of expansion one second after the big bang had been smaller by even one part in a hundred thousand million million, the universe would have recollapsed before it ever reached its present size.⁽⁸⁾

Paul Davies also explains the unavoidable consequence to be derived from these incredibly precise balances and calculations:

It is hard to resist the impression that the present structure of the universe, apparently so sensitive to minor alterations in the numbers, has been rather carefully thought out... The seemingly miraculous concurrence of numerical values that nature has assigned to her fundamental constants must remain the most compelling evidence for an element of cosmic design.⁽⁹⁾

In relation to the same fact, an American professor of Astronomy, George Greenstein, writes in his book *The Symbiotic Universe*:

As we survey all the evidence, the thought insistently arises that some supernatural agency – or, rather Agency – must be involved.⁽¹⁰⁾

THE CREATION OF MATTER

The atom, the building-block of matter, came into being after the Big Bang. These atoms then came together to make up the universe with its stars, earth and sun. Afterwards, the same atoms established life on the earth. Everything you see around you: your body, the chair you sit on, the book you hold in your hand, the sky seen through the window, the soil, the concrete, the fruits, the plants, all living things and everything that you can imagine have come to life with the gathering of atoms.

What then is the atom, the building block of everything, made of and what kind of a structure does it have?

When we examine the structure of atoms, we see that all of them have an outstanding design and order. Every atom has a nucleus in which there are certain numbers of protons and neutrons. In addition to these, there are electrons which move around the nucleus in a constant orbit with a speed of 1,000 kms per second.⁽¹¹⁾ Electrons and protons of an atom are equal in number, because positively charged protons and negatively charged electrons always balance each other. If one of these numbers were different, there would be no atom, since its electromagnetic balance would be disturbed. An atom's nucleus, the protons and the neutrons in it, and the electrons around it are always in motion. These revolve both around themselves and each other unerringly at certain speeds. Those speeds are always proportionate to each other and provide the subsistence of the atom. **No disorder, disparity, or change ever occurs.**

It is very remarkable that such highly ordered and determined entities could come into being after a great explosion that took place in non-being. If the Big Bang were an uncontrolled, coincidental explosion, then it ought to have been followed by random events and everything that formed subsequently ought to have been dispersed in a great chaos.

In fact, a flawless order has prevailed at every point since the beginning of existence. For example, although atoms are formed at different places and times, they are so organized that they seem as though they were produced from a single factory with an awareness of each kind. First, electrons find themselves a nucleus and start to turn around it. Later, atoms come together to form matter and all these bring about meaningful, purposeful and reasonable objects. Ambiguous, useless, abnormal and purposeless things never occur. Everything from the smallest unit to the biggest component is organized and has manifold purposes.

All of this is solid evidence of the existence of the Creator, Who is exalted in power, and indicate the fact that everything comes into existence however He wants and whenever He wills. In the Qur'an, Allah refers to His creation thus:

He it is Who has created the heavens and the earth with truth, and on the day He says: Be, it is. His word is the truth. (Surat al-An'am, 73)

AFTER THE BIG BANG

As Roger Penrose, a physicist who has done extensive research on the origin of the universe, has stated the fact that the universe rests where it is not by mere coincidence shows that it definitely has a purpose. For some people, 'the universe is just there' and it just goes on being there. We just happened to find ourselves right in the middle of this whole thing. This viewpoint would probably not help us in understanding the universe. According to Penrose's view, there are many deep affairs going on within the universe whose existence we cannot today perceive.[\(12\)](#)

The ideas of Roger Penrose are indeed good food for thought. As these words imply, many people wrongly entertain thoughts that the universe with all its perfect harmony exists for nothing and that they live in this universe again for idle play.

However, it can by no means be considered as ordinary that a quite perfect and wondrous order came about after the Big Bang, which is considered by the scientific community to be the means of the formation of the universe.

Briefly, when we examine the glorious system in the universe, we see that the existence of the universe and its workings rest on extremely delicate balances and an order too complex to be explained away by coincidental causes. **As is evident, it is by no means possible for this delicate balance and order to have been formed on its own and by coincidence after a great explosion. The formation of such an order following an explosion such as the Big Bang could only have been possible as a result of a supernatural creation.**



The order in the structure of the atom rules the whole universe. With the atom and its particles moving in a certain order, the mountains are not scattered, lands do not break apart, the sky is not split asunder and, in short, matter is held together and is constant.






This matchless plan and order in the universe certainly proves the existence of a Creator with infinite knowledge, might and wisdom, Who has created matter from nothing and Who controls and manages it incessantly. This Creator is Allah, the Lord of the heavens, the earth and all that is in between.

All these facts also show us how the claims of the materialist philosophy, which is simply a 19th century dogma, are invalidated by 20th century science.

By exposing the great plan, design and order prevalent in the universe, modern science has proved the existence of a Creator Who has created and rules all beings: that is, Allah.

Holding sway over a great number of people for centuries and having even disguised itself with the mask of 'science', materialism, by deeming everything to consist of nothing but matter, has made a great mistake and denied the existence of Allah, Who created and ordered matter from nothing. One day, materialism will be remembered in history as a primitive and superstitious belief opposing both reason and science.

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11. A Dorling Kindersley Book – The Science, published in the United States by Dorling Kindersley Inc., p. 24 
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