WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

The Creation of the Universe with Respect to Hindu Methodology and Scientific Cosmology

Ravi Pal*[*1], Rahul Pal[2], Prachi Pandey[3], Arsh Chanana[4], Anchal Gupta[5], Ravindra Pal Singh[6]

[*1, 5]Assistant Professor, JMB Group of Institutions, JMB Institute of Life Sciences & Higher Education, Madhotanda Road, Pilibhit, Uttar Pradesh, India.
[2, 3, 4, 6]NIMS University Jaipur, Rajasthan 303121, India

Abstract:

In the Universe many peoples believe that nature, the sun and moon, the stars even human beings never had a beginning. There is an endless, external cycle of birth, life and death that constantly repeats itself. This external cycle never began and will never end. It always has been and will always. The study of COSMOS is at best regarded as a semi-scientific field. However, the optical telescope was created more than five centuries ago, led to the establishment of observational cosmology as a field of study with solid experimental support. The breadth of such observational cosmology was, however, obviously constrained by the experiments based on visible light. Cosmology has long been an intriguing topic. Perhaps the draw is the nature of the subject matter-its profound philosophical underpinnings and its enormous scales of time and distance, which transcend out day-to-day experience. The new concepts of dark energy and dark matter thought to constitute the dominant share of the Universe were bought to light as a result of these new observational and theoretical ideas. Humanity has traveled a long road since societies imagined Earth, the Sun, and the Moon as the main objects of creation, with the rest of the universe being formed almost as an afterthought. In recent times, physics and astrophysics have played a central role in shaping the understanding of the universe through scientific observation and experiment. The physical cosmology is primarily shaped through both mathematics and astronomical observation by the analysis of the whole universe. The Cosmos study was conceived to give young learners an opportunity to gain knowledge of Deep Space and the stars and to develop new approaches. Therefore, the lots of opinion given on to the universe or world origination, because, according to the Hindu Methodology the creator the universe is Braham and scientific as NASA and other organization have their scientific view for the creation. This article aims to provide an overview of creation of universe which equivalent to The God Brahma, universe development as cosmology and the associated physics. The creation of the whole world and the universe with the Brahama and scientific view also described in the article with some following recent works.

Keyword: The Brahama, Cosmos, Dark Energy, Dark Matter, Hindu Mythology.

INTRODUCTION

The term “the universe” is derived from Latin world “universum” which was used by Roman statesman Cicero and later Roman authors to refer to the world and the cosmos ad they knew it. this consisted of the earth and all living creatures that dwelt there in, as well as the moon, the sun, the then-known planets (Mercury, Venus, Mars, Jupiter and Saturn) and the stars. A system regulated by natural law rather than laws of humans or the supernatural is referred to as the "cosmos," which is described as a unified and orderly whole. It is used to refer to naturally occurring things, particularly those that are visible in the sky. Cosmos has two different meanings. The verb "arranges" or "adorn" is derived from the Greek word "kosmos," which also means "order or excellent order," or "orderly arrangement," and was brought over to the English language. The phrase "whole physical world" or "universe" was originally used by Pythagoras, a Greek philosopher, mathematician, and the leader of the Pythagoreanism religious movement, in the sixth century. Universe, the whole cosmic system of matter and energy of which Earth, and therefore the human race, is a part [01]. The origin of life on the world or universe such a big thing for us, some years explained in given (**Fig. 01**) properly.

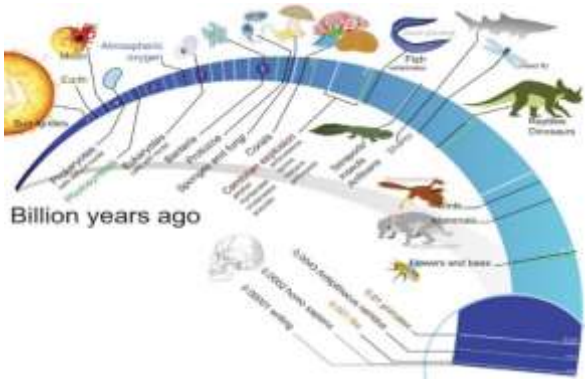

Fig. 01 Origin of life on the Universe

The cosmologists study the universe as a whole: its birth, growth, shape, size and eventual fate. The vast scale of the universe became clear in the 1920s when Edwin Hubble proved that "Spiral nebulae" are actually other galaxies like ours, millions to billions of light years away (Battersby, September 2006). The cosmos is another name for the Universe, which implies viewing the universe as a complex and orderly system or entity. Cosmology is a branch of astronomy involving the science of the universe's origin and evaluation of the universe from the Big Bang to today and on into the future [02].

According to NASA; definition of cosmology is "The scientific study of the large-scale properties of the universe as a whole".

Cosmology exotic concepts like string theory, dark matter and dark energy and whether there is one universe or many (sometimes called the multiverse). While other aspects astronomy deal with individual objects and phenomena or collection of objects. Cosmology spans the entire universe from birth to death with a wealth of mysteries at every stage. The physics of the Cosmos (COS) program incorporates cosmology, high-energy astrophysics, and fundamental physics project aimed at addressing directly central questions about the nature of complex astrophysical phenomena such as black holes, neutron stars, dark energy, and gravitational waves [03].

HISTORICAL BACKGROUND: 'MISSIONS AND INSTRUMENTS'

The universe is originated years ago, In the data literature data, launched in November 1989, NASA cosmic Background Explorer (COBE) took precise measurements of radiation across the sky. The mission operated until 1993.Thanks to Hubble "If you put in a box all the ways that dark energy might differ from the cosmological constant. The box would now be three times smaller". NASA's Wilkinson Microwave Anisotropy probe (WMAP) was a spacecraft.

The structure of this paper as follows. First, discussion of the modern physics regarding the universe origin in the form of some theory like the most acceptable The Big Bang theory, another one Steady State Theory and after this I represent the relevant Hindu concepts. Then if required, I discuss the difficulties with the Hindu concepts. Next, I discuss the modern concepts that are correlate with the Hindu concepts that are mentioned [04]. Lastly, I discuss the difficulties with the modern concepts. I put forth the concordance so arrived in the last section of the paper. The origin of the universe based on the different scientific theory for the creation, all the mentioned in the given (**Fig. 02**) for the explaining of universe origin.

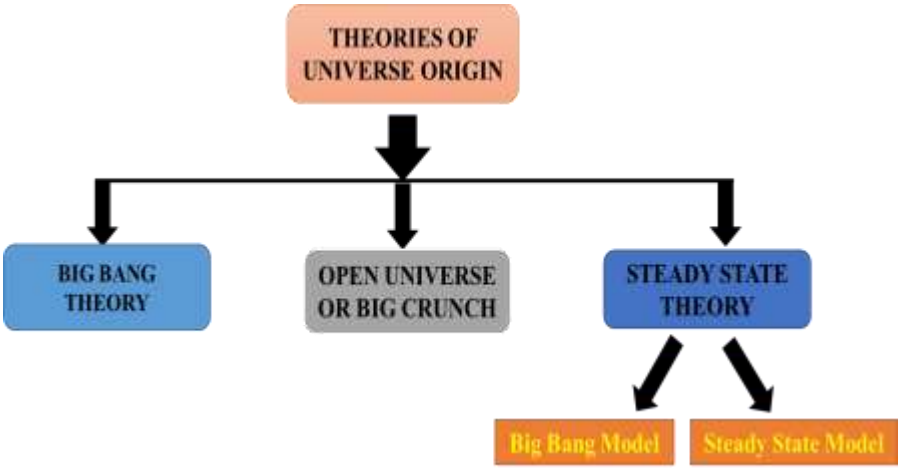

Fig. 02 Different Theories Used in the Universe Origin

The Big Bang Theory

In 1927, Belgian astronomer Georges Lemaitre became the first to propose the theory of an expanding universe (later confirmed by Edwin Hubble). He theorized that an expanding universe could be traced back to a singular point, which he termed "primeval atom," back in time. It laid the foundation for the modern Big Bang theory. The Big Bang Theory is an explanation, based mostly on mathematical models, on how and when the Universe came into existence. The Big Bang theory is the prevailing cosmological model for the birth of the universe. The Big Band theory is most accepted theory by the scientist community [05].

The universe originated in a very dense and hot state, has constantly expanded until now. There are two points of view on what constituted the Big Bang. According to the first of these, known as the Gamow Big Bang theory (1946), about 15 billion years ago an ultra-dense elementary particle exploded. From the products of the explosion, our universe was formed. Since then, it has been continuously expanding and as a result of this, the galaxies scatter and signal it with a red shift in their spectra [06]. The Big Band Theory is shown in the above (**Fig. 03**).

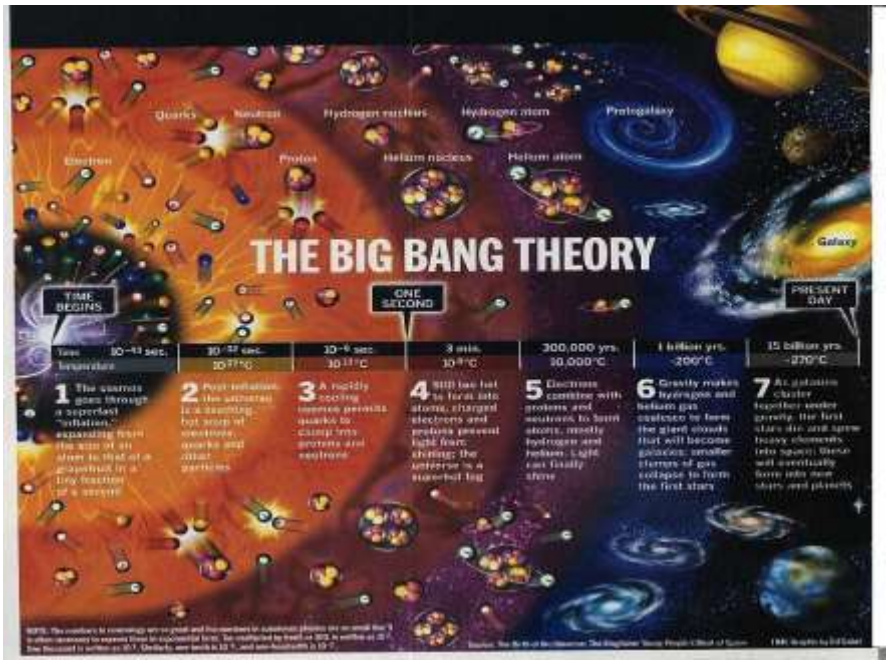

Fig. 03 Big Band Theory as Theory of Universe Origin

Over time, as the distance from the observer on Earth increases, the expansion rate increases. For the discovery of the accelerated expansion of the universe, to the authors of this discovery in 2011 were awarded the Nobel Prize.

The big bang theory consisting the different parts such as explained-

01. **Plank era:** The beginning of time, Plank length and plank temperature.
02. **Grand Unification:** Gravity and elementary particles.
03. **Inflationary Epoch:** Cosmic inflation, elementary particles are distributed.
04. **Electroweak Epoch:** Strong force and exotic particles.
05. **Quark Epoch:** Quarks, Electron and neutrinos are formed as universe cools down. Quarks combine each other [07].

The universe as we know it started with an infinitely hot and dense single point that inflated and stretched — first at unimaginable speeds, and then at a more measurable rate — over the next 13.8 billion years to the still-expanding cosmos that we know today. Existing technology doesn't yet allow astronomers to literally peer back at the universe's birth, much of what we understand about the Big Bang comes from mathematical formulas and models. What is known today as the general theory and the generally accepted belief about how the universe came into being is called the Big Bang Theory. In the inflation model, it is said that the beginning of our entire universe, even time and space, began with a very, very small atomic bubble and after its inflation phase, the explosion and expansion of this microbubble caused the formation of the whole universe [08]. The evolution is explained in the below mentioned (**Fig. 04**)

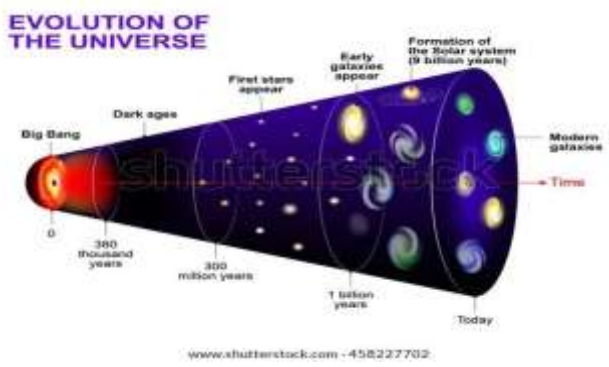

Fig. 04 Evolution of the Universe

The universe, at present, is said to possess about **100 billion galaxies**, each comprising an average of **100 billion stars**. In comparison, Milky Way Galaxy is believed to possess **100 billion to 400 billion stars**.

The energy from the Big Bang drove the universe's early expansion. Since then, gravity and dark energy have engaged in a cosmic tug of war. Gravity pulls galaxies closer together; **dark energy pushes them apart**. Whether the universe is expanding or contracting depends on which force dominates, gravity or dark energy [09]. According to observations of structures larger than galaxies, as well as Big Bang cosmology, **dark matter accounts for 26% of the Mass-energy equivalence mass-energy density of the observable universe**, while the ordinary matter accounts for only 5% (the remainder 69% is attributed to dark energy) [10].

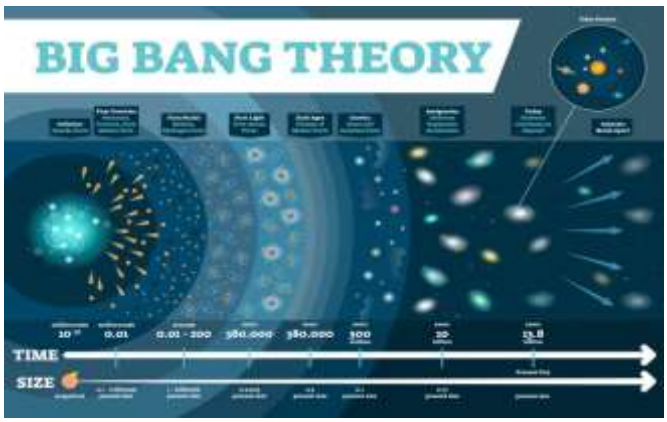

Fig. 05 Caparison with Different Years of Big Bang Theory Origin

Dark matter consists of new particles that were born before the big bang, they affect the way galaxies are distributed in the sky in a unique way. This connection may be used to reveal their identity and make conclusions about the times before the big bang, too [11]. **A new mathematical model suggests dark matter may have been produced before the big bang during cosmic inflation**, when space was expanding rapidly. Researchers believe dark matter makes up about 80% of the universe's mass, but its origins and composition remain among the most elusive mysteries in modern physics. The best-supported theory of our universe's origin centers on an event known as the big bang. This theory was born of the observation that other galaxies are moving away from our own at great speed in all directions, as if they had all been propelled by an ancient explosive force [12].

DARK ENERGY: Dark Energy is a confirmed yet invisible form of energy that comprises approximately 68% of our universe. It is a form of anti-gravitational or repulsive force that has been the major cause of our universe's accelerating expansion. However, everything else about dark energy is a complete mystery [13].

In late 1998, a team of astronomers aimed to calculate the expansion rate of the universe in the form of a constant value, known as the Hubble Constant. They were studying supernovas in distant galaxies and they discovered that distant galaxies were drifting away from us much faster than the nearby galaxies. They realized that the universe wasn't expanding at a consistent rate but an accelerating rate of pace. Hence, the concept of the Hubble Constant was contradicted.

DARK MATTER: In simulations, however, visible matter does not supply enough gravity to create the structure we see; it has to be helped out by some form of dark matter. More evidence for the dark stuff comes from gelaxies that are rotating too fast to hold together without extra gravitational glue.

Dark matter can't be like ordinary matter, because it would have made too much deuterium in The Big-Bang nucleosynthesis. Researchers believe dark matter makes up about 80% of the universe's mass, but its origins and composition remain among the most elusive mysteries in modern physics [14]. A new Johns Hopkins University study suggests dark matter may have existed before the big bang. The study, published in Physical Review Letters, presents a new idea of how dark matter was created and how it might be identified during astronomical observations.

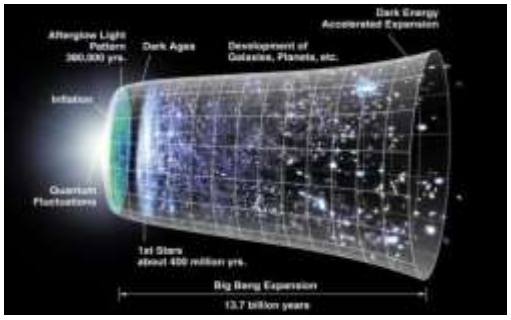

Fig. 06 Origin of Universe

When the universe was less than 3 minutes old, some protons and neutrons fused to make light elements, and cosmologists calculate that if there had been much more ordinary matter than we see, then the dense cauldron would have brewed up a lot more deuterium than is observed [15].

COMPARISION BETWEEN DARK MATTER AND DARK MATTER:

Sr. No.	Comparison	Dark matter	Dark energy
01.	Definition	It is a form of matter	It is a form of energy
02.	Distribution	It comprises 27% of the universe	It comprises 68% of the universe
03.	Force	It is an attractive force	It is a repulsive force
04.	Impact	It holds the galaxies intact	It accelerates the expansion of the universe
05.	Existence	It exists in space only	It exists in both space and time

Table No. 01 List of Comparison between dark energy and dark matter

The big bang theory is important for us to understand because it laysout a framework explaining how the universe was created and breaks down the timeline in which things were created and formed.

We are able to see evidence of this theory as technology is constantly advancing and improving. We are able to see farther into our galaxy and see traces of radiation left over in our galaxy from that initial expansion. However, it's important to also remember that The Big Bing Theory is a Theory and not fact, Both Dark energy and dark matter is corresponding the same things which are necessary to the universe creation in the form of solar system [16].

Modern science tells us that the observations and predictions of the Big Bang successfully replace the Steady State. However, isn't the Big Bang the ultimate example of creation of mass-energy from nothing? (The 1st Law of Thermodynamics states that a body can only gain or lose heat by taking it from, or passing it to, its environment or another body - this is because energy can neither be created nor destroyed) [17].

STEADY STATE UNIVERSE

The idea of steady-state was first proposed in 1948 by cosmologists Hermann Bondi, Fred Hoyle, and Thomas Gold. It was derived from the perfect cosmological principle, which itself states that the Universe is the same no matter where you look, and it will always be the same.

The Steady State theory was very popular in the 1950s. However, evidence against the theory began to emerge during the early 1960s. Firstly, observations taken with radio telescopes showed that there were more radio sources a long distance away from us than would be predicted by the theory. By a long distance, I mean billions of light years. Because of the times it takes light to reach us then, when we look at objects billions of light years from us, we are looking back billions of years in time. So, what these observations were saying is that there were more cosmic radio sources billions of years ago than there are now [18]. This would suggest that the Universe is changing over time which contradicts the Steady State theory. Steady State Theory -A popular theory suggesting that the universe & everything within it is unchanging.

A nearly 60-year-old cosmology book, Bergamini (1964), says, "(The Steady State theory – proposed in the 1940s by Fred Hoyle, Hermann Bondi and Thomas Gold – states) new matter or energy has to be continuously created at a rate equal to the mass of one hydrogen atom in each quart of space every half-billion years. Anti-steady-state cosmologists object to this feature because scientifically there is no evidence that mass-energy can be created."

The steady-state theory states that the universe is always expanding, but it maintains the same density. We know that the state of matter depends on how dense its particles are [19]. Thus, if the density of an object remains the same while its size continues to increase, we can say that that object is in a constant or steady state. The same concept when applied to the universe gives us a steady-state hypothesis.

The Steady-State model asserts that the observable Universe remains the same at any place and time. In the Universe, which is forever expanding, the matter is continuously created to fill the space. This is clearly a stronger version of the usual Cosmological Principle, which applies to spatial positions only.

According to the model, galaxies and other large astronomical bodies near us should appear similar to those that are far away. However, the Big Bang tells us that distant galaxies should look younger than those at close proximity (when observed from the earth) since light takes much longer to reach us. The Steady-State theory gained widespread popularity in the early and mid-20th century. However, by the 1960s, it was mostly discarded by the scientific community in favor of the Big Bang after the discovery of cosmic microwave background [20]. In 1972, Steven Weinberg said of the evidence opposing steady state cosmology: In a sense, the disagreement is a credit to the model; alone among all cosmologies, the steady state model makes such definite predictions that it can be disproved even with the limited observational evidence at our disposal.

The Drawbacks of the Steady State Theory

Unfortunately, there is more evidence against this theory than there are steady-state theory facts and tangible evidence. While there are definite predictions that could be tested via observation, those observations were the reason why it did not gain much clout in cosmology. The radio observations made went far into the universe, and returned with information from billions of light-years ago with evidence of a changing universe, which is pretty much the opposite of what the theory propounds. The cosmic microwave background also could not provide much evidence for this theory. Religion and science have been the best of enemies since at least the time of Copernicus and Galileo. Theory and corresponding numerical simulations have indicated that for probe pulses that are much shorter than the lifetime of the upper state, there is no analytical theory for the amplitude, pulse shape, and group velocity of the probe field [21].

The Steady State Theory is now no longer accepted by most cosmologists. Today the majority of astronomers consider the Big Bang theory to be the best description of the origin of the universe [22].

HINDU COSMOLOGY IN UNIVERSE ORIGIN

There are four Vedas–Rig Veda (The Book of Mantra), Yajur Veda (The Book of Ritual), Atharva Veda (The Book of Spell) and Sama Veda (The Book of Song). Hinduism, starting for the Rig Veda up to present age, there are unending interpretations which continue to conceptualize the cosmic conundrum in vivid dimensions. Though at times there are contradiction in mythology, the essence remains the same which declares that the universe was created from nothing and the earlies state was “gloom hidden in gloom” as declared in the Vedas (ancient scripture). Both the Rig Veda and Brahmanda Purana describe a universe that is cyclical or oscillating and infinite in time. The universe is described as a cosmic egg that cycles between expansion and total collapse. It expanded from a concentrated form — a point called a Bindu [23]. The universe, as a living entity, is bound to the perpetual cycle of birth, death, and rebirth.

Fig. 07 Hindu Cosmology the Creator of world Lord Brahma

The Hindu spiritual world has been an inscrutable for each and everyone. The Big amazement for all and sundry that who created this world, and why? Mysteries for all that the world was unreal, it had no purpose. The question arose as to how this world came into existence if there was no purpose for its existence? In a discussion with most respected Swami Ramanand Saraswati at Onkareshwar. He said that Brahman had a special quality of creating without having a desire. But it seemed more obvious that the Brahman must have had a desire to create this world [24].

Brahma’s Story Brahma is said to have created the entire universe, including himself. He began by creating water and dropping a seed into the primal ocean. The seed became a golden egg from which Brahma emerged. The remaining shell and material of the golden egg then expanded to become the

universe**.** In the earliest depictions of Brahma, he is portrayed as a four-headed god sitting on a lotus, symbolizing that he is always rooted in infinite reality. Each head recites one of the four Vedas, the oldest holy texts in Hinduism. Brahma is wedded to Saraswati, the goddess of knowledge. Saraswati, whose name literally means "one who flows," also symbolizes fertility and prosperity. Together the pair of deities represents consciousness and the creative impulse.

Although Brahma is one of the three major gods of the Hindu pantheon, he is not widely worshipped like Vishnu, the preserver, or Shiva, the god of destruction. In fact, only two temples in India are dedicated to Brahma—one in Pushkar and the other in Kerala.

Fig. 08 The Universe Origin with Brahma

The Hindu scientific approach, understanding of external reality depends on also understanding the godhead. In all Hindu traditions the Universe is said to precede from the gods. Fundamental to Hindu concepts of time and space is the notion that the external world is a product of the creative play of maya (illusion). Accordingly, the world as we know it is not really real but illusionary. The universe is in constant flux with many levels of reality; the task of the saint is found release (moksha) from the bonds of time and space [25].

Therefore, one of the ancient Hindu books describes thus: "After a cycle of universal dissolution, the Supreme Being decides to recreate the cosmos so that we souls can experience worlds of shape and solidity. Very small atoms begin to combine, eventually generating a cosmic wind that blows heavier and heavier atoms together. Souls depending on their karma earned in previous world systems, spontaneously draw to themselves atoms that coalesce into an appropriate body." Hindu cosmology envisaged the universe as having a cyclical nature. The end of each kalpa brought about by Shiva's dance is also the beginning of the next. Rebirth follows destruction and the cycle goes on. Thus, in Hindu cosmology the universe is, according to mythology and Vedic cosmology, cyclically created and destroyed [26].

The following symbolic three representation of the ***creation of the world by Brahma*** is insightful. The life span of Lord Brahma, the creator, is 100 'Brahma-Years'. One day in the life of Brahma is called a Kalpa, which is calculated to be 4.32 billion years. Every Kalpa Brahma creates 14 Manus one after the other, who in turn manifest and regulate this world. Thus, there are fourteen generations of Manu in each Kalpa (one day of Brahma). Each Manu's life consists of 71 Chaturyugas (quartets of Yugas or eras) which in turn is composed of four Yugas: Satya, Treta, Dwapara and Kali [27].

The span of the Satya Yuga is 1,728,000 human years, Treta Yuga is 1,296,000 human years long, the Dwapara Yuga 864,000 human years and the Kali Yuga 432,000 human years. When Manu perishes at the end of his life, Brahma creates the next Manu and the cycle continues until all fourteen Manus and the Universe perish by the end of Bramhma's day. When 'night' falls, Brahma goes to sleep for a period of 4.32 billion years, which is a period of time equal one day (of Brahma) and the lives of fourteen Manus. The next 'morning', Brahma creates fourteen additional Manus in sequence just as he has done on the previous 'day'. The cycle goes on for 100 'divine years' at the end of which Brahma perishes and is regenerated. Bramha's entire life equals 311 trillion, 40 billion years. Once Bramha dies there is an equal period of unmanifestation for 311 trillion, 40 billion years, until the next Bramha is created.

The Rig Veda's view of the cosmos also sees one true divine principle self-projecting as the divine word, Vaak, 'birthing' the cosmos that we know, from the monistic Hiranyagarbha or Golden Egg. The Hiranyagarbha is alternatively viewed as Brahma, the creator who was in turn created by God, or as God (Brahman) Himself. The Universe is preserved by Vishnu (The God of Preservation) and destroyed by Shiva (The God of Destruction). Once the Universe has been destroyed by Shiva, Brahma starts the creation once again. This creation-destruction cycle repeats itself almost endlessly as described in the section above on Brahma, Manu and the Yugas.

We are currently believed to be in the 51st year of the present Brahma's life and so about 158.7 trillion years have elapsed since the birth of Brahma. After Brahma's "death", it is necessary that another 100 Brahma years pass until he is reborn and the whole creation begins anew. This process is repeated again and again, forever.

The fate of the universe depends on the unknown nature of dark energy and how it behaves in the future: galaxies might become isolated by acceleration, or all matter could be destroyed in a big rip, or the universe might collapse in a big crunch - perhaps re-expanding as a cyclic universe. The universe could even be swallowed by a giant wormhole. To understand the origin of the universe we will probably need a theory of quantum gravity.

In the current cosmology, the biggest questions are still unanswered. We do not know the true size of the universe, even whether it is infinite or not. Nor do we know its topology - whether space wraps around on itself. We do not know what caused inflation, or whether it has created a plethora of parallel universes far from our own, as many inflationary theories imply. And it is not clear why the universe favours matter over antimatter. Early in the big bang, when particles were being created, there must have been a strong bias towards matter, which the standard model of particle physics cannot explain. Otherwise matter and antimatter would have annihilated each other and there would be almost nothing left but radiation [28-29].

According to Hindu mythology, Hinduism arose from the discoveries of people who felt that they had gained an insight into the nature of reality through deep meditation and ascetic practices. Science uses a heuristic method that requires objective proof of mathematical theories. Yet both have proposed similar scenarios for the creation of the universe.

According to the Bible; In the Bible, there was time when the world did not exist. Only God existed he decided to create the whole world and with that decision, the world began. The universe is everything that galaxies are part of the universe, and so, is all of space. Cosmology is the study of the universe.

HINDU CREATION MYTH: Traditionally the cosmological events were presented in the form of a mythical story and Hindus were no exception. However, there is a specialty with the Hindus, there is no one defined mythical story describing the creation of this universe in Hinduism indicating that Hindus have always been open to change their theory based on new ideas and empirical observations. This is the reason why we have absolutely no issue with the theory of evolution while other religions have not been so receptive of it. In the modern times being so confident in our present theory of creation we disregard these mythical stories as superstition. This is a mistake and mostly happens because we take the story literally. Taken literally these stories do not make any sense, however if you go a level deeper than you can make sense of the philosophy behind it. Let us look at the most popular creation myth of the Hindus, which mentions that initially there was nothing and everything was beneath the ocean and Vishnu, was sleeping on the Ananta Shesh Naga. Vishnu then dreamt of creating this universe and a lotus sprouted out of his navel. When it blossomed out came from it Brahma, who then created this universe [30].

COMPARING HINDU CREATION MYTH WITH BIG BANG

If you are thinking that there is a real Vishnu in human form sleeping on a serpent and a Brahma with four heads then you have missed the point. In this story Vishnu signifies the consciousness of this universe, while the ocean signifies the un-manifested universe, Shesh Nag represent that which will be left when there is no space, time and matter in which the universal consciousness can rest, and Brahma is the process through which the universe came into existence from its un-manifested form. If we look at this story that way, then the whole story becomes logical and scientific.

Before the big bang there was no space, time or matter. There was just singularity where the entire un-manifested universe existed. This is very similar to the Hindus creation myth saying in the beginning nothing existed and the world was beneath the ocean in an un-manifested form. Instead of singularity we have an ocean here. Big bang theory then says something happened and the singularity manifested into this universe. Hindu myth describes this something as the universal consciousness desiring to manifest the world, again not much difference from the big bang. Out springs the Brahma from the lotus sprouting from Vishnu's navel and creates the world, which is similar to the laws of this universe coming into existence in the big bang theory and this world is created. Just a side note: Lotus signifies birth in both Hindu and Buddhist traditions and therefore it is mentioned in the story as a metaphor for birth of the universe. As you can see the bare bones of the story we hear today about creation of the universe and what was told by the ancients remain the same, it is just that in the modern times since we have better understanding of the laws of nature, we have more details on the process itself. The underlying philosophy remains the same. Considering the openness of Hinduism to include new information into its tradition, we can easily include the big bang theory into Hindu tradition, it blends very well. However, there is just one problem with the big bang theory. It does not tell us about what was there before the big bang and what will happen to the expanding universe.

This brings us into the world of speculation and logic and there is no reason for us to discard the traditional Hindu view of the cyclical universe where it is repeatedly created and destroyed. In fact, if we follow this path then we have an explanation for what was there before the Big Bang, it was a different manifested universe. Going by this then the universe, which is right now expanding will then go back to singularity and a new universe will then be created [31].

PREDICTING THE PAST AND FUTURE USING LOGIC ALONE

The universe in future, no one know as we do not have much information, similarly we have no way of knowing what was there before the big bang. So here we have mostly use logic. Now let me introduce to you three logical concepts to arrive at the cyclical universe theory of the Hindus

- Whatever has a beginning has an end
- Any material thing cannot stay in its one form forever; it can only change from one form to the other.
- For a thing to exist forever it has to go through a cyclical of changes.

If you agree with me on these three assumptions then let us consider how it applies to the universe. We believe that the universe has a beginning at Big Bang, therefore it must have an end also. The universe is changing all the time it is right now expanding; however, this expansion cannot go on forever as this expansion also had a beginning. The process of the creation of the universe is part of another process which must be eternal because if it was not eternal then there must have been something before that process started, in other words it had a beginning and therefore it must have an end also. But if that process has a beginning and an end then there must be some other process which must be going on before that, because something cannot come out of nothing. So logically thinking there must exist a process which does not have a beginning or an end, in other words it must be an eternal process. And that process can be eternal only if it is cyclical. Therefore, the creation and destruction of this universe must be cyclical.

As you can see the Hindu theory of cyclical universe is quite logical. Therefore, if it is only left to speculation, I will go with the Hindu conception of the cyclical universe. Of course, if the scientific evidence indicates otherwise then I will change opinion [30-32].

CONCLUSION

Brahma is the function of creation, not "the creator"! Brahma, Vishnu, Shiva - are all functions of the organizing principle of the universe creation, a way given to us by the sages to think about the nature of the "ultimate truth", the unknowable, attributeless, infinite source of all energy in the universe, the **Brahman**. The universe is characterized as a tiny golden embryo in Hindu philosophy, a tribute to the grandness of its vision. What we also know is that the universe, like humans, came into existence due to a disequilibrium in the triguna. When triguna goes back into equilibrium, the universe will go into dissolution (matter to energy). Which is surprising as the same applies to us as humans. When our triguna comes back into equilibrium, we achieve moksha, that is, transcend death, "from death to immortality"! The universe is a mystery. Every element of the universe known to science, including everything around us, planets, stars, the Milky Way galaxy, and so on, accounts for only 5% of the total universe. Dark matter and dark energy are known to make up the rest of the universe. The Big Bang's energy was responsible for the universe's first expansion, which was quite slow at the time. Currently, dark energy makes up around 68% of the cosmos, and according to a number of hypotheses, this percentage will only increase with time. Scientists have not been able to figure out what dark matter and dark energy exactly are, their characteristics, their properties, etc. Nevertheless, the two are separated by their impact on the universe. The all-review data has described that the universe is originated with the According to the Hindu Cosmology and according to the scientific data lots of theory involving in the origin of universe.

REFERENCE

1. Battersby, Stephen (2006) "Introduction: Cosmology" New Scientist September 2006, https://www.newscientist.com/article/dn9988-introductioncosmology.html?full=true
2. Begelman, M. C., Volonteri, M., & Rees, M. J. (2006). Formation of supermassive black holes by direct collapse in pre-galactic haloes. Monthly Notices of the Royal Astronomical Society, 370(1), 289-298.
3. Goldsmith, D., & Rees, M. (2022). The End of Astronauts: Why Robots Are the Future of Exploration. Harvard University Press.
4. Hazard, C., Jauncey, D., Goss, W. M., & Herald, D. (2018). The sequence of events that led to the 1963 publications in nature of 3C 273, the first Quasar and the first extragalactic radio jet. Publications of the Astronomical Society of Australia, *35*, e006.
5. Sloan, D., Batista, R. A., Hicks, M. T., & Davies, R. (Eds.). (2020). Fine-tuning in the Physical Universe. Cambridge University Press.
6. Lynden-Bell, D. (2010). Searching for insight. Annual Review of Astronomy and Astrophysics, 48, 1-19.
7. Ashtekar, A., Berger, B. K., Isenberg, J., & MacCallum, M. (Eds.). (2015). *General relativity and gravitation: a centennial perspective*. Cambridge University Press.
8. Miralda-Escudé, J., Haehnelt, M., & Rees, M. J. (2000). Reionization of the inhomogeneous universe. *The Astrophysical Journal*, *530*(1), 1.
9. Rees, M. (2011). Our cosmic habitat. In *Our Cosmic Habitat*. Princeton University Press.
10. Rees, M. J. (2003). Our final century: will the human race survive the twenty-first century?. BasicBooks.
11. Rees, M. (2018). On the Future: Prospects for Humanity. Princeton University.
12. Tegmark, M., Aguirre, A., Rees, M. J., & Wilczek, F. (2006). Dimensionless constants, cosmology, and other dark matters. *Physical Review D*, *73*(2), 023505.
13. Volonteri, M., & Rees, M. J. (2006). Quasars at z= 6: the survival of the fittest. *The Astrophysical Journal*, *650*(2), 669.
14. Retrieved from science.nasa.gov: https://science.nasa.gov/astrophysics/programs/physics-of-the-cosmos
15. Jhunjhunwala, P. P. (2021), Hindu Cosmology in the Light of Modern, International Journal of Theology, Philosophy and Science; page:19-52
16. M, E. (2011, October 11). Retrieved from Difference Between.net: http://www.differencebetween.net/science/nature/difference-between-cosmos-anduniverse/

17. M, S. (2020), A critique of Big Bang Theory and a look at a new theory of how creation was created; Researchgate.net.
18. Coles, P., & Lucchin, F. (1995). Cosmology The Origin and Evolution (Second Edition ed.); British Library Cataloguing in Publication Data.
19. Hurley, S. (2015, July 15). Retrieved from explainingscience.org: https://explainingscience.org/2015/07/25/the-steady-state-theory/
20. Tantibanchachai, C. (2019, August 08), Dark matter may be older than the bigh bang, study suggests; Physical Review Letters.
21. Bartlett, R. (2020, October). Positives and Negatives of The Steady State. *Reseachgate.net*. doi:10.13140/RG.2.2.27608.11524.
22. Kaku, Michio. "Parallel Worlds: A Journey Through Creation, Higher Dimensions, and the Future of the Cosmos." 1st Edition, Doubleday, December 28, 2004.
23. Moser, B. (1 June 2004). In B. S. Miller, The Bhagavad-Gita: Krishna's Counsel in Time of War (Reissue ed.), Bantam Classics; Reissue edition. Retrieved from https://www.amazon.in/Bhagavad-Gita-Krishnas-Counsel-Time-Warebook/dp/B000FC1M P0#detailBullets_eature_div
24. Jones, MH, Lambourne RJ, Adams DJ. An Introduction to Galaxies and Cosmology. New York: Cambridge University Press, 2004.
25. Chatterjee, D., & Khatpal, R. C. (n.d.). Concept, Symbol and Beyond Hindu Cosmology.
26. Bidhandi, Mohammad, Ansari Mehr, Roham, "Creation of the world A Reason or an Accident?" Religions, Religions and Mysticism, Comparative Theology, Fall and Winter 1396, No. 18, P. No. 23 to 26, Qom
27. Sajedi, M. (2020, 21 September), "A critique of Big Bang Theory and a look at a new theory of how creation was created", Researchgate.net, P.No. 23 to 26.
28. Georgievich, B. S. (2017, March), About the theory of the Big Bang, thegeneralscienc journal, doi:10.13140/RG.2.2.26288.35840
29. M. G. Payne, L. D. (2006, October 12). Limitations of steady state solutions to a two-state model of population oscillations. *Researchgate.net*. doi:10.1103/PhysRevA.74.043810
30. Sen, P. J., & Chakrabarti, P. P. (n.d.). Sandhi_Research Report. *www.iitkgpsandhi.org*, 1 to 92. Retrieved from http://www.iitkgpsandhi.org/Report_Historical%20Evolution%20of%20India.pdf
31. Afshordi (2017): "From Planck Data to Planck Era: Observational Tests of Holographic Cosmology" by Niayesh Afshordi, Claudio Corianò, Luigi Delle Rose, Elizabeth Gould, and Kostas Skenderis, Phys. Rev. Lett. 118, 041301, https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.118.041301
32. Astronomy (2016): "The M-sigma relationship", October Astronomy (2019): "AstroNews", February, p. 17