

The Universe—A Divine Mystery

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The world we live in is always a mystery to us. There are several questions about the origin of this universe. The humankind is trying to find answers to them in the course of its history. Cosmology constitutes investigations of eminent philosophers, theologians, and scientists in this regard. It is the study of the origin of the universe, its structure and dynamism. This is a multidisciplinary field of study involving philosophy, theology, and physical science.

Scientific Cosmology

(i) ***Ancient Theories*** • The ancient Greek thinkers believed that the universe is infinite in terms of time and space. Anaximander (c. 610–546 BCE) suggested that the earth is cylindrical in shape. Pythagoras (c. 570–490 BCE) discovered that the earth is round in shape. Aristotle (384–22 BCE) proposed that the earth is the centre of the universe and all heavenly bodies like stars and planets revolve around it in different elliptic paths.

(ii) ***Kepler's Finite Universe*** • These ancient thinkers were just speculative thinkers in contrast to scientists of the medieval period who based their conclusions on observations. Aristotle believed that the universe is spatially finite but with infinite time. It means the heavenly bodies have no beginning and end but the space, their receptacle, is limited and finite. This view was challenged by an Italian mathematician Giordano Bruno, who asked an obvious question: 'If there is a boundary or edge to space, what is there on the other side?' He was burned to death in 1600 by religious fanatics for raising this question. In 1610, German astronomer Johannes Kepler (1571–1630) tried to give a rational explanation to the question why the universe is spatially finite. He said that if the space is infinite, there will be infinite stars filling the sky with light and then, the night will never be dark! In modern period, Edwin Hubble (1889–1953), an American astronomer, measured the enormous range of the distance between earth and the Andromeda Nebula galaxy. This confirmed the view that the universe is finite as it can be measured as we measure any finite entity.

(iii) ***Newton's Infinite Universe*** • The French mathematician René Descartes (1596–1650) was of the view that there cannot be any space without matter. But, Isaac Newton (1642–1727) proposed absolute time and space that exist independently of the matter by virtue of their omnipresent presence. In this regard he wrote that 'infinite and eternal' divine power co-exists with the space, which 'extends infinitely in all directions' and 'is eternal in duration'.¹

(iv) ***Einstein's Relative Universe*** • Newton's idea of an universe regulated by certain absolute rules was countered by Albert Einstein (1879-1955). He said that the concepts of gravity, time, and space are relative and not absolute. It is because these three entities depend upon the mass of the heavenly bodies. According him, the gravity is but a wrapping of time and space. He said that the heavenly bodies move freely in space-time curvature, which is induced by mass and energy of these objects.² The philosophical implication of this discovery is tremendous. It

showed that every happening in this world is in *relation* with other happenings; nothing in this world is stand-alone.

(v) **Relativity of Space and Time** • Einstein further proposed that the properties of space and time applicable to our static view of earth do not hold good in the greater view of cosmos. He put forward a theory that ‘the gravitation of the mass contained in cosmologically large regions may wrap one’s usual perceptions of space and time’.³ In 1917, he developed a model of the universe in which the total volume of time and space is finite, but without any boundary or edge. His General Relativity Theory clearly showed that ‘the structure of space-time is itself a dynamical variable, subject to causal influence by the material constituents of the universe.’⁴ In simple terms, it demonstrated that the space and time are relative and variable entities; there is nothing in the empirical world that is absolute.

(vi) **Hubble’s Expanding Universe** • The curious phenomenon the scientists observed with the discovery of telescope, is the expansion of the universe. In 1923, Edwin Hubble discovered that the galaxy of Andromeda Nebula is approximately 900,000 light years away from the earth. In 1929, he presented a paper which showed that the distance between the earth and the galaxies are variable and observation reveals that the galaxies are moving away from the earth in direct proportion to their distance. This data indicates an expanding universe. But the question remained that if everything is moving at an unimaginable speed, what about the finitude of the universe?

(vii) **Big Bang Theory** • The scientists, based on the above investigation, also proposed that the present universe is but an expansion of the highly condensed matter in a miniature space. This is the genesis of the ‘Big Bang Theory’, which says that 13.8 billion years ago all of the matter in the universe was closely packed together in an incredibly dense state and that everything then exploded in a “big bang”.⁵ Though it is only one of the proposals on the origin of the universe, it is the most popular one among the scientists even today.

(viii) **Modern Views** • In 1920s and 1930s several universal models were proposed. They all came to the same conclusion that the space is homogenous and hence *isotropic* (same in all directions). These models also say that the universe has *finite lifetime*. It means that there was a time when the universe did not exist. But the models construed by scientists like Robert Geroch, Stephen Hawking, and Roger Penrose in 1950s and 1960s rejected these views and declared that the space and time can be predicted to be infinite as they are *singulars*. ‘Gravitational singularity, space-time singularity or simply singularity is a location in space-time where the gravitational field of a celestial body is predicted to become infinite by general relativity in a way that does not depend on the coordinate system (of space and time).’⁶ Recently, there are some advances in this field, which propose re-induction of big-bang theory with some changes.

(ix) **Quantum Universe** • Next comes quantum mechanics which says that one cannot simultaneously know both the *location* and *momentum* of an object. This idea is based on the *Uncertainty principle*, first put forward in 1927 by German physicist Werner Heisenberg (1901–76) who stated that ‘the position and the velocity of an object cannot both be measured exactly, at the same time, even in theory. The very concepts of exact position and exact velocity together, in fact,

have no meaning in nature.’⁷ The quantum mechanics deals with everything in this universe from subatomic particles to heavenly bodies.

(x) ***A Theory of Everything*** • In 1920s, Einstein wanted to formulate a Unifying Theory. He believed that the mathematical equations of electromagnetic force and gravitational force can be combined into a single framework. He said to his student Esther Salaman in 1925: ‘I wanted to know how God created this world. I’m not interested in this or that phenomenon, in the spectrum of this or that element. I want to know His thoughts; the rest are just details.’⁸ In the modern period, the scientists are searching for a model in which Einstein’s theory of relativity and quantum mechanics can be applied on each other to formulate a framework called a ‘Theory of Everything’ (TOE) to explain all physical phenomena from smallest particles to huge heavenly bodies. But some say that it is too unrealistic.

The God and the Universe

Aristotle was the first academically well-known philosopher who introduced the concept of God as the ruler of this world. As we can see, the physical science tries to explain the origin and finitude of the universe, but has not yet come to any conclusion. The finitude of the universe appealed to Christian theologians. They pointed out that it is God, who created this universe out of nothing. However, the necessity of dense matter in miniature space for the big-bang disproves the theory of creation *ex-nihilo* (creation out of nothing). Still, some theologians believe that the universe—even being infinite—always depends on God.

The science rejects the intervention of any extra-cosmic entity in the origin and structure of the universe. The theologians oppose this view and say that the universe came into existence by the creating act of God. Also, the Christian tradition emphasises the role of God as the creator. ‘According to Christian theology, the transcendent God, who cannot be approached or seen in essence or being, becomes immanent primarily in the God-man Jesus the Christ, who is the incarnate Second Person of the Trinity.’⁹

One problem with this idea is that of the evil nature of the world. If God is the creator of this world, he is likely to have the blemishes it is filled with. This question has been seriously debated in the writings of St Augustine (354–430 CE) and St Thomas Aquinas (1225–74). They did not spare any effort in their arguments to safeguard the immaculate nature of God from evils and defects of his creation. St Aquinas argues that ‘God’s goodness is beyond all definitions of the good, and we cannot hold God to account by our moral standards’. He also says that ‘God sometimes inflicts evil as punishment in order to maintain the just order of the universe’.¹⁰ In the same vein, St Augustine says that neither God is tainted with evil nor did he create it. He calls evil to be the by-product of God’s creation. Evil, according to him, does not exist in itself; it is a corruption of nature.¹¹

However, the Scottish philosopher David Hume (1711–76) writes: ‘Is [God] willing to prevent evil, but not able? Then is he impotent? Is he able, but not willing? Then is he malevolent? Is he both able and willing? Whence then is evil?’¹² Through this argument, he rejects the very existence of God.

The Dutch philosopher Baruch Spinoza (1632–77) attempted to shield God from evil. He proposed that there is nothing to be labelled as good or evil from

the perspective of God. It is human beings who name an entity or happening as good or bad depending on how pleasant or unpleasant it is to them. Spinoza's God is immanent and the sum and substance of all things.¹³

Cosmology in the Early Portions of the Vedas

The worldview of the Ṛgveda has two aspects: 1. Theological view and 2. Philosophical view. According to Vedic belief, the whole universe is constituted by three elements: earth, air, and space. Vedas generally describe the universe in terms of the relationship between heaven and earth as *dyāvā-prithivī*. *Aditi* indicates feminine principle and *Dakṣa* the male principle of the creation. *Puruṣa Sūkta*, a Ṛgvedic hymn describes a cosmic sacrifice to be the cause of whole creation. It also says that it is *Puruṣa* or God who has become the whole cosmos. However, God is not a finite being limited to the universe, but transcends even that. In other words, the world is only a partial manifestation of God, who is infinite in nature. In this way, the hymn extolls God as *immanent* and at the same time, *transcendent* also. The Vedas also designate God as *viśwakarmā*, the creator of the universe and *prajāpati*, the father of all beings. The origin of the world is also traced to *Hiraṇyagarbha*, the cosmic mind. We see all these concepts getting philosophical dimension in the Upaniṣads.

Ṛgveda also contains deep philosophical thoughts couched in beautiful, but innocent poetic expressions. They suggest that the universe has come out of a great principle without any outside interference. The scholars have recognised the depth of intuition and understanding disguised in the hymns composed by the Vedic sages. They also say that it is these vague ideas which later developed into philosophical doctrines in the Upaniṣads. *Nasadīya Sūkta*, one such hymn well-known for its deep philosophical significance, reads in part as follows:

Existence was not then, nor non-existence,
The world was not, the sky beyond was neither.
What covered the mist? Of whom was that?
What was in the depths of darkness thick?
Death was not then, nor immortality,
The night was neither separate from day,
But motionless did *That* vibrate
Alone, with Its own glory one —
Beyond *That* nothing did exist.
At first in darkness hidden darkness lay,
Undistinguished as one mass of water,
Then *That* which lay in void thus covered
A glory did put forth by *Tapah!*¹⁴

Cosmology in the Upaniṣads

The theological concepts in the Vedas centred around a supreme god evolved into a concept of impersonal divine reality in the Upaniṣads. This ultimate reality is called by different names such as *sat*, pure existence; *brahman*, the great one; and *Ātman*, the cosmic Self.

We find various descriptions of creation and its origin in the Upaniṣads. The theory of creation in the Upaniṣads is twofold: 1. Physical origin of universe, and 2. Divine origin of universe.

The *Taittirīya Upaniṣad* says: ‘This is the Self, the Spirit, and from the Spirit ether was born; and from the ether, air; and from the air, fire; and from the fire, the waters; and from the waters, earth; and from the earth, herbs and plants; and from the herbs and plants, food; and from food, man was born.’¹⁵ This is an illustration of the physical origin of the universe in the Upaniṣads.

The *Bṛihadāraṇyaka Upaniṣad* gives more profound description of the creation. It says: ‘All this [universe] was then undifferentiated. It became differentiated by name and form: it was known by such and such a name, and such and such a form. ... This Self has entered into these bodies up to the very tips of the nails. ... He who meditates on one or another of Its aspects does not know, for It is then incomplete. ... The Self alone is to be meditated upon, for in It all these become unified.’¹⁶

Acharya Shankara explains in his commentary to the above mantra that the Self is superimposed by *avidyā*, the primordial ignorance, with the differences of agent, action, and result. That is when the name and form consisting of this universe pass from undifferentiated to differentiated state. The creation in essence is an apparent modification involving superimposition. The Self remains the same unaffected and unmodified in this process. This is the reason why the Upaniṣad instructs us to meditate on the Self alone, since it is the only reality in the midst of apparent modifications that has taken the form of a universe.

Theistic Idea of Creation

We have already touched upon the theistic idea of creation in Christianity. It will be interesting to learn the views of Indian theistic schools in juxtaposition with the Christian beliefs. In *Bhagavadgita*, Bhagavan Sri Krishna says that all beings and worlds go back at the end of a cycle of creation to Prakṛti, the cosmic stuff, and he projects them forth again at the beginning of the next cycle. This process will be repeated again and again by him keeping the Prakṛti under his control. The Lord further says that he just presides over this process and the whole universe revolves in this manner, being the evolution and involution of Prakṛti.¹⁷ The creation here is not absolute but just the projection of the cosmic stuff called Prakṛti. The concept of history also changes from *linear* to *cyclic*, as there is no absolute beginning or end for the creation. This is in contrast with the Western science, philosophy, and theology, which attempt to explain the origin of the world and its evolution as a linear narrative.

Bhāgavata improvises upon the above idea. It says that the Prakṛti, the root matter becomes disturbed from its state of balance by the will of the Supreme Being, who is the master of the Prakṛti. It further evolves into the principle of *mahat* or cosmic mind and *ahamkāra* or I-sense, which has three aspects dominated by the qualities of *sattva*, illumination; *rajas*, activity; and *tamas*, dullness. These further manifest into subtle elements, senses, and the like. As they are not able to combine and produce the universe on their own due to their inert nature, the Lord through his will-power activates them at every stage of the creative process.¹⁸

However, Prakṛti, the creative power of the universe, remained a mystery to the Indian theologians. The Reality has two aspects: *mūrta*, with form, and *amūrta*, without form. The Upaniṣads and Purāṇas like Bhāgavata accepted both.

The Upaniṣads gave prominence to the Reality without form while the Purāṇas emphasised on the Reality with form and attributes. Both said that the universe is projected out of the Reality through a mysterious creative power, which is unexplainable. The Upaniṣads rejected the reality of the universe by holding that the creation is just a superimposition on Brahman. However, the Purāṇas symbolically gave Prakṛti the status of eternal consort of the Supreme Lord and called it *Lakṣmī*, *Umā*, and the like. This gave rise to mythological stories of exploits of the Lord with his eternal consort.

Tantras say that the Prakṛti, the creative aspect of the Reality, is equal to and inseparable from the static aspect. Tantras call the static aspect as ‘Śiva’ and the creative aspect as ‘Śakti’. Sir John Woodroffe, a well-known exponent of Tantra, says: ‘Śakti is both māyā, that by which Brahman creating the universe is able to make Itself appear to be different from what It really is, and *mūla-prakṛti* or the unmanifested (*avyakta*) the state of that which, when manifest, is the universe of name and form.’¹⁹ Śakti is the primary material cause of the universe consisting of three qualities *sattva*, *rajas*, and *tamas*, which represent nature. ‘The three *guṇas* represent Nature as the revelation of spirit, Nature as the passage of descent from spirit to matter, or of ascent from matter to spirit, and Nature as the dense veil of spirit’ (11). Theologically, Śakti is considered as *devi*, the goddess, who is *Mahāmāyā*. She is described as Brahman in Its mother aspect. She is *Ambika*, the great Mother, and also *Lalitha*, one who enjoys the divine play, as the whole world is only her play.

Sri Ramakrishna’s ‘Mother’

The ingenuity of Sri Ramakrishna lies in his harmony of orthodox Vedāntic principles with that of Tantra. In his concept of Prakṛti and māyā, he blended the ideas of both. He says that māyā and Brahman are like the snake in motion and the snake in rest. He also compares the calm ocean to Brahman and its agitation into waves with māyā; fire to Brahman and its burning power to māyā. Śiva represents intelligence and Śakti represents energy. Both are necessary for creation. These ideas are close to that of the Tantra.

Sri Ramakrishna also says that māyā is the illusory power that deludes the world, the concept similar to that of Advaita Vedānta. He says: ‘If you can detect and find out the nature of Māyā, the universal illusion, it will fly away from you just as a thief runs away when found out.’²⁰ This he calls as *avidyā māyā*, the māyā of ignorance. He also introduces the concept of *vidyā māyā*, which helps one to realise God. Knowledge, devotion, dispassion, compassion—these are the expressions of *vidyā māyā*. This ‘Māyā’, inseparable from Brahman, is what Sri Ramakrishna calls the ‘Mother’. He says:

God has created the world in play, as it were. This is called Mahāmāyā, the Great Illusion. Therefore, one must take refuge in the Divine Mother, the Cosmic Power Itself. It is She who has bound us with the shackles of illusion. The realization of God is possible only when those shackles are severed. ... One must propitiate the Divine Mother, the Primal Energy, in order to obtain God’s grace. God Himself is Mahāmāyā, who deludes the world with Her illusion and conjures up the magic of creation, preservation, and destruction.²¹

Conclusion

Yes, the world we live in is always a mystery to us. The physical science is attempting to fathom this mystery but is *uncertain* over space and time, the very fundamental entities of the universe. The view of the world, created by God out of nothing has been stooped to the level of a dogma in this rational age. Advaita Vedānta says that the world is only a false idea superimposed on the Reality called Brahman. Bhakti Schools describe creation as an expression of God's power. Tantras show us that this cosmic power manifests as the world is one aspect of reality, the other aspect being in a static state.

In Sri Ramakrishna's life and teachings, all these ideas are harmonised into a unified fabric of seeing the whole universe as God himself. Swami Turiyananda, a direct disciple of Sri Ramakrishna and a staunch Advaitin, declared at the end of his life: '*Brahma satya, jagat satya, sab satya—satye prāṇ pratiṣṭita*; God is real; the world is also real; everything is real—the life force (cosmic energy) is established in Truth.'²² It resonates with the Upaniṣadic saying: '*Sarvam khalvidam brahma*; all this is verily Brahman.'²³ Perhaps, this is *the* 'Theory of Everything', which the physical science has failed to arrive at so far in the empirical field, while the Vedic sages realised it in spiritual realm at least five thousand years ago.

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