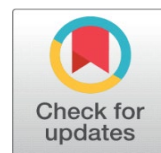


BUILDING BLOCKS OF LIFE IN METEORITES MAY LEAD TO PANSPERMIA ORIGIN OF LIFE

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ABSTRACT

Highlights

- The Jyotish' principle of Hinduism is electromagnetism's interaction with matter.
- Life is defined as an "emergent feature of matter." with manifested soul (jiva ātma) transformed into energy; Hinduism holds souls do evolve.
- In Hinduism, the law of conservation of energy is compared to the Atman (Soul). Key Molecules of RNA and tiny life forms in Meteorites suggests 'Advanced Panspermia Origin of Life'.
- Vedic scriptures state that 'Meteorites are living souls' arrived on Earth to be reborn.

The current hypothesis leads to the genesis of life of panspermia., which is based on the scientific principle of electromagnetic force interaction with matter. Electromagnetic force (Sunlight) interacts with inorganic chemistry available to us given out by stars in the universe plausibly triggers the formation of extra-terrestrial biological molecules of proto cells under abiotic conditions, as evidenced by their presence in meteorites.' Proto cells might theoretically give rise to living organisms with a manifested soul, allowing 'Ribose' to be formed from ice grains hit by sunlight for RNA and DNA at the same time. The presence of life's building blocks and other important organic chemicals like ribose in meteorites, including some microscopic life forms that aren't native to Earth, may have led to the 'Panspermia The 'Evolution of Life on Earth' and the 'Origin of Life' which is evidenced by the definition of 'Meteorites' in Vedic Scriptures, such as the "Bhagavad Gita" (3000 BC) and "Brihat Samhita" (520 AD) that they are the souls of righteous people who have returned to earth to be reborn.

Keywords: Meteorites, Prebiotic Chemistry, Panspermia Origin of Life, Solar System, Evolution, Solar System

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1. INTRODUCTION

The most difficult problem in science is the "Origin of Life." In biology, one of the most important questions is, "What is life?" The finding and detection of critical building blocks of organic compounds in meteorites raises the question of whether the genesis of life on our planet is due to exogenous delivery, endogenous synthesis, or both. Having all these little molecules does not guarantee we have life, regardless of whether they were given to Earth from space or synthesised from simpler molecules. But we're still not sure what transpired after that. According to Cornelia Meinert (2016), just because all of the molecules are currently available does not imply that life exists

www.newscientist.com. Prebiotic chemistry, or how biology evolved from non-biological chemical processes, is an unsolved riddle in the origin of life. Organic molecules found in meteorites are one of the origins of organic chemicals that lead to the formation of life.

When we consider the subject of 'Jyotish' (Astrology) as a subject of electromagnetism interaction with matter, the 'Origin of Life' does not appear to be difficult. Astrophysics is, in fact, the origin of Jyotish principles. The ancient Hindus excelled in every field. topics that allowed for the most abstract thinking and contemplation. As a result, such persons were entrusted with improving the science of astrology for the sake of humanity.

When it is mentioned in Varahamihira's Brihat Jataka that Moon and Mars bring about human female menstruation, ovulation, copulation, and fertilisation [Rao \(2017\)](#), [Rao \(2019\)](#) Astrology's life side is known as Jyotish. and other linked sciences like Astrophysics, Astrochemistry, and Astrobiology can be understood. Modern science is working hard to solve the 'Origin of Life' puzzle. Experiments on amino acids, for example, have only shown the frame required to hold life, but not its cause, i.e., the spirit. The recognition of the spirit and its function in the genesis of life is the most significant contribution of ancient Indian thought, as contemporary science has confirmed. As a result, a close partnership between modern science and ancient Indian thought is required to properly comprehend the origins of life and the evolution of living matter on Earth.

1.1. THE ESSENTIAL PRINCIPLE OF 'JYOTISH,' ONE OF THE SIX VEDNGAS

Jyotish is primarily founded on the principles of Astrophysics and Astrobiology, in which the celestial bodies and star constellations respond with matter (inorganic chemistry elements) emitted by stars at different times during their life cycles through their electromagnetic resonances. The solar system's celestial bodies have been chosen for studies in 'Jyotish' (Astrology) since they are all adapted. accountable for the sunlight on Earth. Jyotish also deliberately adapted the 88 zodiac constellations in our Galaxy's ' Milky Way' by dividing them into 27 Lunar constellations separated by $13\frac{1}{3}^{\circ}$ down the ecliptic which distance the Moon transits in one day. The zodiac constellations are made up of stars that are located outside of the solar system yet within the Milky Way. During their life cycles, stars emit certain chemical elements of inorganic chemistry, which is referred to as 'matter,' or energy perceivable at lower frequencies. The 12 zodiacal signs, 27 Lunar Constellations, and 7 Planets of Jyotish, a Vednga, which truly map the ecliptic and set the celestial stage for all affairs on earth and facets of life, namely, Extra-terrestrial origin of living cells driven to Earth by star dust in order to evolve and proliferation, are all well-known. ([Figure 1](#)) [Rao \(2021\)](#).

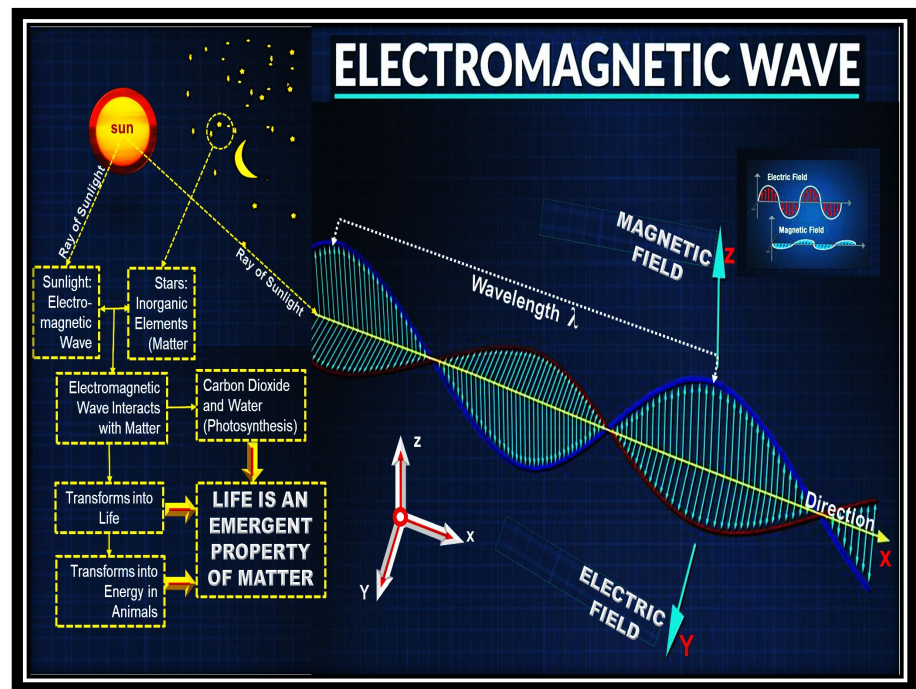


Figure 1 Sunlight (Electromagnetic Wave) and Stars (Elements: Matter)

There is no material difference between living and non-living things. There is vitality and energy in living, and as a result, life can be defined as an emergent attribute of matter, with the soul or spirit embedded initially into it and transformed into energy. Photosynthesis performs the miraculous transition of substance into life, which is then transformed into energy in the living. (Figure 2). The wonder of sunlight is that the basic constituents of life were provided by transformation of Life arose as an emergent property of matter due to the production of amino acids combined in long polymer chains under abiotic conditions due to lightning in the early solar system formation. Inorganic chemistry available to us in the universe, and life arose from it as an emergent property of matter due to the production of amino acids combined in long polymer chains under abiotic conditions due to lightning in the early solar system formation. Because all living things must eventually die, no one is immune to dephotosynthesis. Five natural elements make up the framework of all life. When a person dies, they lose their ability to photosynthesize. Through decomposition, what was created by the energy of light through photosynthesis is dissolved and regenerated back into nature in its original form. However, according to the 'rule of conservation of energy,' which is similar to Hinduism's 'atman,' or soul or spirit,' energy must be directed to the cosmos. Without de-photosynthesis, no life storey can be complete. As a result, the electromagnetic force, one of the four known forces in physics, serves as the criterion.

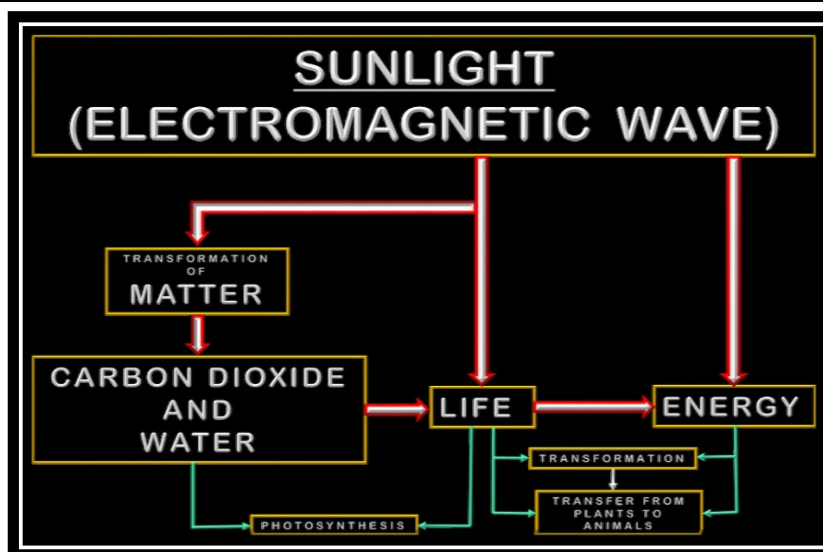


Figure 2 Sunlight Transforms Matter into Life and Life, in turn Transforms into Energy

2. METEORITES

Meteorites maintain the chemical processes that occurred in the early solar system, before to the emergence of life on Earth. Exogenous transport of organic molecules to the early Earth and other planetary bodies by carbonaceous chondrites may have been a primary source of primordial elements required for life's emergence (Chyba and Sagan 1992) [Chyba and Sagan \(1992\)](#). The ancient Earth was pummeling with severe and continuous meteorite bombardment between 4.5 and 3.8 billion years ago. Researchers believe that meteorite bombardment may have seeded ancient Earth with life's building blocks, such as formaldehyde, ammonia, nucleobases, amino acids (protein components) (components of DNA and RNA), Ribose sugar (crucial component of RNA), arabinose and xylose (rich in carbon), other bio-essential sugars, HMT, and other origins of life chemistry, potentially paving the way for life itself. Ancient meteorites that crashed to Earth and were discovered containing components for life, such as water and organic compounds, have all been examined in the context of Hinduism's definition of a meteorite.

In the Solar System, a meteoroid is a sand to boulder-sized piece of debris that collides with the Earth. A meteoroid that penetrates Earth's (or another body's) atmosphere and leaves a visible trail is known as a shooting star or falling star. When a meteoroid reaches the earth and survives impact, it becomes a meteorite. A meteor shower is a collection of meteors that appear at regular intervals of seconds or minutes. Meteor is derived from Greek *meteros*, which means "high in the air

A meteorite is a solid piece of debris from an object that originated in deep space, such as a comet, asteroid, or meteoroid, and passed through the atmosphere to reach the surface of a planet or moon. According to experts, a bolide is a meteorite large enough to make an impact crater. As a result, a 'Meteorite' is a rock from outside the Solar System that collides with Earth and survives the impact.

2.2. DEFINITION OF METEORITE IN GEOLOGY

A meteorite is a rock that falls to Earth from space in its simplest form. Meteorites are rocks; however, they aren't the same as the rocks on Earth. Most are far older, and they represent some of the only samples we have of other worlds in our solar system — other planets, asteroids, and potentially comets. The classification of meteorites is a complicated and technical subject, and the above is only meant to provide a high-level overview. A meteorite is a solid piece of debris from a comet, asteroid, or meteoroid that originates in deep space and survives its transit through the atmosphere to reach the surface of a planet or moon. According to experts, a bolide is a meteorite large enough to make an impact crater. Iron meteorites, stony-iron meteorites, and stone meteorites with rocks from larger planets that have been subjected to geological action are the three primary types of meteorites.

2.3. HINDU CONCEPT OF METEORITES: BRIHAT SAMHITA ON METEORITES

उल्कालक्षणम् ॥३३॥

दिविभुक्तशुभफलानां पततां रूपाणि यानि तान्युल्काः ।
धिष्योल्काशनिविद्युत्तारा इति पञ्चधा भिन्नाः ॥१॥

---Varāhamihira's Brihat Samhita [Bhat \(2010\)](#)

Meaning: Ulkas, also known as meteors, are the forms of beings who descend from Heaven after experiencing pure happiness, and they are divided into five categories: ignescent balls, meteors, thunderbolts, lightning, and shooting stars. Varhamihira, an Indian Astrologer and Astronomer (520 AD), asserts that meteorites are nothing more than the forms of people who fall to be reborn after experiencing the blessings of their righteous conduct in Heaven in one of his major texts, "Brihat Samhita." Meteors come in five different types: ignescent balls, meteors, thunderbolts, lightning, and shooting stars (Comets) [Bhat \(2010\)](#).

2.4. BHAGAVAD GITA ON METEORITES

ते तं भुक्त्वा स्वर्गलोकं विशालं क्षीणे पुण्ये मर्त्यलोकं विशन्ति ।
एवं त्रयीधर्ममनुप्रपन्ना गतागतं कामकामा लभन्ते ॥ 21 ॥

----- Bhagavad Gita: Chapter 9, Text 21 [Bhagavad-Gita \(2003\)](#)

*te taṁ bhuktvā swarga-lokaṁ viśhālaṁ
kṣhīṇe puṇye martya-lokaṁ viśhanti
evaṁ trayī-dharmam anuprapannā
gatāgataṁ kāma-kāmā labhante*

Translation BG 9.21

They return to the earthly level once they have had their fill of heaven's immense pleasures and their merit supply has been depleted. As a result, people who do Vedic rituals for the sake of pleasure come and go in this world.

Commentary

Lord Krishna emphasises in this verse that the sublime delights of the heavenly abodes are only temporary. After they have thoroughly enjoyed heavenly pleasures and exhausted their merits, those who have been promoted there are sent back to the terrestrial level. As a result, reaching the heavenly abodes does not fulfil the soul's insatiable thirst for knowledge. We've all been there a million times before, yet the soul's desire for unending happiness has yet to be satisfied. This notion is supported by all Vedic writings.

Another Vedic scripture, the Bhagavatam (11.10.26), indicates that dwellers of heaven enjoy the celestial delights until their merits are spent. They are then unfortunately forced to return to their modest abodes as time passes. Heaven is fleeting, and it is followed by a period of misery. In the absence of God, Maya (ignorance) is kicking the soul around. At times, it visits the lower abodes, while at other times, it visits the upper abodes. Among the multitude of forms, it encounters across the lower and higher abodes, only the human form allows for God-realization. As a result, the scriptures state that even the celestial gods wish to be born as humans in order to atone for their previous sin of straying to the dark side. "The human form is extraordinarily rare," says another Vedic book (Narada Purana). Even the gods of the heavens beg for it." As a result, Lord Ram warned the people of Ayodhya in Rmyan not to waste this precious human life.

2.5. DNA MOLECULES INTACT IN METEORITES: BHAGAVAD GITA

"Despite the massive shock wave and other extreme conditions of a comet impact, our research reveals that the basic elements of life may have stayed intact," Jennifer G. Blank stated. "Comets would have been great packages for delivering elements for the chemical evolution that led to life." The comet delivery scenario appeals to us because it comprises all of life's essential ingredients: amino acids, water, and energy." www.sciencedaily.com. The amino acids did not break down due to the heat and shock of the simulated crash. Indeed, they began forming the so-called "peptide bonds" that link amino acids together into proteins. She noted that the pressure from the crash appeared to offset the tremendous heat and provide the energy needed to form the peptides. As a result, despite the massive shock wave and other extreme conditions following collision, the building blocks of life in a Meteorite remained intact.

Bhagwān Uvacha

नैनं छिन्दन्ति शस्त्राणि नैनं दहति पावकः ।
न चैनं क्लेदयन्त्यापो न शोषयति मारुतः ॥ 23 ॥

---- Bhagavad Gita: Chapter 2, Text 23 [Bhagavad-Gita \(2003\)](#)

*nainam chhindanti śhastrāṇi nainam dahati pāvakaḥ
na chainam kledayantyāpo na śhoṣhayati mārutaḥ*

Translation: Weapons and fire are incapable of shredding or burning the soul. It cannot be soaked by water or dried by the breeze.

Commentary

Material devices can detect consciousness, which is a sign of the soul, but no material thing can contact the soul itself. This is because the soul is divine and hence exists outside of the interactions of physical objects. The Lord puts it succinctly when he says that the soul cannot be withered by wind, nor can it be moistened by water, nor can it be burned by fire. Because of the heat and stress of the simulated collision, it's plausible that the amino acids didn't break down because they reengulfed by an unseen and impenetrable shield known as spirit or Soul. It is a notion that only what can be shown by tangible evidence and tested in labs is real. Everything else is a trick of the eye or a fantasy. Science provides us with knowledge, yet knowledge is insufficient for man. For the sake of humanity's existence, he also needs intelligence and spiritual judgement. The electromagnetic force, with its intrinsic frequencies, wavelengths, energies, and resonances, may play a critical part in the Panspermia Origin of Life and subsequent development of species on Earth, among the four known forces of physics. If this is correct, the mechanisms involved in the beginning of life and subsequent evolution should not be different. Magnetism, which is ubiquitous throughout the cosmos, is known to have an impact on the biological cycles of a variety of animals on Earth, including humans

3. NEW DEFINITION OF A METEORITE

"A meteorite is a space rock that collides with the Earth in our Solar System, carrying DNA molecules coated with worthy people's souls who have been returned from heaven to Earth to be reborn, and survives the impact with its composition staying intact after colliding with the Earth." [Rao \(2020\)](#).

4. KEY BUILDING BLOCKS OF ORGANIC MOLECULES DISCOVERED IN METEORITES

The Murchison meteorite, which was discovered in 1969 and is one of the most well-known meteorites, is rich in organic compounds. The discovery of Hexamethylenetetramine-Methanol (HMT) in space, which creates formaldehyde and ammonia and is found in meteorites, could be the result of HMT breaking down, which leads to the production of other key biological molecules such as amino acids. ([Figure 3](#)) [Oba et al.2021](#).

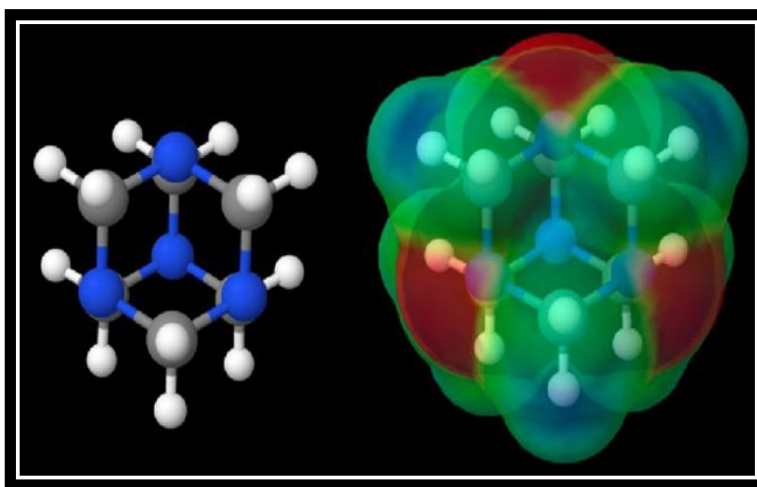


Figure 3 The Symmetric Chemical Structure of Hexamethylenetetramine (HMT, Left) and its Electrostatic Potential (Right). (Credit: Yasuhiro Oba, et al. Nature Communications. December 7, 2020)

Several meteorites included water and chemical compounds, among other things. In meteorites, NASA discovered crucial building components for chemical compounds. Ribose has been discovered in meteorites (a sugar that is required for life). (Figure 4) Oba et al. (2020).

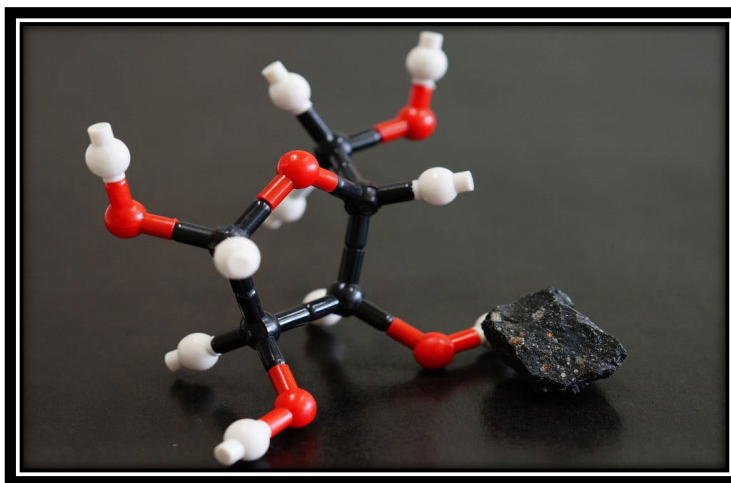


Figure 4 Picture of the Murchison meteorite with a model of ribose's molecular structure. This meteorite included ribose and other carbohydrates. Credits: Yoshihiro Furukawa

Many scholars believe that ancient earth was seeded with meteoric bombardment, which cleared the route for life itself, because all potential life's raw elements were detected or found in meteorites. However, the emergence of life, much alone its beginning, is complicated by extra-terrestrial ribose, but the fact remains that RNA evolved first. In two carbon-rich meteorites, NWA 801 and Murchison, ribose and other bio-essential sugars including arabinose and xylose were identified. The sugar ribose is a crucial component of RNA. It can store information and catalyse reactions at the same time. It's difficult to comprehend how ribose might have been created in the absence of live organisms to serve as a precursor to life. Nucleobases (components of DNA and RNA) and amino acids (components of proteins) have previously been detected in meteorites with the

exception of sugars that make up DNA, which could have existed in cell membranes on comets and ribose at the same time to set the stage for panspermia origin of life.

Searching for life in space has just become a little more fun. In the first phase of the solar system, glaciers exposed to sunlight may form sugar molecules in their locations, according to a new study. Among these sugars is ribose, which is the RNA core and is crucial in the genesis of life. All forms of life use at least RNA as genes, and as "R" in RNA, ribose binds to compounds that combine genetic messages. But it has been difficult to understand how ribose can be made without organic matter, to be part of the precursor to life. Other components of living cells, such as amino acids, which are proteins, have been identified in research and space samples for years. So have molecules that look like cell membranes. If these and ribose were all present at the same time, it would set the stage for a life-changing experience. The impact of sunlight on living things resulted in the formation of non-biological chemical processes known as prebiotic chemistry, providing a conclusive answer to the unresolved enigma of life's genesis. Organic molecules identified in meteorites, primarily due to the effect of sunlight, are one of the sources of organic chemicals that lead to the origin of life (electromagnetism) www.newscientist.com.

5. DEFINITION OF LIFE

The miracle of sunlight transforms water and carbon dioxide into 'Life' in plants and then life is transformed into 'Energy' in animals. As a result, 'life' is a quality of matter that emerges. The essential idea of "Jyotish," a Vedic scripture, is the interaction of electromagnetic and matter. Selectively adapted specific celestial bodies of the solar system, which are solely responsible for sunlight (Electromagnetic wave) on earth, and all 88 star constellations of the Zodiac summed up into 27 lunar constellations lying equidistant along the ecliptic of the Zodiac, which give specific inorganic elements (matter) in 'Jyotish' (Vedic astrology), one of the six Vedngas and ancillary to the most ancient Vedas in phases during their life cycles, into its studies is solely based on the principle of electromagnetism interacting with matter yielding life ,building blocks for framework and transform into life with manifested soul which in turn is transformed into energy in animals. Energy can neither be created nor destroyed similar to 'atman' (soul) in Hinduism. In fact, the 'Sun' signifies the 'soul' or the 'spirit' and is known as "Ātmakāraka" in 'Jyotish' [Rao \(2020\)](#).

Man is regarded as a spirit by Hindus. The sword will not pierce it, the fire will not burn it, the water will not melt it, and the air will not dry it. Each soul, according to Hindu belief, is a circle with no circumference but a centre in the body, and death is the transfer of this centre from one body to the next. The soul is also not constrained by the laws of matter. It is limitless, holy, pure, and flawless in its own core. However, it is tethered to matter in some way and considers itself to be matter. It is a fact in everyone's mind that they consider themselves to be the body.

The soul of a person is everlasting, immortal, perfect, and limitless; and death is simply the transfer of this centre from one body to the next. Our activities in the past have shaped the present, and our actions in the present have shaped the future. From birth to birth or death to death, the soul will continue to evolve up with positive deeds or reverse back with evil ones. Souls do evolve, according to Hinduism "[Complete Works of Swami Vivekananda](#).

6. COMPLEXITY OF LIFE

Having the chemicals that make life possible is not the same as having 'life.' Prebiotic chemistry is a term used to describe how biology may have evolved from non-biological chemical processes. Still, it is an everlasting puzzle about the origin of life, whether it is on Earth or extra-terrestrial. The panspermia origin of the first protocells is complete in all aspects and becomes live cells with the manifestation of spirit or soul. Even souls, according to Hinduism, can evolve and become higher species. This is the accurate perspective, as proven by the fact that world demographers have detected a direct association between human population growth and extinction of species since the 17th century [Human Population Growth and Extinction](#). One person is born every 8 seconds, and one person dies every 12 seconds, according to the Pop Clock implying that one person is added every 24 seconds. The source of this rise is mostly definitely related to the evolution of souls from lower species who have been added to the human population www.biologicaldiversity.

7. HINDU COSMOLOGY

According to Hindu cosmology, creation is eternal and has no origin in time. Each dissolution is preceded by creation, and each creation is followed by dissolution. The unmanifested or undifferentiated state and the manifested or differentiated state occur in the same cosmos. This has been going on for a long time. In the universe, everything is cyclic. There are many universes, all of which follow the identical creation and disintegration cycle (the systole and diastole of the cosmic heart). This srishti (creation) and pralaya (dissolution) cycle occurs once every 1,000 mahāyuga (Eon), or 4,320 million years www.census.gov. Around 3.6 billion years ago, or 3600 million years ago, life began. Nine of the ten intricacy of life are provided by genetic complexity doubling every 376 million years veda.wikidot.com out of Hinduism's 'ten avatars of Lord Vishnu,' with the 10th incarnation expected in around 400,000 years.

7.1. LORD VISHNU HAS TEN INCARNATIONS IN HINDUISM

Meteors struck the early earth between 3.8 and 4.5 billion years ago. Life on Earth began at least 3.5 billion years ago, according to the oldest rocks with fossil evidence of life on Earth because subsequent geologic processes have changed the surface of our planet, removed older rocks and created new ones, these rocks are rare. Around 2.7 billion to 2.8 billion years ago, oxygen was first produced, and 2.45 billion years ago, it entered the atmosphere. Only 2 million years ago, humans first appeared on the planet.

Life on Earth may have been carried here in streams of star dust propelled at very high velocities throughout planetary systems, including on the Mother Earth, for evolution due to Jupiter-Saturn orbital resonance causing climate changes at regular geologic periods, providing diversification of species, in contrast to Wesson's concept of continued arrival of living organisms to Earth. When life first appeared on Earth, it had the ability to spread across the globe until it was fully populated. Dasāvatr (Ten Incarnations), according to J B S Haldane, a British geneticist and evolutionary biologist, presented a "rough concept" of vertebrate evolution. Hinduism was the first religion to explain the "Theory of Evolution of Life on Earth." ([Table 1](#)) veda.wikidot.com, phys.org.

Table 1 Vedic Timeline and Corresponding Geological Timeline of Ten Incarnations

The India magazine of her people and culture, Volume 13, A. H. Advani, 1992, p.92 [phys.org, http://www.americanchronicle.com/articles/view/101713](http://www.americanchronicle.com/articles/view/101713) The India magazine of her people and culture, (1992)

Sl. No.	Name of the Incarnation	Vedic Timeline	Geological Timeline	Evolution
1	<i>Matsya</i> (Fish) Aquatic Organism	Beginning of Vaivasvata Manvantara	PreCambrian - Silurian- 500 - 550 MYA	First developed life of biological evolution in Geological Time Scale is 'fish'.
2	<i>Kurma</i> (Tortoise) Amphibion/Reptile	Vaivasvata Manvantara 2nd Tretayuga	Devonian/ Mississippian 358.9 - 419.2 MYA	In Geology, first reptiles come as second important evolution
3	<i>Varāha</i> (Boar) Land Animal A vertebrate	Vaivasvata Manvantara 3rd Tretayuga	Triassic 200 - 250 MYA	Evolution of amphibian to the land animal.
4	<i>Narasimha</i> (Half Man and Half Lion)	Vaivasvata Manvantara 7th Tretayuga	Cretacious 66 - 56 MYA	In Geology, no such evidences are mentioned. It may have been related with Ape Man.
5	<i>Vāmana</i> (Dwarf Man)	Vaivasvata Manvantara 10th Tretayuga	Quarternary 0.01 - 2.6 MYA	It may be related with first man originated
6	<i>Parasurāma</i> (Tall Man with Axe)	Vaivasvata Manvantara 19th Tretayuga	Quarternary 0.01 - 2.6 MYA	It has similarities with the first modern man originated in the Iron Age
7	<i>Rāma</i> Perfect Human	Vaivasvata Manvantara 24th Tretayuga	Quarternary 0.01 - 2.6 MYA	Modern man with administrative and rulership abilities with all righteousness.
8	<i>Balarāma</i> With Plough	Vaivasvata Manvantara 28th Tretayuga	Quarternary 0.01 - 2.6 MYA	Beginning of agriculture and human civilisation and growth of economy with all righteousness
9	<i>Lord Krishna</i> (Embodiment of Divivnity)	Vaivasvata Manvantara 28th Dwaparayuga	Quarternary 0.01 - 2.6 MYA	Domestication of animals and development of economy with a distinct mark of advancement in civilisation and upliftment of society

10	<i>Kalki</i> (Yet to arrive)	<i>Vaivasvata</i> <i>Manvantara</i> <i>End of 28th Kaliyuga</i>	Quarternary 0.00 MYA	Wickedness, foul play and immoral character and chaos predominates and reaches pinnacle in all walks of life.
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The Rig Vedic Incarnation hypothesis differs from the western Darwinian evolution theory in this regard. Evolution is cyclical, according to the Rig Veda. Meaning, once every living thing on the planet dies, evolution will begin all over again, starting with aquatic animals and ending with humans. Planets may produce or originate proto cells and become living cells with the 'Spirit of Creative Force' of specific genetic sequences of specific life forms, which are then propelled to the earth by star dust for evolution at regular intervals of geological time scales, as revealed by distinct phases in their evolution densities.

8. RESULTS

- "Life" is a quality of stuff that emerges spontaneously from matter with the 'Spirit of Creative Force'.
- Hinduism defines that Meteors are the souls of enlightened persons meaning they are living cells transported to the earth for evolution.
- The discovery of life building blocks of life in meteorites suggests that they are available in abundance as readymade kits in space formed under abiotic conditions and plausibly set the stage for 'panspermia origin of life' and need not necessarily to seed the earth for 'origin of life on earth'.
- The existence of amino acids (components of proteins) and nucleobases (components of DNA and RNA) in cell membranes on comets, as well as direct evidence of ribose in space at the same time in cell membranes, set the stage for panspermia as the start of life.
- The origins of the living cell, DNA, RNA, and all information molecules are all synchronised and simultaneous.
- Most scientists think that the Earth originated just 4.5 billion years ago and that life on Earth began at least 3.5 billion years ago, based on the age of the oldest rocks containing fossil evidence of life.
- Scientists found that genetic complexity doubles every 376 million years using Moor's Law. 9 genetic complexities hves emerged since the beginning of life on Earth 3.5 billion years ago. This is in keeping with Hinduism's theory of evolution, which predicts Lord Vishnu's 10 incarnations will occur roughly 300,000 years from now, in the fourth part of the present Kali Yuga.
- The 'periods' are multiples of about 20 million years, the eras are multiples of about 60 million years, and the aeons are multiples of about 600 million years on the Geological Time Scale. The significant complexity of life arose during the 'Cambrian Explosion.'

Geological Time Scale				
ERA	PERIOD	EPOCH / AGE	Million Years Ago	EVENTS
CENOZOIC <i>Age of Mammals</i> 65.5 mya – present day	<i>Quaternary</i>	<i>Holocene</i>	Today	Ice Age ends Humans are dominant
		<i>Pleistocene</i>	0.01	Earliest Humans appear Ice Age begins
	<i>Tertiary</i>	<i>Pliocene</i>	1.6	Hominids (human ancestors) appear
		<i>Miocene</i>	5.3	Grass becomes widespread
		<i>Oligocene</i>	23.7	Mammals are dominant
		<i>Eocene</i>	36.6	Eocene – Oligocene extinction event
		<i>Paleocene</i>	57.8	First large mammals appear
MESOZOIC <i>Age of Reptiles</i> 245 mya – 65.5 mya	<i>Cretaceous</i>	<i>Extinction of Dinosaurs</i>	65.5	K-T extinction event Earth looks closer to present-day Flowering plants appear
	<i>Jurassic</i>		144	First Birds appear Pangaea splits into Laurasia, Gondwana Dinosaurs are dominant
	<i>Triassic</i>	<i>First Dinosaurs</i>	208	Pangaea cracks First mammals appear Reptiles are dominant
PALEOZOIC 570 mya – 245 mya	<i>Permian</i>	<i>Age of Amphibians</i>	245	Permian – Triassic extinction event Pangaea forms
	<i>Carboniferous</i>		286	First reptiles appear First large cartilaginous fishes appear
	<i>Devonian</i>	<i>Age of Fishes</i>	360	Late Devonian extinction event First land animals appear First amphibians appear
	<i>Silurian</i>		408	First land plants appear First jawed fishes appear First insects appear
	<i>Ordovician</i>	<i>Age of Invertebrates</i>	438	Ordovician – Silurian extinction event First vertebrates appear
	<i>Cambrian</i>		505	End Botomian extinction event First fungi appear Trilobites are dominant
PRECAMBRIAN 4600 mya – 570 mya	<i>Proterozoic Eon</i>		570	First soft-bodied animals appear First multicellular life appear
	<i>Achean Eon</i>		2500	Photosynthesizing cyanobacteria appear First unicellular life appear
	<i>Hadean Eon</i>	<i>Priscoan Period</i>	3800	Atmosphere and oceans form Oldest rocks form as Earth cools
Formation of Earth				

Figure 5 Geological Time Scale

9. CONCLUSION

The distinction between living and non-living entities is obliterated. Both living and non-living things contain matter. All non-living entities to begin, defining "what is life and what is not life?" is critical. The Vedic Scriptures go into great length about this. The Vedas explain Atma (Soul), Jivatma (manifested Soul), and Jiva (Spirit).

When the soul (Atma) was given to human beings, Vedic knowledge (Brahmajānan) was revealed, according to the Atharva Veda. Thus, the human soul possesses all of VEDAS' knowledge. Amino acids, for example, have only shown the framework required to support life, not the source of life, namely the spirit. The important contribution of ancient Indian thought was the recognition of the spirit (soul) and its significance in the genesis of life, which is today recognised by modern science www.americanchronicle.com.

Living things have force and energy, whereas non-living things do not. As a result, life becomes a material property. Sunlight, as an electromagnetic wave of light, performs the marvel of photosynthesis, the transformation of materials (carbon dioxide and water) into life, as well as the enchantment of photosynthesis, the translation of light into living energy that passes from plants to all animals. What was formed by light energy through photosynthesis is dissolved and regenerated back into nature in its natural form through decomposition. Without de-photosynthesis, no life storey is complete.

When the soul enters the womb with conception, the foetus becomes a living, individual person. The Shrimad Bhagavatam, regarded as the "ripened fruit of the Vedas" in Hinduism, provides ample evidence for this. The soul is present in sperm, as well as during conception and germination. When a soul is reincarnated, it is sent down as a drop of rain, fertilising a grain of rice particle, according to the Bhāgavatam. The individual soul is then held within the sperm in a man's testicles until it is collected and digested during sexual contact by a competent guy. The essence of sustenance is sperm. The sperm is then injected into the female's womb, where it will combine with the ovum.

ईश्वरः सर्वभूतानां हृद्देशेऽर्जुन तिष्ठति ।
भ्रामयन्सर्वभूतानि यन्त्रारूढानि मायया ॥ 61 ॥

*īshvaraḥ sarva-bhūtānām hṛid-deśhe 'rjuna tiṣṭhati
bhrāmayan sarva-bhūtāni yantrārūḍhāni māyayā*

--- Bhagavad Gita: Chapter 18, Text 61 [Soul \(2011\)](#)

Translation: BG 18.61: O Arjun, all living beings have the Supreme Lord in their hearts. He guides the souls' wanderings, who are seated on a machine made of material energy, according to their karmas (destiny).

Electromagnetic force is a critical necessity for encoding DNA during cell genesis, conservation, and decoding DNA during evolution. The morphogenic field created by genomic DNA, which "sends and receives electromagnetic signals in a sequence-specific manner" in resonance with the solar canals via longitudinal hydrogen strands, represents heredity and accounts for 2% of DNA. Solar disturbances and their particle emissions are the most likely link between biological and extraterrestrial events. [Bhagavad-Gita \(2003\)](#).

Energy is never created nor destroyed, according to the First Law of Thermodynamics, but rather transitions from one form to another, similar to the Hindu concept of tman (Soul). However, this law does not apply to the liberation of energy and its escape to its source, cosmic space, as a result of de-photosynthesis. De-photosynthesis is a death sentence for living organisms. Death, on the other hand, is not the end of life, but rather a part of it, as life is a circle that never ends.

The First Law of Thermodynamics states that energy is never created nor destroyed, but rather transforms from one form to another, comparable to the Hindu notion of tman (Soul). However, the liberation of energy and its escape to its source, cosmic space, a process realised by de-photosynthesis, is not covered by this law. For living things, de-photosynthesis is a death sentence. Death, on the other hand, is not the end of life, but rather a component of its eternal, because life is a continual circle. De-photosynthesis ensures that the life cycle is completed and that life continues to regenerate itself, as evolution requires. Because photosynthesis is a continuous process, life must evolve in cycles.

CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest.

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Biography

Y.V.S.Rao, , Ph.D., FIE., C. Eng. (I), an octogenarian, was born in 1938. He is a Chartered Mining Engineer, Govt. of India Certified Mines Manager, Certified Mines Surveyor, Astronomer, Author and Astrologer. He was a faculty member of Mining Engineering Department of Osmania University, Hyderabad and later in Geology Department of S. V. University, Tirupati, India. Visited Leitz Electron Microscopy Application Lab, West Germany for 4-weeks on deputation. After retirement, as Executive Engineer, University Science and Instrumentation Department, he served as Visiting Professor of Jyotish (Astronomy and Astrology), Central Sanskrit University, Tirupati. He is the author of several books on Veda-Sciences published by LAP Academic Publications, West Germany and by Sri Venkateswara Vedic University, Tirupati. and has several research papers to his credit published in International Journals of UK and USA (ORCID Number: 0000-0003-2536-2027) . He is a Member of several professional bodies besides being a Member, National Manuscripts Mission ('namami'), Ministry of Culture, Government of India and a Fellow of Institution of Engineers(India), Mining and Metallurgy Division and Member of Electron Microscopy Society of India.

