

## Ancient Science of India 7: Ethno Biological Insights within Two Vedic Hymns-Gayatree and Mrutyunjaya to Guide the Human Society in Right Perspective

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**ABSTRACT** Gayatree and Mrutyunjaya, these two hymns are given the highest status among all the *Mantras* reflected in the four Vedas. The basic theme of these two hymns is devoted to enlightening the life of a human being. Gayatree says to attract the all-pervading divine power and reflect on the self-intellect, a descending theme. Mrutyunjaya advises to concentrate on the self-intellect point (*Kutastha*) to achieve the elixir of immortality, the omnipresent divinity, an ascending process.

### INTRODUCTION

Vedas are a universal and perennial source of knowledge (Saraswati 1973). The divine knowledge of Veda is applicable to all people, all places, in all times and available above the discrimination of religion and sex. The wisdoms of Veda are ever fresh, ever appropriate and everlasting above the limitation of time, place and action, beyond the range of doubts, disbelief and danger, and it is irreversible, infallible and indestructible. Vedic knowledge is permanent, which is flawless, stainless and spotless (Talreja 1982). The saints have realised the Vedic knowledge in their transcendental state of mind (Padhy 2016a), which is achieved under deep meditation (*Samaadhi*), scribed their perception in the form of hymn (*Ssloka*) and attributed the knowledge to the source of divinity, instead of claiming the authorship for self.

From an ethnobiological point of view, Vedas are a rich source of information on biota and contain extensive description of nature, ecology and ancient Indian science in addition to social and spiritual aspects, and each one is an independent area of research. Synonymously, just as the folk or ethnic knowledge that has passed from generation to generation through oral information, the Vedic knowledge has followed the same trend of *ipso facto*, which is why Veda has a special designation called 'Ssruti', which means facts to be learned or remembered (memorised) on the basis of hearing. In ancient days, the *Guru* used to recite the Vedic hymns and the *Ssishyas* repeated the same hymns to mug up and memorise them, which was

a popular tradition followed thousands of years back in the Vedic age. Probably this may be due to the availability of palm leaf inscription treatise, and was not within the scope of all concerned.

The aim of the present communication is to explore the ethnobiological insights within two famous Vedic hymns, namely, Gayatree and Mrutyunjaya, an imperative necessity to guide human ecology in the right perspective.

### METHODOLOGY

Literary research techniques of ethnobiological research were followed to explore the scientific theme of Vedas (Padhy et al. 2015), and few publications from Vedic science following this technique are noteworthy (Padhy 2016b, 2017; Padhy and Dash 2019).

### DISCUSSION

The teachings of the Vedas are secular, which proclaim fundamental truths of all subjects. The Vedas have been acclaimed as the foremost books of knowledge of mankind. The Vedic hymns (*Mantras*) are mostly presented in the form of prayers to guide humanity in the right direction. Facts about the Gaytree and Mrutyunjaya are as follows:

#### Gayatree Mantra

Out of the 20,379 *Mantras* available in four Vedas, Gayatree is given a special status and respect. The spectator (*Drastaa/composer*) of this

*Mantra* was saint Viswamitra, the working force (*Devataa*) behind it is 'Sabita', the Sun God and its metre of singing is Gayatree. The hymn has exposed itself in Rigveda (3.62.10), Yajurveda (36.3) and Samaveda *Utaraarchika* (13.4.3) as follows:

*Aum bhur buvah svaha tat savitur varenyam,  
bhargo devasya dhimahi dhiyo yo nah pra-  
chodayat.*

Mostly this hymn is called *Sabitree* or *Guru Mantra*. Saint Viswamitra, as the spectator of this *Mantra*, has proved worthy of his name, because his name Viswa + Mitra meaning friend of the universe is relevant with his austerity and penance, which has done a lot for the welfare and prosperity of the world. Similarly, his *Mantra* Gayatree is composed in such a style that its muttering or recitation can drag the universal energy and implement for the betterment of human society as a perennial source. It is said that the human society is still enjoying the fruits of Viswamitra's penance that he performed thousands of years ago. His creative power and research for the first time focused on the positive utility of certain plants and animals of nature's biodiversity, which were regarded earlier as worthless. The search for food, medicine, energy and many other essential commodities from non-traditional sources and their successful utilisation by modern science for human society is certainly a reflection of Viswamitra's guidance in obscurity.

The emergence, importance and principles of muttering of Gayatree is well elaborated in the epic *Manusmriti* (Manu: 2/76-83,87,101,102,104,118,148,170) (Swain 1997). Moreover, SriRama Sharma Acharya's written "Gayatree Mahavigyana" is a special compilation to understand the scientific theme of Gayatree *Saadhana*. It is an authentic treatise.

SriRama Sharma has analysed the Gayatree *Mantra* as follows (Acharya and Sharma 2001):

*"That reality of life, destructor of sorrows, disposition of happiness, the only best, powerful, spoiler of sins, ideal of godly qualities is The Almighty. Let us hold him within our inner self. That self-existing divine power will guide our intellect in the right direction."*

Swami Bidyananda Bedaha, the famous analyst of Vedas has recounted about Gayatree in his treatise, 'Vedaloka', "*Gayatree Mantra is not only for muttering, it is a theme of meditation (Dhyana) and helps to be stable at stages of Dharana and*

*Samadhi. The speciality of his analysis of bhur, bhuvah svaha is interpreted as Sat, Chit, Ananda (truth, intellect and happiness) or Satchidananda."*

One holds up the adorable, elegant, beautiful, divine effulgent and gracefulness of the Satchidananda Deva in one's *Dhyana* and *Samadhi*. Let that brilliance inspire and motivate one's intellect positively with the award of divinity (Bedeha 1976).

Yogiraj SriShyamacharan Lahiri Mahasaya has interpreted Gayatree from Yoga point of view. His analysis in nutshell is (Sanyal 1960):

*"This (human) body is in the disposition of 'Aum', inside which the supreme being (Brahma) the kutastha (point in between the eyebrows) exists in the form of Sun God. Let my intellect be fixed there."*

Sri Satyakam Vidyalkar's analysis of Gayatree says, "*Meditate on the radiant glory of God who illuminates all. May our soul be worthy of receiving His divine light. Enlightened by His grace, may we aspire for high objectives and resolve to proceed on the spiritual path with a drive. May this divine flame guide the faculties of our intellect on the path of ultimate salvation*" (Vidyalkar 1974).

An Internet source says, "*We meditate on the Spiritual Splendour of that Supreme and Divine reality, source of physical, astral and celestial spheres of existence. Allow that divine being Supreme to illuminate our intellect, so that we can realise the Supreme truth."*

To understand the Gayatree *Mantra* from a scientific point of view one has to analyse the Sun God (*Sabita Devataa*) from a nature's point of view. The Sun is a gigantic hot mass that releases and distributes light for millions of years constantly. Its diameter is 13,92,000 kilometres, size thirteen lakhs times bigger than the Earth and weighs 3,33,400 times more. The external temperature of the sun is 6000 °C and the inner temperature is 15 crores °C. Comparatively the iron melts at 1430 °C. In the solar source every moment, there is transmutation of Hydrogen to Helium and the difference in mass of the atoms is converted into energy that is released in the form of light. Modern science has discovered that *Aum* is the cosmic primal sound of the universe generated in the Sun's body during this process. The energy that is released during a fraction of time is spread over the solar system, out of which only one part of fifty million comes towards the earth. Out of the later energy 34 percent is reflected back and 10

percent is absorbed by the Ozone layer of the earth. Out of the remaining 56 percent that enters into the earth's atmosphere only 1 percent to 5 percent is used by the phyto-diversity for photosynthesis and the rest is absorbed by the earth's surface and water bodies. In a final calculation it is studied that 2 calories of energy per minute, per square centimetre of the atmosphere of the earth reaches from the solar source. One can imagine how the biodiversity on earth survives with the fractions of energy of the solar system. From this point of view the ancient sage scientists of India had imagined the existence of a conscious energetic personality as *Devataa* inside the unlimited powers of Sun. The source of light energy that comes from Sabita, the Sun God is named as 'Sabitree' or 'Gayatree'.

In the Bhagavad Gita, SriKrishna has said:

- *I am the radiant Sun among the luminaries* (10/21).
- *The light which resides in the Sun illumines the whole world, that which is in the Moon and in the fire-know that light to be Mine* (15/12).
- *Entering the earth I support all beings by my energy; and having become the sapid Moon I nourish all herbs* (15/13).
- *Among the Vedic hymns, I am the hymn known as Gayatree* (10/35).

The solar energy is captured by the chlorophyll molecule of the plant system during the process of photosynthesis. The light energy is transformed to chemical energy, which in turn is utilised for the synthesis of carbohydrate molecules. Photosynthesis in Sanskrit is known as *Samslasana* (*Sam+Slaes+Ana*), which in a broader sense means to embrace accumulation or the conjunction process. The plant system most efficiently performs this process as a producer of the ecosystem. Solar energy in the form of food moves in the food chain from producers to consumers and in the form of supporting feeder nurtures biodiversity and human society. Sage scientist Viswamitra had keenly observed the process of photosynthesis and accordingly developed an yogic process of 'human photosynthetic system' to draw the energy from solar sources with the application of the Gayatree *Mantra*. In this technique, the devotee is expected to do *Japa*, *Dhyana* and *Dharana* of Gayatree, with a mental process as if the endless stream of solar energy is penetrating into his body with steadiness and he is accepting it. This worship is carried out

during three *Sandhya* times, that is, 24 minutes after sunrise, before sunset and at 12 noon. From a scientific and physiological point of view, the human skin synthesises Vitamin D when exposed to U.V rays of the solar radiation that is available at the time of sunrise and sunset. Recently scientists have proved that Vitamin D plays an important role in the development of masculinity in human beings. The excitation and efficiency of the human sperm is highly influenced by the latter vitamin. The supernatural effects of Gayatree are plentiful and subject to realisation. Since the Vedic age, it is a common practice in India to initiate the young boy into Gayatree worship system during the period of *Upanayana*. After that he is called '*Dwija*' (twice born) who takes a vow to maintain celibacy during the student career till marriage. Man is equal with the other members of biodiversity on the basis of biotic status. But, his mental power supports him to draw the divine power from solar energy and drive it for his spiritual upliftment in a right track.

Gayatree can be analysed from the point of environmental science as realised by the author (Padhy 2008), "*Following the cosmic ecological principles of the universe-creation, maintenance and destruction, our global ecosystem is conserved within the frame of Pancha Mahabhuta. The flow of unending sources of solar energy nurtures biodiversity. Let that energy guide our intellect in the right direction.*"

### Benefits of Gayatree Mantra

This hymn is the key that opens the door of Cosmic consciousness, cleans the mind and confers wisdom, prosperity, purity and liberation, sharpens the power to acquire knowledge, and provides mental satisfaction. From a worldly point of view it relieves diseases, avoids all the miseries, fulfils all wishes, protects from all dangers, ensures a bright and auspicious future, provides inexhaustible strength to overcome all obstacles, removes all fear, and destroys one's *Karma* to make free from the wheel of birth and death.

### Mrutyunjaya Mantra

The other famous *Mantra* of Veda is '*Mahamrutyunjaya*', which is presented in Rigveda, 7<sup>th</sup> *Mandala*, 59 *Sukta* and Yajurveda, 3<sup>rd</sup> *Aadhyaya*,

60 *Chanda*. The spectator of this *Mantra* was Basesthaa Maitrabaruni, *Devataa-Rudra* and metre *Anustup* as follows:

*Aum trayambakam yajamahe sugandhim  
pushtivardhanam  
urvarukamiva bandhanan mriytor mukshiya  
maamritat*

Mahamrutyunjaya *Mantra* is devoted to *Bhagawan Shiva*, significantly known as the life saver hymn. *Shiva* is worshipped, followed by a ceremonial bath (with milk, honey, ghee, curd and Gangajal) along with recitation of the *Mrutyunjaya Mantra* for better health, happiness of mind, long life and protection from undue death.

An internet source has projected the literary meaning of the *Mantra* as follows:

*"We worship the three eyed one (Lord Shiva) who is fragrant and who nourishes all beings; may He liberate us from death, for the sake of immortality even as the cucumber is severed from its bondage (of the creeper)."*

Sri Satyakam Vidyalkar (1974) has presented the meaning nicely as follows:

*"May your death be a step to immortality. Let the separation of your soul from your body be a step to complete liberation. Detach mentally before your body is decayed and your soul on the path of immortality. May God release your soul from the bondage of mortal life, as the cucumber, full of fragrance, is separated from its stem with its living seed, when it is ripe. May your soul attain fulfilment before it leaves the earthly body."*

The author has analysed this *Mantra* from the science of yoga point of view (Padhy 2008):

*"We worship the almighty who is established in the form of Aum in our Kutastha. This physical body composed of Pancha Mahabhuta is worthy to be used for self-realisation only (following techniques of Yoga). As any ripened fruit (like Urrbaruk) gets disconnected (from its mother plant), similarly let our soul be free from the grip of death and filled with the elixir of immortality."*

Sri Rama Sharma Acharya has presented the meaning as follows (Acharya and Sharma 2001):

*"We worship the divinity, who is enriched with centred virtues, glory and source of nourishment as well as three modes of protector. Let that God Rudra free us from the bondage of mortal life, like a ripened cucumber but not away from immortality."*

Pandit Raghunandan Sharma has noted that medicine is called *Amba* in Vedic literature (Yajur

Veda: 12/74). His interpretation says (Sharma 2003):

*"We sacrifice (as oblation to the fire) the three Ambas (medicines) enriched with fragrance and nutrition, and by that our sorrow of mortality gets dispelled like the fruit Urrbaruk (gets disconnected from the mother plant) but not away from immortality."*

Swami Dayananda Saraswati's view is completely different from others. He says:

*"O human beings! The Almighty is to be worshipped by everyone. His worship provides nourishment, growth, best fame and salvation. Fear of mortality gets destroyed. Abating Him, we should not worship anyone else"* (Saraswati 1973).

### Benefits of Mrutyunjaya Mantra

Mrutyunjaya austerity is not only for self-spiritual advancement, but rather it saves from many worldly sorrows. In gist they are:

1. To save oneself from negative astrological sufferings.
2. Salvation from any dangerous disease.
3. Save from unnatural death in a village or town due to the spread of an epidemic.
4. Helps at the time of unnatural demise of any relation or close person.
5. Most useful during the unwanted wealth loss and with a wish to be free from poverty.
6. Freedom from unknown or unexpected punishment imposed by the ruler (king).
7. Very helpful during the loss of spiritual attitude. Again the hymn recitation enhances the religious spirit.
8. To avoid accidents, unnatural death, fear of enemy, fear of war/any quarrel and attack from any disease.
9. Saves at the time of loss of personality, power and wealth.
10. At the time of family dispute, quarrel between brothers or overall family distress.
11. Except the above narrated benefits Mrutyunjaya *Mantra* should be recited for the betterment of others and their removal of sorrow. By this there will be improvement of self as a rebound positive reaction.

The purpose of discussing the internal theme of two important and lively hymns of all the Vedas is that the theme of the science of Yoga is expressed through them in a nutshell form. The

Vedic *Mantras* are enriched with the purport of true knowledge, and on proper analysis they reveal excellent wisdom.

### A Comparative Study

The spectator of Gayatree is Saint Viswamitra and of Mrutyunjaya is Saint Basistha. From a grammatical point of view the name Basistha is derived from the root *Besesta*, which means the divine one.

Viswa+mitra is a friend of the universe, and significantly represents the divine power, which is widespread.

In many *Puranic* stories the strong difference between the two saints is discussed. This indicates the difference of opinion in their school of thoughts. In the Ramayana epic, Basistha was the family preceptor of *Bhagawan* SriRam and Viswamitra was his guide and path shower. From all these points of view, it is essential to make a comparative study of the basic theme of the *Mantras*, composed by both of them.

1. Gayatree says to attract the all pervading divine power and reflect on the intellect. Mrutyunjaya advises to concentrate on and worship the *Kutastha* (the centre of intellect) to achieve the elixir of immortality (*Amrutatwa*), the omnipresent divinity. From this point of view, Gayatree has a descending theme, while Mrutyunjaya is an ascending process.
2. In a different presentation, one can take a circle, which has a centre and the circumference is based on the latter. The radius joins the centre with the circumference. The theme of Gayatree is a flow from circumference towards the centre or attraction of infinite towards the centre or attraction of infinite towards finite (*Kutastha*). Mrutyunjaya theme is just the reverse movement of finite towards infinite. In this situation the centre is the *Aatman-kutastha* and the circumference is the *Paramatman/Almighty* or God/infinite.
3. The above discussion can be explained in a different manner. *Aatman* being the centre, the limitless circumference, which is the *Paramatman* surrounds it. Otherwise the *Paramatan* is the centre and the whole biodiversity (as *kutastha*) is moving around the divinity (Gita: 9/10). Whatever may be the analysis, the basic aim of both the *Mantras*

is to establish a strong bond between the *Aatman* and *Paramatman*. One may pick up any one and realise its internal wisdom to make life successful. Otherwise, ecologically, this is for establishment of stable relationships between a living being and biodiversity.

4. The *Devataa* is the functional power of a *Mantra*. Through Gayatree the *Sadhak* attracts the all pervading solar energy (*Sabita*) or divine power towards him in descending form. In Mrutyunjaya, the *Devataa* is Rudra, which means concentration of power or force. Rudra represents the violent/severe/furious/intense application of power. The Mrutyunjaya *Saadhan* concentrates on the *Kutastha* and forcefully moves through the Rudra energy in ascending form to unite with the Almighty.
5. Now the basic theme of both the *Mantras* can be utilised for better upliftment of a *Saadhak*. Through Gayatree he can attract the divine power by which the self-spiritual status can be elevated with the expansion of potential energy of the self. With the concentration of the energy through Mrutyunjaya *Sadhan* he reaches the Almighty and merges there.
6. The science of Yoga states that in every human body the most important Yogic nerve is *Sushumna*, responsible for perception of the self (*Aatman*), is placed within the spinal column being extended from the lowest vertebra up to the brain. Inside the *Sushumna* (central nervous system) there are six spiritual energy centres called Vortex (*Chakra* or *Padma* in Sanskrit). The *Sushumna* starts from the *Mulaadhaara* Vortex point placed at Pelvic Plexus or Coccygeal Ganglion. Inside *Muladhara* the *Kundalini* energy is situated being connected with the universal energy. The sixth vortex point situated at the Cervical or Carotid Plexus (at the point between two eyebrows) is called *Aajnyaan Chakra*, the phenomenon of unlimited energy. This is the point where the *Aatman* is realised (*Kutastha*).

The *Kundalini* is always in dormant condition. By Yogic manipulation it is activated and the energy travels from vortex to vortex, reaches the *Aajnyaan Chakra* and finally reaches the brain (*Sahasraa* or the 7<sup>th</sup> vortex point). At this point the Yogi attains divine wisdom, super consciousness,

perception and realisation of the universal spirit (Padhy 2016a).

In Yoga, the practice of rhythmical breathing or *Pranayama* makes all the motions of the body perfectly rhythmical. Broadly, the Yogi mentally directs his life energy or *Praana* to move, upward and downward through the six spinal centres that energise the *Sushumna*, which facilitates the passage for movement of *Kundalini* energy. *Praana* is the infinite and omnipresent manifesting power of the universe. In fact, breath is the vehicle through which the universal *Praana* enters into a living system. Through *Pranayama*, in addition to excitation and movement of the *Kundalini* energy it subdues the mind of the Yogi, makes it free from unwanted vibrations either being induced internally or influenced externally, and finally, the mind leads to a vacuous condition (*Yogah Chitta Vritti Nirodha* of Patanjali *Yoga Sutra*). Such a Yogic mind is most powerful, acquires the power of creation, maintenance and destruction. From KriyaYoga point of view the attraction of life energy (through *Pranayama*) from the Vortex point of *Kundalini* (*Mulaadhara Chakra*) towards the *Kutastha* (*Aajyan Chakra*) is based on the theme of Gayatree and thrust of life force from *Kutastha* to *Kundalini* is Mrutyunjaya *Saadhana*.

In the post-Vedic period there was a saint named Sukraacharya who had performed enough research on the above two *Mantras*. He was the composer of a law book called Sukra Neeti. By joining these two hymns he created a new Synthetic *Mantra*, famous as 'Mruta Sanjivani'. By application of this *Mantra* a *Saadhak* can give life to a dead body, if the death has occurred untimely due to war or accident. Basically through the power of Gayatree the universal life force is attracted and with the skill of Mrutyunjaya the life force is applied to revoke the life of a dead person. The *Mantra* is as follows (Padhy 2008):

*Aum hoouung juung sahha,*  
*Aum bhur buvah svaha,*  
*Aum tat savitur varenyam;*  
*trayambakam Yajamahe,*  
*bhargo devasya dhimahi;*  
*Sugandhim pushtivardhanam,*  
*dhiyo yo nah prachodayat;*  
*urvarukamiva bandhanan,*  
*mriyora mukshiyaa maamritat;*  
*Aum Svaha buvah bhur;*  
*Aum Sahha Juung hoouung Aum.*

## CONCLUSION

The above study indicates that the Vedic *Mantras* are not mythical presentations. They are enriched with scientific wisdom.

## RECOMMENDATIONS

One should daily recite both the Vedic *Mantras* of Gayatree and Mrutyunjaya in the right time for one's self upliftment from spiritual and social point of view.

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