

Ancient Science of India 4: The Bhagavad Gita Reveals the Concepts of Environmental Science: A Brief Review*

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KEYWORDS Bhagavad Gita. Environmental Science. Mahabharata War

ABSTRACT The Hindu religious epic Bhagavad Gita was narrated by SriKrishna five thousand years ago in the midst of the Mahabharata battlefield. Research on Gita reveals the scientific background of the then people regarding the awesome nature of the cosmos, age of the universe, creation of life and evolution, fundamental principles of environmental science, basic theme for conservation and ramification of the biodiversity and work-culture for sustenance. The abiotic and biotic manifestations at that time were pure, prosperous and powerful compared to the present conditions.

INTRODUCTION

The Gita refers to a conversation between a student and his teacher, with the former putting a question of ethical importance and the latter explains with a proper answer. There are sixteen such Gita versions in the epic Mahabharata. Srimad Bhagavad Gita is supreme among these narrated by SriKrishna in the midst of the battlefield of Kurukshetra. It is an unimaginable attempt of the Master, as if erecting the Everest in the mid of the scorching Sun.

Gita spreads knowledge for all concerned. Every culture finds nurturing words for its own philosophy in Gita. Introspection into this epic, to search out the basic theme of environmental science to understand the divinity through nature, is an attempt in this communication.

METHODOLOGY

The Bhagavad Gita is a part of the epic of Mahabharata, written in poetic form in Sanskrit and accepted as the most sacred religious text of Hinduism. It is divided into eighteen chapters, presented in question (by Arjuna) and answer (by SriKrishna) form in seven hundred verses. The study of ancient literature and mythology comes under the literary research in ethno-biological research techniques (Padhy et al. 2015). The ancient scientific thoughts, encapsulated in the Sanskrit hymns of Gita are analysed from modern scientific point of view and presented (Padhy 2019) in the text.

*This work was extracted from the book "Global Eco-Architecture: Paradigm from The Bhagavad Gita" by Sachidananda Padhy, published by Lambert Academic Publishing, Moldova, Europe in 2019.

OBSERVATIONS AND DISCUSSION

A Prelude

SriKrishna was the supporter of the Pandavas, but personally was not a belligerent in the war. He preferred to be the charioteer of Arjuna. Before the beginning of the war, Arjuna asked SriKrishna to place his chariot between the two armies. The aim of Arjuna was to discern the war-minded warriors who have thronged there to fight. He witnessed the presence of his paternal uncles, grandfathers, teachers, maternal uncles, cousins, sons, grandsons, nephews, grandnephews, friends, fathers-in-law and well wishers assembled in both the armies. Seeing all his relations and kinsmen present there, Arjuna was filled with deep compassion. He had all sorts of a negative physical experience such as trembling of his limbs, parching of mouth, burning of the skin all over and whirling of the brain. The Gandiva bow slipped from his hand and he could not manage to stand there. Finally, he expressed his negative desire for war, and was ready to be killed in the battle being unarmed and unresisting.

Observing the predicament of Arjuna, being overwhelmed with pity, drowned in distress and eyes filled with tears, SriKrishna addressed him with encouraging words. He said that such shameful dejection at this queer hour and crossroad is unworthy and disgraceful, and strongly recommended Arjuna to quit petty faint-heartedness and wake up without yielding to unmanliness. Fearlessness, firmness, cleverness and steadiness in battle constitute the natural duty of a *Kshatriya*, to which he declined. In response to Arjuna's determination to withdraw from fighting the battle, SriKrishna smiling, elaborated him the significance of work culture, which is the

concrete embodiment of wisdom, that is, The 'Bhagavad Gita'.

Concepts of the Gita

The work culture of Gita is analysed from *Gyana* (knowledge), *Yoga*, *Bhakti* (devotion), *Karma* (duty), *Sansaara* (worldly affairs) and *Sanyasa* (renunciation) point of view by many saints and learned persons. Every culture and religion finds support for their own philosophy in the Gita. The Gita supports all sorts of belief and worship, that is, God is single, God is dual, God is formless, God is with a form, God is concentrated at a point and God is omnipresent. Introspection into this epic to understand the divinity through the widespread nature and search out the basic theme of environmental science is not an adventure. It is a humble rediscovery of environmental consciousness of human civilisation five thousand years ago as follows:

1. SriKrishna reveals the secrets of the universal environment based on the awesome nature of the cosmos, the age of the universe, its creation and destruction as well, and has fixed the evolution of the biological world since four *Manvantaras* (1,04,58,77,118 earthly years upto now) (Padhy 2013a).
2. Aspects of ecology, which are amenable with modern science such as ecological factors, flow of energy in the ecosystem, nature's hydrological cycle, ecological niche and socio-ecological pyramids are discussed in this epic (Padhy 2013b).
3. The different manifestations of the nature reflected in the Gita, when arranged systematically can be grouped into nine divisions. These are, 1. Basic theme of life, 2. Sustenance of life, 3. Ecological factors, 4. Proliferation of biodiversity, 5. Expansion of human characters, 6. The source of knowledge, 7. The capitalised sources of knowledge, 8. Specialised divine factors of the nature, and 9. The time factor that encapsulates everything. The chronology of the above divisions represents the biological and anthropological evolution in course of time. Gita has identified twenty biological characters present in diversified form in living beings such as intellect, wisdom,

non-illusion, forgiveness, truth, self-restraint, calmness, happiness, pain, birth, death, fear, fearlessness, non-injury, equanimity, contentment, austerity, charity, fame and obloquy (Padhy 2016).

4. Nature (*Prakruti*) consists of three essential metaphysical constituents called *Gunas* (quality), named, *Sattva*, *Rajas* and *Tamas* (yet to be accepted by modern science). *Gunas* are the property and essence of all things. The existence of *Prakruti* cannot be realised in the absence of *Gunas*, as fire without heat. The diversity of the *Prakruti* is a resultant product of interaction between *Gunas*. There is no being on earth or anywhere else, which is free from these *Gunas* born of *Prakruti*. *Gunas* exert impact on genetic system responsible for division of human society and other living beings (Padhy 2014b).
5. The Gita has focused on the practical realisation and perception of one imperishable divine existence as undivided and equally present in all individual living beings as the only means for the conservation of the biodiversity, which stands as the most appropriate representation for the global biosphere as a single unit as per modern ecological science. It is rightly presented that, 'the divinity is undivided and yet seems to be divided in beings', focuses on the whole world as a single giant ecosystem. It is described as, He (the Divinity) has endowed with numerous arms, hands, thighs and feet on all the sides, and many bellies and heads in all directions with innumerable mouths, teeth, eyes and ears all around, extended in countless forms, and stands pervading all over the universe (globe) (Gita 11/16, 23; 13/13) (Padhy 2014a).
6. Nature and its inhabitants should live together with reciprocity, which has been the prime principle since the beginning of creation as the Gita says. Mankind should protect the environment with the spirit of sacrifice (*Yajnya*) from where he gets all sorts of unasked gifts for livelihood. The nature is the glory of the divinity (Padhy 2013c).
7. The abiotic and biotic manifestations once declared 5,115 years ago by SriKrishna as pure,

prosperous and powerful are now deteriorated to a great extent. The Gita says, 'Let the human community protect the environment for their own survival and the biodiversity around' (Padhy 2015).

8. The diversity of human characters from positive and negative points of view are keenly analysed in the Gita. The essence of all narrations is that a person should try to apply his conscience to proliferate his divinely qualities and destroy the demonic characters, in order to move towards the fulfilment of life (Padhy and Pattnaik 2016).
9. Any living system is a biological machine, and has to work for self-sustenance. There are fixed channels for expression of actions. The inner ideology of action and external performance leads a being to higher stratum. One evolves through actions only, keenly devoted to natural duty. Work culture plays an important role to shape up the physical, biological and social ecology of all beings (Padhy 2018).
10. SriKrishna has presented the human ecology (*ManusyaLoka*) as an imperishable banyan tree in Bhagavad Gita that has its roots upward and branches down. The leaves of the plant are the Vedic hymns (human knowledge) and the twigs and buds are the objects of senses. The tree has also roots growing down (towards the branches), which are bound to the fruitive actions of human society. The plant is nourished by the three modes (*Gunas*) of material nature. The real form of this tree cannot be perceived in this world. No one can understand its foundation, beginning and end. The work culture of detachment is the weapon to cut down this strongly rooted tree, to make one self-free from the cycle of birth and death (Padhy 2021b).

Elaborations of the work culture by SriKrishna is so focused and so vast that, it never gives scope to any one for any sort of misunderstanding in performing his own duty. The day-to-day performance of duty by every individual of the global biodiversity stands as the flywheel to rotate the life cycle of the nature in right motion and prospective direction, where human civilisation is a part and parcel. Finally, SriKrishna gave Arjuna the freedom to choose the right pathway with the words, '*Yatheechasitathaa*

kuru' (do as you like). This shows that, allotment of duty to any living being is a responsibility of nature (God) and performance for sustenance is the option of the individual.

The Master Has Frankly Admitted

I am the *vedic* ritual,
the sacrifice,
and offering to departed;
I am the medicinal herb,
the food grains,
and the *Mantra* formula sacred.
I am
the butter clarified,
I am
the fire sacred,
and oblations
there offered.

Of this universe:
I am the sustainer and ruler,
father, mother and grandfather.
I am only knowable,
the sacred *Oum* syllable,
the three *Vedas* collectible.

The goal, Lord, witness, supporter,
abode, refuge and well wisher.
The origin and dissolution,
the treasure house and foundation.

I am
fundamental,
the seed
imperishable.
I radiate heat as the Sun,
withhold N' send forth the rain.
I am immortality,
cause of mortality.
I am being,
as well, non-being.

Gita: 9/16-19 (Padhy 2021a)

SriKrishna's mission for environmental education to humanity focuses over the motive of the Master to enhance the eco-consciousness of Arjuna before the onset of the non-eco-friendly war at Kurukshetra (Padhy 2021c). It is a fact that the then negative events, which occurred five thousand years ago in the Mahabharata war has

turned to be a day-to-day activity in the present day so called scientific world.

CONCLUSION

The History of Ancient Science of India traces its root in the Vedas and other Vedic age literature (*Upaveda, Vedaanga, Upaanga, Smruti, Tantra* and *Puraana*). In the excellence of the Gita it is narrated that : “All the *Upanishads* are the cows, the milker is SriKrishna, the cowherd boy ; Paartha/ Arjuna is the calf, men of purified intellect are the drinkers, the milk is Supreme nectar of the Gita. *Upanishad* means “sit down with” Master to learn about the *Aatman* (Soul). These are philosophical treatises that form a part of the Vedas contain the most crystallized bits of wisdom. There are 108 *Upanishads* and Gita is also regarded as a Greatest *Upanishad* (internet sources). The Epic Gita has focused on the practical realization and perception of one imperishable Divine existence as undivided and equally present in all living beings. This is the greatest philosophy of the world for conservation of the biodiversity. The vast way SriKrishna has explained the concepts of the environment, that focuses over the scientific knowledge and implementation of ancient Indians.

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Paper received for publication in August, 2021

Paper accepted for publication in October, 2021