

Buddhist and Hindu Reductionism in Understanding the Universe

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ABSTRACT

From the origin of the Indian philosophy up to the present development, the philosophical discussion of the nature of cosmology has been playing a crucial role in understanding the universe. Both Hindu and Buddhist philosophical traditions unanimously agree upon the vastness of the universe, hence using different methodologies to know the universe had been introduced by them concerning the limit of human experiential knowledge. On one hand the human life span seems insufficient to gain the complete knowledge of the universe. On the other, the universe seems endless through the empirical knowledge and they were frustrated by the fact of the eternality of the universe. However, this fact laid for more search on the universe due to the curiosity to know the world. Eternality became a philosophical issue both in time and space dimensions. If the cosmos is eternal in the time, the implication arrived by them was the beginningless and endless of it. If the cosmos is treated as eternal in terms of space, what was implied was the beginningless and endless in both directions. Even though there had been a number of efforts to understand the universe, due to above difficulties it was impossible to have a complete knowledge of it. To alleviate them, Both Hindu and Buddhist traditions implemented the reduction method as a strategy. For instance, the universe had been depicted through the macrocosm, yet it can be perceived by microcosm of the individuality. The Buddha also had shown the futility of searching the universe, yet affirmed that it can be known by an analogy of the individual. Here, the term reductionism is being using for the method of analogies in understanding the universe. This research paper expects to elucidate comparatively this unique methodology used by the both traditions.

Key words; Analogy, Macro, Micro, Reductionism,

INTRODUCTION

The use of reductionism is a common practice in the modern scientific inquiry as an interpretive methodology. Reductionists take one theory or phenomenon to be reducible to some other theory or phenomenon. Here, predominantly analogies as well as models are used especially to phenomena which are unable or difficult to observe through empirical knowledge. For instance, a model can be used to depict the solar system which is a colossal and a huge extension in the space. A reductionist on biology may use concepts such as cell or DNA to reduce to collections of physio-chemical entities of the species. Thus, the concept of reductionism has become an integral part of modern lives. As a result of that, Reductionism refers to a particular mental attitude or manner of thinking that has dominated the modern scientific outlook.

Here, an attempt will be taken to prove that the method of reductionism was used even by Hindu and Buddhist philosophers in the pre-scientific era especially for the theory of cosmology. Such knowledge systems were productively used in alternative sciences such as in Ayurveda medicines and Astrology. The interconnectedness between the universe and the individual had been interpreted in a very sophisticated manner. They might not be scientific, yet were really useful for Indians to know the world. These proto-sciences were useful for their knowledge of the universe.

Upanishadic Reductionism

Upanishadic Philosophers questioned three important philosophically sophisticated ideas as follows;

1. What is the reality in 'I'?
2. What is the reality in the world?
3. What is the relationship between 'I' and the 'world'?

The whole Upanishadic philosophy centered around these questions and they are still in the inquiry both in the Western and Eastern philosophical traditions. Through the spiritual as well as philosophical investigations, early Upanishadic thinkers could find answers for the above questions in an analogical way. They are respectively presented as follows;

1. Atman is the reality in 'I'.
2. Brahman is the reality in the 'world'.
3. Thus, both are identical.

It seems this argument had been established in a logical way as there is a dialectical progress in the knowledge of reality. First one had to look into the internal world searching for the reality within oneself. Then the knowledge of the reality within the individual is realized as the 'self' which is eternal and pure. This is the smallest cosmology that can exist as a reality. Here it is clearly explained the application of reductionism as opposed to Vedic philosophy. Vedic philosophical investigation aimed of knowing the external world which was found to be impractical as the universe seemed to be an eternal and vast entity. By following spiritual methods Upanishadic thinkers turned their attention towards the individual and believed to know the reality in me is far more important than searching a reality without or in the external world. After realizing the nature of the self through seeing 'atman', they focused on the universe which existed externally out of the individual. By the thorough philosophical investigations, they realized it and named as 'brahma'. Now there are two realities as 'atman' and 'brahma' that is the idea of dualism in the Hindu tradition. The world was understood with reference to two concepts and on one side it was the reality of individual and on the other side it was the reality of the universe.

The deduction of macrocosm i.e., the absolute truth of the Universal Self into microcosm i.e., the individual self can be considered as a revolutionary finding in the Vedantic philosophy. Contrary to Vedic ideas, Upanishadic thought turned the attention towards the internal existence because they probably would have realized the impracticability of knowing the external world which seemed vast and eternal. Thus, the understanding of oneself is the reflection of the whole universe and in turn the nature of the whole universe can be understood with reference to the individual self. This example is clear evidence of using an analogy to know and interpret the nature of reality. Thus, the division of the cosmos into two parts ultimately ended with a non-dualism. However, this idea prevailed even before as an insightful thought in the saying of "Ekam hi sath vipra bahuda Vadanti" i.e., the same truth is uttered in a multiple way. Then it evident to say that even the earliest Hindu ideas contained the concept of non-duality as a germ philosophical idea. The culmination of advita vedantaic philosophy is the unity of all in the ultimate analysis.

1. The self as the pratyagathma is a reflection of jagadathma.
2. Both are identical.
3. Thus, there is no plurality.

The practical and social value of the concept of non-dualism and its contemporary relevance also are worthy to mention here. In making the global or social peace the idea can be very productively implemented. Using the internal reality to persuade the external reality is an insightful knowledge of the unity of all human beings. First, the individual focusing on the reality of oneself with reference to the macrocosm affirms that 'I am nothing, but Brahman.' Then the realized one pointing towards the other claims that 'the same is in you.' This is proved that the Brahman exists in me as well as in others are same and equal. The conclusion is drawn as the ultimate realizations as 'all are brahman.' One of the implications of this conclusive idea is the oneness of

human beings. This can be easily used as theoretical basis for peace and harmony. As it seems, the Hindu concept of “Vasudhaiva Kutumbakam” could be a broad idea developed based on the spirituality of non-dualism. This Sanskrit phrase can be translated as “the whole world is one family.” into English. This concept conveys the idea that the entire world is interconnected and all people are part of a single global family. It promotes the values of unity, cooperation, and the idea that we should treat everyone with kindness and empathy, regardless of their nationality, race, or religion. It’s often used to emphasize the importance of global peace and understanding among different cultures and nations. What is interesting to note here that this profound idea originated in Hinduism many centuries ago before the Western concept of ‘the global family’ was introduced.

Buddhist Reductionism

The early Buddhist source provides a clear application of analogy as well as the method of reductionism in understanding the vastness of cosmos. Once a person in the name of Rohitassa attended the Buddha and asked a question.

"Is it possible, by traveling, to know or see or reach a far end of the cosmos where one does not take birth, age, die, pass away or reappear?"

This question has two parts to note philosophically here. On one hand, the question of the eternity of the universe which had been previously analyzed by the Buddha. Once the Buddha was questioned on the nature of the cosmos as follows;

1. Is the world eternal?
2. Is the world not eternal?
3. Is the world both eternal and non-eternal?
4. Is the world neither eternal nor non-eternal?

These questions were raised based on the time concept. The problem of the universe can be either in terms of its expansion i.e., the existence in the space or its existence in terms of in the time sphere. The following questions were asked based on the concept of space.

1. Is there an end to the world?
2. Is there not an end to the world?
3. Is there both an end and non-end to the world?
4. Is there neither an end nor a non-end to the world?

On these occasions the Buddha kept silence and refrained from giving answers due to the pragmatic reasons. If these were answered categorically, it seemed that the questioner would be in the danger of having ideologies and ultimately, they may lead to hindrances to spiritual development.

The other important philosophical value of Rohitassa’s question is that he expects an end of suffering by reaching the end of the cosmos. The Buddha’s answer is clear here again referring to the pragmatic nature of the proposition. The uniqueness of the Buddha is that whatever the proposition is forwarded it is used productively to elucidate the reality. Here too, the Buddha referring to Rohitassa’s question answered;

"I tell you, friend, that it is not possible by traveling to know or see or reach a far end of the cosmos where one does not take birth, age, die, pass away, or reappear."

Rohitassa agreed with the Buddha and responded with more clarification on the proposition.

“Once I was a seer named Rohitassa, a powerful sky-walker. My speed was as fast as that of a strong archer — well-trained, a practiced hand, a practiced sharp-shooter — shooting a light arrow across the shadow of a palm tree. My stride stretched as far as the east sea is from the west. To me, endowed with such speed, such a stride, there came the desire: 'I will go traveling to the end of the cosmos.' I — with a one-hundred-year life, a one-hundred-year span — spent one hundred years traveling — apart from the time spent on eating, drinking,

chewing & tasting, urinating & defecating, and sleeping to fight off weariness — but without reaching the end of the cosmos I died along the way.” (SN 2.26)

This indicates the futility of searching the universe by way of empirical investigation due to the vastness and non-ending of the cosmos. The modern man’s effort in searching the huge cosmos is meaningless one because it will be a never-ending effort. The Buddha proposes a pragmatic method to know the world by deducing the world into the individual existence. Finally, the Buddha reveals the pragmatic way to understand the world.

“However, without having reached the world’s end, there is no making an end to suffering, I say, in this very fathom-long body, along with its perception and mind, I declare: the world, the arising of the world, the ending of the world, and the way leading to the ending of the world.” (SN 2.26)

Thus, if anybody prefers to know the world it is encouraged to know oneself. Withing the individual everything exists. Thus, the nature of the world can be reflected through the knowledge of the self. The Buddha further clarifies;

“The world’s end can never be reached by way of going [through the world], and yet without reaching the world’s end there is no release from suffering. Therefore, truly, the world-knower, the wise one, gone to the world’s end, the holy life fulfilled, having known the world’s end, he is at peace.” (SN 2.26)

This utterance further proves the futility of knowing the world which is believed to be in existence outside of the individual. Whatever the characteristic is there within the individual, can exist in the same manner in others. For instance, according to Buddhist philosophy there are three characteristics of existence namely, impermanence, satisfactoriness and no-self. These characteristics are applied to all (sabba) phenomena. The Pali term sabba is synonymous to loka as explained in the Sabba sutta which is the discourse on all.

“I will teach you the all. Listen to it. And what is the all? (1) The eye and forms. (2) the ear and sounds. (3) the nose and smells. (4) the tongue and tastes. (5) the body and touches. (6) the mind and mind-objects. This is called the all.” (SN 35.23)

Therefore, the Buddhist approach to the concept of cosmology is analogous to the individual. The effort to understand the individual is far better important than to know the whole universe. While the individual is a part of all and the part has all characteristics of the all, the knowledge of everything can be gained through an internal exercise. The Buddhist theory of everything therefore, is a reflective knowledge of the individual.

In Hindu Philosophy, ‘sarvam’ is identified with either the ‘ātman’ or ‘brahman’ that is, what were viewed respectively as the human essence and the reality that pervades “everything” and it is said that he who learns the essence of everything knows everything. The Buddha is sometimes described as one who “knows all” (sabba-ññū). It is impossible to know everything (in the universe) due to the limitation of human knowledge locus. However, the Buddha declares that he is able to know anything he wants to, at any one time. Here, sabba-ññū refers to his understanding of the full context of a word, idea or situation. When the ‘sabba’ refers to our senses i.e., the eye, ear, nose, tongue, body and mind together their external objects that create the world. Everyone creates our own world through these senses. Thus, we are our sensual organs and their respective objects. The world is created by the contact of subject and object. There are no other world exists except the world of the individual existence.

Buddhist Concept of Totality

The Hua-yen is a Chinese Buddhist tradition known as Flower Garland school of Chinese Buddhism. The Hua-yen worldview is based primarily on the Avatamsaka sutra. The Avatamsaka sutra not only attracted to the attention of Chinese Buddhists but also Buddhist scholars over the world by its subtle and profound doctrine of identity and inter-causality concepts. This is regarded as a neo interpretation of the Buddhist theory of causality in an environmental perspective. Many modern environmentalists were fascinated by this idea of totality. The basic idea of the Avatamsaka sutra is the unity of the absolute and the relative; “All in One, One in

All". The All melts into a single whole. So, there are no divisions in the totality of reality according to their teaching.

"Unity in totality allows every individual entity of the phenomenal world its uniqueness without attributing an inherent nature to anything." (Francis Cook)

If the whole system is taken as oneness and inseparable, then its implication is the harmony of everything. As a result of this profound and cognitive perspective no one thinks to harm another because it is a threat to the sustainability of each and everyone. According to these assumptions everything is inter-dependent on and each one cannot keep own existence without other one. This relative condition can be seen in everything, and each part of the world reflects the totality of cosmos. Hua-yen school explains this notion of all is one; one is all under the idea of totality using the theory of dependent-origination. This has a strong moral obligation towards the nature especially from humanity. Environmental protection is an innate moral obligation of humanity which is an unconditional principle. The separation of nature from humanity was a great mistake done by the modern humans and the dominance over the natural world is another wrong approach of the modernity.

In explaining the theory of totality, the concept of reductionism had been effectively used. Hua-Yen Buddhism implies a most vividly depicted metaphor of the Jewel Net of Indra to explain this inter-dependency and interpenetration of things. According to this analogy there is a vast net on which a spherical, crystal-clear jewel is tied on each mesh, so that each jewel reflects the entire net (the whole) and each individual jewel (the part), which itself reflects the whole and the parts. This metaphor clearly captures the Hua-yen notion of emptiness (exemplified by the crystal clarity of the jewels), identity (exemplified by the sameness of the jewels) and interpenetration (exemplified by the infinite reflections in the jewel) if one jewel may slip from the net, where inter connection is completely disconnected. There are no longer any relations to each other. This metaphor indicates, identity of the things is depended on each other. Therefore no one can survive without the assistant of others. Nothing can be separated from other things. The interconnectedness of all phenomena is a causally related existence. This can be compared with the modern idea of eco-system. The whole ecological system is a one thing. Though, for the sake of knowledge things are separated, their systematical relationships cannot be denied. Organically the human body functions as a system and all organs are connected. But for the purpose of study, we separate them into parts. Yet we should not forget their synthesis too. This fact proves that both analysis as well as synthesis as distinguished methodologies help to understand the eco-system as a whole or totality.

CONCLUSION

The quest to comprehend the cosmos has been a central theme in both Hindu and Buddhist traditions from their outset. The recognition of the universe's vastness and the limitations of human experiential knowledge have driven these traditions to develop unique methodologies to explore cosmology. This paper had investigated into the reductionist approaches in Hindu and Buddhist philosophies, focusing on their use of analogies to bridge the gap between the macrocosm and the microcosm. By using the analogy of the individual as a microcosm, both traditions offer unique insights into the nature of existence and the limits of human knowledge. While their methods and conclusions differ, the comparative study of these approaches enriches our understanding of Indian philosophical thought and its enduring quest to comprehend the cosmos.

REFERENCES

1. Bhikkhu Bodhi (2000). *The Connected Discourses of the Buddha: A New Translation of the Samyutta Nikaya*. Wisdom Publications.
2. Chang, Garma C. C. (1972). *The Buddhist Teaching of Totality: The Philosophy of Hua Yen Buddhism*. London: George Allen & Unwin Ltd.
3. Cook, Francis H. (1977). *Hua-yen Buddhism: The Jewel Net of Indra*. Pennsylvania: Pennsylvania State University
4. Kalupahana, D. J. (1969). "A Buddhist tract on empiricism." (Comment & discussion on the Sabba Sutta): *Philosophy East and West* 19.
5. Keown, D. (2005). *Buddhist Ethics: A Very Short Introduction*: Oxford University Press.

6. Kirthisinghe, P. Buddhadas. (1999) Buddhism and Science. Delhi, Motilal Banarsidass Publishers Private Limited.
7. Radhakrishnan, S., and Moore, C. A. (1957). A Source Book in Indian Philosophy: Princeton University Press.
8. Samyutta Nikāya: An anthology. (1972). Part 2. Wheel 183/184/185. Kandy: Buddhist Publication Society.