

SCIENCE-RELIGION PARADOX: A RESOLUTION IN JAINISM

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[Generally it is believed that science and religion are by nature paradoxical. For right understanding of it, an intense and intelligent study is necessary on both scientific knowledge and religious knowledge. In this paper an attempt has been made to unveil science, religion paradox by focusing some aspects of Jain religion.

Key words : Saptabhangīnaya, Quantum mechanics, Relativism, Anekāntavāda.]

Compared to religion, science is relatively a recent outcome of human culture and civilization, but there exists a persistent dichotomy between science and religion. We should, therefore, have a precise definition of what is science, although it can define in various ways. Science is an endeavor to determine casual relation between two or more phenomena. It is a drive to comprehend our natural surroundings, to know the truth and evaluate the natural laws which explain the causal relationship. The 'Desire to know' is a distinctive feature of human nature as Aristotle observed that 'All men by nature have a desire to know'. In short science means an attitude of not taking any view or dogma which is not succeeding in the acid test of reason. Science is opposite of superstition as the latter is not based on causal reason.

Compared to science, religion is an earlier product of the human mind which seeks to understand the eternal mystery of the universe. If we cut off all external cladding of religions and go into the deep core of it than religions are nothing but an attempt to answer fundamental questions about the existence of the world including existence of human being. Now, the obvious question is whether scientific truth is different or similar to religious truth. In our search for truth, Can scientific and religious ways merge together at the same point? To have such a simile an analysis with a

particular religion may be helpful to arrive at a useful destination. For this, we may take Jainism, one of the ancient religions of India as our object of the comparative analysis.

India is a land that has produced a great variety of spiritual teachings. Jainism stands between the Hindu and Buddhist ways and has much in common with, both as well as highly distinctive character of its own.

Scientific basis of Anekāntavāda and physical reality

Anekāntavāda is the corner stone of Jain philosophy along with Kundakuda's dialectic of the twofold standpoint and reality, which are 'vyavahara and niscaya naya'. Presently we shall emphasis on Anekāntavāda theory of reality similar to catuskoti which is used to describe reality as Sunyata, propounded by Nagarjuna. The Jains hold that every object known by us is endowed with innumerable qualities and modes. A constant change is going on within the object and thus object is changing its appearance (apparent reality) every moment. This is also very similar to the theory of impermanence of Buddhism, which describes reality as a great fluxion of events, nothing remains static, and i.e. appearance and reality are not same. The reality is extremely complex in nature, a clear understanding of which requires us to view the object from all possible standpoints. It is considered as a doctrine which is defined in a negative way as non-absolutism, according to which there is nothing like absolute truth or uniquely correct perspectives. Jain concept of 'innumerable qualities' with constant change is relevant from the standpoint of modern science. Quantum mechanics is a cornerstone of modern physical science, which is radically different from our classical concepts. According to quantum concept, the electron, a constituent of all of material world, can be described as a wave or particle, but not both at the same instant. The famous uncertainty principle of Heisenberg (one of the founders of quantum mechanics) says that if we measure the momentum of an electron, we will be less sure about its position or if we measure the accurate position we will be uncertain about the momentum-indeed this is an outcome of wave- particles duality concepts of electron - which are opposite concepts. It is our mental outlook what we want to observe-particle or wave; if we use a device which can detect wave, electron will show its wave nature

and if we use a device to detect particles we will observe the particle nature of reality. Fritj of Capra in 'The Tao of Physics' says "This pair of opposites, too, is transcended by the atomic reality. We can never say that an atomic particle exists at a certain place, nor can we say that it does not exist. Being a probability pattern, the particle has tendencies to exist in various places and thus manifests a strange kind of physical reality between existence and non-existence. We cannot, therefore, describe the state of particles in terms of fixed opposite concepts..."¹ In the words of Robert Oppenheimer "If we ask, for existence, whether the position of the electron remains the same, we must say 'no'; if we ask whether the electron's position changes with time, we must say 'no'; if we ask whether the electron is at rest, we must say 'no'; if we ask whether it is in motion, we must say 'no'"². The Īśa Upaniṣad also describe supreme reality 'Brahman' as

"It moves, It moves not
It is far, and it is near.
It is within all this,
And It is outside all this"³

We can also hear echo of such an idea in Ashvaghosha's concept of 'Tathāta' or suchness-which is reality.

"Suchness is neither that which is existence, nor that which is non-existence, nor that which is at once existence and non-existence, nor that which is not at once existence and non-existence"⁴.

We find several such opposing entities to describe reality e.g. electron/wave, existence/nonexistence, emptiness/form and finally there is unity of all forms. Heisenberg himself said "What we observe is not nature itself, but nature exposed to our method of questioning"⁵. In fact the Heisenberg uncertainty principle demolished two classical concepts: (a) causality and (b) objective description of reality. It is difficult to express in common terms and may be called 'avaktya'. As J.A. Wheeler has observed that reality in quantum world is no more purely objective, the human observer is also participator in the quantum drama, and reality has some subjective elements, i.e. the role of consciousness of the observer and 'I' become non-trivial. All these reminds us the Jain Syādvāda

or Saptabhangī-naya, 'Syāt' means 'may be', 'perhaps'. We can sum up the Jaina Syādvāda or Saptabhangī-naya as following way

1. May be, a thing is (syāt asti)
2. May be, a thing is not (syāt nāsti)
3. May be, a thing is and is not (Syāt asti nāsti)
4. May be, a thing is indescribable (Syāt avaktavyam)
5. May be, a thing is and indescribable (Syāt asti avaktavyam)
6. May be, a thing is not and indescribable (syāt nāsti avaktavyam)
7. May be, a thing is, is not, and indescribable (Syāt asti nāsti avaktavyam)

These are the seven possibility of describing the reality but no single entity is a true or very near description of reality. Just as the in quantum world due to limitation posed by uncertainty principle the concept of exact determinism do not apply in complex description of electron. This again lead us to the concept of quantum properties of matter as potentialities propounded by David Bohm, which says the properties of matter are "incompletely defined potentialities, the development of which depends on the systems with which the object interact, as well as on the object itself. To demonstrate this concept we consider, first, an electron with a broad wave-like packet, of definite momentum and, therefore, of a definite wavelength. Such an electron is capable of demonstrating its wave-like properties when it interacts with a suitable measuring apparatus. The same electron, however, is potentially capable of developing into something more like a particle when it interacts with a position measuring device, at which time its wave-like aspects become correspondingly less important.... The kind of apparatus with which the electron interacts determines which of these potential aspects prevails"⁶ Such seemingly contradictory concepts co-exist in the seven possibilities of Saptabhangī-naya, e.g. third and the seventh naya. Neils Bohr explains this as complimentary principles. Bohr used Chinese concept of Yin and Yang which are both opposite but exist together and required for completeness. D.S. Kothati in his easy on 'complementary principles and Easter Philosophy writes "Anekāntavāda not only explains seemingly contradictory

proposition in daily life, philosophy, macro world, mental exercises and in spiritual domain, it brought in the concept of 'Avyakta' or inexpressibility of certain status. Questions which cannot be answered in affirmative or negative, like existence of soul, could be dealt within the framework of Anekāntavāda. It is, it is not, it is and yet it is not, it cannot be expressed in language. So on. This concept is common to quantum behavior, which cannot always be expressed in language.... Anekāntavāda is as fundamental as the uncertainty principle, which states that some properties cannot be measured accurately, not because of instrumental limitations but because of inherent limitation of knowledge."⁷

Anekāntavāda and relativity

We have just seen from the discussion above that Syādvāda implies relative judgment. It has been emphasized that "Every judgment is true only of a particular aspect of the object attended to and concentrated upon and point of view adopted"⁸. Some scholars have connected this Syādvāda with Einstein's theory of relativity. Jain logic and epistemology held that there is no universal truth about the world; the world has no intrinsic characteristics, there are just different ways of interpreting it. Einstein's special theory of relativity deals with electrodynamics of moving bodies (1905), and general theory of relativity pertains to gravitation field (1915), both hold that certain physical quantities, formerly considered objective and constant are actually relative to the state of motion of the observer and mass of the body in case of gravitation field. According to Jainism the judgments that we pass in everyday life, the truth we pursuit by our intelligent search are true only in reference to the standpoint occupied and to the aspect of the object considered. By smile of six blind persons, they illustrate that all our judgments are conditional, partial and based on relativity.

Scientific basis of Jain Metaphysics

Jain metaphysics is based on the scientific maxim that nothing is destructible i.e. nothing can be created out of nothing ,or out of something which does not at all exist in one form or the other. The Jain thought is in this respect similar to modern science when it advocates that the cosmos or universe, conglomeration of all existing object is uncreated and real by virtue of its being existential

and there for it is eternal, infinite with no beginning and end. Modern Science upholds that universe has an automatic working process. The cosmic constituents cause diverse phenomena by their respective function and interaction. The Jain have traced the whole universe into two uncreated, everlasting, co-existing but independent categories of soul or self. (jiva) self and not-self (ajiva). The Ajiva or non Living things are of five kinds- matter (pudgala), time (kāla), space (ākāśa), and principle of motion (dharma), principle of rest (adharma). Acceptance and description of 'Pudgala' in Jain philosophy and religion bring it closer to modern science. Pudgala etymologically means 'that which is liable to integration and disintegration'. Matter is an eternal substance undetermined with regard to quantity and quality. It may increase or diminish in volume without addition or loss of particles. Matter is the physical basis of the world. Except 'soul' and 'space' everything is produced from matter. The things which we perceive consist of gross matter. There is also subtle matter beyond the reach of our perception of our senses. Jain philosophers uphold that matter is never destroyed; it only undergoes changes into different stages. Nothing is created or destroyed. Change in the law of nature. Modern science asserts that fundamentally no substance is destroyed at any time, but simply its transformation from time to time. Jain philosophers do not regard earth, water and air etc. as having independent existence. It is clearly stated in Jain system that element known as matter and earth, water and air are the special states of matter. It is evident in modern science that water is compound of two gases hydrogen and oxygen and by the disintegration of water they have made clear the properties of these two gases. Similarly by assigning substances existing in the universe Jains have confided that in truth these are not independent elements. They are special states of matter. According to Jain system matter exists in the form of atom (aṇu) or an aggregate or combination. All the physical objects including our bodies are aggregates of atoms. Atoms are combined into aggregates (skandha). Aggregates are formed by integration (samghāta). Every perceivable object is a 'skandha'. It upholds whole world as 'mahāskandha' or great aggregate. Jain system never accepts divinity as foundation to explain and interpret origination, survival and destruction of the world including it's all

living and nonliving things. It never puts the musk of divinity which is not possible to answer by human intellect.

There are too many field like biology (classification of living being), astronomy (sūrya pragyapti, Chandra pragyapti), geography (third chapter of Tattvārtha Sūtra), embryology (in Taṇḍulveyaliya Payanna) where Jain religion has immense contribution in the pursuit of scientific knowledge in different branches of science.

Conclusion

Above discussion clearly shows that Jainism is a religion based on science with a scientific zeal to deal the problems associated with the casual explanation of external world and existences. Nowhere in Jain scripture, divine determinism or divine teleological creation are found. Study of Jain religion reveals that there is no paradox between science and religion. Both, science and religion are battle against human ignorance. Coordination between science and religion is essential for smooth sailing of life in the universe. Jainism is an example of the fact that religion is also science. Both attempt to describe reality. Reality is reflection of our mind- which is also of quantum nature and hence incompletely defined, therefore 'Avayakta'. Reality may not be a thing in itself and it will elude us always.

References :

- ¹ Fritjof Capra : The Tao of Physics, p. 166
- ² J.R. Oppenheimer : Science and Common Understanding, p. 42
- ³ Isa Upanisad, 5
- ⁴ Ashavaghosa : The awakening of Faith, translated by D.T. Suzuki, p. 59
- ⁵ Werner Heisenberg : Physics and Philosophy, p. 58
- ⁶ David Bohm : Quantum Theory, p. 132
- ⁷ D.S. Kothari : The Complementary Principle and Eastern Philosophy, p. 325
- ⁸ N.J. Shah (ed., 2000) : Jain Theory of Multiple Facet of Reality and Truth, p. 11.

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