

Parallelism between Advaitic Metaphysics and Quantum Mechanics to Reveal the Unity Immanent in the Entire Creation

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Abstract :- Physical Sciences carry out their investigations to expand the domain of knowledge, vision and make human life comfortable; on the other side Philosophy, in Indian context, strives to seek knowledge in order to elevate the state of Human Consciousness. Both Philosophy and Physical Sciences are the intellectual activities to seek the nature of Reality. The in-depth analysis of Matter, since ages, have finally resulted in the denial of Matter with the emergence of Quantum Physics. Quantum mechanics has revealed the wave nature of Universe and now it is accepted that universe is neither a material body nor it has material structure. Matter is the most condensed state of energy. Universe is the flow of energy as Waves in different directions. The Wave is not an individuated entity separable from medium but a pattern imposed upon the activity of medium. Physics explains the duality and mutual conversion of Matter and Energy with the help of massless God's Particle, likewise Metaphysics of Advaitic Vedanta counters the duality of Consciousness and energy with its Doctrine of Maya. The doctrine of Maya harmonises all contradictions regarding eternity and non – eternity, unity and diversity, determinacy and indeterminacy, reality and appearance.

We find a sort of conformity in the Theories of Contemporary Quantum Physicists such as 'Veiled Reality and Hypercosmic God' and 'Holomovement and Implicate Order', with that of the Advaitic Metaphysics of 'Pure Conscious and Entirely Blissful Brahma' and 'Maya' respectively in revealing the interconnectedness and inseparability lying beneath the diverse and fragmented appearance of World.

Keywords: Advaita, Quantum Physics, Totality, subject-object, Hypercosmic god, Wave mechanics.

Philosophy and Physical Sciences are the two intellectual persuasions with a single and core purpose to seek the nature of Reality, one for the sake of expanding the human consciousness and other in the pursuit of providing a vast body of knowledge along with physical comforts to humanity respectively. Physical Science is a systematic enterprise built upon physical observations, measurements, calculations, tests and experiments. On the other hand, particularly Indian Philosophy is an activity of rational and intuitive thinking to evolve a subliminal way of living. On account of its intuitive dimension, Philosophy should not be treated as some sort of speculation, imagination or something out worldly. As far as the Advaitic or Non Dualistic tradition of Indian Philosophy is concerned, Advaitic Metaphysics is the only Philosophy that is found compatible with the revelations of Modern Physics. Advaitic Metaphysics even goes beyond Science and offers answers to its unanswerable issues.

Quantum Mechanics studies the behaviour of matter and energy along with their mutual interaction its interaction at the atomic and sub-atomic level. The introduction of

Quantum Mechanics marked the beginning of Modern Physics. In 1900 a German Physicist Max Planck discovered that heated objects radiate energy at discrete and fixed quantity, not as a continuous flow. Planck assigned the term 'Quanta' to the discrete packets of radiated energy. Einstein found that not only heat and light energies are radiated in Quanta but the absorption of energy also takes place in Quanta or discrete packets of energy. This quanta of energy is also called as 'Photon'.

Louis Victor de Broglie discovered the wave theory of electron. Electron, being matter, behaves like both particle and wave; on the other side Photon, being energy, also exhibits both particle and wave nature. This Wave- Particle duality does not hold only for microscopic level but extends from an electron to giant stars.

Matter behaving as a wave was demonstrated experimentally where electrons were found to be diffracted by the crystal lattices just like a beam of light or water wave. Later on, similar observations resulted in case of atoms and small molecules. Now it is well established fact that wave-

particle duality is a universal phenomenon. There are three formulations to explain this dualism. *First*, The Theory of Complementarity put forth by Neil Bohr, which says that the properties of particle and that of waves are not mutually exclusive but complementary. Neil Bohr held that, “subatomic entities such as electrons have no real existence, they exist in a probabilistic limbo of many superposed states until forced into a single state by the act of observation.....Electrons and photons may act like waves or particles, depending on how they are experimentally observed”ⁱ. This implies that the reality is not completely physical as it requires an act of observation that is Consciousness. According to Nobel Laureate in Physics, Eugene Paul Wigner, “It was not possible to formulate the laws of quantum mechanics in a fully consistent way without reference to the consciousness (of the observer)..... (Remarkably), the very study of the external world led to the conclusion that the content of the consciousness is the ultimate reality”ⁱⁱ.

Second, Schrödinger established Wave Mechanics that says that an electron circles around the nucleus as a wave form and the different energy levels represent the different Standing Waves. According to Schrödinger, “What we observe as material bodies and forces are nothing but shapes and variations in the structure of Space. Particles are just like appearances.....Subject and Object are only one.....barrier does not exist.”ⁱⁱⁱ. *Third*, Paul Dirac formulated Transformation Theory which is the unified and generalised form of former formulations.

The building blocks of the universe are atoms, subatomic particles and sub atomic micro particles that have to necessarily remain in motion in order to exist hence they have both momentum and deterministic position. Without position, a particle does not exist. Also a particle ceases to exist without momentum. Werner Heisenberg discovered that it is not possible to determine the position and a momentum of a particle simultaneously and with unlimited accuracy. As the position and momentum of a particle can never be known exactly, this indeterminacy leaves only the probability of where a particle could be observed. Consequently Quantum Mechanics denies the objective existence of subatomic particles. They are ‘tendencies to happen’ and ‘correlations between macroscopic observables’. Heisenberg said, “In the light of the quantum Theory.....elementary particles are no longer real in the same sense as objects of daily life, trees or stones”^{iv}. According to Jeans, “...while the Quantum Theory has determined that we can observe only probabilities.....modern Physics....deals with the grounds of probable knowledge, not with the essence of fundamental reality that is beyond its scope”^v. Thus the prophecy of Advaita Vedanta that ‘Brahma Satyam, Jagatmithya’ and conclusions of Quantum

Mechanics have complete agreement regarding the illusory appearance of world.

Science tried to find reality in terms of matter, energy, field or space but they all come out to be the expressions of some deeper reality in which particles and field of energy and even time blend. Beneath all this weirdness lies logic, a thought, a pre-existing law. Thus Universe appears to be a ‘Great Thought’ rather than a ‘Great Machine’. Quantum Physics moved the creation from the particle to wave and then to an **idea or appearance** which links the metaphysical with the physical. Parallel to this, Advaitic Metaphysics considers the physical reality as the product of Maya which is no more than a **sport** and an illusion. Pure Consciousness and entirely blissful Brahma is the only ultimate reality which is the substrate upon which Maya projects this illusory world.

Bernard d’ Espagnat, a Quantum Physicist and a Philosopher, suggested that a key insight of quantum mechanics is to show that Science does not provide a view of “ultimately reality as it really is” but rather “as it appears to us”. He says, “There must exist, beyond mere appearance....a ‘veiled reality’ that science does not describe but only glimpses uncertainly”. He called this reality as a **Hypercosmic God** who is a holistic and non material realm that transcends space and time. This transcendental reality called Hypercosmic God sounds a sort of conformity with the ‘**Brahma**’ of Advaita whose true nature is concealed or veiled by Maya. This Maya imposes worldly expressions on Brahma. Hence the investigation of Physical Sciences is the studies of Maya and concludes the world merely an appearance or a thought.

Another Physicist David Bohm found that when electrons are in the state of Plasma, they do not behave individually but exhibits if they all belong to a larger and interconnected single whole. Bohm postulated that the ultimate nature of Reality is not the collection of separate objects, rather the reality lies in an undivided whole which is constantly in the state of dynamic flux. He believed that Relativity Theory and Quantum Mechanics predicts an undivided and interconnected universe in which all its part merge and unite in one **indescribable** totality. Bohm proposed the Theory of Implicate Order and Holographic Universe that conveys an ultra holistic cosmic approach and accepts that everything is connected with everything else where everything is enfolded into everything. The physical reality is not the plurality of quantum but a dynamic wholeness in motion where everything moves in an interconnected way. This unbroken wholeness denies the classical idea of analysability of the world into separate and independent parts. In Advaita, the portrayal of world by Maya, which David Bohm termed as

indescribable totality, is also considered ‘**Anirvachniya**’ (which cannot be described).

Erwin Schrödinger writes – “ The only possible alternative is simply to keep to the immediate experience that consciousness is a singular of which the plural is unknown; that there is only one thing and that what seems to be a plurality is merely a series of different aspects of this one thing, produced by a deception (the Maya of Advaita)”; the same illusion is produced in a gallery of mirrors, and in the same way Gaurishankar and Mt. Everest turned out to be the same peak seen from different valleys”^{vi}. This seems to be an echo of Vedic Prophecy ‘**ekam sat viprabahudavadanti**’, that is, Truth is one called differently by many.

The Quantum Physics says that the subject changes the object in the process of observation hence there is nothing like ‘objective’ object independent from subject and nothing which remains unaltered irrespective of observation or no observation by any subject. We find the ontological duality between Mass and Energy; Particle and Wave; quantum plurality and entirety (unbroken wholeness); and observation and observer is disappearing with the revelations of Quantum Physics. Quantum Physicists tried to find the subject in the object and ended up with the discovery that proton, neutron, quarks, electron, positron, neutrino and photon are not real but they all keep appearing and disappearing. The same revelations were established by Advaita, that there exists only one ontological subject Brahman and nothing else like object. The world which is an apparent object is illusory and superimposed on the subject Brahma by the concealing power of Maya. Hence Advaita declares “***That thou art***”(tattvamasi) that subject is you and I, and there is nobody who is not that subject.

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