

Deductive Analysis Pertaining to History of Science in India Based on the Perspective of Swami Vivekanada

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I. INTRODUCTION

Swami Vivekananda was a great and the most adorable connoisseur of India. He was a seer who had realized the absolute truth, a monk with an encyclopaedic erudition, an esteemed spiritual teacher, a patriot saint, a magnificent orator with a capacious mind and an incredible memory, endowed with a sonorous and musical voice and an imposing appearance. But, seldom, do we ever recognize him as 'a scientific visionary' or 'a genius scholar of science'. According to Swami Vivekananda, science is that the explanations of things are in their own nature, and that no external beings or existences are required to explain what is going on in the universe. In his speeches at the World's Parliament of Religions held in September 1893 made him famous as an 'orator by divine right' and as a 'Messenger of Indian wisdom to the Western world'. After the Parliament, he spent nearly three and a half years spreading Vedanta as lived and taught by Sri Ramakrishna, mostly in the eastern parts of USA and also in London. He returned to India in January 1897 to rouse the religious consciousness of the people and create in them pride in their cultural heritage and to expound his plan for their uplift by the application of the principles of Practical Vedanta. This study emphasis on the views of Swami Vivekananda about the history of Science especially in Vedanta Philosophy. It is analysed using Deductive reasoning as a logical process in which a conclusion is based on the concordance of multiple premises that are generally assumed to be true, here reasoning proceeds from general premises to a specific conclusion.

II. NEED AND SIGNIFICANCE OF THE STUDY

The present age is the age of humanism which holds that man should be the chief concern and centre of all activities and thinking. Through science and technology man has attained great prosperity and power, and modern methods of communication and travel have converted human society into a 'global village'. But the degradation of man has also been going on apace, as witnessed by the enormous increase in broken homes, immorality, violence, crime, etc. in modern society. Swami Vivekananda's concept of potential divinity of the soul prevents this degradation, divinizes human relationships, and makes life meaningful and worth living. This concept was a great contribution to make to world culture. In this way he was instrumental in ending India's cultural isolation from the rest of the world. He was India's first great cultural ambassador to the West.

On the other hand, Swamiji's interpretation of ancient Hindu scriptures, philosophy, institutions, etc prepared the mind of Indians to accept and apply in practical life two best elements of Western culture, namely science and technology and humanism. Swami Vivekananda establishes several illuminating original concepts based on his own transcendental experiences and vision of the future. Swami Vivekananda gave an account of India's contribution to the World in the field of Science and Technology. "Out of the past is built the future. ... Our ancestors were great. We must first recall that... we must build an India yet greater than what she has been. "; this was his 'mantra' for the rejuvenation of the country." India has given to antiquity the earliest scientific physicians, and, according to Sir William Hunter, she has even contributed to modern medical science by the discovery of various chemicals and by teaching you how to reform misshapen ears and noses. Even more it has done in mathematics, for algebra, geometry, astronomy, and the triumph of modern science — mixed mathematics — were all invented in India, just so much as the ten numerals, the very cornerstone of all present civilization, were discovered in India, and are in reality, Sanskrit words. Even if this is the truth, now also Indian culture was recognized and expressed superficially. At these circumstances, it is the need of the hour to propagate the scientific concepts amalgamated within the Vedanta Philosophy.

III. STATEMENT OF THE PROBLEM

The main aim of education is the preservation, promotion and transmission of one's culture. But Indian culture is mostly underestimated based on caste system and superstitions. By the late nineteenth century, the caste system of Kerala had evolved to be the most complex to be found anywhere in India, and the exploitation of it had become considerable. That was the reason why Swami Vivekananda having observed that it represented a *mad house of caste*. But explaining Indian Culture only on the basis of Caste System is

something ominous. In spite of her diversities, India has had from time immemorial a strong sense of cultural unity. The authentic Indian culture was really enclosed within such issues and the essence of culture is to be interpreted based on scientific thinking. And it was revealed to the world confidently and credibly by Swami Vivekananda. This study is analysing the contributions of Swami Vivekananda to the history of Science in India. So the study is entitled as *Deductive Analysis pertaining to History of Science in India based on the Perspective of Swami Vivekananda*

IV. OBJECTIVE OF THE STUDY

To elucidate the modern scientific theories based on the Vivekanandas' ideas of Vedanta.

V. METHODOLOGY OF THE STUDY

Deductive Analysis is the process of using generalities to infer specifics. Here first the incidents are extracted related to the selected topic and stated as facts. This information about the problem exposes to make educative assumptions. Conclusion is more important than the information the premises provide. It is reached directly by applying logical rules to the premises. If the premises are true, the conclusion must be true. Here the investigator is using facts and incidents which are definitely in the history as premises.

Swami Vivekananda, differentiate classical science from intuitional science as, Classical Science include reason, logic and instinct. Scientists make observations of natural phenomena and then through experiment try to simulate natural events under controlled conditions. Scientists will then gather the empirical evidence and will generate their hypothesis to explain the phenomenon. Classical science has tremendous impact on man by improving the quality of life, unravel the mysteries of the universe and remove barriers of subjectivity and objectivity. That is, *“Science stands on its own feet and in its own light and challenges comparison with any other sciences. There have been charlatans and magicians and cheats and more here than any other field. This is because that the more profitable the business, the greater the number of charlatans and cheats. But that is no reason why the business is not good”*.

But Intuition is distinctly different from instinct, logic, reason and intellect. It is the highest mental faculty dormant in man. It is above reason and is acquired by the life forms through repeated experiences and gained through transformation. It is voluntary and spontaneous and finds a solution for a given problem in a completely different place and situation. It is an inherent means of knowledge gathering and often leads to what science can achieve and sometimes even beyond that. That is, *“Reason is the vehicle one rides to reach a certain point beyond which one cannot move. Intuition goes beyond reason but reason with unbiased mind is the only guide to reach there. Instinct is like ice, reason is like water and intuition is the subtlest form like vapour and each one follows the other”*.

As he proclaimed about the goal of science and 95% of the greatest discoveries of modern science came from meditation. Verifications came long afterwards.

VI. REVEALED TRUTHS

To elucidate the modern scientific theories based on the Vivekanandas' ideas of Vedanta. The comparative study of both the expositions given at different points of time, shows beyond any doubt that Swami Vivekananda was having detailed and accurate knowledge of scientific ideas discovered till his time. We can also observe that his scientific explanations carry hints which may work as probable solutions to many unresolved mysteries or problems of modern scientific theories.

sl.no.	theory	vedantic view	modern view
1	Expanding Universe	The universe undergoes alternating phases of <i>Vikasa</i> (Expansion or Evolution) and <i>Sankocha</i> (contraction and involution) ceaselessly and in the process undergoes diversification and unification	The distant galaxies we see in all directions are moving away from the Earth, as evidenced by Red Shifts. Hubble's law substantiate it.
2	Theory of Evolution	Patanjali holds that the transformation of one species into another is effected by the 'in-filling of nature'. It is the way of a being's attaining its perfection.	Struggle for existence, Survival of the fittest, natural selection etc.
3	Theory of Relativity	The whole universe is composed of two materials, Akasa and Prana. Akasa is the infinite omnipresent material of this universe, so in this Prana the infinite, omnipresent manifesting power of this	Einstein's 1905 theory of special relativity showed that matter corresponds to an equivalent amount of rest energy. This means that it can be converted to or from equivalent

		universe. The sum total of all forces in the universe, mental or physical, when resolved back to their original state, is called Prana. Akasa existed with motion. The physical motion of the Prana was stopped ,but it existed all the same	amounts of <i>other</i> (non-material) forms of energy, for example kinetic energy, potential energy, and electromagnetic radiant energy. When this happens, as recognized in twentieth century experience, rest mass is not conserved, unlike the total mass or <i>total</i> energy. All forms of energy contribute to the total mass and total energy
4	Quasi Steady State theory	Pralaya conveys all appearance is subject dissolution, but not to destruction, because dissolution leads to recreation. The term is especially used at the ending of a <i>kalpa</i> (cosmic cycle), which then via <i>pravrtti</i> leads to a new creation.	New matter is continuously created as the Universe expands.
5	Theory of Unity	One atom of the universe cannot move without dragging the whole world with it. Everything in the universe is formed from light.	The speed of light is absolute and that the laws of physics are the same in all inertial frames of reference

VII. CONCLUSION

Swami Vivekananda was one of the first among genuine teachers to understand the importance of science and technology. In the first place, Swamiji saw that poor countries like India would be able to overcome poverty and backwardness only by mastering technology. Secondly, Swamiji saw that science is not contradictory to the eternal spiritual principles, which is the foundation of Indian culture. Both Science and eternal principles of Dharma are concerned with truth. Science seeks truth in the physical world, whereas dharma seeks truth in the spiritual realm.

Swami Vivekananda had famously said, “*Education is not the amount of information that is put into your brain and run riots there, undigested all your life. We must have life-building, man-making, character-making and assimilation of ideas.*”

We stand here today and resume work tomorrow, so that by the efforts of our lives and our unshaken faith in the future we may all help to build the greater India yet to be.” Let this should be our dream.

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