

Indian Science in the face of the challenge of the Western World

Hemali Sanghavi

Head, Department of History, K.J.Somaiya College of Arts & Commerce (Autonomous),
Mumbai, India

Abstract

The nineteenth century was the era of industrial revolution. It brought about imperialism and creation of colonial empires. India witnessed the implications of imperialism and was converted into British colony. The results of this phenomenon were disastrous in economic terms but intellectual repercussions were altogether impressive. Indians got acquainted with the Western sciences. This made them aware of the advances of the Western science and technology. Western science attempted to show its superiority in the world.

The greater connectivity brought about by the transport revolution apart from facilitating trade created new spaces. There began discussion and dialogue between the East and the West, which ranged from the issues of religion to science. The example of Vivekananda has been the renowned one. The paper focuses on Virchand Gandhi, the contemporary of Vivekananda and the participant of the World Parliament of Religions (1893) and his efforts to present Indian sciences in the proper perspective. The defense of the Indian Sciences vis-à-vis the Western worldview is the thrust of the paper.

KEYWORDS: Indian Science, Western challenge, Jainism, Parliament of Religions

Background

The nineteenth century was the era of Industrial Revolution. The Scientific and technological inventions and industrial revolution had intimate relation. While the revolution was initiated by new technological inventions, the latter triggered further many more industrial advancements. Geographically industrial revolution started in England during the late eighteenth century and by the nineteenth century spread into the United States. U.S.A. witnessed many changes due to the invention of electricity and improved communication and travel facilities. She unfolded herself as one of the most urbanized industrial states. It was at this juncture that India was in pitiful state as a colony due to the British imperialist policies. She became subject of systematic British expansion. The white man's burden was seriously talked and perceived about. Thus three different dimensions of the industrial and scientific revolution were reflected in these three countries- England, the initiator of the Industrial revolution, U.S.A. as the most successful demonstrator of the industrial advancements and lastly India which was converted into colonial state due to industrial revolution. The interactions between them at various levels can be of great interest. It was by this time that the profound influence of scientific ideas on all other forms of human thought and action, philosophical and political as well as religious and artistic have began to be felt. This can be explored from variety of perspectives. The paper intends to discuss how India was affected by this process and how did it respond to it.

Connecting people, creating spaces

The transport revolution generated by improvements in land, rail and water travel brought about greater connectivity in the world. The steam engine and the telegraph removed the barriers of the distance and time. This largely facilitated trade and commerce and created grounds for international events such as international exhibitions. The first World Fair, known as 'The Great Exhibition' was held at London in 1851. This predated the modern Olympic Games and the organisation of the World cup. This event marked the new beginning not only in economic terms but opened up the space for communication and exchanges. The interactive space which was opened up generated many discussions ranging from religion to science. The first Parliament of Religions held at Chicago in 1893 was one of such spaces. Planned as part of the Columbian Exhibition, the gathering aimed to begin interfaith understanding in the midst of the denouncement by many for such effort. It was interesting paradox that scientific inventions made religions to relook at their beliefs and this in turn initiated and generated philosophical and scientific discussions. It was unquestionably one of the important events where the Indian sciences and religion became popularly known to the West and U.S.A. The rise of Sanskrit studies in Europe was also contemporary to this.

Another point of importance was that U.S.A. at this time witnessed many intellectual undertakings like 'The Monist' and 'The Open Court' which aimed at the scientific understanding of religion and the religious study of science.(Jackson1975: 75)These journals provided significant outlets for scholarship in philosophy, religion, science and oriental thought. The conflict paradigm of science and religion was becoming open for the discussion. The claim of the religion of being too holy to compare and criticise was being repudiated. The present paper is embedded in this setting and attempts to look at these spaces which generated communication and challenges.

Virchand Gandhi-the Indian representative

The man and the event which started this discussion was Virchand Raghavji Gandhi (1864-1901) who represented India at the first Parliament of Religions organised in 1893. It was a unique and unprecedented gathering of world religions (Maxmuller, 1894:2) - Confucianism, Taoism, Shintoism, Hinduism, Jainism, Buddhism, Puritan, Zoroastrianism, Judaism, Christianity and Islam, attended by about 3000 representatives. (Doshi & Shah, 2009: 18) Swami Vivekananda's speeches which impressed this gathering have been much talked about. Virchand Gandhi was another eloquent speaker from India, who represented Jainism at the conference (11 September-27 September, 1893). He emerged as able, articulate and energetic spokesman. He defended the glory of Indian religions, culture and civilization at the conference. He was the first Jain scholar who introduced this religion of nonviolence to the world at the age of 28. Originally Atmaramji, the well-known Jain ascetic and scholar had received an invitation to represent the Jain religion in 1892. Due to religious rules, he could not attend the gathering. Hence, Virchand Gandhi was elected by the community as the representative. He was at that time the Honorary Secretary of the Jain Association of India which was engaged in the work of social reform.

Virchand Gandhi was B.A. of the University of Bombay. He is considered to be one of the earliest graduates of the Jain community. (Shah, 2001: 14) He has brilliant and industrious career. He was man of conviction. He was master of fourteen languages. Virchand Gandhi stayed in U.S.A. for about seven years after he became popular in the First Parliament of World Religions. People in the U.S. invited him two more times, first in 1897 and then in 1899. Like Vivekananda he stayed in U.S. for longer time and more than once. He delivered lectures at clubs, museum, literary and church societies, theosophical branches and spiritual associations. He had studied Jainism, Buddhism, Vedanta Philosophy, Christianity, and western philosophy, all of which enabled him to converse on a wide field of subjects and present his views with confidence. He grew up with a fantastic range of readings and interests which helped him to overcome the constraints of a colonized self. His presentations were of scholarly nature. His impartiality of the outlook and the excellent oratory greatly impressed the Americans. His speeches and writing numbered about 535. He spoke on variety of topics apart from his main thrust on Jainism and Hinduism.

Science of eating

Science was one of the topics he talked about. The point here needs to be noted is that the nature of Indian response to the Western science and technology was widely varied. At least in the initial years two extremes were found, either those of complete rejection or those of overwhelming acceptance. Majority however, showed firm faith in the Indian tradition. Virchand Gandhi also fitted in this line.

Science of eating was one of the interesting expositions of Virchand Gandhi. This lecture began with the Western scientific concept of diet. Scientifically food had been classified into two categories, nitrogenous and non-nitrogenous. The classes were based on the physical elements. Virchand Gandhi put forth Indian perspective vis-à-vis the Western one. He explained the Indian theory of food which divides the food into three classes- *Satvik*, *Rajasi* and *Tamasi*. He showed the interrelation between the food and activity.

- *Satvik* food gives vitality and health.
- *Rajasi* food gives activity.
- Lastly, *Tamasi* food produces grossness and sluggishness and should be avoided.

He pointed out that one should keep in mind these points and the right rules of diet. Thereby one can save himself from taking artificial medicines thereafter. He also worked out dietary experiments. Some pondering needs to be done on this point.

- Virchand Gandhi presented the Indian perspective of the science of eating.
- He could be considered as the first one to initiate discussions on naturopathy in front of the Western world.
- While discussing the Hindu (Indian) standpoint he did not lost sight of the Western concept.
- He presented, discussed and compared both the perspectives side by side.
- He neither considered the Western scientific concept in this regard as the 'only' supreme, superior and valid truth nor the Indian explanation inadequate one.

- Rather, he considered both the expositions as equally valid and complementing each other.
- He focused on the relationship of the food and activity, while the Western concept connected food with the nutritious value.
- The whole exposition thereby also reflected the scientific method and spirit.

Science of breathing (*Pranayam*)

Virchand Gandhi in his lectures gave practical details about the science of breathing. *Pranayam* is the science of breathing where deep, regulated and rhythmic breathing is done. It would not be wrong to say that this science was unknown to the West. He introduced this technique to them. He explained Yoga in terms of restraint of mental impulses. It was looked as a technique of healing the self. His logical presentations made great impressions on the American people. It is important to note here that in the context of Indian society frequently a particular scientific or technological technique which had been practiced for centuries came to be taken for granted and thus was not considered worth documenting. (Dharmpal1971: XIX, XX) He was able to correct many prevalent and erroneous impressions about India and Indian sciences. The spiritual and moral heights attained by the Indians were highlighted by him. On the basis of Virchand Gandhi's speeches and writings the book titled Yoga Philosophy was published in 1912. His presentations hold all the more important value in the context of the popularity of Yoga in the U.S. Contemporary to this, one also finds the publication of Swami Vivekananda's 'Raj Yoga'(1896) in which he restructures the Yogic practices to fit the West. The secularised, individualised and therapy based version of Yoga was brought about. These were the attempts to build the bridge between the religion and science by understanding the scientific principles embedded in the religious practices and rituals.

Response

The series of lectures given by Virchand Gandhi were received with great interest. The lecture rooms were crowded with the audience. The people showed eagerness to listen to his lectures. U.S. media portrayed and received him with great honour. His kindness and brotherly love impressed the Americans. (Thoburn, 1895: 268)

There were of course voices of dissent and disagreement. Some voices of dissent can be seen as biased one. His work and contributions were contemporary with the conversion work undertaken by the Christian missionaries. India and Indian sciences were largely misunderstood by the West. It was the outcome of the strategy employed by the missionaries to derogate Indians and India. His presentations were eye-openers for many in the context of the picture of India often portrayed by the Christian missionaries. (Thoburn, 1895:269-270) He could present clear picture. He corrected the false impression of India as being the uncultured and uncivilized land of Maharaja, tigers, cobras and magicians. He was able to make his mark due to his reasoning, simplicity, strength and power of conviction. His lectures enabled the Americans and the Westerners to broaden their views. One can notice the greater interest shown about the Eastern culture and knowledge in the intellectual journals like 'The Open Court' and 'The Monist' during this period. (Jackson, 1968: 75) This engendered a new attitude of appreciation towards the Indian studies. Virchand Gandhi got many Western friends,

close associates and disciples, though at home many of the Jains were not at that time appreciative of his work and foreign tours. Like the larger Hindu counterparts, the Jains also believed that the foreign tour or crossing the sea result into perverting of the religion.

His main focus was however to present and defend Indian religion and culture, the discussion on science was only part of the argument. His discussions undoubtedly became important part of the nationalist discourse in the contest between the East and West, the two differing world-conceptions. It became an interesting aspect of the East-West contact and dialogue. He can be seen as the ambassador of Indian culture and heritage. One can see the outcome in the form of the European admission of the 'light of the East', but on the basis of her own way of thinking and living, opening herself to truth of the spirit, but not abandoning her own truth of life, science and social ideals. Indians admitted Western science, reason, progressiveness, the essential modern ideas but on the basis of the Indian way of life. The interaction and the intensity of exposure helped the West to realize that the Western culture could not serve as the standard for comparison and evaluation of other societies and tradition. The extension of the missionary activities began to be questioned. The interactive space opened up for East-West encounter. These developments can be seen as the blending of the philosophies of the east and the west. In fact, as the by-product, the relations between colonised India and U.S.A. improved.

Contextualising the process

When The West came upon India, Indians engaged themselves in absorbing European ideas of 'rationality, monotheism and individuality'. The process of absorption was however, disturbed in the second half of the nineteenth century as the British attitude of racial superiority became more pronounced. This led to a greater emphasis on 'Indianness.' The speeches of Virchand Gandhi and his better known contemporary Swami Vivekananda speak for the fact that while Indians had been open to the foreign, ready to learn and adopt, they equally wanted to assert their own, to emphatically preserve what they considered to be elemental to their own life and tradition. European technological innovations were carefully considered and compared to already existing indigenous techniques to be accepted only if deemed to be necessary. To illustrate prevalent medical knowledge was found sufficient for the existing society.

As the nineteenth century progressed, this self-assertion became more emphatic vis-à-vis the Western culture than they had been in the earlier encounters with the foreign. As Vivekananda asserted that it was not enough to learn from the West those things in which India was deficient, but it was also necessary to teach the West in what they do not have. Whether Virchand Gandhi or Swami Vivekananda, the Indians began presenting themselves to the world in a new fashion. They took more distinctive initiatives to interpret their identity to the Europeans, and to affirm it against them. From the perception of the backward country, they attempted to elevate the image of India by demonstrating it as the cradle of ancient civilisation. The concept of national consolidation and the national pride took a huge step forward.

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