International Journal of Scientific Research in Science and Technology
© 2018 IJSRST | Volume 4 | Issue 8 | Print ISSN: 2395-6011 | Online ISSN: 2395-602X

# A Study of Towards an Understanding of Gandhi's Views on Science

**Dr. Anamika**

University Department of History, B.R.A. Bihar University, Muzaffarpur (Bihar)

## ABSTRACT

A reading of the rather extensive literature on Gandhi reveals that his views on science rarely find mention, almost to the point of exclusion. Based on his critique of modern civilization and the sheer lack of material on his views on science, Gandhi has been labelled as anti-science. This has not been addressed adequately either by his followers or by social analysts of Gandhi's philosophy and practice. In this paper focusing on his Collected Works (1888-1948) we seek to address this lacuna by presenting a detailed contextual collation and analysis of his views on science over the years. We look at the responses of scholars to these representations. We then present new material on Gandhi's views on the subject that have been ignored and stand in need of analysis. The readings presented here would in our opinion have the potential of answering squarely some of Gandhi's critics who saw his views as retrograde. This 'archive', it is hoped, will contribute to equalizing the focus in Gandhian studies from an overemphasis on his political philosophy to his contribution to intellectual history and the sociology of knowledge. Gandhi's views on science have often been seen as presumed upon his views on machinery, the machine age and modern civilization. However, as we shall show, there is ample direct reference to science in Gandhi's discussions with co-workers or talks with fellow countrymen. The new data presented here would also strengthen the existing critique of modern science and development. While the contours of this 'alternative' view need working out in detail, the present collation will correct the situation of indifference, if not negation, of Gandhi's views on science by science policy proponents in India. While Nehru's views on science have been written about quiet extensively, Gandhi's have not received any scholarly attention so far.

**Keywords :** Gandhian Studies, Sociology of Knowledge, Modern Civilization, Intellectual History

## I. INTRODUCTION

Huxley's criticism of Gandhi was representative of contemporary understandings of Gandhi on science. Even Nehru, one of Gandhi's closest followers, revealed the extent of his misunderstanding when he responded to Huxley above: It [Gandhi's] may not be a correct attitude; its logic may be faulty… Even this attitude is not necessarily accepted by the political associates and followers of Gandhi. Personally, I do not agree with it and I should make it clear that the Indian Congress and the national movement have not adopted it... I have mentioned these considerations to you not to defend the spinning wheel but so that you may realise that Indian nationalism is not opposed to big scale machinery and much less to science. I have no doubt that when it is in a position to do so, it will industrialise the country as rapidly as possible.

Meanwhile, helpless as we are, we have to carry out such makeshifts as possible... My whole outlook on life and its problems is a scientific one and I have never felt attracted towards religion and its methods [Singh 1988

Nehru while seeking to explain Gandhi's attitude to science actually ends up furthering the divide between the so-called personal view of Gandhi and the public view of the Congress. His view shared by a large section of the Indian intelligentsia even today acknowledges Gandhi's ability merely to mobilise people and rally them around the call for freedom. The charkha is consequently important for its immediate economic and instrumental value in achieving freedom, to be discarded later. Nehru makes a clear divide between himself as a science person and Gandhi as a religious man. This stereotype that sees Gandhi in purely religious terms alone and thereby outside science was expressed several years later by one of the few social scientists who interacted with Gandhi – the anthropologist Nirmal Kumar Bose. As part of Gandhi's Noakhali effort of 1946, Bose had to soon confront his own serious disagreements with some of Gandhi's experiments which led to his departure from Gandhi's camp. What is significant is that Bose sought to explain his actions as those of a scientist with politics being undertaken only in emergencies (1974). For Bose, science and politics were clearly separate entities with little possibility of one including the other. He thus unwittingly cast Gandhi as a political and religious person alone in contrast to himself as a scientist.2 This image has stuck and been made unforgettable by Einstein's famous quote on Gandhi where he sees Gandhi as a saint and Politician who was well versed with the art, not science of peace.

Bose and Nehru indicate an attitude of discomfort and ambivalence to their leader Gandhi and are unable to reconcile his public persona with the more controversial 'private' one. The response by Indian scientists to Gandhi on the other hand shares none of this discomfort. Meghnad Saha, the scientist-architect of the planning and industrialisation model in independent India, for instance saw Gandhian science as entirely retrograde

Amongst our leaders [are] a considerable number incapable of seeing the great and inevitable part which the new age of technic will play in India's destiny… One comes across overdrawn pictures of the imaginary good old days when nobody was supposed to have anything to complain of and a tendency to attribute all the troubles of the world to the evils of science ... We do not for a moment believe that better and happier conditions could be created by discarding modern scientific technique and reverting back to the spinning wheel, the loin cloth and the bullock cart (Quoted in Visvanathan 1985). Saha believed that the primary task of science in India was in "weeding out medieval passion" and training the populace for "a proper grip and sufficient operation of the beauty and power of science". In another context, Saha informed Russian scientists that he and his brother scientists had "as little regard for Gandhi's economic and social theories as you [the Russians] have for Tolstoy [Quoted in Narayan 1960: 55].

## Gandhi's Early Critique of Science

Modern civilisation, far from having done the greatest good to humanity, has forgotten that its greatest achievements are weapons of mass destruction, the awful growth of anarchism, the frightful disputes between capital and labour and the wanton and diabolical cruelty inflicted on innocent, dumb, living animals in the name of science, falsely so called (CW 1: 189-91). The boast about the wonderful discoveries and the marvellous inventions of science, good as they undoubtedly are in themselves, is, after all, an empty boast (CW 3: 414). The above quotes indicate Gandhi's strong views on science very early in his public life.

The use of the phrase 'falsely so-called' indicates that Gandhi believed that the prevailing practice of science had defects but this was not necessarily intrinsic to the scientific quest. Nor was such a condition irremediable warranting a total rejection. There was a need for the scientific enterprise to undergo a course correction. This qualified criticism becomes clearer in his response to members of the British Association for the Advancement of Science who visited South Africa in 1904. Gandhi commended the association's efforts in popularising science and in bringing Britain and the colonies closer to each other. In pursuance of the latter, he suggested that the association should meet in India and be renamed as the 'British Empire Association for the Advancement of Science'. Such a visit, according to Gandhi, would be greatly to the advantage not only to India, but the association as well (CW 5: 46).

## Existing Scientific Practice: Vivisection and Ayurveda

The practice of vivisection for Gandhi was a shining example of the need for such limitation in modern scientific research particularly since the practice of inflicting pain and violence on live animals was a part of the experimental method 'normal' to modern science. Premised on a mechanistic notion of the body and the universe, it legitimated the subjugation of the inferior nonhuman creation by and for the human. This to Gandhi was ethically and epistemically unacceptable. Recent critiques have highlighted vivisectory practice not only in medicine as a machine, but in the concentration camps of Hitler and the bombing of Hiroshima during second world war [Visvanathan 1997: 15-47]. Gandhi's writings on a non-violent cosmology anticipated these criticisms as far back as the early 1920s and also argued that criticism must include a different conception of the experiment and not just be reduced to the realms of humanistic despair.

## Crafts and Indian Science Education

One of Gandhi's earliest experiments, both at the Ashram and outside was in the field of science education. Gandhi's educational scheme was based on an emphasis on the role of manual work, practical training and the use of the vernacular as a medium of instruction. Gandhi was keen to break the vice like grip that the English medium had on education in science. He cited Japan as an example of an educational system that taught science in the vernacular. To teachers and students of the Gujarat Vidyapith he urged the learning of science through the vernacular, adopting English words wherever technically necessary but giving explanations only in Gujarati (CW 39: 396). This vision of using the vernacular for scientific matters was translated into action by the khadi movement both during and after his death. Amongst Gandhi's other major institutional innovation in the 1930s was Nai Talim (or basic education). It is in his writings on Nai Talim that we find Gandhi's unique explanation to the question that has troubled many sociologists of science, namely, 'Why did India not have the industrial revolution?'. Gandhi's critique of education, both modern and traditional, was based on the place of manual and crafts work in its overall scheme. He was convinced.

In Gandhi's cosmology, the unity of body, mind and spirit was needed in exploring the relation between nature, man and God. This as we have seen comes through in his views on vivisection the critique, as also in his reshaping the Gandhi Seva Sangh – the practice. His understanding of the scientific method is perhaps best summarised in his own words on khadi:

It must be borne in mind that to make the spinners self-reliant and through their activity to achieve India's freedom is, and ought to be, the Association's goal. That we may not reach that goal should not cause undue worry. It is enough for us to know that it is the correct goal and, having started the activity, we have to correct our mistakes and go forward. That is the essence of the scientific method. No science has

dropped from the skies in a perfect form. All sciences develop and are built up through experience. Perfection is not an attribute of science. Absolute perfection is not possible either for man or for the science that he creates (CW 83: 355-56). We have in this paper shown that Gandhi is not anti-science as is commonly misunderstood. Through a look at his various experiments, many unrealised in his time; we have also shown that Gandhi's life defined a space for an alternative science for civil society that would operate with different methods. Gandhi's focus on the non-physical resources in organising for science, the satyagrahi scientist, for instance, is a radical departure from science policy as expressed by Nehru in his famous Scientific Policy Resolution of 1956 and followed in India since independence. He also had a universal message by providing a new cosmology of man-nature and fact-value relations that he articulated and put in place through his various experiments. With the above outline of a theoretical framework for Gandhian science in place, we take up for detailed explication the case of the khadi movement.

## REFERENCES


[1]. Biswas A. K. 'History of Science Movements in India'. In Raina et al. 2000. Science and Tradition. Shimla: Indian Institute of Advanced Studies. pp 205-17.

[2]. Gandhi, M. K. 1939. Hind Swaraj or Indian Home Rule. Ahmedabad: Navjivan. Kumar, D. 1991. ed. Science and Empire: Essays in the Indian Context (1700-1947). New Delhi: Anamika Prakashan.

[3]. Ibid.

[4]. Mclure, M. 1997. 'How Scientific can Satyagraha Become'. Journal of Peace and Gandhian Studies. 2(7-8): 110-115.

[5]. Ibid.

[6]. Srinivasan, A. 1993. 'The Subject in Fieldwork: Malinowski and Gandhi'. Economic and Political Weekly. Dec. 11. 29(50): 2745-52.