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On Nehru's Concept of Scientific Temper of Mind and its Place in Modern India

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Introduction

Notwithstanding some murmurs here and there, Jawaharlal Nehru is widely regarded as the principal architect of modern India. He was a man of vision and also possessed abilities to translate it into reality. Besides his well-known contributions to shaping of India's foreign policy, strengthening of the roots of parliamentary democracy, and development of industrial and agricultural sectors, Nehru laid special emphasis on the role of science and technology for chartering the country's development along modern lines. The latter contribution of his has been widely acclaimed in various circles. There is a related legacy of Nehru's which has unfortunately not been adequately acknowledged, much less acclaimed. This is his favourite and oft-repeated theme of the development of scientific temper of mind among the Indian people. In this essay I propose to give a short account of its nature and importance in contemporary India.

Nehru's autobiography gives clues about his interest in the dual aspects of science. He credits his boyhood tutor Ferdinand Brooks (of mixed Irish-French origin) for imprinting his young mind with a set of ideas that eventually shaped in a decisive way his Weltanschauung (Nehru 1989: 14-16). Brooks exposed the young and impressionable boy to metaphysical ideas by permitting him to attend weekly meetings of theosophists he used to organize in his rooms. Nehru states that he "gradually imbibed philosophical phraseology and ideas" and that "I owe a debt to him and to Theosophy" (Ibid.: 15-16). He credits Brooks with a second influence, which is about science. In Nehru's own words: "Brooks also initiated me into mysteries of science. We rigged up a laboratory and there I used to spend long and interesting hours working out experiments in elementary physics and chemistry" (Ibid.:14). His Natural Sciences Tripos from Cambridge University further strengthened his interest in sciences and, as he says, "I was influenced by my scientific studies in the university and had some of the assurance which science then possessed" (Ibid.: 21-22). His interest in socialist ideas was kindled by the writers of Fabian school. In subsequent years he read widely the works of writers like Russell, Bernal and Haldane and realized the importance of science and technology. So already in the 1930s on various occasions he was advocating the role of scientific methods and on this score he stood out among the other nationalist leaders who were waging a political struggle.

Considered against this background, it was but natural that, as the first Prime Minister of independent India, Nehru provided a big niche for science and technology, particularly in the development of industrial and agricultural sectors. His role in the establishment of various science laboratories in the country is well known. We are familiar too with the giant step he took in respect of science education by setting up the IITs. He not only religiously attended and addressed the inaugural sessions of the Indian Science Congress but held scientists themselves in great respect. During his visits abroad he made it a point to meet eminent persons like Einstein and John Dewey; he even offered Indian citizenship to Robert Oppenheimer when he was under duress in the U.S.

Scientific Temper of Mind

While Nehru rightly opted for a major role for science and technology to improve the material well-being of people, he surely did not lose sight of its significance for refining the Indian mind which is steeped in age-old dogmas and beliefs. It appears that here again the first seeds were sown by his tutor Brooks. We may recall here Nehru's exposure as a boy to lectures about theosophy and his interest in ancient Hindu and Buddhist texts, and the stress these writings laid on an unbiased mind. He was quick enough to realize that, while science and experimental method has unlimited potentialities for both exploring and exploiting the natural world, its basic tenets of rationality and proneness to reject ideas and beliefs not supported by positive facts have much wider implications and are of direct relevance for correcting, wherever necessary, and elevating the state of human mind. This is the core notion of his famous concept of Scientific Temper of Mind, which he saw as a necessary adjunct to the application of science and technology for developmental purposes. This became Nehru's second *Mantra* for India's development. He attached paramount importance to it both because he realized the need for freeing the mind from the mazeways of blind beliefs and dogmas in which it is caught and for preserving the linguistic, cultural, religious and ethnic diversity in the country which struck him as a historical fact thanks to his own voyages into the past, resulting in the writing of his widely read book *The Discovery of India* (Nehru 1960).

It is only sad that, although much has been said about Nehru's role to induct science and technology into nation-building activity, precious little has been written about his concept of scientific temper of mind and still less done to promote it in the society. In fact, even at top levels sometimes the true meaning of scientific temper has been missed. Many years ago I heard a Vice-Chairman of the U.G.C. treating a T.V. interviewer's question about scientific temper of mind as one on science itself and dispose it off as such. Khilnani's book The Idea of India, which rightly showers much praise on Nehru's role in nation-building, makes but only a passing reference to this topic (Khilnani 2004:180). From my limited familiarity with the literature I have been able to spot just two cases where attention was focused by writers exclusively on this topic. In October 1980 the Nehru Centre in Mumbai organized at Coonoor in Tamil Nadu a group meeting of about 25 eminent scientists and scholars on this topic under the chairmanship of P. N. Haksar and brought out a statement on this topic (Ramanna 1981). Some years later Nurul Hasan wrote a small but thoughtful paper on this concept (Hasan 1989).

Meaning

Stated briefly, by scientific temper Nehru meant a rational, objective and unprejudiced attitude of mind towards other persons and in all life-situations. As early as 1939 he stressed the importance of science for progress at individual and national levels and further defined science as "a certain way of approaching problems, a certain way of seeking the truth. It is a certain empirical way whereby we get prepared to reject anything, if we cannot establish or prove it" (*Collected Works*, Volume IX, p. 616). As the Prime Minister he gave expression to this theme on numerous occasions – addresses at the Annual Sessions of the Indian Science Congress, letters to Chief Ministers, public speeches, etc.

This theme found its clearest expression in his inaugural addresses at the Indian Science Congress, to which he not only attached great importance but lent strong support. These have been published as a separate volume entitled *Jawaharlal Nehru on Science* under the editorship of Baldev Singh (Singh 1986). Starting with his message to the Silver Jubilee Session held at Calcutta in 1938, Nehru addressed the Indian Science Congress on no less than 15 occasions from 1947 to 1963. It is useful to refer to a few of these addresses for grasping the true meaning of the concept of scientific temper of mind.

In his address at the Lucknow session held in 1953 he lamented that, while science has no doubt affected human life in a positive way, it has not made adequate impact on the human mind. This, he said, is the reason why people are "tied up in knots". He also bemoaned that, although they have excelled in their respective research endeavours, scientists as individuals still "accept or reject things without analysis, without criticism and without examination". He pointed out that a true scientist has on his shoulders the important task of promoting scientific temper among people, which he defined as the "critical faculty in considering problems, that evenness of temper, that objective way of looking at things which if enough of us cultivated would undoubtedly help tremendously in lessening tensions, national and international, and in going some way towards the solution of those problems" (Singh 1986: 38).

In his address at the Calcutta session in 1957 Nehru made a pointed reference to the Buddha's message of tolerance and his rejection of superstition, ritual and dogma. He further lamented that rigidity of dogma in religion and belief not only continues in the country but has in fact percolated into other spheres of life including politics and economics. In the inaugural address at the New Delhi session in 1959 he once again drew attention to the mismatch or gap between the dual aspects of science in modern times, i.e. while it has no doubt contributed enormously to the improvement of material well-being; it has not focused sufficient attention on reforming what he called "displaced minds". He warned that "Science is not merely looking at the heavens and at the microscopic things through its microscopes, not merely losing itself in the higher mathematics, not merely producing all kinds of calculating machines and brains … But the fact remains that perhaps that misses something that is an essential part of the human being. And so science has also to look at the heart of human being, at the spirit and mind of the human being and try to integrate it with all the other advances it is making" (Singh 1986: 71-2).

In the address at the Madras session in 1958 Nehru went to the extent of advising the Science Congress to add to its proceedings a new section that will "probe into the ways of the human mind and the human spirit" (Singh 1986: 63-4). He also advised scientists to imbibe something of the wisdom of the sage and something of the compassion of the saint. He made a pointed reference to how non-scientists but spiritually guided persons like Gandhi and Vinoba influenced people's minds and emotions in the right way. Pointing out hat Indians are in the habit of imagining that they are more spiritual than others, Nehru

reminded that mere recitation of verses from ancient texts does not make oneself spiritual but it is the life that one leads.

During the tenure of Indira Gandhi as the Prime Minister, as part of the 42nd amendment to the Constitution, the promotion of scientific temper was added to the Directive Principles of State Policy. Thus Article 51A(H) enjoins upon every citizen of India "to develop the scientific temper, humanism and the spirit of inquiry and reform".

The Statement issued by the Nehru Centre in Mumbai lists four important attributes of scientific temper. Among these the third one is directly relevant to the theme of this essay. It states: "that the fullest use of the method of science in everyday life and in every aspect of human endeavour from ethics to politics and economics – is essential for ensuring human survival and progress" (Ramanna 1981:15). Emphasizing its importance in the Indian society, the Statement says that "Scientific Temper becomes a part of our culture, a philosophy, and a way of life which leads to pursuit of truth without prejudgement... Inherent in Scientific Temper is a system of value judgements. The inculcation of Scientific Temper in our society would result in our people becoming rational and objective, thereby generating a climate favouring an egalitarian, democratic, secular and universalist outlook ..." (Ibid.: 16).

Place of Spirituality and Values

It is important to clarify that Nehru's emphasis on the role of science and technology in national reconstruction and the importance of scientific temper of mind in social conduct was not one of mechanistic application of science nor an argument for the use of cold reasoning in human affairs. On the contrary, prompted by his own not inconsiderable knowledge of Indian thought, he underlined the need for keeping in view the spiritual approach characteristic of the Indian mind and the values cherished by it. Nehru gave vent to this opinion on more than one occasion (Gopal 1984: 286-8). As mentioned before, in his address at the Madras session of the Indian Science Congress, he wanted the achievements of science to be tempered with the wisdom of sage and the compassion of saint. In a speech at Kolkata later in the same year, he even wanted a union between the truth-centered and experiment-based scientific approach and the spiritual approach forming part of Indian thought (Gopal 1984: 288). In a speech at Punjab University in 1959, he refuted the notion of incompatibility between natural sciences and humanities – a theme later developed in a more elaborate way by the British writer C.P. Snow for exposing the hollowness of two cultures proposition (Snow 1993). Later in the same year, in a speech at Teheran University, Nehru even stated that no science and industry could save a nation unless it adopted certain basic guidelines and human values. In an address to the Congress Parlimentary Party in 1963 he made a pointed reference to the complementarity between modernity and values derived from the past and cited the coexistence of atomic power plant at Trombay near Mumbai and the famous Trimurti figure of Elephanta caves, separated from each other by only a narrow strip of the Arabian Sea.

Conclusion

Now a few remarks about the degree or extent to which scientific temper of mind has permeated the Indian society. In his book *The Argumentative Indian* Amartya Sen has stated that the tradition of reasoning has been an ingredient of Indian mind ever since the dawn of history (Sen 2005). The dialogic method of the Upanishads is a well-known instance from the early period. The emperor Ashoka expressed in no uncertain words his displeasure against blind beliefs and superstitions. The Mughal emperor Akbar steadfastly upheld "the path of reason" (*rahi aql*) and said that his belief in Islam emanated from reasoning, not from "blind faith" and "marshy land of tradition" (*taqlid*) (Ali 1997).

But we all also know that over a period of many centuries the rational component of the Indian mind was largely submerged by thick accretions of myths, superstitions and obscurantist practices. Gandhi, while remaining true to his Hindu background, expressed in no uncertain terms his opposition to blind beliefs, wasteful rituals, temple evils and offering of prayers for selfish ends instead of cleansing and purification of the soul (Gandhi 1990; 39). It is precisely this veil enveloping the Indian mind which Nehru's concept of scientific temper sought to tear off. It will be incorrect to say that no efforts at all have been made by government agencies and voluntary organizations to spread scientific temper among people. For example, some years ago the Government of Maharashtra, thanks to the weight put in by organizations like Andhashraddha Nirmulan Samiti, has passed orders that persons advocating dogmatic beliefs and superstitious practices and misleading gullible people by these practices can be dealt with legally including arrest. But the fact remains that the progress is extremely tardy and various dogmas and superstitions still hold sway among both non-literate and literate sections of the society. For instance, both animal and human sacrifices are still being performed to propitiate malevolent deities. A recent example of "displaced

minds" in our society is the closure of the Indian Statistical Institute in Delhi for many days because the hostels and classrooms were 'haunted' by the ghost of a former student (as reported in *Times of India* dated 22nd September 2004).

There are many other deplorable manifestations of the phenomenon of "displaced minds". Gautam Adhikari's book *Unreasonable Indians* (2010) has drawn attention to the increasing loss of reasoning among political parties. The electronic and print media, instead of correcting the minds, are actually promoting their corruption by permitting advertisements which announce the sale of things like 'Lakshmi-yantras' that supposedly ensure wealth. Godmen and their misdeeds are well known. The gigantic leap in corruption in money matters in higher levels of the society has become a national concern.

In view of these circumstances the role of scientific temper of mind has now become more relevant in the functioning of our society. It needs to be promoted by all available means and at all levels. It deserves a prominent place in our value education programmes at school and college levels. A whole corpus of concepts drawn from sources ranging from the Upanishads and Buddhist and Jain streams of thought to Asoka's Dhamma policy to Sikhism, teachings of medieval saints and precepts of Akbar's unfortunately short-lived Din-Ilahi or divine monotheism including the concept of sulh-i kul or Absolute Peace (Khan 1997) could form part of this value education.

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