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Nehru and the Spirit of Science

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Jawaharlal Nehru's writings show a complex thinker who saw science as a tool for social change, not just an enemy of religion. He sought a balance between science and spirituality, inspired by Gandhi's ideas. Nehru believed that India's progress depended on this "scientific-spiritual approach".

India is the only country to include the development of scientific temper in its Constitution. Our Constitution states that one of our fundamental duties is “to develop scientific temper, humanism and the spirit of inquiry and reform”. However, the meaning of the term “scientific temper” has been contested over the years, perhaps most famously during the debates that resulted from the scientific temper statement in 1981 released by P.N. Haksar and others. The concept of scientific temper continues to be invoked, as it was in 2011 in Palampur and earlier this year in Kolkata.

The origin of the term is usually traced to Jawaharlal Nehru but unfortunately Nehru's thinking on the idea of scientific temper has often been confined to a few quotes from The Discovery of India. Scientific temper is then taken to be a self-explanatory term referring to some form of “evidence based reasoning” as opposed to “superstition” and “obscurantism”.

These invocations appear woefully inadequate to deal with the real political contestations in our time and fit far too easily into an elite narrative where the scientifically trained technocratic elite must deal with the “superstitious” masses. As D.D. Kosambi once wrote, “Science is the theology of the bourgeoisie.”

Nehru's thinking, however, was much more complex and if we are to reinterpret the idea of scientific temper in the present context, or what Nehru also called “the spirit of science”, it is worth doing it carefully.

As Nehru said, “It is interesting to see this apparently inherent conflict between the normal conservatism of a static society and the normal revolutionary tendency of the scientist's discovery which changes often enough the basis of that society.”

Since much of the systematic writing that Nehru did was during his time in prison, it is natural that a lot of attention has gone to his pre-independence writings. However, there is a vast volume of writings and speeches of his after independence. Crucially, these are also writings after Nehru had seen the impact of the atomic bomb, which naturally affected him greatly. These writings stand out because they reveal a somewhat different attitude towards the question of science.

First, for Nehru, the most important part of the spirit of science was social change. In 1950, in a speech titled “The Spirit of Science”, Nehru asked what that spirit was. In reply, he said, “The active principle of science is discovery”, which is opposed to continuity and conservatism in society. As he said, “It is interesting to see this apparently inherent conflict between the normal conservatism of a static society and the normal revolutionary tendency of the scientist's discovery which changes often enough the basis of that society.”

Therefore, the spirit of science is “to accept the disintegration of the old, not to be tied down to something that is old because it is old, not to be tied down to a social fabric or an industrial fabric or even an economic fabric simply because you have carried on with it” (Baldev Singh 1988: 78). For Nehru, the spirit of science was tied to revolutionary change and it was against conservatism in all aspects of social organisation.

At the same time, Nehru realised that this revolutionary change must have a historical basis. He therefore said, “After all, what are we today—you and I and all of us? Wherever we might be, we are the ultimate products of this past behind us. Whatever culture we have, whatever science we have, whatever in any way the world possesses today—the way of thought, or writing, or action or deed—it is the accumulation of the past, accumulated up to this present. From the pinnacle at which we stand and from the pinnacle of the present, to ignore that past and to throw it away is to throw away the whole fundamental on which we have grown. We cannot do that” (Baldev Singh 1988: 87).

In essence, Nehru was trying to understand how scientific thought could have a civilisational basis. To explain scientific temper, Nehru would often refer to the Buddha and the Upanishads and their approach towards the truth. He realised that revolutionary change without historical and civilisational roots would remain incomplete and partial. To work out the solution would require re-examining Indian thought because “the basis of Indian thought is something magnificent” and “essentially scientific” (Baldev Singh 1988: 179).

Further, Nehru argued that the primary questions of his time were moral rather than scientific. His answers so surprised Karanjia that he said later in the interview that Nehru’s answers were very “unlike the Jawaharlal of yesterday”.

The person who no doubt influenced Nehru’s thought on this was M.K. Gandhi. Nehru described Gandhi as a revolutionary but argued that Gandhi thought of revolution in continuities rather than as a break. In an interview with the French journalist Tibor Mende, he said there had been only one major change in his thinking—the one brought about by Gandhi (Mende 1956: 36).

However, on matters of science, Nehru’s thinking is often seen as an antithesis of Gandhi’s. Gandhi is rarely seen as a model of scientific thinking. Many people saw a clear break between Nehru and Gandhi, precisely because of Nehru’s purportedly more scientific approach.

In an interview with Nehru in 1960, Russi Karanjia said, “People of my way of thinking consider his [Gandhi’s] philosophy to be somewhat confused and unscientific”, and asked him if it would be correct to classify the post-independence era as the “Nehru epoch”. In reply, Nehru contested the idea of a break and said, “I would call ours the authentic Gandhian era” (Karanjia 1960: 22).

Further, he argued that the primary questions of his time were moral rather than scientific. His answers so surprised Karanjia that he said later in the interview that Nehru’s answers were very “unlike the Jawaharlal of yesterday” and raised “visions of Mr. Nehru in search of God in the evening of his life!” (Karanjia 1960: 32).

In essence, Nehru argued that the development of the scientific approach to society, most developed in European thought by Marxism, must necessarily take Gandhi’s approach into account. The problem was, he said, to create a “fully integrated human being” or “the spiritual and ethical counterpart of the purely material machinery of planning and development being brought into the making of man” (Karanjia 1960: 34).

Towards the end of his life, Nehru would repeatedly cite Vinoba Bhave’s formulation that the days of politics and religion were over and we would have to yield place to science and spirituality.¹ He took this statement to mean that a narrow view of politics and religion were unsustainable. In a speech in Bangalore in 1960 he said that science was not enough. It could create both human benefit and disaster unless it was tempered by spirituality (Nehru 2015: 42–43).

Speaking of nuclear weapons, Nehru said that even though science must necessarily advance, it has thrown up a terrible paradox because “we have arrived really at the brink of hell”.

The other important aspect of Gandhi’s thought that influenced Nehru was his complete identification with the masses of people. Nehru did not believe in an elite conception of science where the rational scientist would educate the superstitious masses from above. On the contrary, he encouraged scientists to learn from the people. He was clear that scientists by themselves had no particular moral authority and it was only in their contribution to humanity that they would earn humanity’s respect.

Finally, while Nehru was obviously an admirer of the technological achievements that science had made possible, he was well aware of its destructive potential and increasingly concerned about it in later years. As he said in an address in 1958 on “Bridging Indian Philosophy and Modern Science”, “Science ... has arrived at a stage when it offers us a choice of tremendous progress and tremendous disaster.” Speaking of nuclear weapons, he said that even though science must necessarily advance, it has thrown up a terrible paradox because “we have arrived really at the brink of hell”.

Nehru suggested that the reason for this was the “divorce between science and philosophy” (Baldev Singh 1988: 177–179). A report of an address he gave in 1959 said that he asked “scientists to think in terms of humanity” (Baldev Singh 1988: 184). Nehru was worried “scientists were actually taking command of military equipment, but humanity was not deriving any benefit from it”.

It is not widely known that Nehru was president of the Association of Scientific Workers, a trade union, for a period of time. A large portion of the objectives of the association was to work towards peace. Nehru himself asked scientists to become “workers for peace” (Baldev Singh 1988: 263).

In a letter to chief ministers, Nehru wrote how the Cold War had led to an increasing focus on science and technology but reduced the spirit of science (Nehru 2009: 776–777). The development of technology was increasingly being channelled towards military uses in a quest for power.

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In sum, a reading of Nehru’s articles and speeches reveal a complex thinker whose ideas on scientific temper cannot be simplified to a simple opposition to religion and superstition. Rather, Nehru felt that the spirit of science was the spirit of revolutionary social change and he was concerned how, in the Indian context, this could be achieved in a way that had continuity (rather than with breaks). He was constantly engaged with Gandhi’s ideas and felt that science could not be left unchecked and there must be what he called a “scientific-spiritual approach”. He felt that the terrible possibilities that science had opened up made non-violence a necessary philosophy and the struggle for peace necessary.

Finally, Nehru felt that scientific achievement had gone ahead of moral progress. He was concerned with the need for an approach towards a training of the human spirit. These aspects of Nehru’s thought need further discussion and elaboration. They constitute an important aspect of a changed attitude towards scientific temper and science itself.

It is clear that Nehru was anticipating some questions that have become even more pressing today. War continues to be ever present with ever more sophisticated technology being deployed and the threat of nuclear war continues to loom. The advent of artificial intelligence has brought the question of humanity into sharp focus. Finally, the formerly colonised countries of Asia and Africa are emerging into a modernity with a civilisational basis that is distinct from Western modernity. Nehru’s idea of scientific temper retains its relevance but it must be understood in its entirety to appreciate its relevance for our time.

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Footnotes:

1 On 9 September 1960, Nehru wrote to Shriman Narayan, member of the Planning Commission, asking for Vinoba’s precise words where he said science and spirituality must replace politics and religion. Narayan wrote back the following day and Nehru used the quote in a speech on Visvesaraya’s centenary celebration on the 15 September and used it several times after that.

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