



Are we undermining our scientific temper?

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Science funding is inadequate and science management is problematic

- There was much angst early this month about the disgraceful remarks that have been over the last few years at the Indian Science Congress (ISC) meetings, to the point where even the organisers felt the need to take a stand.
- This is unfortunate because the ISC has traditionally been a forum for scientists from all parts of the country to present their work.
- It is a forum where research that is grounded in rationality has always been given a hearing, even if it did not make it to peer-reviewed journals.
- The vast majority of Indian educational institutes actively discourage learning, not to mention research, and the ISC is the only venue where scientists meet their peers and get affirmation of their work.
- It is truly a shame that a handful have brought disrepute to the entire Indian science community, particularly to those at less favoured institutes who, if nothing else, spread scientific temper through their own actions to the broader community.

Nehru and scientific temper

- The broader question to be answered here is whether the nation is undermining its scientific temper.
- The British understood that scientific temper would result in a questioning of their rule and preferred to keep their subjects subservient.
- It was only after Independence that the need for scientific temper was considered to be important.
- It was even felt that scientific temper should be protected as a fundamental duty.

- For Jawaharlal Nehru, scientific temper did not mean that everyone had to study science; rather, it was a way of thinking, a way to break the hold of superstitions by applying rationality and thought.

Superstitions hold

- Unfortunately, the vision of the giants of our freedom struggle foundered in a morass of mediocrity.
- Even those educated in the best institutes in the country never lost their superstitions.
- It is now not only acceptable but fashionable for public figures to utter scientific nonsense.
- One may easily conclude that scientific temper is not important to the government and, perhaps even more tellingly, to scientists.
- It is hard to know how to reverse this deterioration in scientific temper.

Changing facts

- Funding for science is inadequate, the management of science is problematic, and the university system has failed.

All of India's Prime Ministers have been strong protagonists of science and technology

Protagonists of science

- From Jawaharlal Nehru to Narendra Modi, India's Prime Ministers have been strong protagonists of science and technology and have believed that the well-being of the common man is vested in scientific temper.
- India is among the top 10 countries for scientific research, according to data released by Elsevier, a publisher of scientific articles and journals.
- There have been many indigenous programmes in scientific research.
- In space missions, India is counted among the top six in the world.
- India cannot undermine the dreams of 1.3 billion people, which can only be realised through science. Both Apra Vidya, or knowledge of the intellect, and Para Vidya, or higher knowledge, are inseparably embedded in the Indian psyche.

Science is for humanity

- Science has always been universal and neutral.
 - Pseudo-intellectuals and people with unscientific beliefs masquerade as scientists to undermine Indian science.
 - India's greatest slogan, Vasudhaiva Kudumbakam (the world is one family), which is engraved in the central hall of Parliament, calls for acceptance and respectful coexistence.
 - Keeping up with our traditions, the Indian scientific community should declare that science is for humanity, and should avoid looking at science through the prism of religion and beliefs.
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- India will definitely march ahead with scientific vigour, indomitable courage and technology in the years to come.
 - The legacy of science and scientific temper can never be undermined in India.

Public rationality has to be ethical and humanitarian

- The answer is complicated because the terms in the question are themselves ambiguous.

Three ambiguous terms

- The first ambiguous term is 'scientific temper'.
- While much has been made of it, there is no clear definition of what scientific temper is.
- It may broadly refer to a scientific disposition (a way of knowing something), but that is a problem since ways of knowing in different sciences are quite different.
- The second ambiguous term is 'we'.
- If it includes all the citizens of the country, then we could ask: why should all citizens possess scientific temper? And who are the people who actually possess scientific temper? It could be scientists but surely it does not include all scientists in all their interactions with their family, colleagues and society?
- The third ambiguous term is the word 'undermining'.
- One could argue that if one possesses scientific temper, then it is not so

easy to undermine it because its nature is such that it will not be easily swayed.

- Human truths cannot be reduced to matters of evidence and arguments alone.

What is public rationality?

- On the other hand, it is important to have something similar to scientific temper in our public discourse.
- It is important to realise that public rationality — the ways by which we can discuss and dispute public matters in a public manner — needs some codes of conduct.
- Being dispassionate, taking into account insights and information from different sources, and following an argument to its end even though its conclusions may not be pleasing to one are all characteristics of public rationality.
- If some scientists mistakenly want to call it scientific temper, thereby negating other influences on this attitude, then they are using this term in an ideological manner.
- Public rationality is one that has to be ethical and humanitarian since it is about decisions and relationship with other humans.
- We need this larger public rationality, which draws on some ideas of scientific attitude as well as those derived from the practices of philosophy, literature, social studies and the arts.

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