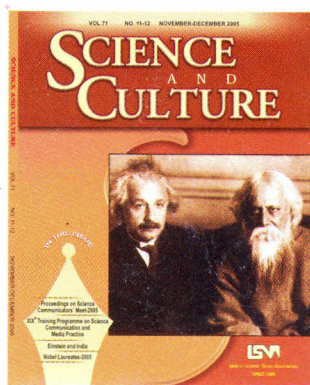


# SCIENCE AND CULTURE

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EDITORIAL

## WHY SCIENCE NEEDS GOOD COMMUNICATORS ?



THE PRIMARY role of a newspaper is to gather news. Sadly, we are currently witnessing a worrying trend within much of the world's media, where a traditional commitment to reporting facts is giving way – under a combination of commercial and political pressure – to a more colourful, but less reliable, tendency to

concentrate coverage on interpretations of fact. One can think of examples ranging from the coverage of the Gulf War to the way in which the media tends to cover science-related controversies, such as the safety of genetically modified crops, human-induced climate change or the ethics of human cloning and stem cell research. In all such cases, it is becoming increasingly difficult to separate out the factual basis of what is being reported from what is presented.

What is true of news reporting in general also applies to the public communication of science and technology. One of the challenges facing all of those engaged in such activity is not only to make science communication an important channel for the essential dialogue between science and society, but also to ensure that this dialogue is solidly based on fact. In other words, both journalists and other types of science communicator face the task of providing individuals with the facts that empower them to engage properly in such dialogue. Their ultimate goal should be to ensure that decisions emerging from such dialogue are taken in a way that is both appropriately democratic and informed.

Substantial and effective dialogue will only take place when those on both sides have a sound understanding of the relevant factual evidence, indeed evidence-based decision-making should be aspired at every level of society,

from local communities to the top levels of government. If the relevant evidence is absent – which often, sadly, turns out to be the case – then it is surely the role of the science communicator to fill the gap i.e. in other words, to make up the relevant 'knowledge deficit'.

When engaging in an issue of science-related public controversy, both the science communicator and the science journalist in particular have a responsibility to ensure that any publicly – stated position is well grounded in the current state of scientific knowledge. This is particularly true when it comes to considering the role of science and technology in meeting the needs of developing countries. For the communication of accurate scientific and technological knowledge must be seen as a *constituent* and *integral* element of the development process.

The role of the science communicator to fill the gap i.e. in other words, to make up the relevant 'knowledge deficit'

Indeed, science and technology communication is essential to building the capacities of governments, NGOs and industry. In other words, those engaged in different aspects of policy-making can benefit – and be 'empowered' – through access to authoritative information and informed opinion on key issues at the interface between science and society, Government and scientific institutions have a responsibility to provide the openness and transparency that can enable this to happen. Science journalists and other science communicators have a responsibility to ensure that it does.

However, current attempts to entice students into science degrees, by radically changing the curriculum, or offering financial incentives, may be just as misguided, when the real problem appears to be a deep-rooted misunderstanding of science caused by scientists' failure to communicate its cultural significance in society. Solving

the problem of getting people into science and scientific careers with quick fixes – populist courses, the alcohols, or reduced student fees or bursaries, will not win students who do not see the relevance of science to their futures.

Dissemination of good science is necessary – ignorance can prevent swaying of political support for or against a potentially hazardous application of technology; funding bodies need to be seen to be addressing issues of public concern and the social or cultural consequences of a scientific concept can only be realised by discussion in the community.

**Good communicators are needed who can enthuse youngsters that science is relevant and exciting.**

The problem is not limited to students' experience – a large proportion of science is taught by aging teachers. This is a vicious cycle, but to escape, good communicators are needed who can enthuse youngsters that science is relevant and exciting, but who also have academic credibility. This specific skill needs to be encouraged to help them develop a society that has an informed opinion about the social, ethical and political questions posed by science. It is time for a new discipline, Science Communication, to establish itself that can challenge the alleged impartiality and objectivity of science. Science communication is about dealing with science and issues

of social responsibility and citizenship. It is a profession in its own right, and one that is distinct from promoting science, be it through PR, education, infotainment, or encouraging more people to take up science as a career. Science journalists should be addressing not just the trustworthiness of the research itself, but also how the research is applied – the processes of regulation, how scientific advice is used and interpreted, the commercialisation of research – as well as its broader impacts on society. This can be done by equipping scientists to engage effectively and meaningfully in debate. In this way, the public can be provided with an opportunity to assess realistically the credibility, integrity and dependability of the processes of science.

It should be remembered that people are interested enough to care about science, and they certainly do when it causes impact on their lives. However, one of the potential problems with science communication is that a lack of public support for science is sometimes interpreted as a sign that science communication isn't working. In this respect, it should be recognized that earning public trust is a longer and more complex activity than undermining it. Evaluating the success and impact of science communication is difficult – it isn't about testing people's knowledge of science, and it shouldn't be about gauging their support for it. The need arises for the continuity of authentic science communication. This is why science needs good communicators. □

**Amit Krishna De**