

Bridging the gaps among the experts, the activists and the science communicators

Bhupati Chakrabarti

There was a time till some quarter of a century back when people used to look for expert opinion in the fields of science and technology whenever anything that may affect the life of the common mass used to hit the headlines. Whether it was a hurricane in Florida or an earthquake in Japan or a gas tragedy right at the centre of the country or a sudden break of an unknown disease we had always looked for expert views on the genesis of these or on the possible remedy of the calamities, particularly if those were man-made and happened close to our place. I do remember one of my old friends who as a young sub-editor of a vernacular newspaper in Kolkata could ring up a leading scientist in the field of chemistry in the city on the very next morning after the Bhopal gas leak accident. He still takes pride in the fact that he was the first to come up with the name of MIC and not phosgene as the possible killer gas that was suggested by the chemist after carefully listening to the sufferings of the people and the nature of the factory from where this leak took place. It was indeed an expert domain.

Over the three decades or so owing to a number of factors this scenario has changed significantly. The mushrooming of the so-called NGOs that 'work' in the fields ranging from child health to nuclear power opposition, from science education to global environmental issues, has not only made them visible in a big way but it has made a significant section of the society to turn towards them for 'expert opinion'. However, people cannot be blamed for that. The easy availability of these NGOs and their workers and the amiable behaviour of a section of the workers has been able to generate confidence among the masses, particularly in the areas where one cannot have access to experts from different fields explaining different issues that they come across around them. In fact, one will find that in the rural areas the local teachers do serve as experts in a number of situations and that is one of the reasons for holding at least a section of the teachers in high esteem till now. On a number of occasions

the teachers provide some basic answers to these queries, though in the true sense of the term, they cannot be termed as 'experts'. The workers of the NGOs or the people who associate themselves with similar type of work quite often feel that they are doing a job at the grassroot level and the experts cannot do that. They often prefer to refer themselves as the 'activists' and I have used this term in the title of this article.

With the funding coming from all possible sources, government or private, local or foreign, more and more NGOs are spreading their activities. So much so that, today, for example, in the environment-related issues, large numbers of people in the society feel that there is no need for an expert and the 'NGOs know best'. In fact, in this particular field the line of demarcation between awareness and knowledge has become somewhat fuzzy and the school-going students from a very tender age start believing in some of the things that may not be tenable under the scanner of an expert. This approach puts these students in a problem in the later part of their career as they carry some wrong or incomplete or one-sided notion on some of the issues.

With due respect to the sincerity of a section of workers of the NGOs, most of whom have been employed handpicked but who do not have the right background for the work they undertake, one can only hope that they should not be looked up as experts in the field. In fact, they themselves should not consider themselves to be so. Quite often an organization is employing a person with a particular type of background commensurate to a particular project and is continuing with the same person when an entirely different type of project is undertaken because of the desire of the funding agency. It is well known that the large numbers of activists associated with the anti-nuclear movement are not aware of the basic physics for nuclear power production or about 'radiation biology' leave aside the complex technical details of a nuclear reactor. In fact, they refuse to suggest the plausible alternatives to nuclear power to

fulfil the growing demand for energy as quite naturally the associated technological and economic problems are beyond the comprehension of most of them. These aspects are indeed complicated and do come under the expert domain. It is true that ordinary men may not be able to raise these uncomfortable questions and experts may tend to be too technical. Social and political commitment may drive one to a particular field for activism but the necessity of some basic knowledge on the issues they talk about, cannot take a backseat.

And there are science communicators whose role in a democratic society can only be overemphasized¹. With the immense growth of print media and in the growing interest of the masses in science and technology, a big chunk of newspapers and magazines do publish articles, features, news and interviews related to science and technology. Television networks of Indian origin, however, do not air much on science though some channels with roots abroad do come up with excellent programmes based on science and technology. That way radio plays an important role as it airs programmes based on science and technology keeping in mind the local needs and people's interest. Radio programmes maintain a certain quality though the time allotted for such programmes is not adequate. Yet being indigenous, they serve a definite purpose. Moreover they can actually rope in the experts in a number of programmes and listeners get an opportunity to have a more reliable view.

Serious science communicators try to prepare their write ups based on materials available in different international science magazines and journals like *New Scientist*, *Nature*, *Science*, *Scientific American* and a few more. However, all the science communicators actually do not take that much pain always and do base their write ups on secondary or even on tertiary sources. That definitely takes its toll not only on the quality of writing but on the correctness of the information as well. Vernacular science writers and communicators also depend on materials pub-

lished in English newspapers, some of which are syndicated versions of the writings published in newspapers and magazines in the West. The basic problem lies in that the science communicators are normally from one or the other discipline of science but with spreading of the knowledge horizon, their background even in a field where he or she had some basic training in student days proves inadequate to comprehend a number of things. In fact, this group of people is expected to act as a link between experts and common readers. Quite often bowing to the immediate needs of newspapers and magazines, science communicators do venture into fields that they are not accustomed to. So a person with no background of biology is asked to write on stem cell research or a person with no background on meteorology is asked to write on the late arrival of nor'westers whenever the issues hit the headlines. With the good intention of the science communicators notwithstanding, people are deprived of genuine expert opinion. Sometimes not only wrong information but also wrong ideas do creep in. And the situation leads to development of misperceptions if not misconceptions.

In a big country like India expert opinion on different issues cannot directly reach all of the interested population spread across the country. People cannot attend popular or semi-popular lectures, discussions or talks on issues they are interested in as most of these are confined to big cities or metropolises. That in a way entrusts a big responsibility on science communicators or on the workers of the NGOs involved in the field of science and environment-related work. They can take help of experts to know the issues in

a better way and can supplement the experts with their sincere efforts but by no means can replace the experts. Experts also need to show the desired attitude and should address the relevant queries that may come to them through these workers and communicators. Since on a number of issues experts have varied opinion based on the scientific data and their interpretation, the grassroot level workers of science tend to be choosy and try to pick the opinion that suits their mode of propagation. Lots of environment-related issues and their impact on life on earth are testimony to such attitudes. Expert help is even more needed in such situations where a rational mind can explain different aspects of a problem and can give an idea as to why expert opinions vary.

A few organizations in different parts of the country run some training programmes for science communicators. Surprisingly they do not get enough participants who have pursued science up to the graduate level. We can respect the commitment of an activist to a cause but he or she may not be the best person to learn from. Since the profession of science communication has not emerged as a whole-time vocation with support from different sectors, the work is mostly undertaken by people who are actually associated with other professions for their bread and butter. Moreover, with widespread accumulation of knowledge, we are having experts from more and more fragmented fields. The comprehending capability of an otherwise educated man has now been proved to be inadequate to talk on issues emerging in his field but do not come directly under the arena where his work is limited. This is true not

only in the field of science but elsewhere as well.

A more intense interfacing of experts with the activists including those from the NGOs and science communicators who are doing the groundwork is very much necessary. In different branches of science knowledge is being constantly updated. It always pays to learn from experts. However, it can only be done if all the sides show interest and the experts are ready to share the additional burden as a part of their social commitment. Experts quite often cannot take some time off and write or talk on the issues from his or her field for the benefit of the common man. Science communicators and the leaders running the NGOs may be encouraged to be in touch with experts in different fields so that the common people can get more error-free answers to their queries. Some scientists and academicians have shown interest in this work and we need more of them. Particularly when one is dealing with students and the younger generation, wrong learning takes its toll in the long run. It is difficult to undo some long cherished wrong concepts, not tenable from the scientific point of view. So the bridging of these gaps among the experts, the activists and the science communicators has become all too important for the benefit of the society at large that is expected to emerge as a knowledge-based one in the near future.

1. Dwivedi, B. N., *Curr. Sci.*, 2006, **90**, 896.

Bhupati Chakrabarti is in the Department of Physics, City College, Kolkata 700 009, India. e-mail: dibhu@cal3.vsnl.net.in