

Indian science

A long road ahead



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Despite its vast numbers of scientists and research institutes, Indian science has always fared poorly on the global front. Several reasons have been put forward for the dismal performance, but the only fact that emerges is that there can be no consensus on what afflicts Indian science.

Western scientists set the trends

**RAGHAVENDRA GADAKAR**

TO BEGIN with, we must realise there is a lot that is right with Indian science. Even without considering those Indian scientists working outside the country, a significant number of Indian scientists have individually excelled in their fields of research and are easily comparable with the best scientists in the world.

But here is where the problem arises. If this is true, then why aren't there more of such scientists and why is it that, collectively, our impact is a fraction of our potential? Obviously, there are several factors. But we must not confuse the most important factor for the many minor ones.

Indian scientists find themselves in an economically and technologically backward environment that does not give them a fair chance to compete with their Western colleagues. This disadvantage cannot be wished away. The question then really is, can we work around this and

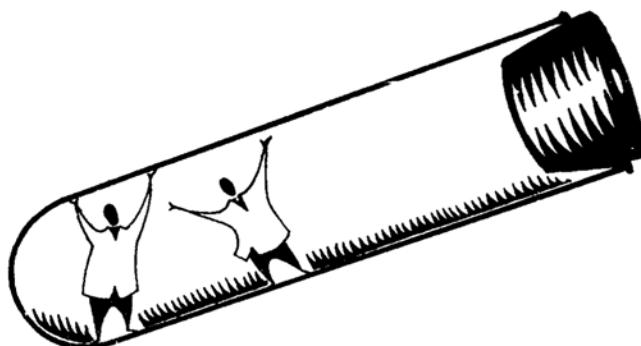
do better than we are doing now? The answer is yes.

An important task before Indian scientists is to find reasonable solutions in a short time for the pressing problems of the country — health, food, sanitation and development. Here, the name of the game is not competition, but results — quick and cheap. The only possible strategy is to make the best of our plight. Beg, borrow or steal technology, train our scientists abroad, enter into foreign collaborations — the end is what counts and not so much the means.

But many of us do basic research to build up a foundation of scientific manpower and expertise that will put the country on the map of the scientific world and equip us better to tackle the country's problems in the future. And that's how it should be. Here, the name of the game is competition — you don't advance human knowledge unless you work at the cutting edge of collective human knowledge.

This is where our economic and technological backwardness can either be really crippling or virtually irrelevant, depending on how we go about choosing our fields of basic research. And, as far as objectives are concerned, most of us engaged in basic research fail to realise that it does not matter that much which field we work in.

It is this failure that allows Western scientists to set agendas. Indian scientists then inevitably end up following the West's lead and seldom provide the lead themselves. Obviously, this cannot be satisfying after a while.



and our productivity falls further.

It is common for Indian scientists to work outside the country before embarking on a career in India. Indeed, our institutions either prefer this or make it almost mandatory. There is probably nothing wrong with this,

especially if returning scientists choose to tackle a problem that is feasible and one in which they are not likely to be handicapped because of working in India. But it is shocking that most of our scientists, brilliant as they are, seem to be incapable of doing this. Their work priorities continue to be provided to them by scientists abroad.

Biologists probably illustrate the problem best. India is endowed with incredibly rich fauna and flora and tropical biology is an absolutely fascinating area in which we have a fair chance of providing leadership. But most of our biologists prefer (it's not so much a preference as it is inertia) to work on a bacterial or viral strain brought from the US. It is as if Indian scientists want Western scientists to make tropical biology more fashionable before taking it up. ■

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