

The era of the mind

Current Science has frequently published many observations, editorial and otherwise, on the state-of-affairs of science and technology (R&D, education, and industry) in India and what needs to be done to improve it. Interestingly, some of these observations are attributable to those who have been or are responsible for formulating, and advising the government on, national S&T policies and the execution of such policies, the consequences of which we now bemoan.

What appears common in the suggested remedies is the simple-minded extrapolation of experiences gained in the past into the future. Surprisingly, none of the authors has shown any serious awareness of the fact that human civilization is already undergoing an epochal change, features of which are clearly discernible to some. The management guru Peter Drucker saw its coming (as an era dominated by knowledge workers) as well as its potential at least two decades ago. Global industries have begun grappling with the change out of stark necessity. Where all this lead to is difficult to predict but it is quite clear that we are already in the throes of a revolutionary transition, in the handling of which past experiences will count for little or nothing.

Today, the question is no longer one of rectifying past mistakes. Nor will the future be some variation and extension of the past, rather it will be a radically different one. Our past mistakes, and those who have been responsible for them, are fast becoming irrelevant. In the coming decades we are being offered an opportunity of starting with a new slate and only the clever and the talented will do well. The new era will definitely be an era of the mind. Working smart, not working hard will be the key to success. The command and control system of administration (which most societies borrowed from the military) within which we have spent most of our lifetime is changing to a more horizontal and consensual system. The ability to think globally and interact globally will be very important. The

internet is going to change our lives beyond recognition, and the altruism of many top-notch knowledge workers (scientists, open source software developers, etc.) is going to completely redefine the dynamics of the world's social and economic activities. In another few years I fully expect computers to be able to do many of the mundane tasks of researchers, and therefore I expect to see the average researcher becoming irrelevant to society. Knowledge is becoming so freely available that only those who can use it innovatively or those who can create new knowledge will be respected and rewarded in a way, for example, as already happens to people knowledgeable in the literature and the arts. Mere possession of knowledge will be passé.

These views cannot bring comfort to those who in the old era have held an iron grip on the S&T R&D community promoting mediocrity and building fiefdoms, and now, shedding crocodile tears. With meritocracy on the rise, mafias and fiefdoms will fall into the dustbin of history, automatically. Our real problem is therefore: how to phase out the old educational system, what to replace it with, and how to bring meritocracy back so that our people can be adequately trained to meet not only the socio-economic demands of the future but also their personal ambitions of worth in life. The problem is compounded further by the fact that for a given set of skills, the employability span for a person is progressively becoming smaller, which in itself is frightening to many since most of us have serious limitations when it comes to adapting to the unknown and learning the unfamiliar. To have to do this several times in a lifetime, in a timely manner, to remain just employable will be frightening.

On the positive side, the setting up of outstanding cyber-universities is not only a possibility but, I believe, within the reach of talented individuals. Which means that something in the nature of *gurukul* system, advantageously adapted

to modern communications technology, can occur. I am not sure if many of the gurus will come from India in the near future but in the long run I am much more optimistic.

The new elite will be a very different breed both in talent and in attitude. To an unprecedented degree they will have global reach and influence over the minds of the people. This much is clear. In another few years many of us can expect to be working from home as productively, perhaps more, as from an office. The implication is that people will not have to abandon the comfort and culture of a place they like to make a global impact or even earn a global salary. These are going to be radical changes for our country which even today sees several centuries living side by side. But I hope we will cope because I believe the new elite will be far more generous, considerate, and helpful to the rest of mankind than history has ever witnessed before.

With every successive epochal change, people have identified and bound themselves to increasingly larger communities, and the future may well hold that global rather than national concerns will become the natural norm. For the scientific community it will not be something new since it has been a global community of distinction since the past few centuries. Only now the rest of mankind will emulate them in economic spheres by seeking quality products and services irrespective of their geographical origins. I think we will see, in the years to come, very interesting changes in our notions of nationality and government, of government and governance, and so on. I would hesitate to make predictions, except perhaps that some of these changes may occur suddenly and catch most of us unawares.

RAJENDRA K. BURRA

640, Domlur Layout,
14th Cross Road,
Bangalore 560 071, India