

Scientific societies build better nations

Scientific societies in the developing world must take a stake in their countries' future. They should be proactive in fostering a culture supportive of economic development driven by science and technology.

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In many developing countries, science is treated as a marginal activity, or even as an adornment, to quote the Pakistani Nobel prizewinning physicist Abdus Salam. It is, then, hardly surprising that the tradition of scientific societies has not taken deep root. Very few are as active as their Western counterparts, and fewer still have international stature. This partly explains why many developing countries have been slow to gain economic benefit from advances in science and technology.

Scientific societies are deeply embedded in Western culture. In the two centuries following the establishment, in 1660, of the pioneering Royal Society in the United Kingdom, most of the countries of Europe and North America followed suit. These non-governmental organizations — professional bodies with altruistic objectives — have worked selflessly to promote the public understanding of science and raise the status of scientific disciplines and professions. The evolution of a scientific culture in the West has been due in no small measure to the efforts of these societies. They are highly regarded by the establishment and their views command respect. The societies are also vigorous publishers of scientific journals, contributing to the quality of research.

In the developing world, the desired levels of economic success are still elusive, despite prudent initiatives such as encouraging foreign investment, promoting industrialization, instituting macroeconomic reforms, and emphasizing research and technological education. With the approach of the third millennium, and the recognition that science and technology are agents for change, we must ensure that developing countries are not further isolated from the global economic mainstream. The scientific community has a responsibility in this regard.

The Western experience shows that scientific societies in developing countries have much to contribute to nation building. In the case of Singapore, the scientific community recognized the importance of scientific societies in nation building soon after independence in 1965. Since then, the Singapore National Academy of Science and its scientific societies have been proactive in complementing the government's efforts in the cause of development. They promote numerous annual programmes aimed at a national audience, including science festivals, science olympiads, mathematics olympiads, science and technology competitions, badge



Societies promote festivals and science and maths olympiads... spreading a culture supportive of science among the public

schemes for student project work in 12 disciplines, lectures and many other activities.

The effectiveness of these programmes in spreading a culture supportive of science and technology among the public in general and students in particular is well acknowledged. Funding has been a major but not insurmountable issue in implementing awareness programmes. The problem of scarce funding has been overcome by pooling expertise and resources and cultivating a spirit of commitment, enthusiasm and volunteering among society members. Alliances with government and private corporations have been forged. In parallel with its public programmes, the scholarly activities of the academy and its societies have raised the profile of the disciplines and professions they espouse.

It seems to us that scientific societies in developing countries are well positioned to help bring about a culture supportive of science- and technology-driven development through public initiatives and other measures. Representing a concentration of expertise and intellectual resources, they are in a position to take an equity stake in their countries' futures. Although a lack of funds is one reason why such societies have not

maximized their potential, this can be more than made up for by partnerships with government organizations and private corporations, as well as by tapping the large workforces of these countries. This would have the effect of strengthening existing institutions and enhancing their stature.

The success of general scientific societies in the West has led to the proliferation of more specialized societies catering to diverse interests and objectives. Many have regional branches, and these have helped to enhance their reach and effectiveness. The scientific intelligentsia in developing countries can emulate such measures.

More importantly, scientific societies can be established without the need for institutional infrastructure, official sanction or massive funding. It just requires the coming together of a core group of scientists committed to translating a vision into reality. Nearly three decades after its birth, the Singapore National Academy of Science and its affiliates have still not found it necessary to have permanent premises, despite their wide range of activities.

There needs to be more support for scientific societies from international aid agencies such as the United Nations Educational, Scientific and Cultural Organization, the World Bank, the International Monetary Fund and the rich countries that provide aid to the Third World. Indeed, such agencies should give modest annual grants to learned societies in developing countries. Over 70% of the support for science and technology in Africa comes from foreign aid. Even if only a small percentage of this went to scientific societies, it would be a tremendous help. Support and encouragement would establish new partnerships, thereby catalysing development. It would also further energize the scientific intelligentsia in developing countries for a noble cause, and accelerate the creation of institutions of credible standing out of such scientific societies.

As Salam noted, "It is basically mastery and utilization of science and technology that distinguishes the South from the North." It is time for scientific societies in developing countries to help to close that gap by taking on a higher profile. □

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