Forging Better Links with Governments

In Western countries most political personnel, from high-ranking politicians such as premiers, ministers and deputies, down to under-secretaries, officers and bureaucrats, have basically received a humanistic education (law, political science, literature, philosophy, etc.), but scant information on basic science and its cultural and economic roles in modern society. While a fair percentage own a PhD in economics, very few politicians are former physicists—though sometimes they are, and very successful, like NATO Secretary General Javier Solana—or scientists in general. I do not know whether the culprit is the abrupt end of the Renaissance due to religious wars or the later spread of Idealism, reluctant as it was to consider science as a part of culture.

The idealistic view of science as a purely practical endeavour, instrumental to defence or public health and communications, leads to the misconception that scientific discoveries and results are commodities which can be obtained or refused depending on the actual needs of the nation. This view leads to funding that is erratic, being exclusively linked to these needs rather than to the needs of science itself. But science is not a commodity: something you can buy and sell on the market if you don’t have any.

One of the basic needs of science is continuity. Temporary cuts in funding lead to damage (in terms of loss of knowledge and expertise) that is long-term because, for instance, it encourages researchers and teachers to leave their science jobs. The next generation of researchers and teachers are then left trying to cope with this, with long-term harmful effects on the civil and economic status of the nation. On the other hand, modern science is pervading all aspects of our daily lives, with a Weltanschauung which is gradually superseding other philosophical and religious views, and imposing itself as a winning culture.

The question is: can the Western world still afford the scientific illiteracy of its rulers? It seems that the new economic competitors of Far- and South-East Asia are not so much affected by this problem. Technical schools there disseminate researchers into the workplace as well as future candidates for ruling positions. Experienced scientists are called back from the West to fill governmental positions (Nobel laureate Yuan Lee as science minister in Taiwan, for example). The high-growth rate of these economies was fuelled by a trust in science. Even though the bubble in the East has now burst, and the growth could not be sustained, could Europe and North America not learn from their investments in science?

Practical responses of physical societies to this problem could be to promote the political commitment of experienced scientists, to strengthen their consultancy roles with governments and policy-makers, to have more access to media, tighter links with the industrial and economic world, etc. The latter aims are already on the agenda for the European Physical Society. However, we should consider that many politicians and government assistants holding a PhD in science passed through industrial jobs, private enterprises or consultative activities. Did we do enough in the past to attract to the EPS physicists operating within these important realms?

Another issue involving scientists on the global scale, which should be of interest to the largest physical societies, is that of planetary emergencies, at least for physical issues such as energy production and saving, nuclear waste management, detection, and monitoring of potentially dangerous asteroids and, last but not least, the control of nuclear weapon conversion. Much has been written (see for example Samuel Huntington’s “The Clash of Civilisations and the Remaking of World Order”) about the potential danger that highly aggressive peoples obtain weapons of mass-destruction. I have nothing to add to this except that dealing with the decommissioning of nuclear weapons and the smuggling of nuclear material requires at some stage scientific assistance—some hired physicists perhaps? Can a joint effort of physical societies do any good, both on the moral and practical levels? I think physical societies should discuss their cooperation and forge tighter links with concerned governments and agencies and expand their presence and action over the largest possible area of civil society.

Giorgio Benedek, Università Degli Studi Di Milano, Italy