SCIENTISTS: SPECIAL TARGETS FOR GOVERNMENT REPRESSION?

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North American and Latin American scientists, engineers, and medical professionals from 13 countries, meeting in conjunction with the 1981 American Association for the Advancement of Science (AAAS) annual meeting in Toronto (Canada), condemned the violation of human rights of their colleagues currently taking place.

The participants at the meeting, organized by the AAAS Committee on Scientific Freedom and Responsibility, expressed their concern about the decline of academic and scientific freedom in recent years. This, they said, has led to a deterioration in the quality and availability of education at all levels as well as a restricted research environment. Attacks on scientists and students imperil the long range possibilities for national scientific and technological progress and contributes to the brain drain, they noted.

The participants concluded that this attack on human rights and scientific freedom has become a chronic problem. Working groups recommended the promotion of greater cooperative efforts in responding to violations; the establishment of a Latin American regional centre to monitor and support scientific and academic freedom; the monitoring of the granting of loans by lending institutions; and the recognition by funding agencies of the need to support research into the causes of repression and violations of human rights.

They concluded by affirming that the advancement of science is fundamentally linked to the advancement of human rights. Scientists therefore have a responsibility, not only to promote scientific freedom, but also to promote the basic rights guaranteed to all under international law.

The following article is extracted from a paper given by Prof. José Goldemberg, physicist and president of the Brazilian Society for the Progress of Science.

Legend has it that when the Romans captured the Sicilian city of Syracuse in 212 BC, a soldier killed the great mathematician Archimedes as he was trying to solve geometry problems in the sand. This story is often cited as an early example of brutality toward an eminent scientist, brutality that has prevailed throughout history in many parts of the world. In actual fact, Archimedes was working on a combination of mirrors that would set fire to invading Roman ships by concentrating solar energy on them, an activity that obviously qualified him as a “combatant” in the eyes of the victorious army.

This story always comes to mind when I think of the problem of the persecution of scientists and the violations of their human rights in Latin America.

One has to be realistic enough to recognize that a very strict system of laws and regulations is in effect in many countries, forbidding political activity of one type or another. Scientists who violate these regulations or who involve themselves as citizens in the struggles against governments are bound to be imprisoned and suffer in the hands of the police. These are risks they take as individuals interested in changing or improving things. No special privileges can be claimed for them.

There are, however, a number of activities which are not strictly political and areas of discussion in which scientists are important — the protection of the environment, rational use of land resources,
preventive medicine, protection of minorities, and educational problems in general. Scientists play a large role in these discussions and, as a result of their views, frequently overstep the narrowly drawn limits of tolerated discussion. They are consequently arrested or persecuted. Contrary to popular belief, military governments and dictatorships are not the result of historical accidents and neither, generally speaking, are they installed by "palace coups". They come about when the upper middle class feels threatened by increasing demands from the population and ever more powerful labour unions trying to obtain a larger share of the national income. As a rule in Latin America, the upper middle class constitutes some 10 percent of the population but earns half the total income. The military is part of the class of technocratic-bureaucrats that maintains this system. It is an auxiliary of the ruling class and reflects its aspirations.

In critical situations — Brazil in 1964, Chile in 1973, Argentina in 1977 — the domestic political situation resembles civil war. In the "roar of battle" all kinds of reprehensible actions are justified. The most politically active groups suffer, mainly workers, intellectuals, and students. In the process, universities and scientists also suffer. Yet, in Latin America, scientists are also generally part of the upper middle class, either by birth or by newly acquired importance. In addition, scientists and technologists are considered important to a country's development, and many military and techno-bureaucrats in government are fascinated by the achievements of technology. In the quest for self-assertion, and in order to fulfill their ambitions of becoming a powerful nation, military regimes have come to realize that technology such as aerospace engineering, communications, and nuclear energy is essential. This means giving special privileges to scientists and engineers.

**SCIENCE AND POLITICS**

Are scientists special targets for repression? It is the significance of the functions scientists perform that attracts attention to their activities. As a result, they receive special honours, but are also persecuted and because they easily become representatives of aspirations of many people, they are bound to clash with the more repressive groups in society.

The special traits of scientists — a refusal to accept authoritarian rule, a search for evidence, a disdain for myth — are bound to trouble repressive governments that stand for traditional privileges and values.

Current Latin American governments are frequently unclear about their position regarding science and scientists. While some ministers and members of the military value and encourage scientific activities, others do not. A particularly good example occurred in 1977 in Brazil when the government almost succeeded in suppressing the annual meeting of the Brazilian Association for the Progress of Science (sapc). In 1961, Brazilian universities were purged of many unacceptable professors, who were forced to retire. However, the sapc meetings remained open to them. During the 1970s, the sapc meetings were the only forum where people could discuss and analyze specific problems and they often resulted in protests, warnings, and denunciations. Slowly, the annual meetings became important political events and tensions among scientists and the government mounted.

Government judgments on the subversiveness of the scientists' activities followed four criteria:

- scientific work in the exact sciences was not considered dangerous to the stability of the government and was actually useful to the technological development of Brazil;
- work in the social sciences, however, could be a threat. Sociological studies of the poverty-stricken areas of Brazil, for example, are in themselves political arguments demonstrating the failure of government policies;
- physicists have become a threat because they have pointed to problems associated with nuclear energy, which interfered with government plans;
- meetings in which scientists and students mix freely might "contaminate" other sectors of society against the government. The 1977 meeting was "tolerated" only at the last minute. This was a dramatic affair because the government increased the importance of the meeting and because Brazilian scientists, who are usually quite conservative, were outraged at the obscurantist position of the authorities.

In general, governments want a docile population. Scientists are not docile, and therefore they are a breed to watch with suspicion. In this sense, science and scientists cannot be separated from politics.

**WHAT CAN BE DONE?**

The only sensible policy in my view is to try to convince governments and ruling elites that the persecution of scientists actually runs counter to their own interest. Enlightenment seems to be the only way to protect scientists.

In large countries — such as Brazil, Argentina, and Colombia that have elites with great national projects this seems possible because in the medium and long term, their projects are hurt by the lack of scientists. In the smaller countries, enlightenment is a much harder task, because it might actually make sense to suppress scientists as well as other more liberal elements of society.

I recommend that all opportunities, public and/or private should be used to stress the importance of science and technology in solving the problems of developing countries. Whenever possible, one should stress that differences of opinion as well as criticism should not be construed as "subversive" or "conspiratorial".

Enlightenment failing, only embarrassment at home and abroad can act as a deterrent to the violation of human rights of scientists. These violations can and should be characterized as "autophagy of vital parts" on the part of authoritarian governments, in the sense that they are destroying important parts of their own systems. This method has worked in Brazil and I don't see why it should not work in other places.