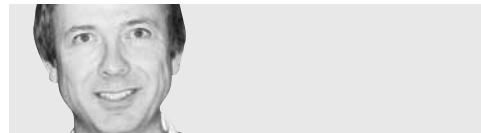


INNOVATION POLICY BRIEFING

Canada needs a scientific advisory board to Parliament to help formulate science policy

We need to develop a political culture that is proactive, not reactive—one that understands the value of sound science policy.



BY ROBERT MANN

WATERLOO—Who speaks for science? The naive answer to the question would be “scientists.” Don’t psychologists speak for psychology? Don’t chemists speak for chemistry? Don’t physicists speak for physics?

Well, yes—but which physicists?

Speaking to whom? About which subjects? Answering what questions? Proposing what policies? These fundamental questions make it clear that finding the right spokespersons for science is not a simple matter.

When it comes to science policy, it is particularly important that we find sensible answers to these questions because political, social, cultural, and scientific landscapes are continually changing. Speaking from a physicist’s perspective, in the past 10 years we have seen the introduction of many new initiatives that have transformed how physics is done

in Canada. For a time we had a science policy adviser, whose role has now been supplanted by the Science & Technology Innovation Council (STIC).

The Canada Foundation for Innovation (CFI) has changed not only the investigative facilities of our laboratories but also the manner in which grant money is acquired. The Natural Science and Engineering Research Council of Canada (NSERC) is undergoing the most radical shift in its history, altering how grants are refereed. In my own community of Waterloo, major philanthropic donations resulted in the Perimeter Institute and the Institute for Quantum Computing, which have reshaped the pursuit of physics in Canada.

Faculty renewal has been going on across Canada for the past 10 to 15 years

in a university environment that both culturally and financially has rewarded grantsmanship on a scale only dreamed of two decades ago. Start-up packages, salaries, and teaching loads have all been altered to attract the best researchers. The Canada Research Chair program has further rewarded research excellence. We now have a new generation of physicists that are working on front-line research in condensed matter, astrophysics, quantum optics, biophysics, gravitation, complex systems, cosmology, and particle physics that is truly competitive at a world-class level.

Despite this much-welcomed progress, the current situation is quite vulnerable. While most of the past decade has been quite good economically, the last year’s financial collapse resulted in much retrenchment in Canadian universities, and current government deficits significantly threaten healthy and productive scientific environments. Added to this is an increasing awareness of the acute need to deal with climate change, impending energy shortages, and a growing world population. Given this situation, how will science policy be shaped in upcoming years?

Scientific societies—such as the Canadian Association of Physicists (CAP), which I represent—can and do speak for science. The CAP provides a collective voice that allows the physics community to talk internally between members and externally with funding agencies (such as NSERC and CFI) and government policy-makers. Our Science Policy Committee drafts briefs to government finance committees that recommend appropriate budgetary allocations to ensure that Canadian physics remains at the cutting edge, producing the most benefit to Canadian society.

But even our situation is quite fragile. The CAP has only 2.5 full-time positions, financed by members’ dues. On a larger scale, the Canadian Consortium for Research (of which CAP is a member) is in fact a volunteer organization without an office. The Partnership Group for Science and Engineering has only one paid employee, and makes use of an office from the Royal Society of Canada. There is, unfortunately, no significant money for initiating, developing, and shaping science policy in Canada.

If we are to move forward, this situation must change.

We need to develop a political culture that is proactive, not reactive—one that understands the value of sound science policy. There is a genuine need for full-time professionals devoted to researching science policy issues, finding out what is effective, and what brings the best value. A mechanism for deciding on how to fund large-scale science projects (such as the proposed Canada Neutron Centre to replace Chalk River’s National Research Universal reactor) is long overdue. An effective, arm’s-length, scientific advisory board to Parliament would also be a helpful tool in formulating science policy in Canada.

What is needed is a coherent bridge—one that is not vulnerable to the whims of the economic or political climate—between policy-makers at the top and the grassroots scientists that carry out the research and train the next generation.

Robert Mann is a professor at the Department of Physics and Astronomy at the University of Waterloo. This column was originally published at *The Mark News*, Canada’s online source for news analysis and debate, www.themarknews.com
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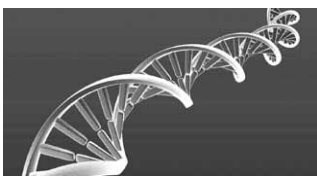


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