

CANADIAN GLOBAL AFFAIRS INSTITUTE
INSTITUT CANADIEN DES AFFAIRES MONDIALES

The Internationalization of Canadian Science: Getting Back in the Game?

by Daryl Copeland

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POLICY UPDATE

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Paul Heinbecker's compelling 2010 book, from which I have borrowed the second part of my title, offers many useful insights into how Canada's once storied place in the world might most expeditiously be restored. It does not, however, dwell upon the role of science in diplomatic practice or as a constituent element of foreign policy kit. This is not surprising. Those issues have never registered appreciably on the domestic public or political radar screen. That said, the need for, and possibilities associated with combining science and diplomacy carry critical implications for security, prosperity and development. Indeed, this connection has never been more relevant.

Or timely.

Why?

Because at this crucial juncture, were the earth to be equipped with a collision warning system, the alarm would almost certainly be clanging incessantly.

A plurality of expert opinion is now convinced that the health of the planet is deteriorating and that, as a direct result, humanity's long-term survival is in jeopardy. Although some aspects of that argument have been contested, it seems to me clear that we are collectively hurtling towards a tipping point - indefinable, but nonetheless not too distant - beyond which remediation and recovery will be extremely difficult, if not impossible.

If we are to avert that disastrous outcome, there are no military solutions. It will be science that provides the requisite knowledge, and technology the necessary tools. By better combining the objective, evidence-based, problem-solving methodology of science with the political agency and extensive networks of diplomacy, it just may be possible to avoid reaping the whirlwind associated with our incompetent, even rapacious global stewardship.

But there is much to be done, and the clock is ticking.

Understanding the challenge

In a post-truth age of "alternative facts" and "fake news", emotion, conviction and ideology have in large part triumphed over reason, empirical proof and pragmatism. Against this backdrop of uncertainty and rising populist and nationalist sentiments, science shines brightly as a beacon, a positive and powerful driver of progress in addressing a daunting range of complex, cross-cutting challenges. Unlike terrorism, religious extremism or political violence, however – and this is germane – the new threat set already afflicts us all.

For these reasons and more, and notwithstanding unfortunate developments such as Brexit and Donald Trump's ascendancy, many countries have put into place international science policies

and programs which respond to the transformed landscape. Those sorts of initiatives include, but extend well beyond, more conventional S&T-based international pursuits related to arms control/disarmament and environmental protection.

Canadian performance has lately been mixed, and over the past decade considerable capacity has been lost. From 2006 to 2015, budgets and programs were severely cut, thousands of federal scientists (and those working elsewhere who depended upon government funding) lost their jobs, scientists were muzzled and support for basic science took an enormous hit. Rebuilding is today a precondition if new opportunities are to be seized and Canada's place secured in the widening world of international scientific co-operation.

In the face of continuing globalization (the defining historical process of our times) and the emergence of heteropolarity (the nascent world order model), Canada has many comparative advantages and retains substantial potential. This reserve resides mainly in various levels of government, the private sector, academia, research institutes and specialized NGOs. Key players could, and indeed should, be doing more to expand their engagement in collaborative efforts to address the vexing range of "wicked" S&T-driven issues, ranging from climate change and pandemic disease to food and water insecurity, migration, urbanization and declining biodiversity. Special opportunities exist for Canada to demonstrate leadership in the emerging field of science diplomacy, but re-investment and new partnerships will be essential. Even as seemingly natural a proposition as taking the lead on the negotiation of an international convention on the conservation and management of freshwater resources would be difficult in the present circumstances.

The way we were

Canada was once a pioneer in environmental advocacy, development assistance and creative diplomacy. Running through these enterprises is a strain of activity which is usually referred to as "international scientific co-operation" – the term science diplomacy has only come into widespread parlance over the past few years. In any case, when viewed through the lens of S&T, a summary review of the past 50 or so years illustrates convincingly that the combination of science and diplomacy has often paid handsome dividends.

Pierre Trudeau energetically supported, and then co-chaired the Cancun Summit on north-south relations. His government was deeply involved in the law of the sea (UNCLOS) negotiations, which eventually produced the treaty that Canada signed in 1982. Trudeau's stillborn "strategy of suffocation", aimed at slowing the arms race, and his much-maligned, late-Cold War "peace crusade", had they borne fruit, would have both relied heavily upon scientific verification.

Brian Mulroney significantly upped Canada's game – and in so doing burnished its image and reputation – by rolling out a string of environmental accomplishments. The government concluded the Acid Rain Treaty with the U.S., hosted the meeting that produced the Montreal Protocol on Substances that Deplete the Ozone Layer, and led in the organization and delivery of

the landmark Rio Earth Summit (UNCED). That convocation produced an unprecedented range of achievements, including the Rio Declaration on Environment and Development, the Framework Convention on Climate Change, the Convention on Biological Diversity, the UN Convention to Combat Desertification, the Statement of Forest Principles, the Commission on Sustainable Development and *Agenda 21*.



Figure 1: U.S. President Ronald Reagan & Canadian Prime Minister Brian Mulroney at the 1985 Shamrock Summit, where they co-signed the Acid Rain Treaty (Erin Combs/Toronto Star).

Under Jean Chretién, the pace and intensity of Canadian science diplomacy ebbed, and support for international science was reduced as a result of the cost- and deficit-cutting measures associated with the program review. Still, his government marshalled a great deal of scientific evidence to win the battle for public opinion and defeat Spain in the so-called "fish war", strongly supported the essential and invaluable, but largely unheralded Global Partnerships Program, and hosted the first meeting of the parties to the Kyoto Protocol (COP 11), which Parliament ratified shortly after.

Paul Martin's brief tenure as prime minister was not particularly noteworthy from the perspective of this analysis. Still, he established the Council of Canadian Academies and appointed a national science advisor whose writ – until the Conservative government eliminated the position in 2008 – extended to foreign policy issues.

Whatever might be said about the performance of any of these leaders, when compared against the carnage inflicted by the Harper government's "war on science", their cumulative record veritably shines. For almost half a century, science occupied a privileged position within the firmament of Canadian foreign policy. If the government of Canada is to succeed in re-establishing that aspect of its liberal internationalist credentials, then some new directions will have to be explored.

Going global?

It is often suggested that science would benefit by becoming more interdisciplinary. Clearly, science is an increasingly international endeavour, and the sources of global R&D and innovation are diffusing in tandem with development progress and shifting power. Although traditionally high-performing countries such as the U.S., U.K., some European states and Japan still dominate, new players including China, India, Brazil and Korea are scrambling quickly up the ladder. This is not just about the emergence of new sources of knowledge generation, technology and innovation, or even the fact that some private philanthropic foundations are now spending more on certain types of scientific research than many of the world's governments. All of this carries important commercial, economic and ultimately political ramifications.

And how is Canada doing? This country has on the books a clutch of bilateral S&T agreements, and while some have yielded tangible benefits, most arose from the need to produce an easy deliverable for photo-op purposes on the occasion of a ministerial visit. Accordingly, many of these pacts now languish and are moribund. Nevertheless, in the wake of the "decade of darkness", 2006 to 2015, there have recently been some encouraging signs. Despite the contrary messaging on pipelines and oilsands development, and our faltering innovation performance, Canada has returned to the fold on climate change and has embarked on a joint venture with the U.K. to advocate for the international elimination of coal as an energy source. Canada is no longer likely to be awarded the Fossil of the Year Award for obstructing progress. Although the staff and budget are small and the position is now housed in a line department rather than the political centre, at long last the position of chief science advisor has been filled. A domestically focused science and research funding committee has been established, and there is talk of creating a new inter-agency body to co-ordinate the government's international scientific programs and activities.

And yet, and yet …

While the outlook is not entirely bleak, Canada – unlike Quebec – has not really stepped up to the plate. The government is underperforming on its commitments to science and risks engendering a "say-do" gap. The findings of last spring's fundamental science review (Naylor Report) highlighted the need to pursue opportunities for enhanced international scientific collaboration, but the government has been slow to respond. R&D spending lags seriously behind our competitors. The mandate letters presented to Foreign Affairs Minister Chrystia Freeland, International Development Minister Marie-Claude Bibeau and Minister of Science Kirsty Duncan lack any specific reference to science diplomacy or objectives in international S&T more generally.

There is no strategy or plan to attract and fast-track diaspora scientists and scientific refugees, an untapped resource which, if carefully exploited, could rapidly augment Canada's depleted capacity.

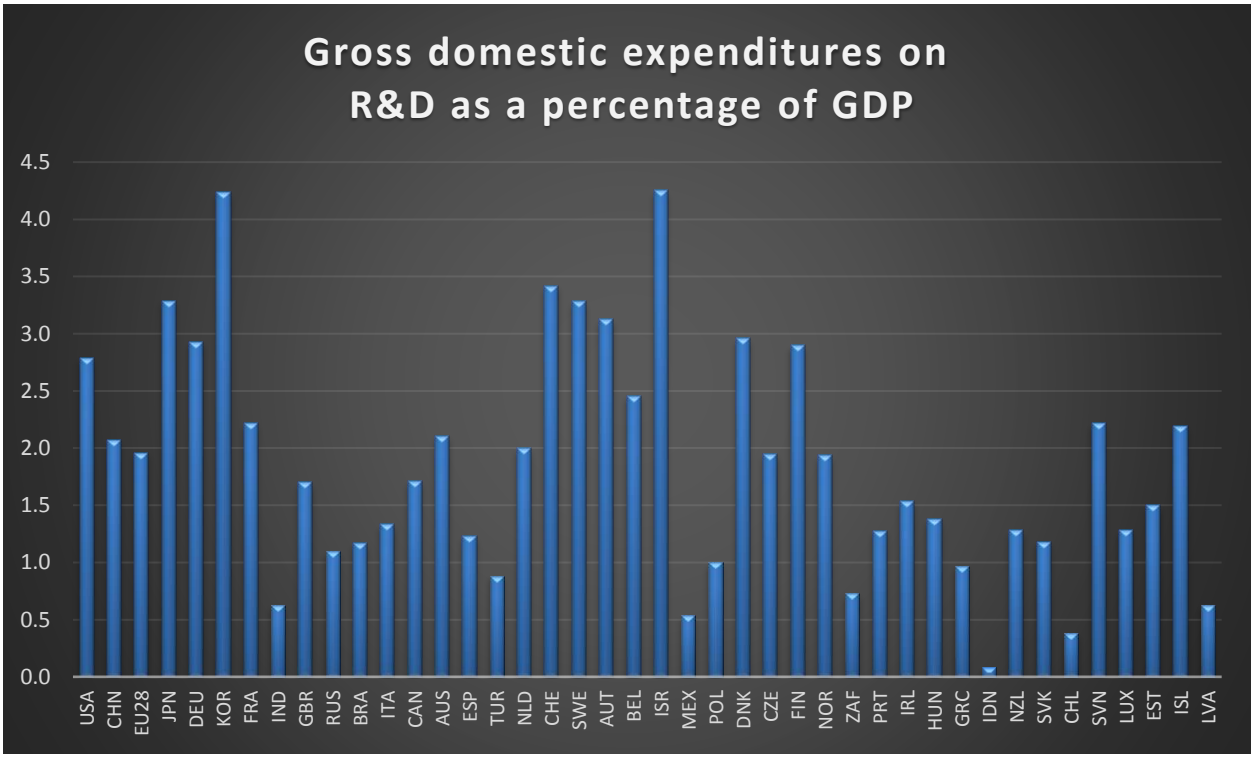


Figure 2: OECD (2017), OECD Science, Technology and Industry Scoreboard 2017: The digital transformation, OECD Publishing, Paris.

Global Affairs Canada (GAC) has for many years toyed with the idea of appointing a departmental science advisor, but that has not happened, despite the rising trend to this end elsewhere. While a science and technology division does exist at GAC, it serves the trade and commercial side of the department, and is preoccupied largely with efforts to sell products and services abroad. Policy planning papers have been written on science diplomacy, but they are gathering dust, and the concept – let alone the practice – remains largely alien.

Canada signed the UN Arms Trade Treaty, but – as the controversial decision to proceed with a large sale of armoured vehicles to Saudi Arabia underscored – export controls have not been tightened. Perhaps most discouragingly, Canada refused to join 122 other countries in support of the landmark UN treaty to ban nuclear weapons.

With a general election only two years away, the case for the government to move quickly and deliberately on issues of international science co-operation seems unassailable. How else will this country be able to demonstrate its commitments in this regard, or to the attainment of the UN's Sustainable Development Goals, all of which feature a significant S&T component? There are, moreover, a range of accessible, low-hanging fruits that are well within reach and easily harvested.

Wrapping up

At this year's recently concluded CSPC, and on the occasion of the visit of a high-level delegation from IIASA, I organized a panel on the subject of this paper. The following list of observations and recommendations, compiled by the conference organizers but not yet published, is based upon those presentations and the discussions that ensued. It represents a useful action agenda and summary of the current state of play:

- Canada's capacity to undertake science diplomacy and international research collaboration suffered greatly during the Harper years, and is now weak compared to most other advanced nations.
- The federal government's strong expressions of support for evidence-based policy-making, science and research have not yet been matched with financial reinvestment or substantive action.
- Canada needs some quick wins in order to reconnect with its past history of international scientific co-operation, especially as it prepares to: hold the G7 presidency and host the annual summit in spring 2018; mount a campaign for election to the UN Security Council in 2020 and support progress toward achieving the UN's Sustainable Development Goals.
- To attain these objectives, Canada should rebuild its global partnerships and re-establish international research and innovation linkages, for example by rejoining the International Institute for Applied Systems Analysis (IIASA), an organization of which Canada was a founding member.
- IIASA has been effective in addressing current Canadian priorities, including many transnational issues such as climate change, food and water security, population/migration, management of the global commons and sustainable energy policy.
- Global Affairs Canada's science diplomacy and science policy capacity need to be strengthened and the department should be tasked with developing an international science strategy.
- Bridge building between nations is particularly relevant in the face of challenges such as power shift, asymmetrical globalization, rising populist sentiment, Brexit, the widening economic and digital divides, and the machinations of an unpredictable, isolationist U.S. administration.
- The soft power of science diplomacy can bring researchers together among countries that are otherwise unreconciled, or even hostile towards one another, particularly during crises, or when regular channels of political communication are strained or blocked.
- If properly planned, resourced and equipped, Canada could advance its interests, promote its values, contribute to development, peace and security, and play an important role in

bringing greater ambition, diversity and geopolitical balance to the internationalization of science.

Any accelerated internationalization of Canadian science is bound to be a complex undertaking. The process will be complicated and difficult, as there are many moving parts and more than a few of them are rusty, ill-fitting or non-existent.

Of at least one thing, however, readers may be sure. It will take considerably more than bureaucratic tinkering, or a reliance upon Prime Minister Justin Trudeau's adoring media and glittering personal brand, to get Canada meaningfully back into the game.

About the Author

Daryl Copeland *is an analyst, author, consultant and educator specializing in science and technology, diplomacy, international policy, global issues and public management. He is Senior Fellow at the* Canadian Global Affairs Institute*, Policy Fellow at the University of Montreal's Centre for International Studies and Research (*CERIUM*), and Visiting Professor at the* Diplomatic Academy of Vienna *and the* Academy of Diplomacy and International Governance *(UK). From 1981 to 2011 Mr. Copeland served as a Canadian diplomat, with postings in Thailand, Ethiopia, New Zealand and Malaysia. His headquarters assignments included Director, Southeast Asia; Director, Communications Services and Senior Advisor: Public Diplomacy; Strategic Policy and Planning. He is a member of the Editorial Board of the journal* Place Branding and Public Diplomacy*, sits on the International Advisory Board of the* Canadian Foreign Policy Journal *and is the author of* Guerrilla Diplomacy: Rethinking International Relations *as well as 12 book chapters and some 175 articles published in the scholarly and popular press. Mr. Copeland teaches an advanced seminar on science, technology, diplomacy and international policy at universities and training institutes around the world. See* www.guerrilladiplomacy.com*, and follow him on twitter @GuerrillaDiplo.*

Canadian Global Affairs Institute

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