

## **From Bromley to Bromides—The Need for Sound Science Advice in an Alt-Facts World**

*There is little in this world more useless than unwanted science advice*

– D. Allan Bromley, Science and Technology in the Bush Administration, in *Science Advice to the President* (William T. Golden, ed., AAAS Press, 2<sup>nd</sup> edition, 1993, p21)

Since 2005 when it was founded as the brainchild of **John de la Mothe**, a Canada Research Chair for innovation at University of Ottawa, and **Nicholas Vonortas** of George Washington University (GWU), the D. Allan Bromley<sup>1</sup> Memorial Lecture and Event has provided graduate students with the opportunity to meet and exchange ideas with senior science and technology (S&T) policy advisors from the two capitals—Ottawa and Washington, D.C. In the spirit of honouring the legacy of the Canadian-born science advisor to the US President George H.W. Bush, the event alternates between the two capitals.

In April 2017, the lecture was given by **Kei Koizumi**, former Assistant Director of the Office of S&T Policy (OSTP) in the White House, and students from GWU and uOttawa were provided with overviews of various S&T policy issues that impact both countries. These ranged from energy policy to health sciences, along with global issues such as antimicrobial resistance, emerging foreign relations with China, and free trade.

The timing was propitious. At a moment when the incoming US President has signalled little interest in science advice and who improvises public policy through tweets, the Canadian administration is underscoring its need for science advice and use of evidence to help inform decision-making (including the nomination of a chief science advisor) after the dark days of the Harper muzzling tenure.

The keynote lecture by Mr Koizumi reflected on the President Obama years and the notion of reinstating the rightful place of science in government after some sombre years during the President Bush Jr. era. The Obama OSTP under the leadership of John Holdren accomplished a great deal in demonstrating the value of knowledge and science in society and Koizumi highlighted the various dimensions of science for policy and policy for science in the eight years he was at OSTP (for his lecture, see the ISSP [You Tube](#) link).

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<sup>1</sup> D. Allan Bromley was born in Westmeath, Ontario, in 1926 and held degrees from Queen's University and the University of Rochester. Dr. Bromley sat on President Reagan's White House Science Council and was the first person to hold the Cabinet-level rank of Assistant to the President for Science and Technology from 1989 to 1993, a position he held during the administration of George H.W. Bush. He was a former President of the American Association for the Advancement of Science (AAAS) and a recipient of the National Medal of Science, the highest scientific distinction in the United States. D. Allan Bromley died in 2005.

In addition to the workshops, students from both universities were able to participate in a special talk on climate change in the developing world at a Parliament Hill breakfast, and attend an informal roundtable with the Council of Canadian Academies outlining some of its assessments of public-policy issues with a science and evidence base<sup>2</sup>.

The Canada-US science relationship is an extensive one and continues to be the most comprehensive such engagement in the world (there has been no need for any formal Canada-US S&T agreement). Indeed, Allan Bromley was instrumental in helping shape this relationship when he was the President's science advisor—from his efforts in promoting the Sudbury Neutrino Observatory to the International Space Station to his views on the developing NAFTA agreement, Bromley was a science-diplomacy champion.<sup>3</sup> He was also the driver behind the Canada-US S&T Consultative Mechanism with the Canadian Minister of Science William C. Winegard,<sup>4</sup> and he worked tirelessly to promote science outreach between the two research communities. (While Bromley was on the Executive of the AAAS in 1981, he tried valiantly to interest the AAAS in having a Canadian Division leading up to the AAAS meeting in Toronto.<sup>5</sup>)

Today, Canada and the US maintain a highly porous yet strong link in all fields of knowledge. As President Clinton was to say in his speech to Parliament in 1995:

*From the oil from Alberta that fires factories in the United States, to the silicon chips from California that power your computers, Canada and the United States, are living proof of the value of partnerships and cooperation. Technologies produced in Canada save lives in U.S. hospitals, while food from US farmers lines your supermarkets.*

President Obama in June 2016 further underscored the special partnership with his speech to Parliament about investing in knowledge, but also noting the challenges ahead:

*Our two nations know first-hand the awesome power of free markets and innovation. Canadians help run some of Silicon Valley's most innovative companies. Our students study at each other's world-class universities. We invest in research and development, and make decisions based on science and evidence. And it works. It's what's created these extraordinary economies of ours.*

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<sup>2</sup> See [scienceadvice.ca](http://scienceadvice.ca)

<sup>3</sup> D. Allan Bromley, The Future of Science and Technology Policy under NAFTA, in Technology, Trade, and the New Economy, (The First Prime Lectures, John de la Mothe and Gilles Paquet, eds.; University of Ottawa, 1995 , pp63-76)

<sup>4</sup> Canada-United States Collaboration in Science and Technology Policy-Report to the Minister for Science William C. Winegard and the Assistant to the President for Science and Technology, D. Allan Bromley on a meeting between the United States Department of Commerce and Industry, Science and Technology Canada, held in Washington D.C., September 16, 1992

<sup>5</sup> See Paul Dufour, Advancing Knowledge at the Frontier—the AAAS and the Saga of Science Societies in Canada, ISSP, University of Ottawa, February 2012

*There is one threat, however, that we cannot solve militarily, nor can we solve alone, and that's the threat of climate change. Now, climate change is no longer an abstraction. It's not an issue we can put off for the future. It is happening now. It is happening here in our own countries.*

*The United States and Canada are both Arctic nations, and last year when I became the first U.S. president to visit the Arctic, I could see the effects myself. Glaciers like Canada's Athabasca Glacier are melting at alarming rates. Tundra is burning, permafrost is thawing.*

*This is not a conspiracy. It's happening. Within a generation, Arctic sea ice may all but disappear in the summer. So skeptics and cynics can insist on denying what's right in front of our eyes, but the Alaska natives that I met, whose ancestral villages are sliding into the sea, they don't have that luxury. They know climate change is real. They know it is not a hoax.*

The Bromley event reminds us annually that our next generation will have some big and wicked challenges ahead – and that science advice and effective diplomacy matters. Our emerging knowledge-thirsty societies will have to address these with a renewed passion and wisdom. The science issues are not hoaxes or alt-facts. Bromides will need to be replaced with standards and principles such as those set by Allan Bromley. Working on all dimensions of the Canada-US partnership will be critical.