CANADIAN PSYCHOLOGICAL ASSOCIATION

SOCIÉTÉ CANADIENNE DE PSYCHOLOGIE

Submission to the Science and Technology Consultation, Industry Canada
From the Canadian Psychological Association
February 7, 2014

The Canadian Psychological Association (CPA) is the national association representing the science, practice and education of psychology in Canada. With almost 7,000 members and affiliates, the CPA is Canada's largest association for psychology. The CPA's goals are to improve the health and welfare of Canadians; promote excellence and innovation in psychological research, education, and practice; and to promote the advancement, development, dissemination, and application of psychological knowledge. As a discipline, psychology recognizes that science and technological advances must be based upon evidence.

Our members cover a broad range of domains of importance to the fields of science and technology. They conduct basic and applied research in health, business, human factors, education, systems engineering, and international development – to name a few. They work in such places as hospitals, universities, and research institutes, as well as in business and industry, in both the public and private sectors. Individuals with bachelors, masters, and PhD degrees in psychology can be found in varied careers, including but not limited to top- and mid-level management, administration, statistics, labour-relations, personnel and training, business services and marketing. Thus, our association represents individuals who contribute to almost all areas of science, business, and technology.

CPA's Input on Consultation Questions

Building on the advice provided by the Expert Panel on Federal Support for Research and Development, what more can be done to improve business investment in R&D and innovation?
To improve business investment in R&D and innovation, the CPA recommends an approach to funding that balances the need for basic research with needs for knowledge transfer and development. Human factors are of fundamental importance to the success of any private or public sector organization. Business and industry recognize that success depends upon the innovative contributions and productivity of employees; they also recognize the importance of psychological health in the workplace. As such, research supporting these capacities, as well as the social and physical health of employees, would be of considerable appeal to the business community.

Psychological research has broad and deep relevance to the success of individuals, families, economies and societies with an application to public policies and programs, economic recovery and assuring Canada's long-term prosperity. Psychological and psychosocial research yields measurable and concrete benefits in the workplace (e.g., how to sustain productive and successful workforces), individual and societal well-being (e.g., how to create policies and programs that enhance childhood development, family functioning or healthy aging), and health (e.g., how best to prevent and treat mental health problems and disorders) – to name only a few. Investments in research help secure Canada's identity as an international destination attracting scholars who will in turn make contributions to research innovation and skills development.

141, ave Laurier Ave. West
Suite 702
Ottawa (Ontario)
K1P 5J3
(613) 237-2144
1-888-472-0657
Fax: (613) 237-1674

E-mail/Courriel :
cpa@cpa.ca

www.cpa.ca

All of Canada's communities are stakeholders in the country's well-being, inclusive of industry. Researchers and industry can and should come together to address issues and problems that are of public and stakeholder concern. This kind of collaboration can be incented by tying funds to innovation for which eligibility criteria include an industry/university partnership and a demonstration that the research will target an identified social problem or need.

What actions could be taken, by the government or others, to enhance the mobilization of knowledge and technology from government laboratories and universities, colleges and polytechnics to the private sector?

This question addresses human social and economic processes that would be responsive to systematic study. Scientifically trained psychologists are in demand today to address the most pressing social problems, including those the business community confronts. Current curricula in psychology provide excellent training in scientific methodology and research design, data collection and analysis, critical thinking and theoretical grounding, professional writing, knowledge translation, evaluation, and computer skills. These are all highly-transferrable skills. Despite this, we need new resources in order to develop and/or add to existing university programs so we can expose students to alternative career paths and create practical experiences in communication, public policy, and management.

In addition, most scientists would agree that, although knowledge mobilization is a worthy goal, connecting with those who have the expertise and the networks required to translate basic research into accessible language and distribute it widely is difficult and often-times time-consuming. One way to increase knowledge mobilization is by providing a funding mechanism for national professional associations to partner with researchers at the grant proposal stage to formulate and implement plans for enhancing the economic, social, and technological impact of the research.

How can Canada continue to develop, attract and retain the world's top research talent at our businesses, research institutions, colleges and polytechnics, and universities?

Highly trained and skilled workers are essential to economic prosperity and innovation. Psychology is a core discipline for which students are highly trained and skilled. Supporting graduate-level teaching, research, and experience is imperative to building the foundation for development in the public, private and not-for-profit sectors. Increased funding for students through scholarships, internships, and travel grants would strengthen partnerships and allow students to pursue scholarly activity and gain practical experience in real-world contexts before entering the labour market, thereby ensuring that employers have access to high quality expertise. These are initiatives and activities which benefit students, employers and universities and into which all can make investments.

We must recognize that the best are strongly attracted to organizations that excel. Efforts to support and promote institutions that foster excellence will be rewarded. Investments in universities and colleges as well as research facilities in hospitals and schools of health science across Canada will help Canadians pursue and complete higher studies and acquire new skills. These investments will foster the next generation of researchers who will tackle the many economic, social, and cultural challenges facing Canada in the coming decades. To this end, the CPA recommends the following:

- Increase the number of graduate student scholarships through the granting councils;
- Expand the scope of MITACS to allow graduate students and post-doctoral fellows from research-based universities to intern with not-for-profit organizations;
- Create incentives programs where private companies such as research facilities, large corporations and universities can hire new researchers as interns;

- Create a federal internship program where students with applicable basic and applied skills can train in federal government departments; and
- Reverse the Government's 2012 decision to eliminate SSHRC's Aid and Attendance Grants to Scholarly Associations (AAGSA) program.

How might Canada build upon its success as a world leader in discovery-driven research?

In 2010, Industry Canada via the Minister of Industry, asked the Council of Canadian Academies to assess the state of science and technology in Canada and to consider all fields in which research was conducted. Results of their assessment were summarized in a report entitled, *The State of Science and Technology in Canada, 2012.* A thorough analysis of the scientific disciplines and technological applications showed that Psychology and Cognitive Sciences was one of the six research fields in which Canada excels in a global context. Research in Psychology and Cognitive Sciences is primarily being conducted in the university and hospital settings—many of which are in dire need of infrastructure improvements.

Canada has done an excellent job of investing in some aspects of its research infrastructure. For example, Compute Canada (https://computecanada.ca) offers high performance computing resources to Canadian scientists free of charge, providing them with the tools they need to compete on the world stage in computational neuroscience, formal analysis, and artificial intelligence.

However, Canada's dedication to research has fallen short elsewhere. For example, the decision to terminate the MRI facilities in the National Research Council Institutes for Biodiagnostics (NRC-IBD) in Winnipeg, Calgary, and Halifax has had many negative effects. First, tools and trained technicians are no longer available to our researchers. Second, research programs that have depended on the neuroimaging equipment and technicians in the NRC-IBD have been severely disrupted. Third, the decision has had a severe impact on science/industry partnerships. For example, shutting down the MRI research equipment in NRC-IBD Winnipeg precipitated the relocation of a world- class biotechnology company (i.e., IMRIS, http://www.imris.com/) to Minneapolis. This is a problem for a number of research sites in Canada.[1]

It makes little sense to decommission existing research infrastructure known to foster research innovation and industry partnerships while calling for advice to improve Canadian research capacity and industry partnerships. We encourage Industry Canada to recognize and maintain its existing assets as it works to build new ones.

Is the Government of Canada's suite of programs appropriately designed to best support research excellence?

Canada's funding agencies (NSERC, SSHRC, CIHR) support research programs rather than research projects. The distinction is an important one that allows Canadian researchers the opportunity to conduct broad discovery-based research programs that provide the technological innovations that fuel industry. More to the point, members of the international scientific community consider Canada's dedication to research programs as unique and innovative and identify it as a reason they would consider moving to a Canadian research institution.

[1] http://www.cbc.ca/fifth/blog/federal-programs-and-research-facilities-that-have-been-shut-down-or-had-th.

We recognize that the current Federal government has continued to make investments in Canada's federal granting councils; we appreciate that in a time of fiscal constraint, increases in research funding may be challenging. However, core research funding is essential for Canada's granting councils. Given this, the CPA recommends:

- Investing an additional $50 million in research funding to support SSHRC Insight Grants, CIHR Open Operating Grants, and NSERC Discovery Grants for each of the next 5 years;
- Continuing the tradition of a 5-year model - this draws researchers to Canada, supports discovery, and allows Canadian scientists to invent the techniques and tools for tomorrow's marketplace; and
- Making both program- and project-specific research funds available so that funding resources are distributed broadly to obtain the most impact.

On behalf of the Canadian Psychological Association, we thank the Government for welcoming input into discussions about the future of the Canadian Science and Technology agenda. We would welcome the opportunity to answer any questions or provide any other input as needed (by phone: 613-237-2144 ext 323 or by email: executiveoffice@cpa.ca).

Sincerely,

Lisa Votta-Bleeker, Ph.D.
Deputy CEO and Science Director
Canadian Psychological Association

Aimée Surprenant
Chair, Scientific Affairs Committee
Canadian Psychological Association