

**PRODUCTIVITY, CULTURE
AND SOCIETY: THE ESSENTIAL
CONTRIBUTION OF PSYCHOLOGY
AS A SOCIAL SCIENCE**

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PRODUCTIVITY, CULTURE AND SOCIETY: THE ESSENTIAL CONTRIBUTION OF PSYCHOLOGY AS A SOCIAL SCIENCE

EXECUTIVE SUMMARY

The Federal Government has done a good job in strengthening support for Canada’s research enterprise in the natural sciences, engineering and health sciences. It is time for the Government to show the same commitment for research focussed on Canada’s peoples, cultures and society.

Canada is a wealthy country, with a vibrant society enriched by science, scholarship and artistic achievement. It has a tradition of funding its intellectual infrastructure, from basic scientific research to cultural products and multi-cultural initiatives. Nevertheless, successive governments have fallen behind with regard to funding scholarship and science in the humanities and social sciences.

The problem is now acute. The main vehicle for supporting the humanities and social sciences is the Social Sciences and Humanities Research Council of Canada (SSHRC). Financial support for SSHRC has been allowed to deteriorate to the point where there is serious talk about taking a “year off” from funding researchers who rely on regular research competitions to do their important work.

SSHRC finds itself in crisis. In order to “make the case” for SSHRC, the Canadian Psychological Association (CPA) provides an overview in this document of psychology as a discipline and specifically that aspect of psychology that is a social science. This presentation is offered as an exemplar of the essential work undertaken in the social sciences and humanities. It strengthens the case for increased support for SSHRC and all its important work.

WHAT IS PSYCHOLOGY?

Psychology is the study of the biological, cognitive, emotional, social and cultural determinants of behaviour. That is, how we think, feel and behave in our social and physical environments. It is impossible to consider productivity, innovation and societal development without placing human behaviour in all its complexity at the centre of the discussion.

Psychology is both a science and the application of that science that spans the three research councils and beyond. It includes the biological determinants of behaviour such as **the study of basic brain processes (NSERC) and the contribution of human behaviour across the continuum of care in health and health care (CIHR), in the workplace and in society (SSHRC).** Psychology is one of the few if not the only discipline with such a broad scope of scientific interests and applications which allows it to act as a meeting ground and synthesising agent for research from all three councils and many disciplines.

THE CANADIAN CONTEXT

We live in one of the most prosperous and secure countries in the world. Effective societies find ways to maximize opportunities and to minimise costs and liabilities. Much of their success relates directly to improving productivity, innovation, security, justice, democracy and opportunity.

The Canadian Government has taken important steps to ensure the viability and continued development of Canadian society. These policy initiatives include, for example, the economy, poverty, health, the environment, immigration, research and multiculturalism. An essential component of the rationale for these programs is based on social science research which helps drive public policy.

The Federal Government has committed itself to a bold plan to revitalize and improve Canada's competitiveness. The Prime Minister's goal is to move Canada from fourteenth to fifth place in the Organisation for Economic Co-operation and Development rankings for research expenditures over a decade. Significant investments include the Canadian Foundation for Innovation, the Canadian Research Chairs, and targeted investments through the three granting councils.

Basic funding of social science research through SSHRC has, nevertheless, been left behind direct and indirect funding to the Natural Sciences and Engineering Research Council and the recently established Canadian Institutes for Health Research. The latter two councils have historically enjoyed a much higher level of Government commitment, and the gap between them and SSHRC is rapidly widening.

PSYCHOLOGY'S CONTRIBUTIONS AS A SOCIAL SCIENCE

Psychological science examines how Canadians think, feel and behave in their social and environmental contexts. Psychological science is funded through the three research councils. Some examples of this science and its applications as a social science are contained in this document and include:

- Understanding Workplace Psychology Key to Improving Productivity
- Our Children's Future - Our Country's Future: Education, Learning and Critical Thinking
- Human Development and Our Ageing Society
- Psychology Training Produces Highly Qualified Personnel: An Invaluable Resource in the Public and Private Sectors!
- Psychological Knowledge is Critical to Health, Wellness and Health Care
- Effective Communities and Diversity
- Safe Communities: A Safe Country
- Psychology and Our Environment
- Children and Families
- Social Science in Space

RECOMMENDATIONS:

1. **The Canadian Government has shown significant support for research in the natural sciences, engineering and health sciences. It is time for the Government to show an equal degree of support for research focussed on Canada's peoples, cultures and society by increasing SSHRC base budget funding from \$175 million to \$500 million per year ramped up over a three-year period.**

The increased government support will allow SSHRC to:

- A. **Bring research support in the Research Grants Programme based on peer review and excellence up to a level of success comparable to the other research councils. This is particularly important at this time of faculty renewal. Too many important missed opportunities occur due to the inability of SSRHC to fund excellent and deserving research.**
- B. **Continue and expand the Community-University Research Alliance.**
- C. **Bring support for doctoral level graduate students based on peer review and excellence up to a dollar level equivalent with the support offered doctoral level graduate students by the other councils.**
- D. **Bring doctoral level research support based on peer review and excellence up to a success ratio equivalent with the other councils.**
- E. **Initiate a programme of support for masters level graduate students based on peer review**

and excellence up to a dollar level equivalent with the support offered masters level graduate students by the other councils.

- F. Initiate a programme to bring support for masters level graduate students up to a proportionate level equal to that of the other councils.**
- G. Initiate a programme of support for senior undergraduate students based on peer review and excellence similar to that offered by the Natural Sciences and Engineering Research Council.**

PRODUCTIVITY, CULTURE AND SOCIETY: THE ESSENTIAL CONTRIBUTION OF PSYCHOLOGY AS A SOCIAL SCIENCE

INTRODUCTION

Canada is a wealthy country, with a vibrant society enriched by science, scholarship and artistic achievement. It has a tradition of funding its intellectual infrastructure, from basic scientific research to cultural products and multi-cultural initiatives. Nevertheless, successive governments have fallen short with regard to funding scholarship and science in the humanities and social sciences.

The problem is now acute. The main vehicle for supporting the humanities and social sciences is the Social Sciences and Humanities Research Council of Canada (SSHRC). Its financial support has been allowed to deteriorate to the point where there is serious talk about “taking a year off” from funding researchers who rely on regular research competitions to do their important work.

The Federal Government has done a good job in strengthening support for Canada’s research enterprise in the natural sciences, engineering and health sciences. It is time for the Government to show the same commitment for research focussed on Canada’s peoples, cultures and society.

Canada needs a renewed commitment to the large body of Canadian scholars and graduate students in the humanities and social sciences, many of them working in colleges and universities which are chronically under funded. While our appeal is for increased support for SSHRC generally, the Canadian Psychological Association has a mandate to represent psychology. This document is devoted to psychological research that falls under the SSHRC umbrella as an exemplar of the importance of SSHRC research in general.

Psychology is a broad scientific discipline whose work spans the three research councils. Psychology has a proud scientific history in both basic and health research. **But it is SSHRC that finds itself in crisis.** Thus, after an overview of psychology as a discipline, this document will focus on that aspect of psychology that is a social science as one example of the strong case for an increase in support for SSHRC and all of its important work.

WHAT IS PSYCHOLOGY?

Psychology is the study of the biological, cognitive, emotional, social and cultural determinants of behaviour. That is, how we think, feel and behave in our social and physical environments. It is impossible to consider productivity, innovation and societal development without placing human behaviour in all its complexity at the centre of the discussion.

Psychology is both a science and the application of that science. The discipline began in the university laboratories of Europe and North America in the late 1800s with the examination of cognitive processes. This led to a vibrant scientific enterprise that spans the three research councils and beyond. **It includes the biological determinants of behaviour such as the study of basic brain processes, memory, thought, perception, etc. (NSERC) and the contribution of human behaviour across the continuum of health and health care (CIHR), in the work place and in society (SSHRC).** Psychology is one of the few, if not the only discipline, with such a broad scope of scientific interests, which allows it to act as a meeting ground and synthesising agent for research from all three councils and many disciplines.

Modern psychology approaches the analysis of behaviour in several ways. One approach focuses upon the fundamental processes of perception, cognition, movement, learning, motivation, and emotion, as well as the application of this knowledge to many fundamental problems facing individuals and society. A second approach emphasises the study of abnormalities of behaviour, such as neurological and psychiatric disorders and disease and their treatments. A third approach focuses upon the social nature of human behaviour and the study of factors affecting it.

THE CANADIAN CONTEXT

We live in one of the most prosperous and secure countries in the world. This enviable position is a result of the ingenuity and creativity of Canadians. Our society is confronted with a wide range of health, social, environmental and economic opportunities and challenges. Effective societies find ways to maximize opportunities and to minimise costs and liabilities. Much of their success relates directly to improving productivity, innovation, security, justice, democracy and opportunity.

The Canadian Government has taken important steps to ensure the viability and continued development of Canadian society. These policy initiatives have included, for example, the economy, poverty, health, the environment, immigration, research and multiculturalism. An essential component of the rationale for these programs is based on social science research which helps drive public policy.

The Federal Government has committed itself to a bold plan to revitalize and improve Canada's competitiveness. **The Prime Minister's goal is to move Canada from fourteenth to fifth place in the Organisation for Economic Co-operation and Development rankings for research expenditures over a decade.** The Government's steps to achieve this goal include investing significantly in research in the public sector and attempting to encourage more research in, and technology transfers to, the private sector. Significant investments have been made through programs such as the Canadian Foundation for Innovation, the Canadian Research Chairs, and targeted investments through the three granting councils.

Basic funding of social science research through SSHRC has, nevertheless, fallen behind. Support for SSHRC has not kept pace with the increases in direct and indirect funding to the Natural Sciences and Engineering Research Council and the recently established Canadian Institutes for Health Research. The latter two councils have historically enjoyed a much higher level of Government commitment, and the gap between them and SSHRC is widening rapidly.

With respect to psychology as a social science, human behaviour is at the heart of productivity, innovation and social cohesion. The humanities provide essential tools for critically understanding Canada. The social sciences are indispensable for improving productivity and innovation in a just, vibrant and tolerant multicultural society.

PSYCHOLOGY'S CONTRIBUTIONS AS A SOCIAL SCIENCE

Understanding Workplace Psychology Key to Improving Workplace Productivity

Productivity and innovation depend directly on human behaviour. Companies that develop effective work groups and workplace dynamics improve productivity and make more money. Research shows the clear relationship between productivity, job satisfaction, organizational climate and organizational structure. It is important to know how to resolve effectively management/worker disputes, improve collective bargaining and enhance labour-management relations.

Research shows that increasing an employee's productivity will directly affect job satisfaction and improve the bottom line. Goal setting, leadership, motivation, creativity, effective supervision, harassment interdiction, appropriate evaluation tools to assess outcomes, recruitment, retention, promotion and work force contraction are key issues. Businesses must know how to dissolve stereotypes and the prejudices they engender to promote understanding and to integrate workers from different backgrounds and cultures into the workforce.

The effectiveness of the interface between humans and technological components and systems determines the effectiveness of these new systems and their impact on safety, productivity and innovation. Companies need to know how to introduce new technology into the workplace and into society, how to reduce resistance to change, how to make technology more compatible with human behaviour and human functioning and how to effectively redesign work groups and the workplace around new technology. Poor design can produce costly results, product failure, injury and death.

The World Health Organization and others have shown that psychological health issues in the workplace are draining billions of dollars from business and industry. Depression, anxiety, addictions, marital

discord, child and parenting issues, the psychological components of chronic disease management, just to name a few, affect productivity and innovation. Healthy workers and healthy work environments have a positive impact on the bottom line and the quality of life.

Our Children's Future - Our Country's Future: Education, Learning and Critical Thinking

Two of the cornerstones of psychological knowledge and its application are the biological and social determinants of human learning. This knowledge is extremely important since highly qualified personnel are in no small measure the engine of Canada's scientific and economic future. This research examines how people learn, remember and integrate information, the nature, impact and remediation of learning disabilities, literacy, the acquisition of a second language, the social dynamics involved in enhancing education and keeping adolescents in school, teacher/student/parent dynamics, how best to introduce information to a new learner, and so on. Education is essential to success in the new economy. Knowing how learning works most effectively supports education. **Research demonstrates that one of the best anti-poverty programs is literacy and education.**

Traditionally, education was a formal experience that took place in schools. Today, it is a protean and continual enterprise by which we learn new skills, adapt to changing circumstances, master new technologies, and deal with increasing volumes of information. **Education is more than transmitting knowledge:** it is the instilling in the individual the ability to analyse information, to evaluate arguments, and to make decisions. Defined this way, education is a dynamic process, not confined to a place or time. It is essential to understand how to maximize learning in different settings in order to be successful in the modern world. Research that improves life-long learning outcomes has tremendous impact on us personally and on the bottom line.

Human Development and Our Ageing Society

Developmental psychologists study social and intellectual growth across the life span. They describe and analyse the factors that lead to a healthy, balanced individual or to development that is less than optimal. Their study of resiliency and their knowledge of the factors that contribute to healthy development are critical to society. Early recognition of developmental problems and their timely remediation reduces unnecessary suffering, minimises damage over the life span and saves individuals and society precious resources and money.

With longevity steadily increasing, more and more Canadians and their families face issues related to ageing. Although considerable research now shows that not all negative consequences of ageing are inevitable and that some changes have adaptive significance, the ageing population does have special needs. These needs guide research that shapes services that provide our ageing citizens and their families with the highest quality of life. For example, research helps us better understand how social and family interactions contribute to successful ageing, the issues relating to work and retirement, and the concerns relevant to living arrangements and supports for the elderly. Helping a senior remain in his/her home is satisfying for the senior, saves health care dollars and has been shown to have positive health outcomes. One particular issue that has received attention recently is the so-called "sandwich generation", middle-aged people (mostly women) who cope with child rearing, employment, and the care of elderly parents. Health systems rely on social science to predict, develop and evaluate appropriate services delivered in the most cost-effective manner with the best outcomes.

Psychology Training Produces Highly Qualified Personnel: An Invaluable Resource!

Psychologists are highly qualified personnel. Psychology courses and degrees are the most popular in Canadian universities. Psychological knowledge is highly valued by society. The social sciences and humanities continue to be the most popular choices of Canadian students in the highly competitive marketplace of university career options. Human resource data that tracks employability and career paths show that psychology graduates of all levels and social science and humanities graduates in general are successful in the highly competitive Canadian employment market. This is because they have the skills desired by employers. Dr. Nicky Hayes in her article *The Distinctive Skills of a Psychology Graduate* (*European Psychologist*, June 1996, Vol. 1, No. 2, p. 130-34) listed the skills acquired upon graduation with a psychology degree. Her analysis is an example of the skill sets of psychology graduates and includes high levels of:

1. literacy
2. numeracy
3. computer literacy
4. information-finding skills
5. research skills
6. measurement skills (research measurement and psychometrics)
7. environment awareness (work, home, noise, lighting, etc.)
8. interpersonal environment awareness (communications, conflict, etc.)
9. high order problem solving
10. critical evaluation
11. perspectives (identification and appreciation of multiple points of view or solutions)
12. high order analysis and pragmatism.

These skills make psychology graduates highly valuable in science and academia, the public service and the private sector.

Psychological Knowledge Critical to Health, Wellness and Health Care

Human behaviour is at the heart of health care. Health research in psychology spans the neuro, health and social sciences. In terms of the latter, we now know that the quality of an individual's social system contributes significantly to their successful treatment, recovery, and relapse prevention from physical or mental disease. We know that an individual's relationships and daily activities can influence basic biological processes such as the immune system and their susceptibility to certain diseases. **Social psychology helps find answers that keep people healthy and help them recover faster.** Social psychology plays a pivotal role in helping to determine which social factors contribute to wellness and which to disease. It helps determine ways of keeping people healthier, helping them recover and rehabilitate faster, manage chronic disease and disability better and experience end-of-life with more dignity

Research finds ways of reducing the prejudice too many Canadians hold towards people with mental illness. It also examines the impact of poverty on families, and particularly children, and finds and develops programs for individuals, families and institutions that help reduce and interrupt the negative impacts of inter-generational poverty.

Psychology is the only health profession that requires practitioners to have a post-graduate degree that requires research as a necessary part of their education and training. Psychologists as scientists or practitioners are uniquely trained to be of value to population health and determinants of health research, program planning and program evaluation initiatives at both the macro and local levels.

Effective Communities and Diversity

Canada's communities are vibrant social organisms. Community psychology examines communities from a behavioural perspective to identify what factors contribute to effective and ineffective community processes and outcomes. Their work is part of the foundation that underpins effective, empirically-driven social policy.

Currently, eighty percent of Canadians live in what Statistics Canada defines as urban centres. The nature of the country is built around the centrality of cities with important links and relationships to towns, villages, rural areas and remote communities. It is important to better understand these communities in their own rights, their relationships to each other and their future opportunities and struggles.

Canada is one of the most ethnically diverse nations with a proud history of racial and cultural tolerance. Historically, Canada has welcomed more immigrants on a per capita basis than any other country. As the new millennium dawns, present domestic birth and immigration patterns predict that Canada will become even more diverse in the future. It is critical that we understand the dynamics of immigration, integration, assimilation, prejudice, tolerance, and so on. Ethnic diversity has always been a defining feature of Canada.

Safe Communities: A Safe Country

Criminal justice psychology examines criminal behaviour, the social processes that interdict and support it and the best means to correct and deal with it. It is important to be able to predict serious anti-social behaviour such as sexual predation and violence.

Safe communities are a hallmark of a successful society and Canada enjoys high marks in this regard. Studies have shown the impact of the length of sentencing on recidivism. Reducing recidivism means fewer victims and lower incarceration costs for society. Other research helps to develop ways of keeping young people out of crime and out of jail in the first place. Criminal behaviour is a costly waste to the individual, the victim(s) and society. Canadian research on the selection of juries, factors influencing eyewitness testimony, the identification of the offending criminal and the diagnosis of psychopathy is internationally recognised. Considerable scientific effort has been devoted to defining and assessing the competency to stand trial.

Many challenges remain. Correctional rehabilitation, both within and outside the penitentiary, with particular attention to sexual offenders, continues to be a research focus. Predicting the recidivism of sexual offenders is a special challenge. A good deal has been accomplished but much remains to be done in predicting dangerousness of offenders. Programmes designed to divert adult and young offenders from lives of crime and to reduce sexual offender recidivism have helped to reduce the costs to the criminal justice system in Canada. More needs to be done in the diagnosis and treatment of mentally ill offenders.

Terrorism, ethno-political warfare and the prevention of conflict are important issues for Canada and the world. Psychology as the study of human behaviour has contributed much to this area of study. Some examples include behavioural profiling, conflict recognition and resolution, effective negotiation strategies and understanding those human factors that enhance peace and stability.

Psychology and our Environment

It is important to understand how aspects of the physical environment affect human learning, thinking, perception, development, personality, and social relations, and how human behaviour in turn affects the environment. For example, the trend towards increasing urbanisation necessitates a better understanding of residential density, neighbourhood cohesiveness, the proper design of dwellings, workplaces and communities, the stressful effects of noise, lighting and traffic, environmental design to deter crime, etc. More recently, scientists have been examining the important impact of such worldwide changes as pollution, ozone depletion and global warming on human behaviour.

As the Canadian economy becomes increasingly reliant on knowledge-based and service workers, preventing and ameliorating indoor environment problems become even more pressing challenges. For example, environmental psychologists who study workplaces have found that physical conditions do not, in general, predict symptom reports of sick buildings. Rather, it has been shown that an interaction between individual and organizational characteristics (human behaviour) and physical conditions provide a better guide to understanding these problems.

Another area of growing interest is the move toward home work sites as a result of the use of electronic communications that enable workers to fulfil job responsibilities without leaving home. This trend has advantages for employers and employees (and the families of the latter) as well as drawbacks. As technology advances giving us more work site options, it is important to understand both the positive and the negative consequences of the alternatives.

Children and Families

Canadian census data recently released by Statistics Canada underlines the fact that the family continues to undergo enormous change. Well functioning families are fundamental to a successful society. As an example, they are the principal socialising institution for social mores and behaviour in children. Breakdown at the family level can be evident in society for years to come. Family dynamics can significantly influence the development of pro-social or anti-social behaviour, violent behaviour in general or towards women, children, minorities, etc., appropriate behaviours for success at school and work, and so on.

Social science is where we gain our understanding of the pressures facing Canadian families and the rearing of children. Research focuses on many areas such as parenting skills, effective discipline, the importance of parent/child interactions, the inculcation of morals and values, the effect on children of one- and two-parent families, the sexual identification of boys reared in fatherless homes, the effects of homosexual parents on the behaviour and sexual identification of their children, child-rearing in single-mother, maternal employed and two-parent employed families, blended families and the effects of day-care and early childhood education. The results of this research drive educational and social programs and public policy. Acting without this important knowledge too often causes unnecessary suffering and costly mistakes.

Space

The Canadian Space Agency has included behavioural research on diversity and the effects of prolonged isolation in their research mandate. It is important to understand psychological or behavioural variables in space, particularly as science moves towards more prolonged and multi-faceted flights and the international space station.

CONCLUSION

Psychology is but one of the social science and humanities disciplines. The important contributions of the one exemplifies the magnitude of the contributions of them all. It is impossible to imagine our society without the rich treasure of the humanities and the powerful contributions of the social sciences. Psychology, economics, political science, sociology, history, law, and geography provide a research base and policy applications essential to Canada and its place in the modern world.

SSHRC is the primary and pre-eminent engine that drives social science and humanities research in Canada. SSHRC research makes an invaluable contribution to the country. The Council is in desperate need of increased funding to further enhance its impact and to service the needs of the majority of Canada's university students and faculty. This lack of adequate Federal Government support will reduce rather than enhance progress toward an ever-richer life for Canadian citizens recognised in rankings such as those of the Organisation for Economic Co-operation and Development and the United Nations.

Canada, like many countries, is at an important crossroads. The knowledge economy demands increasing numbers of highly qualified personnel. The "baby boom" retirements will drive the need for huge numbers of highly qualified replacements in universities, business and industry and the public sector. **The largest pool of replacements will come from university graduates in the social sciences and humanities. The university students of today are the highly qualified personnel of tomorrow.**

We come, then, to our recommendations for saving the work of SSHRC, and thus of saving the future contribution of the humanities and social sciences in Canada. These recommendations are built on the understanding that the essential work supported by SSHRC is carried out by graduate students and faculty. Both are fundamental to the innovation agenda and to the development of society. These recommendations, as was stated at the outset, relate to all SSHRC's work and not just to that portion affecting psychology. We have made the case that psychology as a social science has much to offer and deserves support. Other social sciences and the humanities can all make similar claims.

RECOMMENDATION:

- 1. The Canadian Government has shown significant support for research in the natural sciences, engineering and health sciences. It is time for the Government to show an equal degree of support for research focussed on Canada's peoples, cultures and society by increasing SSHRC base budget funding from \$175 million to \$500 million per year ramped up over a three year period.**

The increased government support will allow SSHRC to:

- A. Bring research support in the Research Grants Programme based on peer review and excellence up to a level of success comparable to the other research councils. This is particularly important at this time of faculty renewal. Too many important missed opportunities occur due to the inability of SSHRC to fund excellent and deserving research.**
- B. Continue and expand the Community-University Research Alliance.**
- C. Bring support for doctoral level graduate students based on peer review and excellence up to a dollar level equivalent with the support offered doctoral level graduate students by the other councils.**
- D. Bring doctoral level research support based on peer review and excellence up to a success ratio equivalent with the other councils.**
- E. Initiate a programme of support for masters level graduate students based on peer review and excellence up to a dollar level equivalent with the support offered masters level graduate students by the other councils.**
- F. Initiate a programme to bring support for masters level graduate students up to a proportionate level equal to that of the other councils.**
- G. Initiate a programme of support for senior undergraduate students based on peer review and excellence similar to that offered by the Natural Sciences and Engineering Research Council.**

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