

**ADVANCING CANADA'S COMPETITIVE ADVANTAGE:
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**“EMBRACING PEOPLE-CENTRED INNOVATION FOR A
SUCCESSFUL 21ST CENTURY”**

**Keynote Address by Dr. Chad Gaffield, President,
Social Sciences and Humanities Research Council of Canada**

[as delivered alternating between English and French]

Bonjour!

Permettez-moi de commencer par quelques remerciements. J'aimerais tout d'abord saluer Paul Bates, doyen et professeur d'industrie en services de gestion financière de l'École de commerce DeGroot de la McMaster University, et le remercier de sa contribution en tant que membre du conseil d'administration du Conseil de recherches en sciences humaines (CRSH).

Monsieur Jean-Marie Toulouse, je vous remercie d'avoir organisé cet événement qui nous réunit et de m'avoir invité à y participer pour partager la vision du CRSH avec vous tous. J'aimerais aussi souligner le leadership et les qualités de visionnaire de Michel Patry, directeur de HEC Montréal, qui a cru en cet événement et qui l'a accueilli ici.


Ma contribution à ce forum sur la gestion abordera la question de l'innovation. C'est un sujet d'actualité dont l'importance est illustrée dans toutes les études et les recherches qui ont porté sur ce sujet au Québec, au Canada et à l'échelle internationale. De toutes nos réflexions, je crois qu'il est possible de tirer deux grandes conclusions : notre modèle d'innovation doit être repensé, et les sciences humaines doivent être au cœur de ce nouveau modèle.

D'ailleurs, hier soir, John Micklethwait nous rappelait les leçons que nous pouvons tirer de la crise mondiale que nous avons connue et qui, selon certains, n'est pas terminée. Sa rétrospective nous a également permis de mieux comprendre ce qui nous attend au cours des prochaines années. En tant qu'historien, je constate à quel point l'histoire est une fois de plus riche en enseignements dont nous devons nous inspirer pour établir de meilleurs modèles économiques et géopolitiques. Selon moi, la solution à nos problèmes mondiaux passe par notre capacité humaine à innover et à mieux comprendre d'où nous venons afin de faire de meilleurs choix d'avenir.

Ce midi, j'aimerais d'abord expliquer brièvement les deux grandes conclusions auxquelles je faisais allusion plus tôt en ce qui concerne l'avenir de l'innovation et l'importance des sciences humaines.

Je vais ensuite tenter de montrer comment, d'après moi, l'innovation est liée aux changements profonds que nous vivons collectivement et qui sont liés à trois thèmes : la complexité, la diversité et la créativité.

Enfin, j'aimerais lier toute la question de l'innovation aux programmes qu'offre le CRSH.



Twenty years of results from the United Nation's Human Development Index indicate that Canada has more number one rankings (10) than any other country.¹

To achieve this success, Canada has built one of the world's top civil societies and has used its natural resources to benefit from its proximity and unique relationship with the United States. But our researchers have shown that Canada's productivity growth has lagged behind that of other industrialized countries for the past 25 years. Individual earnings have remained stagnant; for lower income earners, real earnings have dropped by 20 per cent or more.²

Most employment opportunities have been in small businesses which have been responsible for 80 per cent of new jobs over the past 20 years.³

And we know that 50 to 80 per cent of economic growth now comes from innovation and new knowledge.⁴ Less well recognized is how significantly this process has been reconceptualized in recent years.

Since the 1980s, the dominant model of innovation has been evolving from a linear transfer model to a more iterative "chain link" model, to, most recently, a multi-dimensional model connecting researchers to consumers and users through multiple channels. Consequently, there is a new emphasis on people — ideas and behaviour — and therefore on the research fields of the social sciences and humanities.

In other words, the emerging model of innovation puts people at centre stage.

Such recent research conclusions explain why I am so pleased to be here today to share with you some of the ways that SSHRC is building on past success to increase the contributions of research and research training in management, leadership, ethics, governance and across the social sciences and humanities to advance Canada in the 21st century.

Let me begin my summarizing in stylized fashion ten specific insights of research on innovation — many of them unexpected and somewhat surprising if judged from the perspective of just a few years ago.

1. University research in Canada is of excellent quality. No university president is content with their university's ranking but the evidence is clear that on an international scale Canadian scholars are world-class in diverse areas including many fields of the social sciences and humanities. This fact has been noted consistently in the recent reports on innovation.⁵
2. University links to larger society have been strengthening but have a long way to go. In particular, university research is characteristically distant from market opportunities; OECD studies have placed Canada near the bottom of the list of countries with businesses collaborating with universities in research and development.
3. The technology transfer offices that multiplied in the 1970s and 1980s have not worked out as well as hoped. With some exceptions, such as at the University of British Columbia and at the Université


¹ See the United Nations Development Programme, *Human Development Report* <http://hdr.undp.org/en/statistics/>

² Industry Canada, Competition Policy Review Panel Final Report, *Compete to Win*, June 2008, pp. 18 and 20. http://strategis.ic.gc.ca/eic/site/cprp-qepmc.nsf/eng/h_00040html

³ Industry Canada, Small Business Research and Policy, *The Growth Process in Firms: Job Creation by Firm Age* <http://www.ic.gc.ca/eic/site/sbrp-pppe.nsf/eng/rd02119.html>

⁴ Geoff Mulgan with Simon Tucker, Rushanara Ali and Ben Sanders, *Social Innovation - What it is, why it matters and how it can be accelerated*, Oxford Said Business School, June 2007. http://www.kentrustweb.org.uk/UserFiles/CW/File/Policy/Unit_Briefing_Summaries/Social_Innovation_1007.doc

⁵ See Mark Goldenberg, Wathira Kamoji, Larry Orton, and Michael Williamson, Canadian Policy Research Networks Report, *Social Innovation in Canada: An Update*, September 2009. <http://www.cprn.com/doc.cfm?doc=2057&l=en>



de Sherbrooke, they have not produced the expected revenue. While still playing useful roles, they have not fulfilled the ambitions imagined in the linear model of innovation that was dominant several decades ago.

4. Researchers have now also shown that the technology transfer approach misses a key and increasingly important dimension of innovation — social innovation. Innovation is not simply about goods but it is also about services. Moreover, social innovation cuts across the non-profit, for-profit, and public sectors. The evidence shows that fields such as social entrepreneurship, design, technology, public policy, cities and urban development, as well as community development, are increasing using social innovation as a central strategy.⁶ In other words, new ideas for social innovation are now becoming priceless in terms of long-term and widespread benefit. Just think of the focus now on greater hand washing as a key behavioural innovation with enormous consequences. Furthermore, technological innovation typically implies social innovation as well. Technology depends upon the human context that gives meaning to new ways of doing things.
5. New forms of collaboration, both within and across sectors, and new ways of working can be observed, reflecting new media and new technologies, new understanding about complex systems, about how people organize, and how ideas move. These new ways of working involve different types of partnerships, the adoption of cross-sectoral strategies, and the development of new networks and means of networking.⁷
6. Scholarly partnerships between community organizations and postsecondary institutions are fostering new knowledge, tools and methods to develop the best strategies for diverse aspects of intervention, action research, program delivery and policy development that are appropriate for our rapidly changing times.
7. All of this is especially important since business R&D in Canada is modest. Our business expenditure on research and development is only average by OECD standards. And it is poor when measured against the other G-7 countries including the United States. Canadian businesses hire fewer employees with PhDs. Red Wilson's report on competitiveness emphasized how Canadian firms rank poorly in all aspects of innovation from the creation of knowledge to the diffusion of knowledge to the use of knowledge for commercialization.⁸ The recent report by the Council of Canadian Academies emphasized how business strategy choices have led to weak business innovation performance.⁹
8. Over the years, the changing views of innovation have increasingly made clear that people, their mindsets, their intellectual assets — what economists call human capital — are central. These are the talented individuals who make the crucial, small-scale improvements in product design, production processes, knowledge management, services and service delivery standards required for the economy of the 21st century.¹⁰ Skills cultivated through research in the social sciences and humanities in particular—such as critical thinking, creativity and the ability to embrace complexity and diversity within our increasingly interconnected world — are characteristic of the talented graduates who have become one of Canada's greatest "natural resources."


⁶ Geoff Mulgan with Simon Tucker, Rushanara Ali and Ben Sanders, *Social Innovation - What it is, why it matters and how it can be accelerated*, Oxford Said Business School, June 2007, p. 6.
http://www.kenttrustweb.org.uk/UserFiles/CW/File/Policy/Unit_Briefing_Summaries/Social_Innovation_1007.doc

⁷Mark Goldenberg, Wathira Kamoji, Larry Orton, and Michael Williamson, Canadian Policy Research Networks Report, *Social Innovation in Canada: An Update*, September 2009, p. v. <http://www.cprn.com/doc.cfm?doc=2057&l=en>

⁸ Industry Canada, Competition Policy Review Panel Final Report, *Compete to Win*, June 2008
http://strategis.ic.gc.ca/eic/site/cprp-gepmc.nsf/eng/h_00040html

⁹ Council of Canadian Academies, *Innovation and Business Strategy: Why Canada Falls Short*, April 2009.

¹⁰ Council of Canadian Academies, *Innovation and Business Strategy: Why Canada Falls Short*, April 2009. Peter Nicholson, presentation to Science Day in Canada, *Innovation and Business Strategy: Why Canada Falls Short*, Ottawa, May 27, 2009.

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9. Studies of innovation have also made clear how different our economy is today than just a few decades ago. Almost 70 per cent of Canada's GDP is composed of the service economy. As a result, there is an increasing role played by the social economy. Everywhere, customers (in the sense of users, whether individuals or companies) are now seen to be driving commercialization and social innovation. Their ideas, tastes, and preferences make and remake the market as well as our institutions.¹¹
 10. Research on innovation is now also characterized by a multi-faceted emphasis on the importance of a strong civil society, a sophisticated capacity for global engagement, and a robust array of policies and institutions to implement domestic and international economic initiatives. In other words, economic growth is no longer seen as producing successful societies in a linear way; rather, economic growth is seen as resulting from and interacting with successful societies in integrated, multi-dimensional ways to make them even more successful.
 11. Finally, recent research emphasizes the need for new metaphors; new vocabulary as technical expertise is now being combined with, and integrated into, contextual understandings in multi-layered ways that connect what became known in the 20th century as distinct left-brain and right-brain thinking.

Taken together, the central insights of recent research emphasize the importance of three deep conceptual changes that are increasingly defining the 21st century as a truly new era: first, a new recognition of complexity; second, a new embracing of diversity; and, third, a new emphasis on creativity.

1. Complexity

The new recognition of complexity is redefining both how we think about individuals and their interactions with others. The trajectory and itinerary of our lives is now recognized to be multi-causal and non-linear reflecting both individual differences and group dynamics. Our communities are presented with an increasingly complex mix of opportunities and challenges with multiple social, economic and cultural dimensions. The phenomena transforming the lives of individuals and communities alike include changing patterns of employment and demands for skills in a knowledge-based economy, an increasingly diverse social fabric, transformations in family life, changing values, new constraints on organizations and public services, and new rules of business competitiveness.

The Digital Age is accelerating and expanding complexity as 20th century distinctions become less obvious — such as those between producers and consumers, between authors and readers — and as industrial-era definitions become contested. Who is an expert? What is authentic? Who is the owner?


In the new recognition of complexity, we now know that building the future we want is not simply a matter of technological fixes, magic bullets, miracle drugs, or easy solutions of policy or practice. Rather, we now see that, more often than not, the significance of any action or technology depends on the relationships within which they are embedded. Complexity means uncertainty.

2. Diversity

Beyond the new recognition of complexity, we are now embracing diversity in unprecedented ways. Not that long ago, the dominant metaphor for thinking about society was a cookie cutter. A successful country was seen to need a homogenous population. Public policies tried to impose a one-size-fits-all standard for ideas, behaviour, and identity.

Diversity was defined as a problem to be solved. In contrast, our era has now made clear that all societies have multiple origins and multiple identities depending on who is doing the defining and what criteria are being used. We now recognize that no single perspective can hold all the answers.

¹¹Industry Canada, Canada's Office of Consumer Affairs, *Consumer Trends Report*, <http://www.ic.gc.ca/eic/site/oca-bc.nsf/eng/ca02093.html>



Not only is the pursuit of uniformity often unrealistic and misguided, but we have realized that sameness can lead to vulnerability. Just as we now value genetic diversity, we have come to appreciate the strength and resilience of social, economic and cultural diversity.

No one wants to put all their eggs in one basket. And no one wants all their eggs to hatch a single mindset.

3. Creativity

The concept of creativity is often thought of in conjunction with the products and services of the arts, entertainment and media sectors. But the concept of creativity now also includes a wide range of other activities in research and innovation in products, services and processes throughout the private, public and not-for-profit sectors. Policies that support and stimulate creativity in ways that enhance economic productivity, competitiveness, and sustainability are now seen to be one of the keys to prosperity.

The three deep conceptual changes related to complexity, diversity and creativity are affecting leadership thinking across society. Business leaders increasingly rely on teams comprised of those able to confront complex challenges, solve problems, embrace diversity, and creatively seize opportunities to enhance operations. Such collaboration increasingly relies on digital communication. Scholars emphasize that so many of the productivity gains of recent years have been attributable to the effective use of ICT; the increasing importance of teamwork illustrates the importance of the business strategy decision to take advantage of such innovation.¹²

But research has also shown, surprisingly perhaps, that place matters more than ever in the digital age.¹³ As well as opening a virtual door to anywhere, digital connections expand and deepen connections made in physical space. Just think how much closer contact we keep with distant family members today than just a few decades ago.

The implications of the conceptual changes of complexity, diversity and creativity in the evolving Digital Age are profound. Tom Jenkins, executive chairman and chief strategy officer of Open Text Corporation, which is now ranked among the world's leading ICT companies, uses a historic and compelling metaphor to emphasize the profound transformation now underway. He explains that "the internet economy has thus far belonged to the toolmakers who built the infrastructure that made the digital age possible. But the torch is being passed. The future now belongs, at least equally, to the tool users, the creative people, content providers, service deliverers, who have learned how to take the images, sounds, ideas, and concepts and share them digitally."¹⁴


And this transformation is another key reason why research in – and the graduates of – the social sciences and humanities are becoming increasingly important across the private, public and not-for-profit sectors.

The new people-centered model of innovation is reflected in new expressions such as the customer-driven marketplace and user-driven social innovation. The new thinking emphasizes the "connectors" in an innovation system – the knowledge brokers, entrepreneurs, and institutions who mobilize knowledge across the campus and community. Similarly, social innovation is recognized to play a decisive role in economic growth which helps explain the rising demand for types of economic growth that enhance

¹² See Council of Canadian Academies, *Better Research for Better Business*, May 2009.

¹³ The Social Sciences and Humanities Research Council, "Researcher Profile Q&A," [Meric Gertler] *Dialogue*, Spring 2009.

¹⁴ Tom Jenkins, "Infrastructure for the New Economy," http://www.cbc.ca/national/pdf/pitch_infrastructure1.pdf January 13, 2009.



rather than damage human relationships and well-being. One example of the importance of social innovation is the *New York Times Magazine* annual issue that celebrates the “Year in Ideas.” Many of the ideas chosen for celebration are based on suggestions for changes in behaviour or organization or policy. This reality makes clear the need to understand society, understand changing tastes and preferences, all of which can endure or change in expected and unexpected ways. In this context, one special challenge for Canada is to stay in touch with the actual users of so many exports.

Corporate social responsibility is becoming an increasingly used phrase across Canada. The business sector is increasingly embracing the “triple bottom line” of “people, planet, profit” as a business strategy for sustainable growth.¹⁵ After all, it was a Canadian, John Kenneth Galbraith, who most forcefully challenged the post-World War II assumption that “a sufficiently expanding economy will sweep away other social problems.” He showed how societal health and economic growth must be intertwined to produce resilient societies and economies.¹⁶ Examples of this inter-sector collaboration include philosophers collaborating with biologists, engineers, and artists to interpret the legal, ethical and aesthetic dimensions of biomedical technologies; geographers working with demographers and economists to rethink international public policy on agriculture; business leaders identifying critical research questions for scholars of sustainable development.

One rapidly emerging sector that illustrates the power of such engagement across sectors includes the creative industries that depend upon disciplines such as communications, fine arts and new media as well as technological innovation. Advanced economies have seen tremendous wealth generated at the interface of culture, economics and technology. Now contributing \$43 billion of Canada’s GDP, these industries are based on the knowledge, skill and talent of experts in design, film, and games, as well as creative services such as advertising and public relations.¹⁷ But the growing creative economy is only one part of the profound changes that connect the Digital Age to the increasing importance of the service sector.

Ranging from banking to entertainment, and real estate to retail, these growing sectors rely on the research and competencies of the social sciences and humanities. Overall, it can be inferred that diverse disciplines such as economics, sociology, literature, and law influence more than \$388 billion of economic activity in Canada, the equivalent of industries fueled by knowledge based in the natural sciences, engineering and medicine.¹⁸


It is in this changing context that SSHRC has evolved its programs and activities since 1978. For example, SSHRC launched in 1980 the strategic program Women and the Workforce and in 1991, Women and Change/Transformation. Along the way, the strategic program Organizational Management in Canada was begun in 1981 and renewed in 1991 under the theme of “Globalization and the Economy: The Challenge for Management.” Similarly, a program on the “Economy focused on Knowledge” was initiated in 1999, and in 2000 this effort was continued under “Rethinking Productivity,” in order to rethink economic concepts such as productivity as well as to encourage an integrated approach to understanding the economy and its place in a sociocultural context. Then, in 2000, as part of the Government of Canada’s strategy to increase education, research and innovation, the Minister of

¹⁵ Mark Goldenberg, Wathira Kamoji, Larry Orton, and Michael Williamson, Canadian Policy Research Networks Report, *Social Innovation in Canada: An Update*, September 2009, p. v. . <http://www.cprn.com/doc.cfm?doc=2057&l=en>

¹⁶ John Kenneth Galbraith, *The Affluent Society*, A Mentor Book/New American Library, 1958.

¹⁷ See the Conference Board of Canada in collaboration with Heritage Canada, “The International Forum on the Creative Economy,” March 17-18, 2008, Hilton Lac-Leamy, Gatineau, Quebec.
http://www.conferenceboard.ca/topics/education/symposia/creative_economy.aspx

¹⁸ The Impact Group, *The Economic Role and Influence of the Social Sciences and Humanities: A Conjecture*, March 2008.



Finance announced an investment of \$100 million over five years for the initiative on the new economy which since that time, has produced important results across the private, public and non-profit sectors.

In 2005, the grant programs linked to the social economy were redesigned to fund research teams comprised of university faculty and representatives from community organizations. A national centre, in addition to six regional centres, were created to lead research projects relevant to the social economy in Canada.

Let me also emphasize the increasing importance of SSHRC's Community-University Research Alliance program, which for more than a decade has helped bring together university researchers with community partners –policy makers, business, all levels of government – in order to arrive at results that are truly applicable to the users.

And let me cite just a few examples of the path-breaking SSHRC-funded research initiatives underway here at Montreal universities.

Concordia University sociology professor, Bill Reimer, through the New Rural Economy project, is collaborating with 15 Canadian researchers, 25 institutional partners, including the business community and government agencies, and 32 rural sites, to find solutions to the challenges facing Canadian rural communities.

For example, the community of Cap-à-l'aigle, here in Québec, used a local interest in lilacs to create an annual festival drawing people from around the world. Plum Coulée, Manitoba, is planning to transform a slated-to-be-abandoned grain elevator into a multipurpose facility housing a restaurant, interpretive museum, a seniors' centre and a daycare.


Gregor Murray, titulaire de la Chaire de recherche du Canada sur la mondialisation et le travail et professeur de l'École de relations industrielles de l'Université de Montréal, examine la manière dont les gens s'adaptent au renouvellement de leur milieu de travail. Ainsi, M. Murray et son équipe trouvent des solutions à d'importantes questions : comment peut-on assurer à la fois la réussite économique des organisations et le bien-être social des travailleurs à une époque de plus en plus mondialisée?

While pursuing his PhD studies at McGill University, with a SSHRC doctoral fellowship, Stéphane Dandeneau, under the guidance of his team leader, turned a research project in social psychology into a video game that enhances users' self-esteem and reduces their social stress. Through Got Game Entertainment, the video game has gone on to be sold in Mac and PC versions in stores across North America and Europe.

Georges Dionne, titulaire de la Chaire de recherche du Canada en gestion des risques, s'intéresse à l'analyse des risques et à la création d'outils que la société peut utiliser pour réduire les coûts qui sont liés à ces risques. Par exemple, M. Dionne a étudié la manière dont les autorités peuvent détecter des fraudes relatives aux assurances et a mené une vaste étude en collaboration avec le Bureau d'assurance du Canada.

M. Dionne a également apporté une importante contribution à la gestion des risques en matière de sécurité routière lorsque lui et l'un de ses collègues ont proposé un modèle de tarification de l'assurance automobile fondé sur les points d'inaptitude attribués au conducteur. Ce modèle a été adopté par la Société de l'assurance automobile du Québec.

Titulaire de la Chaire UNESCO-Bell en communication et en développement international et professeure du Département de gestion et de technologie de l'Université du Québec à Montréal (UQAM), Magda Fusaro étudie l'impact qu'ont les technologies de l'information et des communications sur les organisations et le grand public. Ainsi, en analysant les nouveaux comportements sociaux, elle peut



proposer des programmes comme « Branchons les aînés » afin de faciliter l'utilisation et la diffusion des technologies par la population.

There are so many more examples of SSHRC research making a difference. For example, Tima Bansal leads the Network for Business Sustainability at the Richard Ivey School of Business at the University of Western Ontario, which is a network of social scientists, managers, and policy-makers aiming to mobilize knowledge in the area of business sustainability. Through its events and knowledge mobilization efforts, the Network has already been able to raise the profile of sustainability research and change in the community of practice.

One of its activities is to assemble annually a diverse group of 15 leading organizations in sustainability to identify the issues for which better research is needed. Representatives from these organizations are able to discuss social and environmental issues in a non-threatening environment.

At the May 2007 meeting, representatives from TD Bank and the Pembina Institute met at the Network's Leadership Council meeting. This initial encounter ultimately resulted in the TD Bank announcing in February 2008 that it would become carbon neutral by 2010 - the first such commitment by a major Canadian bank. The move will reduce Canada's carbon footprint by 140,000 tonnes of CO₂ per year.

Dr. Bansal tells me that her research shows that the magnitude of this commitment cannot be understated because of the position of banks as important agents of change in the business community.

In keeping with the changing times, SSHRC is now increasingly focused on working in partnership.


Dans le budget de 2007, le gouvernement du Canada a annoncé qu'il allouerait au CRSH un financement supplémentaire de 11 millions de dollars par année pour accroître la recherche sur la gestion, l'administration et les finances dans le but d'appuyer les avantages décrits dans sa stratégie des sciences et de la technologie. Il s'agit de promouvoir l'excellence sur la scène internationale, de mettre l'accent sur les priorités, de favoriser la création de partenariats et d'augmenter la responsabilisation. Grâce au leadership de Gisèle Yasmeen, vice-présidente de la Division des partenariats, et à celui de Murielle Gagnon, directrice de la Division des programmes stratégiques et des initiatives conjointes, un appel spécial de propositions a permis de recueillir environ 500 candidatures. Cela correspond à un investissement de plus de 38 millions de dollars et à l'attribution de 259 subventions liées à des sujets comme l'éthique professionnelle, le développement économique communautaire, le développement des ressources humaines, les finances et le crédit, ce qui se fait souvent en collaboration avec les secteurs public, privé et sans but lucratif.

L'an dernier, dans le cadre de ses activités de consultation, le CRSH a demandé au Conseil des académies canadiennes d'évaluer les forces et les faiblesses générales de la recherche canadienne portant sur la gestion, l'administration et les finances. Ce conseil a donc formé un groupe d'experts dirigé par David Zussman et dont fait partie Jean-Marie Toulouse, que nous souhaitons remercier et féliciter pour tout le travail qu'il a accompli.

Selon les principales conclusions du groupe d'experts, les activités menées par la communauté des chercheurs dans ces secteurs se situent au-dessus de la moyenne mondiale, mais il existe de nombreuses possibilités d'établir des relations beaucoup plus efficaces entre les chercheurs et des collaborateurs des secteurs public, privé et sans but lucratif pour leur bénéfice mutuel.

L'année dernière, le CRSH a également lancé un appel spécial visant à organiser un forum national, dont la présente conférence est le résultat.

Nous sommes très fiers d'appuyer « Promouvoir l'avantage compétitif du Canada » et d'en apprendre plus sur les tendances et les nouveaux enjeux de la formation et de la recherche liées à la gestion, sur



l'impact qu'a la recherche sur la communauté de praticiens et les politiques publiques ainsi qu'au sujet de la façon dont cela augmente la compétitivité et la prospérité du Canada.

Dans le cadre de la seconde étape de sa stratégie sur la gestion, l'administration et les finances, le CRSH met l'accent sur trois thèmes interreliés : l'innovation, le leadership et la prospérité.

L'intérêt du CRSH pour l'innovation montre comment la recherche appuie les changements positifs que subit la nouvelle économie afin d'améliorer le bien-être de la société.

Pour ce qui est du leadership, cela concerne les enjeux que sont la gouvernance, la gestion des ressources humaines, la prise de risques, l'éthique et les questions de politique. De plus, on étudie de nouveaux modèles de leadership, en particulier ceux d'équipes qui travaillent « organiquement » et qui entretiennent souvent des liens sous forme électronique.

Enfin, la prospérité souligne l'importance qu'a la qualité de vie pour chacun d'entre nous, et non seulement pour quelques-uns.

As we look ahead, the challenges before us in Canada emphasize the importance of these increased efforts to advance knowledge and understanding and to develop the talent needed for success in the 21st century. Research is needed more than ever.

For example, our researchers have shown that, despite a remarkable history of public investment in education, Canada still needs to overcome a debilitating problem of poor adult literacy. We also now know that Canada's world-class ranking as one of the top OECD countries in terms of the proportion of the population who hold university degrees is in jeopardy as other countries expand their own post-secondary systems. Among residents aged 55 to 64, Canada ranks fourth; among those 25 to 34 years old, Canada ranks 12th.¹⁹

At the graduate level, Canada's development of PhD candidates has remained quite stable despite the overall expansion of universities and now ranks only 20th among OECD countries. And our doctoral graduates are less likely than those in the United States, for example, to be employed by Canadian firms.²⁰

We need increased research to enhance our understanding of the 21st century model of innovation. We need better evidence about innovation. We need better indicators of innovation in services. We need better performance measures to track innovation and assess its economic and social impact. We need more research on how to connect effectively and efficiently the campus and the larger community for their mutual benefit, keeping in mind their distinct roles and responsibilities in promoting successful societies. We need more research on how governments can best support business R&D — for example, what are the relative merits of direct and indirect support?

Similarly, universities must continue adjusting to the research evidence which shows that the major direct return from the private sector to universities is through philanthropy. The recent multimillion

¹⁹ Statistics Canada, *Education Indicators in Canada: An International Perspective*, September 2009, <http://www.statcan.gc.ca/pub/81-604-x/2009001/hl-fs-eng.htm>

²⁰ OECD, *Developing Highly Skilled Workers: Review of Canada*, Paris, 2004, p. 7. <http://www.oecd.org/dataoecd/2/0/34457947.pdf>. Science, Technology and Innovation Council, *State of the Nation 2008—Canada's Science, Technology and Innovation System*, Ottawa, 2009, p. 45. [http://www.stic-csti.ca/eic/site/stic-csti.nsf/vwapj/08-141_IC_SOTN_EN_Final_no_trans2.pdf/\\$FILE/08-141_IC_SOTN_EN_Final_no_trans2.pdf](http://www.stic-csti.ca/eic/site/stic-csti.nsf/vwapj/08-141_IC_SOTN_EN_Final_no_trans2.pdf/$FILE/08-141_IC_SOTN_EN_Final_no_trans2.pdf)



donations of Red Wilson and Hal Jackman to Canadian universities illustrate the increasing recognition of the importance of the social sciences and humanities within the new model of innovation.²¹

Our scholars are also emphasizing the increasing importance of global engagement for Canada. At the moment, Canada still has limited presence in markets other than the United States. The evidence shows that Canada has only a minor relationship with the so-called BRIC countries which are expected to account for 50 per cent of the world economy in the coming decades. But to engage globally, we need to understand other cultures, societies, histories, languages, and to be actively engaged in international debates about policy and practice, about ideas and behaviour.

Our scholars are also showing how we need to reform the intellectual property regime to reward creators while also stimulating competition and innovation in the Digital Age.

Conclusion

Over the centuries, successful societies have been nimble, flexible, and adaptable and they have changed in ways that build on their strengths to meet new challenges and seize new opportunities. Today, such characteristics are more important than ever.

À l'aube du 21^e siècle, la façon dont nous nous percevons en tant qu'individus et collectivité connaît de profondes transformations. La façon dont nous abordons l'énorme défi que représente l'élaboration de stratégies et de pratiques durables et vigoureuses en vue de faire du Canada l'une des sociétés les plus prospères du monde fait aussi l'objet de grands changements : l'importance croissante d'intégrer différentes manières d'acquérir des connaissances; la plus grande valeur de l'innovation; le besoin grandissant de positionner des éléments importants dans un environnement plus vaste. Ces changements montrent comment nos efforts d'aujourd'hui se basent sur ceux que nous avons faits par le passé pour acquérir des connaissances, découvrir de nouvelles perspectives et trouver de l'inspiration.

This year marks the 50th anniversary of C.P. Snow's famous description of the two solitudes of the arts and sciences.²²


While C.P. Snow would tell us today that we still have a lot of work to do, the importance of drawing upon all the ways of knowing, of bridging the two solitudes of arts and science is now a key theme of leaders across the private, public and not-for-profit sectors.

We must keep in mind that the desired future will not follow a contest to determine superiority among cultures and societies in a zero-sum game but rather will follow a win-win effort to enhance all societies by drawing upon the most compelling insights, evidence, and experience.

La récente crise financière a permis de souligner le besoin d'adopter de nouveaux modèles d'innovation pour établir des stratégies et des pratiques de gestion durables et vigoureuses. Ce besoin nous a poussés à rejeter, au cours des dernières décennies, les modèles linéaires simples et simpliste. Aujourd'hui, nous préférons des modèles de plus en plus complexes qui mettent en évidence la multidisciplinarité des activités menées par les universités et les entreprises. Plus particulièrement, les changements d'opinion concernant l'innovation ont permis de clairement constater à quel point l'être humain, sa façon de penser et ses biens intellectuels — ce que les économistes appellent le « capital humain » — sont de la plus haute importance.

²¹ "Hal Jackman Doubles Gift to the Humanities," *UofT Magazine*, June 17, 2007, <http://www.magazine.utoronto.ca/great-gifts/hal-jackman-gift-to-the-humanities-u-of-t/>
"Chancellor adds \$2.5m gift for Mac history department," *The Hamilton Spectator*, November 5, 2008, <http://www.thespec.com/article/461249>

²² C.P. Snow, *The Two Cultures*, Rede Lecture delivered at the Senate House, Cambridge, May 7, 1959. C.P. Snow, *The Two Cultures and the Scientific Revolution* (New York: Cambridge University Press, 1959).



Le 21^e siècle associe « continuité » et « changement » de manière à inciter l'innovation en tirant des leçons du passé et en allant plus loin. Assurons-nous que, dans plusieurs siècles, quand nos descendants reviendront sur le passé, ils seront persuadés que nous avons fait tout ce que nous pouvions pour bâtir une société et une économie durables et vigoureuses non seulement pour le bien de notre pays, mais pour celui du reste du monde.

Let me close by thanking all of you — the scholars across the social sciences and humanities, the partners across campus and beyond, the leaders, influencers, and decision-makers — who are helping Canada harness the power of knowledge and understanding to create a prosperous and resilient economy and to foster a safe, just and civil society.