

## Chad Gaffield

### **New Horizons for the Study of People: Interdisciplinarity, Internationalization and Innovation in the Digital Age**

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First of all, I would like to thank Dr. Helga Nowotny and all the members of the organizing committee for including me in this important event. I am thrilled to be here and to have the chance to contribute to the discussions in this beautiful and historic city. As a point of departure, I would like to make two claims. First, that Horizons for the Social Sciences and Humanities is the largest and most important gathering in recent times involving a diverse group of leaders focused on the critical importance of research on human thought and behaviour for making a better future in the 21<sup>st</sup> century. In other words, this event in Vilnius is not only relevant for Europe but also significant internationally as well.

My second claim is that, in order to fulfill the ambitions and realize the potential of this global gathering, we must base our collective goal on a common understanding of why these ambitions and their potential are so important. In other words, we must agree on what is at stake.

In order to get to where we want to go, in order to define what we will do to get there, and agree on how we will do it, a deep and common understanding of why we must succeed is required.

The straightforward – though crucial – first step is to agree on which motivations should be rejected.

Let's reject any insistence on entitlement by any research field.

Let's reject any obligation of charity by some research fields for other research fields.

Instead, let's try to summarize into a common understanding the substantive reasons why it is so important that the ambitions of our gathering here in Vilnius be successfully fulfilled.

To try to offer such a summary in a few pages is certainly risky, but, however incomplete, the following comments based on a vantage point across the ocean seek to contribute to a more robust and comprehensive understanding of both the challenges and opportunities of the social sciences and humanities in Horizons 2020.

The point of departure for my cross-campus comments this evening is my memories of being told by well-meaning and knowledgeable observers who offered comments like these shortly after my appointment as President of the Social Sciences and Humanities Research Council:

“You have the hardest job!”

“You have to promote and support research without being able to point to impressive technologies or labour-saving devices.”

“You can't promise to cure cancer or to develop pills to relieve pain or improve mental health.”

“You have many more students and scholars to focus on with much less money to award.”

“You do not have patents to count, no mind-boggling science installations to marvel at, not as many prizes for global research excellence to strive for - and yes, while there are Nobel prizes for fields in the social sciences and humanities, they are only a few.”

I have never felt, however, that I had the hardest job or been at a disadvantage in articulating the importance of the social sciences and humanities. Indeed, now after more than seven years in my position, I am more proud than ever about our research contributions and increasingly optimistic about our research fields and their ability to enhance our knowledge and understanding of the past and present and thus to help build a better future.

As we all know, there have certainly been many challenges along the way and there is no doubt that promoting and supporting the social sciences and humanities is certainly not for the faint of heart. But I am increasingly convinced, undoubtedly like all of you here in Vilnius, that we are in the midst of a profound Kuhnian paradigm shift, that we are pushing forward a truly transformative era, that holds the potential for a much better future, one that will transcend whatever progress we perceive in looking back over the course of recent decades and centuries.

Why am I proud of past achievements and optimistic about the coming years?

From a campus point of view, there is a new recognition that the study of all aspects of the past and present are inherently interconnected not in additive ways, but in interactive ways.

The study of human thought and behaviour and the study of particles, molecules, flora and fauna, and the universe, all form a whole that we are now recognizing cannot be fully understood as simply the sum of the parts with certain parts being far more important than other parts.

On campus, the division-of-labour approach to advancing knowledge that we developed since the 19<sup>th</sup> century certainly generated deep insights that have helped transform rural agricultural societies into urban industrial jurisdictions characterized by greater prosperity, increased literacy and longer lives. But, today, fewer and fewer researchers hope that any one part of higher education and scholarship can fully explain even a single aspect of what we need to know about the past and present.

But even more important in explaining the fundamental changes now underway across the social sciences and humanities are the increasing calls for help from the larger society.

In the case of Canada, for example, such calls began after World War II with urgent calls to develop a truly Canadian culture to match the political sovereignty and world presence garnered since the later 19<sup>th</sup> century.

In the 1950s, Canada was still in many ways an intellectual colony characterized by universities populated for the most part by professors who had received graduate degrees elsewhere and who used imported instructional materials. The new demand was for creating a domestic cultural voice as a key component of nation-building. The first research funding agency for the arts, social sciences and humanities – the Canada Council – was established in 1957.

By the 1970s, Canadian society looked to the social sciences and humanities for help to come to grips with unprecedented social issues related to ethnoculturally-diverse immigration, the ageing of the baby boom,

and the changing views of gender identities and roles especially in the workplace. As a response, the Social Sciences and Humanities Research Council was created in 1977.

The next phase of the increasing calls from the larger society for help from the social sciences and humanities came in the 1980s especially with respect to the relationship between environmental change and human behaviour and the human-computer interface.

Then, in the 1990s, new thinking redefined the field of medicine in terms of health thereby moving from a bio-medical model to one that included the social sciences and humanities. In Canada, this led to the transformation of the Medical Research Council into the Canadian Institutes for Health Research, with a mandate to fund all research fields that could enhance health outcomes.

The most recent addition to the growing lists of societal expectations for contributions by the social sciences and humanities has been the growing calls from the private sector. Increasingly since the later 1990s, business leaders have moved from their earlier focus on technological development to a comprehensive approach involving research on business strategy, governance and management, customer relationships and analytics, marketplace knowledge and global engagement. This trend has been intensified with the rapid proliferation of the digital economy as it moved from its origins in the creative industries to touch all sectors including those in natural resources.

Along the way, the larger public increasingly came to agree that the major challenges facing societies could only be tackled by further insights on human thought and behaviour. While technological breakthroughs remain highly valued, the new approach recognized that human decisions to use or not use technology were just as crucial in determining success or failure.

Over my career, I have experienced the rising expectations of the larger society toward the social sciences and humanities. I have found that when I mention to neighbours or those I meet in the community that I am a historian studying family patterns in the 19<sup>th</sup> century, their reactions usually fall into one of three categories which have undergone significant change in their relative size.

One type of response is somewhat incredulous: "You don't know why people develop relationships, get married and have children?"

The second type of response is the opposite of this *I-am-a-human-therefore-I-understand-people* assumption. This response says "Gee, I don't think we will ever understand why people develop relationships, get married and have children."

In contrast, the third type of response turns the pessimistic *people-are-too-complex-to-ever-fathom* assumption into an optimistic and urgent call for more such research on human thought and behaviour. In this case, people responded to my description of my research by saying "That is so important. If we had better understandings of human decisions, it would so much easier to build successful companies, increase learning outcomes in schools, strengthen civic engagement, and, in fact, confront all the world's problems."

Over the years, I have been getting more and more of the third type of response. Rarely now do people assume that such research on human thought or behaviour is futile or unnecessary. Why?

My sense is that one of the key distinguishing characteristics of our era is that we are beginning to take seriously the challenge of understanding people. And that we are getting increasingly optimistic that by confronting this challenge, we can help make a better future.

Why? Why are the research fields that focus on people, the social sciences and humanities moving to center stage?

One important reason has been the growing consensus about the failure of the technology transfer model that had become predominant during the 1970s and 1980s as the preferred way to achieve economic growth that would then support health, education and welfare.

The real limits of the linear lab-to-market push approach became increasingly clear by the later 1990s as almost all campus-based technology transfer offices did not even gain enough licensing revenue to pay for their operations.

In this context, the linear tech transfer model began to be replaced by a people-centered model of innovation involving multi-directional flows of ideas and knowledge across campus and into the private, public and non-profit sectors in new partnered, networked collaborations.

This new model of innovation reflected the new descriptions of customer-driven marketplaces, patient-oriented health systems, student-focused schools, citizen-engaged politics and employee-empowered workplaces.

As a result, leaders across society agree that, to thrive in the 21<sup>st</sup> century, the private, public and non-profit sectors now require enhanced understandings of people – the focus of the social sciences and humanities – as well as the discoveries and inventions of the life sciences and physical sciences.

As Horizons 2020 makes clear, the challenges today clearly call upon all the ways of knowing for two main reasons: to contribute insights and to develop talented contributors across the private, public and non-profit sectors; and to work together, to increase exponentially the value of their scholarship especially to address pressing societal challenges, the wicked problems, and the complex questions that defy simple solutions.

Not surprisingly, the Horizons 2020 challenges resonate with those identified elsewhere in recent years including, for example, those explored at the World Social Science Forum in Bergen in 2009 and the World Social Science Report of 2010.

And it is for such reasons that, for example, the natural sciences have been increasingly reaching out to the social sciences for increased partnership as illustrated by discussions at the Belmont Forum.

It is important to emphasize that underpinning the new people-centered model of innovation are deep conceptual changes that are increasingly making clear why we are re-imagining the role of all scholarly fields in the early 21<sup>st</sup> century.

While many such changes are important, I believe that new attitudes are especially important with respect to three key concepts: complexity, diversity and creativity.

In recent decades, we have increasingly abandoned the assumption that societies include only a small group of creators (usually a pre-ordained elite) for a majority of the population who must apply the fruits of the creative minority.

Instead, we now assume that anyone and everyone can be creative, and thus we seek to tap the entire pool of talent; this new approach helps explain the rise of interdisciplinarity as well as increased campus-community connections especially in the digital age.

Similarly, we have moved from thinking that diversity is a problem to be eliminated, to seeing diversity as the foundation of strength and resilience; this conceptual change has fueled new ideas about genetic diversity and economic diversity as well as new ways of tackling the world's most difficult problems such as poverty and inequality.

And we have re-imagined complexity as we have abandoned the conviction that complexity is only apparent (assuming that phenomena are simple if we just look closely enough) by recognizing complexity as a common feature of both human and non-human interactions with emergent properties, non-linearity, etc. My sense is that such deep conceptual changes make the challenge of advancing knowledge much more difficult but also much more promising.

One important example is the increasing importance of digital technologies which are enabling, accelerating and then influencing the new ways of thinking about concepts such as creativity, diversity and complexity.

This point is important to emphasize since we often hear that we are living in a technologically-driven age. While this claim is undoubtedly true in part, the lessons of History make clear that technologies become major factors only subsequent to our decision to use them.

The social sciences and humanities teach us that technology is not inherently good or bad. Since technology is a social construction, the relevant question is how it is being used – what is the human context?

The same, of course, can be said of innovation – which itself is not necessarily good or bad – as illustrated by the initially welcomed financial innovations that led to the failures begun in 2008.

But what is clear now is that all of our societies, economies and cultures are becoming digitally-enabled. This is true not only in the service sectors that now represent about two-thirds of developed world economies, but throughout the sectors including, in the case of Canada, the oil industries, forestry, mining, and agriculture.

And we should not be surprised – though often it seems we are – about who are the “ICT” workers in the all-inclusive digital economy. Numerous studies illustrate that historians, philosophers and literary scholars as well as computer scientists and engineers are among the diverse employees that now form the workforce in the so-called ICT sector.

Do we need more historians or mathematicians? Though still familiar, such questions are wrong-headed. We need more people who can think systematically, creatively, critically, constructively, and then can productively work with others in collaborative, networked, interactive ways. Study after study of career experiences have all concluded that whether students learn these competences through one way of knowing or another is not important over a life time.

But have scholars in the social sciences and humanities been responding appropriately to the increasing calls for help from across the larger society in recent decades?

My sense is that scholars in our fields have not always been flattered by the increasing social conviction that our research can help the private, public and non-profit sectors. While we would never describe our work as irrelevant, we have sometimes resisted reflexively the claim that it is, or should be, relevant to the larger society. We have not always interpreted the rising expectations that we can help tackle societal challenges as evidence of an increasing recognition of the importance of our scholarship.

At the same time, however, there is no doubt that many students and professors across the social sciences and humanities have been actively engaging with the larger society, and are now more often collaborating in, and sometimes leading major research initiatives involving diverse research fields as well as partners beyond campus.

In such work, we can perceive a new recognition that our scholarship is not only intrinsically important but extrinsically essential for the larger society.

Moreover, we now conceptualize intrinsic and extrinsic scholarly contributions as complementary rather than in competition; in the new view, the intrinsic value of learning about people in the past and present lays the foundation for extrinsic contributions – in expected and unexpected ways – to our efforts towards making a better future.

The complementary view of intrinsic and extrinsic contributions has been proving exceptionally important for the social sciences and humanities since so much recent research has been exposing the extent to which unfounded assumptions about people have characterized policies and practices in many societies. Until recently, for example, modern school systems developed during two centuries without any serious study of how children learn. Similarly, workplaces typically did not reflect any analysis of the conditions for successful management, sustained employee productivity and innovation. Businesses usually operated with little understanding of customers or the features of the marketplace. And health care systems did not focus on patient outcomes or even a wide range of health determinants.

In these and in so many other examples, we are now realizing how early we are in our research efforts to enhance knowledge and understanding of human beings in order to improve our schools, businesses, and institutions.

We are also realizing the deep interconnections and interactions between and among research fields. To take advantage of insights from the social sciences and humanities, we now see that we must also pursue discipline-based, interdisciplinary and engaged scholarship.

And in pursuing cross-campus and community-connected collaboration, we need to abandon any sense of hierarchy among research fields.

Rather, such collaborations must involve the bringing together, drawing upon, reconciling, and enriching different ways of knowing for the benefit of all.

It is for these reasons that the emphasis in Horizons 2020 on complementarity and integration is so important and should resonate across all research fields.

But we should also admit that this emphasis requires us to avoid the pitfalls of earlier such efforts.

The challenge must not be seen as a call to make the social sciences and humanities more like the natural sciences, engineering, and the bio-medical and health fields. Rather, Horizons 2020 calls on us to build upon the promising aspects of the diverse metaphysical and epistemological traditions that have developed over the years.

And let's admit that this will not be easy.

Successful implementation will depend on our ability to embrace the challenge and opportunity to create a new era of research, a new era of science, a new era of scholarship.

The next step might be to celebrate those examples of success in developing cross-campus understandings based on complementarity and integration. In the Canadian case, one impressive example has been the development of common guidelines for research involving humans that includes all research fields from clinical trials to oral history as well as encompassing diverse traditions, most significantly, Canada's Aboriginal Peoples. The result of several years of discussion, debate and consultation, and now viewed as a living document with periodic updates, these guidelines show how core values and principles can be distilled from different research traditions in order to establish common policies and practices that build upon rather than undermine the richness of these traditions.

This type of example suggests the importance of re-thinking what we consider to be the defining characteristics that distinguish disciplines and research fields. One tendency has been to emphasize differences in methodology such as "quantitative" or "qualitative" research. But increasingly, researchers agree that every approach is inherently both qualitative and quantitative. Not only are words and numbers semiotically comparable, but quantitative methods are also 'qualitative', since counting follows decisions about what we decide to count, how we categorize, how we interpret- attribute significance, and so on. Similarly, qualitative statements usually imply comparisons of size and intensity, uniqueness and commonness, and similar relative assumptions.

This example suggests that it is not the research strategies that continue to differentiate disciplines, but rather the questions addressed by various research fields. This insight suggests that major steps forward can be taken if scholars from diverse traditions pursue different research questions about a common focus of research – such as illustrated by the Horizon 2020 societal challenges – in a complementary and integrated way.

One encouraging example of such efforts involves those who are connecting neuroscience to studies of behavioural change and decision-making.

But how can we ensure that applications for research funding for complementary and integrated initiatives receive appropriate adjudication?

Unfortunately, we, as scholars, have not studied ourselves extensively in terms of how we evaluate especially, to use Michèle Lamont's book title, *How Professors Think*. We have tended to study 'others', rather than our own practices and policies.

But there have been significant steps forward in recent years. Discussions in Europe, for example, have made major international contributions to understanding and confronting the limits of bibliometric and citation databases of commercial companies. They have also emphasized the different roles of books and journal articles in different fields. Similarly, increased attention is being paid to the distinct traditions of deciding who is cited as author of a journal article and who is thanked in the acknowledgements or references.

Similarly, cross-campus debate has begun examining what evidence of a scholar's achievements or of a specific research project should be documented and how we should define outputs, outcomes and impact.

One result of such discussions and debate has been a renewed confidence in human judgement through peer review processes. But here the evidence thus far should caution us about the readiness of any group of humans to assess complementary and integrated proposals. My experience suggests that proposals closely associated with the social sciences and humanities have not characteristically done well in multidisciplinary evaluation committees. The reasons are undoubtedly multiple and complex. To some extent, it seems that

the 20<sup>th</sup> century hierarchy of ways of knowing plays out as well as the 20<sup>th</sup> century social construction of excellence in measuring past achievements.

In Canada, we have been working hard to make progress on the challenge of single adjudication of diverse fields but it is clear that we still have much work to do to meet this challenge.

We must do better in many respects in developing appropriate ways to handle all the aspects of research administration: an inclusive call for proposals; a common application form with inclusive terminology; evaluative criteria that do justice to the diverse ways of knowing; referees and selection committee members who have both the expertise and experience to assess proposals that transcend traditional boundaries both on campus and beyond; and reporting guidelines – outputs, outcomes and impact – that are robust and inclusive.

Complementarity and integration across all research fields require sophisticated and inclusive attention to the many components of the granting process – from the selection of evaluation criteria and how they are implemented to the application forms, including the choice of words and categories for the information to be requested, as well as the selection of proposal evaluators and selection committee members. Discussion here at this conference is certainly moving us forward on such important issues.

It is truly a major step forward that research granting agencies are now increasingly collaborating to accelerate progress on the implementation of policies and practices that align with the changing world of research in the 21<sup>st</sup> century.

In this regard, I am delighted that the support of the European Commission will allow the major research funders in Europe and the Americas to launch an initiative to build a TransAtlantic Platform for the Social Sciences and Humanities in order to enhance collaborative research internationally in key areas of mutual interest and engagement. The Netherlands Organisation for Scientific Research and the Social Sciences and Humanities Research Council of Canada will coordinate an effort by member organizations to strengthen and promote Trans-Atlantic research co-operation, output and impact utilizing a series of coordinating, project, and programme strategies. The Trans-Atlantic Platform will also contribute to the realization of a Global Research Area by coordinating with the EU/India Platform (EqUIP) for the Social Sciences and Humanities.

Let me close by emphasizing how pleased I am to be here and for the opportunity to work with all of you to share ideas, exchange thoughts, and develop specific plans to address what we all agree is the most urgent task before all of us: doing all that we can to help create a better future.

There is no doubt that this task seemed more straightforward some years ago. Indeed, during the course of the 19<sup>th</sup> and 20<sup>th</sup> centuries, western society developed considerable confidence about progress. Each generation claimed to be surpassing the one before, and leaders celebrated self-congratulatory milestones along the way such as longer lives and better educated, more prosperous citizens. We should not forget that, by the 1960s, the emphasis was on the emerging leisure society when the challenge would simply be to fill our time pleasingly as machines did our work, cleaned our homes and made our food.

Today, my sense is that such confidence has been shaken if not destroyed by many people. Today, observers around the world are cautious. The balance sheets for households, companies, communities and countries are not adding up favourably, if at all in many cases. The emphasis everywhere now, as illustrated by Horizons 2020, is on the global challenges we face, the wicked problems, the clashing civilizations, the

seemingly irreconcilable tensions between human ambitions and the rest of the environment. Are we confident that our descendants will live better lives than us?

Well if we aren't, I think we can be, but only if we successfully embrace the potential of a new era, one that holds the promise of renewed policies and practices, of stronger ethics and equity, of increased resilience and responsiveness, of smarter communities and enhanced quality of life.

By embracing complementarity and integration across research fields, by drawing upon the strengths of the social sciences and humanities, the natural sciences and engineering, the bio-medical and health sciences, Horizons 2020 holds the promise of a shifted paradigm, of a new era characterized by prosperity and security, justice and resilience, peace and enhanced quality of life.

In the early 1960s, the great Canadian scholar, Northrope Frye, explained that "The fundamental job of the imagination in ordinary life... is to produce, out of the society we have to live in, a vision of the society we want to live in." [1]

I believe Horizons 2020 does indeed imagine a society that we should want to live in; successful implementation will certainly help Europe and the world take major steps forward in realizing that vision.

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[1] Northrope Frye, *The Educated Imagination* 1964 (The Massey Lectures 1962).

Chad Gaffield, one of Canada's foremost historians, has been President of SSHRC since 2006. In this capacity he has helped define a new model of innovation that places understanding about people—human thought and behavior—at the organization's core, and that reaffirms the contributions of social sciences and humanities research to our economy and quality of life.

Gaffield has won many awards for his teaching and research. The University of Ottawa named him Researcher of Year in 1995 and Professor of the Year in 2002. A Fellow of the Royal Society of Canada, he received the society's J.B. Tyrrell Historical Medal in 2004 for his outstanding contribution to the study of Canada. In 2007, the Canadian Association of University Teachers presented him with its Distinguished Academic Award in recognition of excellence in teaching, research and service to the community. In 2011, he was the inaugural winner of the Antonio Zampolli Prize, awarded by the Alliance of Digital Humanities Organizations to recognize a single outstanding output in the digital humanities by a scholar.

Gaffield received his BA and MA from McGill University, and his PhD from the University of Toronto.

