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Opinion Leader: Dr Chad Gaffield

Innovating Canada for the Digital Age

By Dr Chad Gaffield

Researchers and students across the social sciences and humanities are now at the heart of research and innovation as digital content and the use of digital media become the focus of attention in the Digital Age. There is a new conviction that our capacity for innovation increasingly depends upon a constellation of digital technologies, digital content, and digital literacies.

Tom Jenkins, executive chairman and chief strategy officer of Open Text Corp says 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."

This transformation is an important reason why research in — and graduates of — the social sciences and humanities are becoming increasingly important across the private, public and not-for-profit sectors. The social sciences and humanities are critical in the digital age, because our disciplines are strong content providers, from history to literature to philosophy. Our scholars provide a rich range of content that informs digital content. They building a strong Canadian presence on the web much as they have contributed significantly to the world's collective knowledge. Canadian content is especially important when it is made available in a way that encourages access and appropriately respects users and creators.

In a recent report, the Council of Canadian Academies identified digital humanities as an emerging field with significant strength. Furthermore, the report stated that new media has the potential for tremendous growth in Canada, with global sector expected to grow to \$2.2 trillion within five years.

One aspect of current research focuses on e-commerce. Paul Messinger, a professor at the University of Alberta School of Business, is leading a nationwide study of buying and selling practices on the Internet. He and his team are gathering critical data about how customers are attracted to e-commerce web sites, how they interact with those sites, how they make orders online and what kinds of service experiences earn customers' loyalty. Based on that understanding, Messinger is making recommendations to Canadian businesses, customers, charitable organizations and government associations and is helping improve Web management and e-commerce competitiveness in Canada.

David Lyon is director of the Surveillance Project at Queen's University where he works with an international team to examine how growing computer dependence and reliance on personal data collection has raised public concern about privacy and civil liberties.

Stéphane Bouchard at the Université du Québec en Outaouais is forging Canada's reputation as a world leader in the emerging field of cyberpsychology, which includes issues like social anxiety, pathological gambling, schizophrenia and post-traumatic stress disorder. Dr Bouchard's research focuses on the use of virtual reality and telepsychotherapy delivered through videoconferencing, to prevent and treat such anxiety disorders.

SOFT INFRASTRUCTURE

Research in the social sciences and humanities has also been central to the rapidly emerging creative industries that depend upon disciplines such as communications, fine arts and new media. Advanced economies have seen tremendous wealth generated at the interface of culture, economics and technology. Now contributing \$43 billion to 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.

The digital infrastructure of the 21st century includes not only tech infrastructure but also a "soft" infrastructure containing applications, information, concepts, commodities, and identities, connecting us — enabling us — in new and profound ways. Digitizing our heritage as well as capturing "born-digital" records is key to strengthening this digital infrastructure. While France and Germany, for example, were initially skeptical of digitization, they are now moving decidedly towards that objective. Similarly, Canadians are now focused on how best to create comprehensive Canadian digital content. The social sciences and humanities community is actively contributing to this discussion. Similarly, the digital age prompts us to jointly consider how we can best offer open access as a means for communities throughout Canada to benefit from documents, knowledge, and services.

To promote innovative digital scholarship, our team at the Social Sciences and Humanities Research Council has recently launched, in collaboration with American and British partners, the "Digging into Data Challenge." We are challenging researchers to come up with novel ways of tapping into the digital data repositories around the world to enable new research opportunities and promote international linkages. This challenge will include newly funded research to find ways to best use content, coupled with options to improve digital literacy. Our announcement of the winners of this competition will occur shortly.

The Government of Canada's Science and Technology Strategy aims to create important advantages for Canada in terms of its people, knowledge and entrepreneurship. Digital scholarship is well placed in this framework as it fosters the intelligent use of new technologies, a more creative class of scholars and leaders, and a Canadian leadership advantage in both the public and private sectors.

A broad consensus and willingness from a variety of sectors to collaborate on advancing Canada's role in digital content has emerged from the recent Science Policy conference in Toronto, Science and Technology Day on Parliament Hill and the National Forum on Management at HEC Montreal. This consensus will assist us in fostering a competitive advantage for Canadians as we work on a variety of complex issues including identity theft and the digital divide.

In this context, becoming a digital culture, with ready access to Canadian content (historical, contemporary, economic, social, and cultural) is increasingly relevant. And learning how to use, assess, and manage digital content now underpins our national success.

Dr Chad Gaffield is president of the Social Sciences and Humanities Research Council.