THE CULTURE OF TECHNOLOGY IN CANADA

"The spirit of innovation has made a good lodgment, and committed sad ravages even in this secluded corner of the world."

Kingston Chronicle and Gazette, March 22, 1834.

ABSTRACT

The relationship between technology and culture in Canada is typically approached as a question about the impact of new technologies on cultural production, distribution and regulation. Without detracting from these important issues, this article explores an alternative possibility: that Canadian culture is itself technological. Focussing upon the federal innovation agenda, the article examines the development of a public pedagogy surrounding innovation, the outcome of which has been a depoliticization of the political economy of technology in Canada.

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Faced with the daily emergence of new applications of digital media technologies, it is difficult to avoid puzzling through the "impact" these emerging forms, and the practices they sponsor, have on our activity across a range of categories – politics, community, education, culture. In many respects, the various challenges and opportunities that these technologies present for people who fund, produce, distribute, regulate and consume cultural products in Canada are understood exclusively in terms of such impacts. This is not entirely regrettable: the opportunities and challenges for cultural practice and production presented by new media technologies are serious and formidable. Much hangs in the balance. The decisions that we make (or don't make) about how to design, use and regulate these technologies will one way or another, have dramatic implications for cultural industries, cultural practices and cultural consumers in Canada.

Still, there are other ways to think about technology and its relationship to culture in Canada. In what follows, I will not focus upon the question of the impact of technology *on* culture in Canada, but rather on the proposition that technology *is* culture in Canada, and on the stakes of imagining Canadian culture in this way. I want to draw attention not just to the technologies of culture in Canada, but to the culture of technology. What is at stake in the culture of technology is politics, which are understood as participation in a diverse array of possible modes and forms, in public opinion regarding what is just and what is beneficial.

The culture of technology is doubly depoliticizing: first, it is a culture in which the politics of technology itself – the manner in which technologies encode and materialize prohibitions and permissions, and reproduce particular distributions of resources and power – is generally exempt from democratic political judgment; and, second, it is a culture in which the perceived imperatives of (falsely) depoliticized technology can be mobilized in order to remove other, non-technological controversies from the sphere of democratic political judgment. An excellent example of the operation of the depoliticizing culture of technology in Canada is

what has come to be known in recent years as the "innovation agenda."

Innovation does not only mean doing new things in new ways, it also describes a particular political-economic formation that has emerged in Canada over the past several years. The "innovation agenda" comprises a suite of federal government policy initiatives ostensibly aimed at making Canada more competitive in the global knowledge-based economy. Industry Canada's Innovation Strategy, published in 2001 in a pair of documents entitled *Achieving Excellence* and *Knowledge Matters*, established the following three priorities: promoting "the creation, adoption and commercialization of knowledge"; "ensuring the supply of people who create and use knowledge"; and building regulatory and market environments that provide "incentives to innovate." The restructuring carried out under the auspices of the innovation agenda has relied heavily on a massive commitment to the development and deployment of new technologies across all sectors and to the cultivation of an economic climate of enterprise and flexibility. Crucially, it has also relied upon the legitimation of a particular relationship between the state and the market vis-à-vis technological innovation and development, in which the state's role as a regulator and redistributor of resources is reduced, and its role as a facilitator, sponsor and promoter of capital accumulation is enlarged. This role has the state investing massively in research and development, particularly in science and technology research oriented to commercialization, and in education aimed at the generation of "highly qualified people". It also sees the state as playing a key role in securing the sort of competitive fiscal and regulatory environments that provide incentive for investment in innovation by ensuring that such investments can be converted into profit without undue burden.

In other words, the innovation agenda imagines the culmination of the restructuring of the Canadian economy along neo-liberal lines. If this was at all in doubt, it has been dramatically confirmed in the version of the innovation strategy recently promoted by "Canada's New Government" in a document published earlier this year under the title *Mobilizing Science and Technology to Canada's Advantage* (2007), which follows on the government's broader economic blueprint, *Advantage Canada* (2006). The document starts out by affirming that "Science and Technology comes into almost every aspect of our lives, helping us to solve problems and create opportunities." Accordingly, "Canada can and must do more to turn our ideas into innovations that provide solutions to environmental, health, and other important social challenges, and to improve our economic competitiveness." As is the way with neo-liberal strategies for the state, doing more sometimes means doing less:

> "This Science and Technology Strategy recognizes that the most important role of the Government of Canada is to ensure a free and competitive marketplace, and foster an investment climate that encourages the private sector to compete against the world on the basis of their innovative products, services and technologies. The government also has a role in supporting research and development which is the basis of new discoveries that lead to improved lives, better jobs, and new business opportunities. To achieve world excellence in science and technology, Canadians must promote and defend two complementary and indivisible freedoms: the freedom of scientists to investigate and the freedom of entrepreneurs to innovate and market their product to the world." (*Mobilizing Science and Technology to Canada's Advantage*, p. 19).

Despite its rhetorical presentation as necessary and straightforwardly self-justifying, the innovation agenda is, in fact, a deeply political project, in the sense that it contains a vision of the good life and an account of the means to achieve it, and in that it represents a particular configuration of interests and power. It is also political insofar as the benefits and burdens of its institutionalization and realization are not evenly distributed among those who occupy the various positions of security and insecurity characteristic of highly-polarized post-Fordist economies. A political project on this scale cannot proceed without legitimacy. In a democratic context, legitimacy can be generated in a couple of ways. It can arise politically, from an expression of consent that follows informed public deliberation about the ends in question and the means proposed to achieve them. If that is too risky, it can be accomplished culturally, by cultivating a tacit endorsement for these ends and means that obviates the need for political legitimation.

In a technological society, the ground for this sort of cultural legitimation in relation to the innovation agenda is well-prepared. Whatever else you may wish to call it, ours is a technological society. A technological society is one that is saturated by technological devices and systems, many of them functionally integrated, and which experiences technological dynamism as a constant condition. It is a society in which an expansive range of human activity and attention, both individual and collective, is mediated by these devices and systems. As such, a technological society is one in which social organization and, especially, economic life is bound up tightly with technology. It is a society in which technology is culturally identified with material prosperity and moral progress, and in which modes of practice and reasoning associated with technological systems – in particular the priority placed on efficient means relative to worthwhile ends – cross over into other, non-technological, spheres of activity. In a technological society, technologies are not just tools or instruments; they are a way of being in the world, they are "forms of life." It is in this sense that we might say that technology *is* culture.

A technological culture like ours is well-suited to provide the sort of cultural legitimation that something like the innovation agenda needs if it is to successfully evade the sort of robust *political* legitimation we might otherwise demand of such a clearly political project. However, a technological culture does not just arise and persist on its own, as if it were some sort of essential characteristic of "being Canadian." Such a culture must be cultivated. It has been cultivated in Canada, I would suggest, by means of a sustained public pedagogy – what Raymond Williams once described as "permanent education"– carried out not solely or even primarily through the formal institutions of schooling but, rather, via a wide variety of other means and venues. Interestingly, the core aim of this pedagogy has been precisely to normalize the idea that Canadian culture is, *essentially,* technological, and that to be Canadian is necessarily to be an innovator.

A good example of this public pedagogy is the 2004 centenary edition of *Maclean's* magazine. The special edition, intended to capture the spirit of 100 years of Canadian history, is themed "Leaders and Dreamers: Canada's Greatest Innovators and How They Changed the World."

Here, the history of the 20th century in Canada is styled as a history of successful innovation – not just in science and technology, but also in politics, philosophy, commerce, fashion, the arts, and sports. In every conceivable area of endeavour, distinction is rendered in the vocabulary of innovation. Macdonald, Douglas, King, Pearson, Trudeau – not just politicians and statesmen of varying degrees of acumen and virtue, but bearers of the twin spirits of innovation and nation-building. Harold Innis, Charles Taylor and Northrop Frye, were not just deep thinkers, but innovators. Wayne Gretzsky – handy with the puck behind the net? Heck no, an innovator! And Shania Twain – the latest in a somewhat alarming line of female Canadian pop icons, manufactured in a secret facility north of Newmarket? No! An innovator! Here, *all* success, and even mere *celebrity*, no matter what the field and no matter how banal, is rewritten as innovation, the spirit of which belongs to our very national fibre. As Anthony Wilson-Smith, former editor of *Maclean's* puts it in his introduction to the centenary edition: "The ability to innovate isn't just one of the qualities that define what it is to be Canadian; rather, it's an integral part of our collective soul".

It goes without saying that scientific and technological achievements receive special notice in the magazine. Medical breakthroughs, the railway, the Canadarm, Canadian contributions to telegraphy, telephony and radio, the Blackberry, video games, the zipper, the Wonderbra, the Arrow, the snowmobile – all receive the typical treatment as unambiguously positive gifts from the past to be present, bestowed by heroic inventors who battled against the odds and the doubters to see their visions through to fruition, emblems all of the national spirit of innovation. There is even a highly personalized chapter of the story in an article celebrating the invention by Edward Rogers Sr. of the alternating current radio tube. The article is written by Ted Rogers, president and CEO of the Rogers Communications empire and publisher of *Maclean's* magazine. Rogers the younger writes: "Over the years, I have been fortunate to build strong companies based on emerging technologies such as FM radio, cable television, wireless telephones and high-speed internet, but my success could never have been achieved without the pioneering innovation of my father and the determination of my mother to instill his legacy in me." His good

fortune may indeed be related to his mother's determination and his father's inspiration, but he has profited even more from a neo-liberal state whose approach to the regulation of new media encourages the sort of cross-ownership and concentration that has made him multiple millions as an "innovator". This, too, is what is meant by "a culture of innovation in Canada."

This is just one example of the cultivation of a technological culture of innovation through a public pedagogy that serves to depoliticize what is otherwise a potentially controversial political project. The rhetorical strategies of this public pedagogy map perfectly onto the state rhetoric as presented in the primary documents of the innovation strategy spanning the Chretien and Martin Liberal governments and the Harper Conservative government. In his message introducing *Mobilizing Science and Technology*, Industry Minister Maxime Bernier encourages Canadians to "create a new culture of scientific and technological achievement in our country, and bring new ideas and innovations to the world." A few years earlier, in his preface to *Achieving Excellence*, then Prime Minister Chretien reminds us that we have always been an innovation nation: "Thanks to the hard work, ingenuity and creativity of our people, we enjoy extraordinary prosperity and a quality of life that is second to none. Ours is a history of adaptation and innovation". This construction places the cultural rhetoric of the innovation agenda squarely within the well-established tradition of technological nationalism in Canada, whereby technology overcomes not just the geography that divides the nation but also – as an idea, as a collective project to which we might all commit despite our differences – effaces the politics buried within such projects themselves. In 2004, Peter MacKinnon, then Chair of the Association of Universities and Colleges of Canada, made this connection explicit in a remark that was quoted in that year's federal budget, when he said that the federal focus on knowledge and innovation could "be in the 21st Century what the construction of the transcontinental railway was in the 19th Century. It can be a new National Dream."

In his magisterial 1934 book, *Technics and Civilization*, Lewis Mumford wrote that "Every culture lives within its dream." Ours is the dream of a nation made strong and whole by technology. And so long as we live within this dream, it will be very easy for the captains of commerce and industry, and their representatives, to invoke technology as a reason to exclude from the democratic judgment of citizens political questions about technology itself, and about the relationship of the state to its development and regulation. The New National Dream is the collective project of economic restructuring to which capitalist and state elites in Canada have been committed for at least the past two decades. In presenting the innovation agenda as a technological project, connected seamlessly with Canada's historical destiny as a technological nation, Canadian elites have more or less succeeded in effacing the deeply political nature of this project, insulating it from contest and opposition. And they have succeeded because a technological culture such as ours is highly susceptible to such claims. For whom among us, after all, would stand up against innovation? Against a strong and globally-competitive economy? Against the imperative for Canada to be a leader in technological development? Against our own history as a nation of innovators? Very few of us. And so depoliticization is smuggled in by the culture of technology, a problem that would seem to bear consideration alongside the various challenges presented by the new technologies of culture.

Notes

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