MA MAJOR RESEARCH PAPER

Technology, Culture and Industry: Canadian Communications Regulation and Digital Policy

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Introduction

After hosting the Winter Olympics in Vancouver in February 2010, Canada was on a cultural high, with national audiences for broadcasts of the games tuning in by the millions, government funding initiatives that had set out a national program to "own the podium," and live online streaming of every event that contributed to a nation-building exercise predicated upon bringing Canadians together and boosting an international Canadian "brand." As such, the Games could be interpreted as an exemplary Canadian capitalization upon the participatory networks and intangible commodities of a globalized information economy, a giant exercise in rights management, corporate sponsorship and cultural spectacle. However, this success was marred for many in the Canadian communications industry with federal moves in the March budget toward liberalising the Canadian telecommunications sector, government interventions signalling this aim with the independent communications regulator, and still-pending regulatory decisions that would shape the structure of broadcasting, all contributing to an anxiety that the government was intent on selling out Canadian cultural sovereignty in contrast to the determination to "own the podium," especially as "the advent of broadband erased the divide between telecommunications and media, between communication and culture" (Campbell).

Such matters related to digital technology, communications policy and converged media have recently incited much debate in Canada, eliciting various perspectives on strategies to meet a digital future. These debates include publicly conducted national discussions about copyright, net neutrality and the nature of broadcasting. Many proposals are informed by Canadian industries' integration into an increasingly

globalized digital economy, national government engagement with the jurisdictional difficulties of the Internet and the increasingly fragmented content universe but technologically converged daily experience of the information worker or digitally literate citizen. Unequal opportunities to access this digital world have made the construction of a national, universal and inclusive digital network infrastructure a common concern. Outside of Canada, the crafting of national digital policy has often been predicated upon facilitating national participation in network-enabled digital economies, the impetus for government intervention in markets then becoming the necessity of universal public access to high-bandwidth web services. The UK strategy has proposed to fund such an initiative for under-served areas with a levy on phone lines, while in Australia, this end is to be achieved through a $43 billion government investment in a National Network. In the US, a National Broadband Plan aims to deliver connections to 100 million homes by 2020 at next-generation speeds of 100 megabits per second, setting up a battle between the FCC and American telecommunications companies over whether the "free market" or regulatory authority will determine the shape of the networks (Stelter and Wortham). In Britain, a widely articulated vision of government-citizen interaction enabled by the semantic web and portending a "revitalization" (Brown) of politics itself was mired, when it came to the digital strategy's immediate legislative implications, in longstanding battles fought over intellectual property.

In Canada there have been similar debates, though no comprehensive strategy has unified concrete policy proposals around a digital communications framework. This paper attempts to analyze the emergence of a national digital strategy, and the increasingly strident perception of a need for a national digital strategy, against this

background. How can such a policy comprehensively address Canadian culture and territoriality? What logic characterizes the digital and information economy in the context of this debate? How do international digital regimes interact with national policies? What would characterize a coherent and democratically formed Canadian digital policy? Taking up these issues from a political economy perspective on communications in Canada, traditionally occupied with questions of cultural sovereignty and media ownership, the paper begins by reviewing the impact of new media upon the established regulatory framework. It then examines three debates related to digital communications that occurred in 2009, with outcomes related to regulation of broadcasting versus cable providers and pressure towards deregulation; public consultations on copyright, a government investigation of privacy, and the impingement of international actors on these regimes; and finally hearings on net neutrality which put the capacity and competitiveness of Canadian networks under the microscope.

Despite the often vociferous rhetoric invoking various "crises" in these debates, their immediate outcomes resulted in little substantive change to the structuring of the Canadian communications landscape. It then examines proposals for policymaking made in light of the transformative effects of digital technology emerging from the established perspectives of Canadian communications regulation, culture and economy. While, with some exceptions, the perspectives from culture tend to focus on the limitations of regulation in the twenty-first century, the perspectives of industry tend to encompass broad policy sectors, deriving their inspiration from a next-generation semantic web, or "web of things." This vision also underpins existing national digital strategies from countries such as the UK and Australia, which have inspired calls for similar Canadian

"holistic" strategies to deal with a converged technological and corporate environment. In light of these convergences and the de facto but ambiguous digital regulation that proceeds from the current uncertain Canadian approach, a coherent digital strategy would enable the possibility of crafting proactive policies in response to technologies, considering not only their liberating potential but also their association with restrictive systems that a reactive approach might very well perpetuate.

Political Economy, new media and communications in Canada

A dispute between Canadian telegraph and newspaper companies at the beginning of the twentieth century arose out of the former's monopolization of information products and their distribution networks:

> In an effort to force newspapers to subscribe to both their news and telegraphic services, Canadian Pacific Telegraphs (CPT) – a subsidiary of the Canadian Pacific Railway, Canada's largest railway – bundled the two services and charged one rate for both ... in 1910 the [Board of Railway Commissioners] ruled that they were indeed exorbitant and forced the company to establish separate pricing policies for the two services. Shortly thereafter, their advantage lost, the railways abandoned the news business. A division of responsibility between the production of information and its carriage was thus instituted in regulation. (Skinner and Gasher 56-7)

Throughout the rest of the twentieth century Canadian regulation of the broadcasting and telecommunications industries would be largely occupied by concerns over ownership from the competing perspectives of culture, which dictated Canadian ownership and content requirements in defence from the behemoth American industries to the south, and economy, specifically the tendency toward consolidation and integration of Canada's

privately owned media organizations, implicitly driven by domestic ownership requirements and sparking debates about editorial independence and competition. While communications systems were viewed as "central to the development of a shared set of ideas and values, a sense of nationhood, a Canadian culture," predicated especially upon Canada's large and sparsely populated geographical territory (Skinner and Gasher 51), imported American media products became and remain the economic mainstay of Canadian broadcasters. The Canadian production sector and cultural industries therefore are largely dependent upon regulatory requirements to ensure broadcast and distribution. These nationalist objectives are laid out in the 1991 *Broadcasting Act* on the thesis that the broadcasting system provides a "public service essential to the maintenance and enhancement of national identity and cultural sovereignty" (3.1). Within the Canadian legislative framework then, argue Salter and Odartey-Wellington, broadcasting in particular, apart from other communications media, is imbued with a public interest value such that regulation is "not premised solely on [spectrum] scarcity, but on the use of a public resource and on broadcasting being an essential service" (575). The underlying rationale for regulation includes, but extends beyond the imposition to foster economic competition.

The Canadian Radio-television and Telecommunications Commission (CRTC) is the regulatory body charged with shaping the broadcast industry to meet the objectives of the Act, as well as shaping the telecommunications industry to meet the objectives of the 1993 *Telecommunications Act*. More economically-minded than the *Broadcasting Act*, the *Telecommunications Act* also makes domestic ownership of Canadian communication systems a key requirement, along with directions to the Commission to minimize

regulatory burdens and promote reliance on market forces. The *Telecommunications Act* also reiterates the strict separation of information production and carriage in its stipulation that except "where the Commission approves otherwise, a Canadian carrier shall not control the content or influence the meaning or purpose of telecommunications carried by it for the public" (36) This clause in particular and the discrete realms of broadcasting and telecommunications would come into contention in the digitally-centred policy debates of 2009.

Contextualizing contemporary debates about the revolutionary impact of new media, much of the history of the Commission can be seen as incorporating various such revolutionary and "un-regulatable" technologies into its regulatory framework, notably in its decision to use the cable system as a regulatory tool in the 1980's in the face of the rise of satellite (Salter and Odartey-Wellington, Skinner and Gasher). When it comes to new media, what matters is not the possibility, given the nature of technology, for regulation, but the political will to regulate (Salter and Odartey-Wellington). But the rationale for regulation often becomes obscure as the broadcasting system is prone to becoming "vehicle" (Salter and Odartey-Wellington lxvii) for various agendas, whether for industrial strategy, technological adoption, globalization, partisan politics, or just general distrust of government. In the case of technology and communication in the 1990's, Abramson and Raboy argue that a transformation occurred in Canadian policy within the context of globalized media policies crafted by discrete nation-states. Between 1993 and 1997 "the basic framework for Canadian communication policy shifted" to one that envisioned the creation of an information society with global scope rather than a distinct geography (775).

Occurring in three phases, this transition began with the elimination of the Department of Communication in 1993, "a communication governance redesign at odds with technological convergence" (776), as the CRTC, originally answerable to that department, became dually answerable to departments of Industry (for telecommunications) and Heritage (for Broadcasting), effecting a split between "hard" (economy, technology) and "soft" (culture, identity) interests respectively. Before this time, and despite rhetoric about convergence and the "information society" going back to the 1970's, debates at the Department of Communication had tended to centre on the content and cultural side of this equation, not media and carriage. As the question of information carriage became newly urgent in the 1990's with American "information highway" initiatives, this "preoccupation with content during the 1980s" meant that Industry gained considerable influence "in carriage issues" (777). The ensuing battle over who would lead the Canadian "information highway" initiative resulted in the elimination of the Department of Communication (778). Communications policy in the 1990's then reacted to American economic initiatives and international trade developments rather than technology, and the dissolution of the Department of Communication

> meant more than the separation of policy-making between content and carriage in the moment of their convergence. It also dispersed communication policy to other sectors, and begged the question of a how a coherent approach to communication policy could be developed. Transformed from a specific ministerial responsibility to a category of state responsibilities to be distributed among political agents, the information society project was being dispersed across the field of governance. (778)

In April 1994, the CRTC's discussion paper on the Canadian Information Highway, crafted in an open and consultative process, stood in contrast to the closed crafting of the telecommunications and industry-based Information Highway Advisory Council's report.

In 1995 the G-7 Brussels meeting, in Abramson and Raboy's analysis, inaugurated the second phase in the Canadian policy-making transition, as slippage occurred between national and global policy-making. At this meeting the ideal of interoperable networks and markets driving information-based wealth set forth a model of governance in which the "state was called on to take the role of 'facilitator,'" co-ordinating transnational circulation for industry, and where "public interest representation took the guise of consumer representatives" (781). Such reasoning was reflected in a 1995 CRTC report, predicated upon platform convergence, which backed the creation of Canadian communications giants that could compete on the stage of global industry, "carefully contradictory" in its elucidation of traditional Canadian policy ideals and neoliberal global governance (781). A post-Brussels shift in Canadian policy, therefore, collapsed the information society "into a single policy project, neither domestic nor transnational, but slipping constantly between these" (784), moving traditional non-market policy objectives into a policy framework that could contain them.

Finally, with the spread of free trade agreements in the 1990's, both jurisdictions and sectors became slippery: "the increased commodification of information in the sphere of communication policy is the same thing as the convergence of communication policy and trade policy" (786). While the dissolution of the Department of Communication, then, dispersed communication policy-making among various ministries of government, it "also concentrated the lead decision-making power in market-oriented units such that

further-reaching evaluation of social impact is always someone else's responsibility" (787). Trade became the port of entry into communications policy, and the history of communication policy is a revisionist one of trade policy, with cultural concerns and objectives cast as barriers to trade, reflective of ongoing American trade negotiation strategies seeking to liberalize markets, especially for digital industries. Asking how this information society governance interfaces with the old Canadian cultural regime, Abramson and Raboy suggest that the "interoperable networks which underpin globalization" are complemented by "interoperable policy frameworks which ... are not replacing domestic political traditions, but rather, learning to accommodate and absorb them" (789). Consequentially, it is no longer possible to study national policy without making cross-national comparisons.

Political Economy and Convergence

Following the 1990's, the Canadian environment did indeed see the rise of several communications organizations attempting to compete in a globalized industry, often predicated upon synergistically capitalizing upon the potential of new media technologies. The CRTC effectively exempted new media from regulation as broadcasting media and therefore from public interest or cultural concerns, making regulation for economic purposes and competition the prime driver in the Canadian communications environment. In 2000, the Commission approved three mergers which made Canada's media sector one of the most consolidated in the world. These included broadcaster Canwest Global's purchase of Hollinger Inc.'s Southam newspaper chain, more than doubling its size; broadcaster Quebecor's purchase of cable company Vidéotron and the merger of broadcaster CTV and Bell's Internet and satellite services

which created Bell Globemedia, not long after reconstellated as CTVglobemedia. These entities represented Canada's largest over-the-air conventional private-sector broadcasters and the dominant broadcaster in the French-language market. Along with the smaller broadcasters Astral and Corus, they were complemented by an oligopoly of Broadcast Distribution Undertakings (BDUs), the cable and satellite companies Bell, Rogers and Shaw, all with various cross-media holdings of their own. The industry was then dynastically structured around six families and their converged holdings: the Aspers (Canwest Global), the Rogers, the Shaws, the Thompsons (CTVglobemedia), the Peladeaus (Quebecor) and the Greenbergs (Astral). The collapse of Canwest in 2009 and the probably sale of its television assets to Shaw has reduced this number to five. The national public broadcaster and various trade associations and lobbies from the independent production sector also represent important interests on the Canadian scene, but perhaps the biggest influence on the structure of the industry is the American presence to the south, the impetus behind much of the Canadian regulatory framework.

At the beginning of the decade a healthy economic climate and a steadily globalizing and converging worldwide media industry made consolidation and cross-media ownership attractive to Canadian media companies interested in potential economies of scale and scope enabled by digital distribution media. Part of the strategy driving consolidation in 2000 was the exploitation of digital media, which formed an important part of its rhetorical justification about serving Canadian citizens in an age of "Information." Canadian media then were oriented toward integration in a national and globalized media economy in which changing trends in organizational structures were indicative of changes in strategies relative to environment (Küng 180). Economic and

organizational theory has suggested that such changes in organization, strategy and environment are expressive of a large-scale change from vertically-integrated, industrial-age structures to the loosely structured inter-firm alliances of the "information age," which are less hierarchical, bureaucratic and centralized than their predecessors (Küng 180). While this theory, then, anticipated the emergence of smaller, dispersed organizations with the explosion of information technology, the "growth of the global media conglomerate" (Küng 180) actually became the biggest news for the media industry in the 2000's, typified by the mega-merger of AOL Time Warner. Technological change and market liberalisation drove these mergers, which were supposed to enable production for more platforms and more markets and thus larger economies of scale and scope, but also in part "from the prosaic fact that for large companies organic growth alone can seldom meet the growth expectations of the financial markets or maintain strategic advantage" (Küng 184-5). Convergence, for instance, tilted the markets in Canwest's favour, its shareholder value peaking at $2.2 billion a month after the Southam acquisition (Olive). For the traditional broadcast industry in particular, at the time of Canadian consolidation, the impact of digital media was somewhat indirect other than through the vague positives of cross-promotion, larger advertising markets, reduced labour, and the integration of executive and administrative functions (Skinner 14) that would affect corporations in any industry. Online video streaming was a relative rarity, YouTube did not debut until 2005, and the "threat" of p2p file sharing and media piracy were still largely associated with the music industry.

Convergence is a term that from a political economy perspective is nebulously defined and strategically deployed in the media industry. It is however consistently and

explicitly identified with digital technology. For this reason, political economy theorists are highly interested in examining the practise and rhetoric surrounding digital media or and its role in driving consolidation around the turn of the century. The political economy critique of this seemingly digitally-driven consolidation questions the given constellation of power in the media industry and the reproduction of structural power and inequality in new media (Mansell). Structural changes are politically determined as "incumbent" (Benkler) powers seek to colonize the potentially disruptive emergent paradigm of new media. Conglomerated media and their advertising partners seek to "return control and order to the fractionalized media landscape" (McAllister and Turow 508). Consolidation in relation to new media is from this perspective largely a question of an often implicit, sometimes explicit, conflict over structural constitutions that on the one hand favour and promote public interest and on the other facilitate profit and commodification through the monetization of content, distribution systems and audiences. The relatively recent bout of large-scale convergence or consolidation of established media powers has intensified the "schism" (Sparks, Young and Darnell) between democratic-participatory and neoliberal-commercial ideals, polarized views that nevertheless both often imply that extreme power is inherent to digital technology and new media. The crucial suggestion from a political economy perspective is that the nature of new media and its structural institution is contingent and not determined "naturally" or inherently by technology, the logic of economic efficiency or the demands of monetization.

While Benkler sees a "large-scale battle over the institutional ecology of the digital environment" (381) emerge primarily through a conflict over proprietary versus social production, McChesney and Schiller consider the global communication industry

in its dual economic and democratic role. Mass media's deleterious relationship to democracy in this analysis is exemplary of the problem that Benkler argues can be addressed by the advent of the networked public sphere. McChesney and Schiller argue that though the press has a mythological antagonistic relation to government, the rise of professionalized mass media in the United States and its export under the auspices of globalisation and neoliberalism have resulted in weak democracy borne of collusion between government and media and the erosion of public service and non-commercial media systems abroad. The obscured political construction of digital communication technology's relationship to deregulation, commercialisation and globalisation as natural, inherent and inexorable is integral to this process. Power resides in a global media oligopoly dominated by a select few top-tier firms complemented by a collection of second-tier firms that attempt to emulate the consolidated behemoths through risky debt-fuelled growth, as "the new structural logic of the communication industry leaves them little choice in the matter" (McChesney and Schiller, 12). This is the end-process in the establishment of a powerful group of media conglomerates that operate more like cartels than competitive corporations and produce largely depoliticized content. Taking a broader perspective on industries of information, Dan Schiller argues that the globalization of communication industries has stamped communication and information with a "radically changed social identity" (137), defined by capitalist development of communications systems, the absorption of national networks into transnational corporate systems and the commodification of information and information-related activities. While this transition has deeply affected global cultural and telecommunications industries, where access to the US market has often been swapped for the liberalization

and privatization of national industries and spatially expanded the communications infrastructure of transnational corporatism to much of the developing world, the Canadian national market still remains closed to foreign investment. Canada's "long tradition of market intervention and regulation predicated upon its unique physical and demographic characteristics ... has foregrounded the ethic of public service" and "at least tempered commercial imperatives and provided a critical lens for evaluating and helping to curb creeping commercialism" (Skinner and Gasher 70-1). This temperance is threatened in a highly charged and changed environment influenced not only by interventionist media owners and the advent of digital technology but also the tilting of the regulatory balance towards economic imperatives (Salter and Odartey-Wellington), where the role of the government is cast primarily as facilitator of market-based competition and innovation. questions the seemingly "natural" union of consolidation, commercialism and digital technology in the Canadian environment in the wake of the 2000 mergers, outlining a process of convergence that came about through a government-policy lens linking the prosperous information society the promotion of convergence. The economic justification of convergence as a necessary predicate for growth and survival in the digital age tied information and media to the economic logic of large corporations and their fortunes on the stock market, indicating a conceptual transition from a public-service oriented vision of media and its regulation to what he calls a covert, "Machiavellian" (810) regime that takes government non-intervention as a given. The incumbent powers in the Canadian media industry are not threatened by the Internet but are re-entrenching themselves in resilient ways on the web as new media are recast as old via ownership and consolidation.

However, Winseck notes, historically convergence has often led to organizational entropy and collapse, and since 2000 in general and in Canada in particular, media organizations have often "struggled" to leverage the advantages of consolidation, with a mixture of divestiture and acquisition characterising the industry since 2000, again typified by the fate of AOL Time Warner (Küng 184). The transitions following convergence have often been painful, with "conglomerates increasingly describing the benefits of size not aggressively but defensively, that is, not in terms of critical mass and market dominance, but in terms of positioning the organisation for all eventualities in an environment where uncertainty is high" (Küng 187). Moreover, Schiller argues, the debt-fuelled explosive growth of global telecommunications industries in the 1990's was met, in 2000, with "rate-cutting, investment downgrades, precipitous stock-price drop-offs, financial losses, layoffs, business reorganizations, and bankruptcies" (146). Predicting, on the one hand, further consolidation in the global industry, and on the other, a reintegration of transnational business processes with proprietary networks, Schiller argues that in order to understand the consequences of this environment's "network-enabled services we must engage, finally, with capitalism's new heartland: information" (146). Schiller's digital capitalism, then, is characterised by the corporate dominance of information, or information's commodification, through in-house knowledge management processes (streamlined automated systems), commercialisation (increasing prominence of advertising, PR and sponsorship, especially in relation to education), and a "contrived" information scarcity through "legal, technological, and other coercions" (150), notably intellectual property regimes. Copyright, in particular, "is itself in the process of being radically extended, so that it no longer merely seeks to regulate

multiplication and distribution of works, but rather ... the actual practices of media consumption" (Schiller 150).

What the above political economy theorists have sketched points to an intersection of a Canadian communications policy framework with a globalized industry where communication media are identified with trade policies. Cultural and social objectives in communications policy become incongruous obstacles in networked economies, where public interest ideals are customer service ideals, tipping the rationale for regulation unduly towards the market (Salter and Odartey-Wellington). With such an emphasis on the carriage of information, debates revolve around the powerful interests embodied in the cables and networks of telecommunications, a sector that in Canada is identified with an industry agenda. However, the careful contradictions that Abramson and Raboy suggest were constructed within the Canadian communications policy framework with the reinvention of the information society in the 1990's came under pressure in the following years as the industry-led impetus to digitally-driven convergence did not resolve tensions but intensified them. This intensification, as Abramson and Raboy also suggest, has come about with the dispersal of communication across various areas of governance where policy is now increasingly crafted with attention to seemingly irreconcilable problems of jurisdiction or within an environment of cross-national regimes to be implemented within discrete national entities. In 2009, a global economic recession contributed to policy debates in Canada that took up several areas of crises within the Canadian communications environment expressive of the traditional Canadian policy concerns, i.e. industry convergence and the control of content, and national and cultural sovereignty, occurred within an overarching framework

of Canada's participation within a digital or information economy. The crises afflicting the Canadian system, the existence of which were themselves highly fraught topics of debate, concerned a "broken" business model for traditional broadcasting, a "backwards" legislative framework for intellectual property, and a precipitous lag in citizen access to high-speed broadband networks.

Broadcasting's broken model:

Fee-for-carriage debates and the push for deregulation

The crisis that generated the most vociferous debate related directly to the CRTC and its regulatory institutions in 2009 was brought about by an oft-referenced phenomenon known as the fragmented audience. This results from the explosion of cable and pay specialty channels which saturated the TV market in the 1990's (Küng), the advent of DVR technology, timeshifting, online video streaming, and Video-On-Demand (VOD) viewing, which dissolve the traditional one-to-many mass media, ad-supported model. Fragmentation reflects a problem for media organizations related to the licit viewing habits of digitally connected audiences in the twentieth-first century, in contrast to the illicit technologies of digital piracy, which they have sought to overcome through consolidation and cross-ownership of platforms. The 2009 recession led to a contraction in the advertising market which resulted in a correction of a "misalignment" (Berman, Shipnuck and Duffy) in advertising revenues which unrealistically favoured conventional over-the-air networks (in Canada, CTV, CBC and Global) over specialty and cable channels, which had been leeching away their mass audiences for years. An important distinction then arose between over-the-air ad-supported revenue models and cable subscription-based models. Globally, cable companies emerged as industry winners,

portending a new era of media mergers in which cable acquires content. In the US, Comcast acquired broadcaster NBC in 2009, subject to FCC approval, and in Canada Shaw gained control of Canwest Global after the broadcaster essentially entered bankruptcy in 2009. This transfer of power from conventional networks to cable companies found combative expression in the "fee-for-carriage" debate, a regulatory fight over a (third) proposal that cable companies financially compensate the conventional networks for delivering their signals to subscribers, as they do for cable specialty channels not available for over-the-air reception.

Leading up to the hearings on this issue, the English-language private broadcasters in Canada jointly suffered massive write-downs, with Canwest, CTV and Rogers seeing the value of their "conventional television assets" drop by a combined $3 billion (Cash). Small-market conventional network stations closed in several communities across the country after some failed to find buyers for as little as $1 (Cash). The national public broadcaster also entered a precarious position, both financially and politically, after anticipating a $171 million budget shortfall for 2009-10. Failing to make a deal for cash or credit with the federal government, the CBC sold off assets, cut jobs and reduced programming (Quill). Meanwhile, Canadian BDUs, particularly the cable companies, have grown their businesses and revenues substantially since 2000, the combined operating revenue of cable and satellite interests totalling $10.3 billion in 2008 (Statistics Canada). While the small Hamilton cable operation Mountain Cablevision sold for $300 million to Shaw in 2009, the city's conventional station was sold by Canwest for a nominal $6 (Cash). Canada's three major broadcasters, Global, CTV and CBC, declared their conventional business model "broken" and waged a public campaign around fee-

for-carriage, which would present them with a substantial new source of revenue, framed as a struggle to "save local TV." The BDUs countered with a campaign decrying a new "TV tax" and claimed that the broadcasters spent too much money buying rights to American programming. The CRTC eventually settled on calling the issue one of negotiation of "value for signal." The degree to which the Canadian industry is consolidated, however, meant that the broadcasters hit by financial crises were at the same time held by companies reaping profits from lucrative specialty and digital channels, "most of the interested parties so diversified" that they were "competitors and partners at the same time" (Cash). Neither the broadcasters' nor cable companies' positions were particularly ingenuous, since there was no necessary link between the proposed increased income for broadcasters and their funding of local TV, and the cable companies professed to be consumer-interest spokespeople while enjoying an oligopolistic dominance of an industry which had seen rates rise sharply since prices were deregulated, with profit margins growing by at least 15 per cent year over year since 2000, and more than 20 per cent since 2004 (Statistics Canada). Nevertheless, the campaigns resulted in a government intervention in the affairs of the arms-length Commission, in which it requested that the CRTC to hold an additional hearing on fee-for-carriage specifically from the "consumer perspective" in order to evaluate "how the application of such a regime would impact the various components of the communications industry as it adapts to the new digital communications environment" (CRTC, "2009-614," 2).

As 2009 came to a close, the pressure on the media industry appeared to be relenting with the recovery of advertising markets. The latest "crisis" engendered by

digital media for the television industry, the mass migration of viewers away from TV to computer screens which had often been cited by broadcasters as a new form of competition significantly contributing to their broken business model, was countered by the American ratings oracle Nielsen. Nielsen's research in 2009 found that more than 99 per cent of American video viewing was of traditional (linear, live) television, and that while mobile and online viewing certainly represent growth areas, TV continues to be the dominant medium (Bloxham, Moult and Spaeth). The implication here is that the digital threat to broadcasting is highly exaggerated, with surveyed audiences tending to dramatically over-report time spent watching video on mobile platforms and under-report time spent watching television (Bloxham, Moult and Spaeth). This contrasts revolutionary predictions, such as a 2006 IBM report (Berman, Shipnuck and Duffy) which predicted a short-term future "bimodality" between digitally plugged-in and old, generally passive consumers, which the industry must seek to serve simultaneously, while embracing experimental business models in order to "adapt or succumb" to the fate of the music industry. A similarly themed Canadian study from 2007 (Nordicity, *Banff Green Paper*) suggested a less drastic vision of coexistence of new media and traditional television. The proliferation of content, its increasing popularity, and high cable subscription rates in Canada accompanied by a strong "cultural acceptance" (Nordicity, *Banff Green Paper*) of the monthly subscription bill lead to a prediction that the conventional industry, and its attendant regulatory and policy regime, will change incrementally, and often reactively, rather than radically.

The problem of fee-for-carriage in particular for the CRTC was that it moved the Commission beyond reactive and incremental policymaking into territory with political

consequences that it did not want to occupy, with a furor and confusion built up by the broadcasting and cable industries' misleading campaigns. The prominence of this debate also overshadowed other regulatory matters that would have significant impact on the Canadian industry such as the adoption of a group-based system for licensing which would theoretically reflect the consolidated structure of Canadian organizations and a national transition from analogue to digital over-the-air television signal transmission scheduled for completion by 2011, both of which initiatives were affirmed in the Commission's March 2010 decision (CRTC, "CRTC unveils"). In the same decision the Commission also confirmed that it would institute a "market-based solution" on fee-for-carriage, i.e. acceding to the requests of broadcasters and allowing them to negotiate fees with cable companies for their signals, with the exception of the CBC, which, as a public broadcaster, could not realistically negotiate while wielding the threat of withdrawing its signal. While the Commission Chair stated that this solution was meant to address the current "dispute" threatening the "integrity" of the Canadian broadcasting system, in effect the issue was substantively deferred as the CRTC referred the matter to the Federal Court of Appeal in order to clarify whether it has the legal authority to impose such a regime. Moreover, the fee-for-carriage outcome was contested internally, with a minority report from Commissioner Michel Morin arguing that the CRTC had leaned too far towards the interests of industry and away from those of consumers (CRTC, *The implications and advisability*).

Regulatory matters, then, are still characterised by uncertainty, following an overall trajectory from the beginning of the decade toward uncertainty in the media environment, with decreasing confidence in mass audiences and ad-supported revenue

models linked to the advent of digital media technologies. Mitigating factors against radical change in Canada have been television's continued dominance among media consumers (the "culture" of cable subscription) and a regulatory structure that mandates Canadian ownership. However, government interventions in regulatory matters have also contributed to uncertainty. In addition to the government's direction to the Commission to hold fee-for-carriage hearings from a consumer perspective, these included a direction from the federal cabinet, at the appeal of telecommunications providers, to reconsider a ruling that opened up incumbent network infrastructures to competitors (Pilieci); and, to greatest public debate, the Minister for Industry's decision to overrule a CRTC decision on the fraught matter of Canadian ownership restrictions. This was the Globalive case, an instance where a new mobile entrant did not, the Commission ruled, meet domestic ownership requirements. In December 2009 the government made an "exception" for Globalive and permitted it to enter the Canadian market, raising concerns that such an "ad hoc" decision unfairly favoured Globalive and failed to address the underlying question of legislation, confused ownership rules and precipitated deregulation ("Globalive"). Part of this uncertainty was cleared up in the government's March 2010 *Speech from the Throne*, in which it confirmed it would begin the process of liberalizing the Canadian telecommunications industry, stating that it would "open Canada's doors further to venture capital and to foreign investment in key sectors, including the satellite and telecommunications industries" (7). This was related to a digital economy strategy "to drive the adoption of new technology across the economy" and strengthen IP and copyright laws (7). Confusion resurfaced, however, when the government followed up

with the release of the budget, and said it would remove foreign ownership restrictions on satellites only (3.3), leaving Globalive an example of an ad hoc decision.

A concrete precursor to the government signalling on market liberalisation was a 2008 industry report called *Compete to Win*, which noted that concentration within the telecommunications and broadcasting sector made it increasingly difficult to differentiate them according to the different regimes laid out in the *Broadcasting* and *Telecommunications* Acts. In this environment, the authors stated, foreign ownership restrictions were "incongruous" with government directives to the CRTC stressing market competition as a guiding force in the sector, and that by liberalizing the market and encouraging new entrants and smaller competitors the government could "focus" on the challenges related to Canadian content and cultural policy in an "open" market (48-9). "Maintaining a 'closed' regulatory system for the creation, distribution and consumption of cultural products is no longer favourable in the Internet age," wrote the authors, and therefore "Canadian cultural policies require urgent and systemic review, in light of the changes wrought by new technology" (36).

The cost of participation in the new information economy:

Piracy and privacy

The same sentiment, that changes wrought by new media signified the need for drastic reform, marked debates related to intellectual property (IP) and privacy law in 2009, with the added pressure of powerful and interested trade lobbies, wide public attention to issues that affected the everyday use of technology by most Canadians and, in both cases, previous failed attempts to legislate solutions to property and privacy problems. While the proverbially fragmented audience was a byword for troubles

affecting a globally generalised broadcasting business model with particular implications Canada's protectionist communications regulation, when it came to IP and privacy, Canada's particularistic and "backward" legislation led to its contested designation as a "haven" for the illicit elements of a global digital economy, drawing national debates into geopolitical orders.

In 2009, the International Intellectual Property Alliance (IIPA), a trade lobby for US creative industries, placed Canada on a priority watch list when it came to matters, in a statement that many industry lobbyist would later find eminently quotable, concluded that "Canada has gained a regrettable but well-deserved reputation as a safe haven for Internet pirates" (17). Canada's regrettable status, in part, stems from failed attempts to amend its *Copyright Act*. These included two bills introduced in 2005 and 2008, both with the objective of adjusting the regime to technological change since the Act was last updated in the 1990's and implementing a World Intellectual Property Organization (WIPO) treaty which Canada had signed in 1997 but has not yet ratified. Both bills failed to move through Parliament because of political instability, despite the fact that since 2000 copyright reform has been a regular matter of political attention, prompting twelve government reports on the subject (Scotchmer 74-5). Much of this attention is a result of pressure created by US trade lobby interests in the wake of the 1998 Digital Millennium Copyright Act (DMCA), the American implementation of the 1996 WIPO treaty, which set a new global standard in industry-led anti-piracy measures. In the same year the American culture industry lobby enjoyed another success with the passage of the Copyright Term Extension Act, which extended then-established copyright terms for an additional 20 years (Mun). The early 2000's also saw industry victories tending to turn

the tide against the landmark 1984 Betamax case, in which Sony successfully defended its technology against Universal despite its potentially use for copyright-infringement (Philip 203). The creators of the Internet's "infringing machines" (Philip 204), however, have had different outcomes, as in the successful attempt to shut down the filesharing service Napster in 2001 (the company went bankrupt before the case was brought to the Supreme Court) and a 2005 ruling against the p2p network Grokster in which the Supreme Court set aside a lower court decision which had accepted a Grokster defence based on the Betamax decision (Lohmann).

Despite pressure from U.S. trade lobbies to adopt legislation similar to the DMCA, a Canadian lack of legislative willpower on copyright stems from its status as "a case of political kryptonite" (Angus 26). When it comes to copyright, the Canadian government is caught between two cogent interest groups neither of which it wishes to antagonize: the industry lobby, with strong links to Canada's most important trading partner, and the consumer interest lobby, which enjoys mainstream public support. While there are other important stakeholders who stand to gain or lose much in amended copyright legislation, these two have contributed to a stalemate. *Bill C-61*, the legislation introduced in June 2008, resulted in a public backlash and incited criticism because of its perceived industry bias. Much criticism focused on its anti-circumvention clauses, which outlawed the circumvention of Digital Rights Management (DRM) technologies, the "locks" on digital media limiting their uses, making such technology attractive to major entertainment and telecommunications companies, many of whose copyright lobbies supported the bill (Novak). After this reaction, the government announced that in 2009 it would hold public copyright consultations jointly under the purview of the Departments

of Industry and Heritage with the aim of crafting new, forward-looking, copyright legislation. The consultations ran from July 20 to September 13 and consisted of several roundtables, town halls and an invitation for online submissions from members of the public. The government received more than 8,000 such submissions from various interest groups and members of the public (Vongdouangchanh 24).

Several key issues emerged through the consultations in relation to Canadian copyright law: DRM and circumvention laws, whether or not Canada should adopt a more "liberal" policy in regard to quoting or excerpting from copyrighted works, the abolishment of Crown Copyright, the desirability and basis for crafting technologically neutral copyright law (based on "timeless" principles rather than timely markets), ISPs' liability for piracy conducted on their networks, and with what degree of flexibility Canada could implement the WIPO treaty requirements, which centred again on the stringency with which the law should approach circumvention (Scotchmer). Two distinctly "Canadian" issues were the existing national blank media levy, in which a portion of the sale of blank CDs forms royalty payments to artists in a collective licensing practice, and whether or not Canadian copyright law is actually in "crisis" or whether this overstates the case. Essentially, these arguments boiled down to two polarized positions espousing, on the one hand, that consumers (or users) were in need of protection from massive corporate interests, and on the other, that it was creators who were disproportionately under threat. The Minister for Industry, Tony Clement, deemed the consultations a "success" (Vangdouangchanh 24) after their conclusion, and the Internet law expert Michael Geist, who had initiated online protest against *Bill C-61* and championed the user interest perspective on copyright, especially against the copyright

industry's claims that Canada was a "piracy haven," suggested that the consultations represented a "blueprint" for a "made-in-Canada" approach to copyright reform, with a high level of public participation proving the extent to which the debate has become mainstream ("Copyright Consultation" 26).

Several months after the consultations concluded, however, international trade agreements overshadow not-yet-extant legislation. Late in the year leaked documents raised concern about ongoing closed negotiations of an Anti-Counterfeiting Trade Agreement (ACTA). Google's Washington, DC office explicated ACTA as the "Global Treaty that Could Reshape the Internet" at a public panel the company conducted about the closeted negotiations on January 12, 2010. Including four panellists and a room of spectators of whom about half were barred from mentioning the content of ACTA provisions by non-disclosure agreements, the panel discussed the various contradictions of ACTA which critics, fuelled by the leaked documents, had seized upon: an ostensible counterfeiting treaty which dealt, rather, with IP and the Internet; exclusive of the participation of states, such as Russia and China, which are global centres of the illicit activity the treaty ostensibly sought to prevent; and including nations (the US, EU and Canada among them) with varying domestic laws and regimes whose political leaders variously assured their publics the treaty would not dramatically affect. While a potential dictatorial effect on domestic IP and copyright law through ACTA provisions was generally considered undesirable by all the panellists, one attorney made an exception for Canada and the other "few outliers among the ACTA countries" (*Google D.C. Talk*). In contrast to a statement made two weeks later by the Canadian International Trade Minister that ACTA "would comply with Canadian law" (Migneault), this panellist

argued that "a strong ACTA agreement" would "be a good step for Canada, whose law is so far out of step with that of every other developed country that they're earning themselves a reputation as an outlier in this area. I hope it *would* help to bring them into the twenty-first century" (*Google D.C. Talk*).

The potentially legislative blunt instrument that is ACTA seemingly moves toward obviating the ostensible purpose of the public consultative process. This is on top of another set of leaked trade documents from the Comprehensive Economic and Trade Agreement (CETA) currently being negotiated by Canada and the EU, which have also revealed another source of pressure on Canadian domestic IP law. The European documents stated the ongoing CETA negotiations present "a unique opportunity [for Canada] to upgrade its [IP] regime despite local anti-[IP] lobbying," and suggest that the copyright consultations were possibly "a tactic to confuse" (Geist, "EU's IP"). Indeed, critics of copyright industry lobbies have noted the apparent irreconcilability of public consultations and closed negotiations. The ACTA and CETA agreements, wrote Geist, "would render Canadian copyright law virtually unrecognizable as Canada would be required to undertake a significant rewrite of it law. The notion of a 'made-in-Canada' approach ... would be lost entirely" ("Beyond ACTA"). David Fewer, of the Canadian Internet Policy and Public Interest Clinic (CIPPIC) echoed this point when he characterised the ostensible anti-counterfeiting purposes of ACTA as "an excuse for a bit of policy laundering that could radically overhaul Canadian intellectual property laws in ways that domestic political parties wouldn't, and couldn't dare ... the content of many of the [copyright consultation submissions] is at odds with the content of the leaked ACTA Internet Chapter" ("CIPPIC's David Fewer").

In addition to the controversy over Canada's commitments in international trade agreements, the copyright consultations also led to an articulation of a concern about the general state of public knowledge when it came to Canadian copyright law, as distinct, specifically, from American law, echoing the typically Canadian concern about the encroaching creep of culture from south of the border. This was linked to media coverage which critics argued was colonized by American terms for the debate. Commentators pointed out that many Canadians are unaware of the ways in which Canadian copyright law differs substantially from that of the US, especially with regard to the existence of the storage media levy, a scheme which is predicated upon the assumption that copying will occur and thus sanctions it (though it has become less relevant with the decline of CDs and cassettes). Moreover, Canadian copyright law, despite the furor over piracy, is in many ways stricter than the American version, with its blank media levy, government-supported copyright collectives, conservative restrictions on quotation and excerption, and fewer copyright exceptions (Knopf, Schruer). The outline of nationalist-economic and cultural-political projects were therefore at the heart of the Canadian copyright debate, explicitly linked to Canada's "future prosperity" as a "leader in the global digital economy" (Scotchmer 55) and "the need for a holistic forward-looking approach to copyright reform that acknowledges the links between copyright policy and Canada's broader digital policy" (Geist, "Copyright Consultation," 26).

Developments around privacy legislation presented somewhat more subdued, less combative parallels to those around copyright in 2009. The government introduced the *Electronic Commerce Protection Act*, or anti-spam bill, only to see it suffer the same fate as its latest copyright reform bill and die at the prorogation of parliament. Before it died,

marketers protested a provision of the bill, which sought to outlaw unsolicited commercial email, which required positive consent from users for before sending them email. Copyright and entertainment industry lobbyists also militated against its prohibition of the installation of DRM (or "spyware") on users' computers, similarly, without their positive consent (Nowak, "Marketers"). This mirrored the user-protection versus industry lobby wars around the copyright bill, with the consumer lobby in this case arguing that amending the anti-spam bill to suit industry interests would obviate its purpose. And as with the rhetoric of the drastic need for Canadian copyright modernisation, the anti-spam bill was also meant to address Canada's failure to keep up with international norms in the privacy arena. As the only G8 country without specific spam legislation, this "long overdue legislation" would "send a message that Canada can no longer be a haven for spam" (Nowak, "Marketers").

If the copyright debate was about the degree of control users versus producers of digital media or information commodities could retain, the less heated debates around the anti-spam bill were about the degree of control people could retain over their personal information as they became ever more engaged participants in digitised systems. The "*ever-increasing corporate-commercial dominance*" of information, as Schiller puts it, transformed from "a public good to a corporate product" (147), foments a struggle of balances and rights not only in the realm of intellectual property law but in privacy legislation. This was reflected in the 2009 report from Canada's Privacy Commissioner, who urged Canadians to "take control" over their online information (especially the youth demographic). This injunction came especially in light of the age of social media and reflected one of the Office's most high-profile cases of that year, its investigation of the

social networking site Facebook, boasting 12 million Canadian users and more than 200 million worldwide (Denham 6).

The Office launched its investigation into Facebook in 2008 after the CIPPIC submitted a complaint consisting of 24 allegations within 12 distinct "subjects." "The central issue in the CIPPIC's allegations," the Commission's final report stated, "was **knowledge and consent**," more specifically, Facebook's practices involving the retention of user information and security safeguards for third-party applications (Denham 7). Facebook and similar sites "present an interesting challenge" to the regulatory role of the Office, the report stated, because it must attempt to apply Canada's private-sector privacy act towards its objective of balancing "an organization's need to collect, use and disclose personal information for appropriate purposes with the individual's right to privacy vis-à-vis their personal information" (Denham 7). After a preliminary report, two meetings, a final report and a 30-day follow-up period, the Office stated that it had successfully negotiated with Facebook to implement changes to the site that would satisfy Canadian law and all of the CIPPIC's allegations that the Office had considered well-founded. This included "a new privacy tool for [the] site," which Facebook called a privacy wizard, "which is aimed at giving users more control over who gets to see each item on their Facebook page" (Denham 8).

The Facebook affair bore important implications because, in the end, the Office's efforts to make the site comply with Canadian privacy law rested largely on the US-based company's goodwill, representative of the growing extent to which Canadians' personal data is lodged on servers located outside of Canadian jurisdiction, despite a domestically-owned telecommunications sector. The internationalization of information – "data knows

no border" – is why the future of privacy in Canada, the Commissioner predicted in a 2010 address, lies not only in modernizing the relevant legislation but in global co-operation on standards and enforcement (Stoddart, "The Future"). The transnational flows of information, new technology, and normative social change, then, become the most important factors impinging on the near future of privacy law, with technology by far exerting the greatest influence. However, despite these changes and the normative attitudes they precipitate, privacy, the Commissioner argued, is by no means dead: "Regardless of how people *choose* to act, they maintain a powerful belief that the choice must be theirs. Increasingly, the disclosure of personal information boils down to questions of knowledge and consent" (Stoddart, "The Future"). This, of course, mirrors the foundation of the Office's Facebook investigation. While the Office had to rely on Facebook's fortunately forthcoming goodwill, the Commissioner asked whether such co-operation will always be forthcoming from non-Canadian entities. The answer: "Unlikely. Just think of all those shady spammers and cyber-thieves who prey on the vulnerable. Who are they? *Where* are they?" (Stoddart, "The Future") That would be "much of the world outside Europe and North America," currently lacking the "adequate rules for handling this precious commodity" (Stoddart, "The Future"), notwithstanding any outstanding concerns about the American *Patriot Act*. The creation of value that comes out of this novel commercial role complicates the strict traditional impositions of personal privacy in the twenty-first century, as "personal information has become the principal commercial asset of social networking sites and free online search engines," supporting a "whole new economic sector," not only profitable for industry but highly desired by users, predicated upon "the tracking, profiling and targeting of consumers for

various types of behavioural advertising" (Stoddart, "The Future"). In order to benefit from participation in this new economy users must give up certain traditional aspirations for control, though combating its potential abuses makes the issue of cross-national co-operation all the more pressing. Initiatives on this front include the 2009 Spanish Initiative, an agreement between various stakeholders on broad data protection principles, which garnered support not only from governments but from some of the world's largest digital corporations on the grounds that global co-operation would bring "some measure of legal certainty" to the new economy of personal information (Stoddart, "The Future").

The particularly Canadian perspective on the ideal of a global standard is reflective of the necessity that such a standard must aim toward "approaches that are at least consistent and harmonized, even if they reflect differing social and cultural values" (Stoddart, "The Future"). The flexibility of existing Canadian approaches, the Commissioner argued, which form a "middle ground" between European and American systems, tempering the stringent protection of the European model with less bureaucracy and allowances for commercial rather than strict rights-based perspectives, is borne of a hybrid French-British legal culture and characteristically Canadian multiculturalism: "Canada is used to dealing with issues from very divergent perspectives. This is a valuable skill when it comes to addressing privacy challenges. As we know, perceptions of privacy and the best ways to protect it can vary dramatically" (Stoddart, "Protecting Personal Information").

The resurfacing of the Facebook issue, for instance, might be construed as a difference of opinion over what constitutes privacy and consent in the digital realm. Shortly after the resolution of the CIPPIC allegations, the Office received a new

complaint that proceeded, at least in part, from the Office's negotiated solution. The complaint alleged "that the new default settings" for privacy introduced by Facebook's "privacy wizard," "would have made [the complainant's] information more readily available than the settings he had previously put in place" ("Privacy Commissioner of Canada launches new Facebook probe"). Facebook's new privacy settings, introduced in late 2009, were "clearly intended to push Facebook users to publicly share *even more* information than before," actually reducing "the amount of control that users have over some of their personal data" (Bankston).

Both the privacy and copyright debates of 2009, then, centred around the dangers of the uncontrolled distribution of information via digital technology, especially with no mediating cross-jurisdictional institutions that could bring a measure of accountability to exchanges. Notably, the users of social networks and online utilities make less absolute demands upon the degree to which they may retain control over their personal information (their digital currency) than do creative representatives over the systems that distribute their digital information products. Moreover, while Canada is labelled as a "haven," in both cases, for either spam or piracy, both also offer alternative visions of the relative strengths of Canadian regimes. In the case of copyright, appeals to national integrity and particularistic implementation of "flexible" cross-national regimes are opposed to and decentre systems crafted on authoritative globally-extensible principles in closed environments. As such agreements extend into the realm of privacy, intertwining old ideals of subjective integrity with a new commercialism of personal information and the established power structures of copyright regimes, such appeals may very well come to occupy privacy debates as well.

Accessing the information economy:

"Canada's broadband lag"

Common to the conflicts over copyright law and broadcasting regulation in Canada was the issue of whether crises in these areas, along with the attendant urgency for regime modernisation, really existed at all: the highly variable terms of the debates and the equally variable authorities that interested parties appealed to attest to the uncertain grounding of policy. Common to these conflicts, too, was an international industry environment that acted as a normative benchmark for discrete national policymaking, with cross-national rankings and comparisons providing a measure of national progress towards participative integration as at once a coherent national digital economy and within a global digital economy. Most directly, this integration was measured as the progress of Internet networks within nations and increasingly the availability and accessibility of high-speed broadband networks within nations, correlated with a national rising GDP. Debates in this area therefore centred on how best to facilitate the proliferation of high-speed, low-cost networks, especially in remote regions, resulting in differing visions for government intervention in the telecommunications industry. The capacity and capability of domestic networks would, in turn, demand determinations from regulatory institutions about the fundamental nature of the net.

In this context, pressure on Canada's "protected" communications industries came from a series of reports related not to Canadian cultural policy, but to Canadians' access to the Internet as mediated by the competitiveness of their domestic telecommunications market. Cross-national Canadian "lag" on available broadband speed, pricing and mobile services precipitated in some instances arguments for deregulation, as critics argued

limiting the pool of communications investors and providers resulted in complacency among the industry incumbents, providing no incentives for innovation. These reports included OECD rankings on broadband penetration, with Canada slipping from first place in 2002 to tenth in 2008, and Canadian middling rankings in terms of pricing for wholesale and retail broadband services (Lawford, Lo and De Santis, 75). A study from Oxford and Oviedo Universities provided "an additional unflattering portrayal of Canada's relative performance" in terms of quality of service (Lawford, Lo and De Santis, 75).

One study in particular, from the Berkman Center at Harvard University, paid particular attention to Canadian network lag. The Berkman Report aimed to conduct an international comparison of broadband access in "market-oriented democracies" in order to evaluate effective national strategies for "next generation connectivity," that is, fairly ubiquitous and accessible high-capacity network connectivity (8). Rather than adopting the traditional measure used in national rankings of network access, penetration per 100 inhabitants, the authors of the report combined this benchmark with two others, "capacity and price" (9). This resulted in changed perceptions about relative international standings: "Canada, for example, is often thought of as a very high performer, based on the most commonly used benchmark of penetration," but after accounting for speed and price of Internet connections, "it shows up as quite a weak performer, overall" (10-11). A *Globe and Mail* editorial expressed a typical anxiety in reaction to this report when it called it a "wake up call" that should "puncture" Canadian complacency: "If we do not act with haste, the innovations that could employ our future work force could well pass us by" ("Canada's broadband lag"). Canada's lag was tied up with a general digital malaise

resulting from limits on foreign ownership, "inconsistent CRTC decisions," lack of economic stimulus spending on Internet connectivity, delayed copyright reform, and a digital economy conference that "generated buzz – ministers Tony Clement and James Moore are reputed to 'get it' – but yielded few results" ("Canada's broadband lag").

Interestingly, while many reactions to the Berkman report focused on the need for the government to foster market-based competition and liberalize the telecommunications sector, the authors of the report linked increasing competition with "unbundling," a kind of "access regulation" for network infrastructure that would require incumbent telecommunications and cable companies to share their infrastructure with competitors at regulated prices, bypassing the need for such new competitors to invest in their own networks. Politically, the authors note, this is like "wearing bellbottoms or talking about a national healthcare system" in the United States (78), although it is really an update of economic competition-based regulatory policy, entailing a "shift from older-style regulated monopoly structures to a system that deploys its regulatory power to lower entry barriers" (Berkman 74). Contrary to the market-oriented arguments which stress the need to lower regulatory burdens as means to the promotion of competition, the argument here is that the problem for Canada is that its regulator is not strong enough, offering an "example of half-hearted efforts to impose unbundling, and increasingly heavy reliance on competition between local telephone and cable incumbents" (79).

Effective regulation is necessary to deal with the "vertical integration" the authors propose is necessary for the transition to the "ubiquitously-networked society" of next-generation connectivity, "centered on the needs of users, not carriers" (87). In the US, however, concerns that incumbents wouldn't invest in infrastructure if faced with the

prospect of open access regulation resulted in "regulatory abstention" (106). In Canada, the experience is one of "regulatory hesitation" (Berkman 106) with only limited moves towards unbundling (in the case of fibre, cable companies successfully appealed the CRTC policy on unbundling to the federal government in 2009). Canada, then, is an "ambiguous" case, an early leader in promoting broadband penetration, but with a current "investment environment" possibly "too expensive and too uncertain for non-incumbent entrants" (Berkman 110). The lack of competition means that Canadian companies offer, in a global comparison, "the slowest speeds and highest prices" (Berkman 111).

The numbers on connectivity, however, can be as contested as those measuring rates of piracy. Critics of the Berkman Report contended that it relied on penetration measures that lacked nuance, advertised speeds rather than "real-world data" and that it ignored the "robust" North American national cable and telephone networks (Waverman and Dasgupta). In this reading, the actually "less favourable" picture in Canada is relative to the "mixed signals that the CRTC is still sending on prolonging and extending regulatory policies that may, at best, have made sense in the days when we could not see beyond the old copper-wire telephone network" (Waverman and Dasgupta). In any case, international comparisons are invalid when dealing with characteristically divergent nations. These critics therefore make the arguments of the Berkman Report purely political, rejecting ambitious regulation qua regulation: "regulation curtails economic freedom, which is why a very high standard of evidence is required to justify regulation" (Waverman and Dasgupta). When it comes to opening up access to North America's national networks, "measured steps" are better than "radical surgery that would rip the heart out of a generally healthy broadband network" (Waverman and Dasgupta). Since

there is "no other nation ... like Canada, which has significant geographical challenges to overcome in order to roll out networks" (Pilieci), incumbent telecommunications companies argue that Canadian broadband performance measures must be particularistically national, though they are generally supportive of market liberalisation and, by extension, increased competition.

However, while the incumbents' position in that case might dovetail with the CRTC's in their common favour for relying upon competition, where possible, and regulation for competition where not, the issue of increasing Canadian broadband usage and capacity came up from a different angle in 2009 in a series of hearings on the issue of net neutrality. In these proceedings, the Commission considered a number of practices engaged in by Canadian ISPs affecting how information travelled on their networks. The speed with which users could send and receive information on the web and the prices they paid Canadian providers for these services, i.e. the benchmarks key to international broadband rankings, were also at issue in the net neutrality hearings. With the growing availability of high-bandwidth applications and services online, higher Canadian usage of bandwidth, ISPs argued, justified network management practices aimed at curbing congestion. These ISP "network management practices," sometimes referred to as bandwidth throttling by critics, often slowed or disrupted their customers' Internet services, especially high-bandwidth applications such as torrent filesharing systems. Those in favour of net neutrality argued that ISPs shouldn't discriminate between kinds of data and that a neutral net should treat all information equally. If ISPs couldn't handle the traffic, according to this logic, they should upgrade their networks.

Before considering net neutrality from retail perspective, the Commission first ruled on a conflict between Bell and a small ISP which its network infrastructure, finding that Bell's management practices, which affected the smaller ISP's users, were justified. But, distinguishing between wholesale and retail customers, the Commission held a second hearing to consider the issue from a more general perspective. The Internet traffic management practices (ITMPs) considered in these hearings were various, including throttling, Deep Packet Inspection (DPI) enabling network providers to determine the content of information travelling through a network (thus presenting privacy concerns), and "economic" measures that capped customer bandwidth or charged customers according to levels of usage. A ruling in favour of net neutrality would, prevent ISPs from favouring specific sites and services (i.e. their diversified content holdings) by dictating the ease with which a user might access them, effectively creating a "tiered" net where independent sites and applications could be marginalized. Proponents of net neutrality argued that its "underlying principles" could be found in the extant principles of common carriage, exemplified by the telephone system, which stipulated that "common carriers must serve upon reasonable request without discrimination, charge just and reasonable prices, and provide service with adequate care, skill and honesty – merely by virtue of common carriers' status as public callings" (Lawford, Lo and De Santis, 4). ISPs, on the other hand, argued that ITMPs were essential as they struggled to keep pace with bandwidth use on limited infrastructures. During the second CRTC hearing, however, input from ISPs revealed a wide variation in ITMPs, some on more shaky justificatory ground than others, as in Rogers' admission that while it "charges tiered

pricing for faster upload speeds … all tiers are throttled at the same speed when using peer-to-peer applications" (Geist, "Web Neutrality").

Eventually the Commission ended up with a compromise between the two sides, establishing an approach it said "appropriately balances the freedom of Canadians to use the Internet for various purposes with the legitimate interests of ISPs to manage the traffic thus generated on their networks" (CRTC "Telecom Regulatory Policy"). It based this approach on four considerations: transparency, requiring the disclosure of ITMPs to consumers; innovation, stressing that ITMPs must serve a "defined need" rather than being open-ended solutions to a problem that might be better served by technological investment; evaluative clarity in determining what would constitute preferential, unjust or discriminatory practices on the part of an ISP; and finally competitive neutrality between the incumbent ISPs and the smaller services that leased their networks. It identified "the core of the debate" as "whether innovation will continue to come from the edges of networks, without permission" (4). It established a complaint-based regulatory framework for retail Internet services and directed ISPs to disclose their ITMP practices to consumers by posting information on their websites. The Commission, however, noted that issues related to Section 36 of the *Telecommunications Act*, which states "that carriers must have prior Commission approval when they control the content or influence the meaning or purpose of telecommunications they carry" (117), existed apart from the framework established for ITMPs, since such practices should in principle not be directed toward controlling the content, purpose or meaning of communication on the web. In light of the Act, the Commission stated, blocking of content could only be approved in "exceptional circumstances" (122) and ITMPs, while generally not constituting control of

content, might in some instances do exactly that if they result "in the noticeable degradation of time-sensitive Internet traffic," or delayed traffic to such an extent that in effect it constituted blocking (122).

A report issued by the Public Interest Advocacy Center (PIAC), which took on net neutrality from a specifically consumer perspective, duly noted that the CRTC's position meant that a new battleground in Canada would be over what constitutes "time-sensitive" traffic (Lawson, Lo and De Santis, 6). Moreover, they argued, the only concrete benefit from the consumer perspective coming out of the Commission's approach was the outright prohibition of the re-use of DPI data. Citing Canada's ranking in the Berkman Report, the authors argued that rather than regulatory permission for traffic management, Canadian consumers would benefit more if "broadband access and higher speeds were made an explicit government priority as has been undertaken in the EU and started in the US" (7). In the absence of government leadership, however, and in the face of regulatory compromises, consumer concerns won't go anywhere in Canada until they "align with other interests" (57). In contrast to initiatives in other jurisdictions, such as Europe, to secure citizen rights to broadband access, in Canada a coherent, leading public interest position on the state of the networks is missing.

Outcomes from crisis

Policy debate at the beginning of the twenty-first century revolved around the separation between content production and carriage, information and its networks instituted at the beginning of the twentieth. During the net neutrality hearings, a dispute arose between near-monopolistic carriers and their customers centring on the illicit practices enabled by networked communication, whether there were counted as

monopolization of network-wide resources for lawless activities (i.e. filesharing), or the manipulation of the network in order to discriminate against and control information. The net neutrality debate also, in common with the controversies over fee-for-carriage, deregulation and uncontrolled flows of information in the piracy and privacy debates, signified a decisive transfer of power in the global communications industry from content producers to carriers, traditional broadcasting to telecommunications organizations, the "power once held by the networks ... usurped by the very wires they are carried upon" (Robertson). Perhaps most saliently for the current Canadian regulatory framework, this transfer of power means that the logic that limited cultural and social objectives to the *Broadcasting Act* comes under pressure, as it is now "clear that the operation of telecommunications facilities has cultural ramifications" (CRTC, "Navigating Convergence," 3). However, it is also salient that even in the most direct conflict over this issue, between content producers and carriers in the fee-for-carriage argument (and where broadcasters argued that it was a "regulatory imbalance" in favour of cable that had contributed to their decline), was confused by the extent to which the Canadian industry is converged, with broadcasters and cable distributors all owned by and owning various parts of each other. Convergence therefore continues to be another considerable pressure on the Canadian regulatory framework, though concerns over interventionist owners in the twentieth century threatening editorial independence and media diversity have been updated somewhat by the interventions of telecommunications carriers on networked communication in the twenty-first. Moreover, the consolidated industry that the CRTC helped to create in 2000 also contributed to its own diminishing leverage with the communications giants that resulted (Sturgeon), undermining an original impetus for

domestic ownership requirements. Contributing to this regulatory uncertainty are interventions from the government in the affairs of its arms-length regulator, including the Globalive case, the direction on a consumer-centred fee-for-carriage hearing and the direction asking the Commission to reconsider its decision on unbundling incumbent networks for wholesalers (CRTC, "Navigating Convergence," 74). At the same time, the omission has asked on more than one occasion for direction from the government on how to approach the converged environment, while maintaining its exemption of new media from regulation (though various decisions, i.e. on net neutrality, constitute de facto regulation of the web). While the government has produced no definitive policy statements for new media, the overall regulatory tendency is toward reducing regulatory burdens and relying on market-based forces in the communications sector. While there is also certainly a tendency to deregulation and the loosening of ownership restrictions, as evidenced in statements from the Throne Speech and its links to the earlier *Compete to Win* report, the reality of the proposals in the 2010 budget leaves uncertainty intact, though the small steps taken toward liberalisation in the Canadian communications sector remain one of the few areas of any concrete change coming out of the above debates and 2009. Decisions on net neutrality and fee-for-carriage effectively maintained, for the time being, the status quo; there is as yet no legislative movement on privacy and copyright. Perhaps what is most remarkable about the 2009 debates around digital technologies, media and economies, then, is that amongst widespread recognition of digital revolutions in culture, industry and networks, even combined with a deep economic recession and the collapse of Canwest Global, one of the largest media organizations in the country, there has been little substantive change in the structuring of the media landscape.

Part of the reason for this was that these digital issues have corollaries in wider public debates that involve decisions that the Commission and elected officials would rather not explicitly deal with because, in the case of the former, they are beyond its scope as political or commercial decisions, or, in the case of the latter, they involve warring consumer and industry lobbies. These conflicts can be extrapolated to an international globalized and converged industry context, where shifting constellations of power produce arguments in which consumers and independent producers are caught between traditional analogue producers and newly powerful carriers taking advantage of digital distribution, whether the dispute is between traditional publishers and Amazon in the field of e-book pricing or Rupert Murdoch's personal crusade against Google. Moreover, the interventions of the converged multinational communications organizations and their lobbies upon national sovereignty through their impositions on domestic laws and economies add another dimension to policy-making in a cross-national and globalized context. While agreements such as ACTA and the lobbying of the IIPA are clear examples of globalized industry interacting, uneasily, with national policymaking, the converged environment of global digital industries also integrates consumers into participatory systems which are themselves increasingly vertically integrated instances of content production, software application, distribution systems and the mobile networked devices of "next-generation" connectivity, which, in contrast to the early ethos of cyberculture, often inculcate users in closed systems of media consumption comprised of industry alliances enabling "seamless connectivity" and usability over open platforms.

The cultural theorist Wendy Robinson has termed this proliferation of personal mobile digital devices "second wave" cyberculture, enabling a mobility correlative to autonomy, in one sense, but in another sense emblematic of the mobilization of subjects in complex environments of control. While first-wave cyberculture focused on the freedom afforded by the virtuality of digital technology, the second wave, in the disillusioned wake of the dot-com crash and 9/11, focused on commercialisation, consumer electronics and convergence. The central question that emerges out of this second wave is one of cultural consumption in an environment populated by semi-autonomous and –intelligent devices where "resistance can be accommodated" (Robinson 61) and mobilization takes on its double-edged meaning. This grounded cyberculture, commonplace in the avenues of everyday life, gives parallel rise to new models of web governance that ground networks in national geographies, envisioning the web as a technologically transformative but commonplace and pervasive communications utility, on the order of electrical or telephony systems, with an importance to national wellbeing justifying government intervention in markets in order to make sure that all citizens have access to the network. Digital policymaking in countries such as the US, France, the UK, Australia, Germany and New Zealand, then, posits broadband access as a right, predicated upon maximizing national participation in a global digital economy. Common to these characteristically national digital strategies, as well, are ideals for government-citizen interaction borrowed from those of converged cyberculture, the service models of next-generation networks and the sophisticated administrative capabilities of a "semantic web." In the Canadian context, proposals for a proactive national strategy to exploit the opportunities of transformative digital technologies have in some cases proceeded from

the dualism characterising the current communications regulatory framework, that of culture and industry, and a desire to unify these perspectives has informed other calls for a comprehensive national strategy modelled after those already existing in other jurisdictions. While the cultural perspective has tended to emphasise the limitations of the traditional Canadian approach to government intervention in the digital sphere, the industry perspective has focused on the need to foster high-speed broadband through innovation and competition.

Push versus pull: Frameworks for cultural regulation

With the advent of digital technology, the Canadian cultural regulatory dependence on a quota system for cultural regulation, i.e. demand-side incentives that "push" Canadian content out to the public, becomes a problem. While industry subsidies, often a percentage of or levy on profits, also provide production-based incentives for the creation of Canadian cultural content, it is the demand-side model that is under concerted pressure as consumers purportedly turn to unregulated online media and the traditional broadcast regime moves toward consumer control through VOD and similar services. While the need for cultural regulation at all has always been a matter of contention, in the digital environment the workability of the traditional cultural demand-side framework is often characterized as obsolete, whether one accepts an underlying rationale for cultural regulation or not. This is exemplified by two approaches to Canadian cultural communication policy that came out of think tanks in 2009, both of which built upon the premise that Canadian policy established in the 1980's has failed to keep pace with changes in the communications industry, specifically convergence (both technological

and corporate) and the opening "of monopoly markets to competition and choice" (Munro v).

In a report from the C.D. Howe Institute the Canadian culture industry becomes a "prism through which to view" such transformative technological changes and a "microcosm of some of their policy implications" (Lawson, Iacobucci and Trebilcock, 1), thus helping to chart a course for navigation through the digital revolution. Noting a technological and media landscape characterised by convergence, broadband networks and wireless ubiquity, the crux of the authors' argument is that "content policies can feasibly focus only on supporting Canadian creative-content production through direct subsidies" (2). Moreover, telecommunications and broadcast policies should, eventually, merge to mirror the convergence of the industries they regulate. Telecommunications and broadcast policies should, eventually, merge to mirror the convergence of the industries they regulate. In the case of the *Telecommunications Act*, with its clear objectives that "tend to focus on the economic efficiency of the sector rather than support of Canadian culture" (4), reinforced by government directives to the CRTC, the industry's increasing encroachment on territory traditionally conceived of as belonging to broadcasting, raises questions about whether telecommunications policy should be amended to include cultural objectives.

In an attempt to address these cultural questions, the report evaluates the Canadian regulatory instruments for culture in terms of their suitability for four technological "eras," which the authors sketch discretely and chronologically while emphasizing that in reality such eras are neither. These instruments include quotas (for exhibition of and expenditure on Canadian content), production subsidies, ownership

restrictions, public ownership (i.e. the CBC) and access rules, i.e. mandatory channel carriage requirements for cable companies (6). These instruments are of course set up in opposition to the "U.S. effect," where economies of scale lower the price dramatically of American content for Canadian broadcasters (6). Comparatively, Canada's ownership policies are much more "exceptional" than those of other countries, especially for cable and satellite companies (12). The first of the four technological eras is that of over-the-air broadcasting, characterised by spectrum scarcity and disrupted by the emergent dominance of cable. The second is the "500-channel era," characteristic of the present Canadian context, where scarcity is not as much of an issue and content can still be "pushed" to audiences who have many channels but few choices among networks. This is followed by the wired IP era, currently making inroads in Canada, characterised by on-demand Internet access to content and the end of "push" distribution and spectrum scarcity, though access is still dominated by cable and telephony giants. Finally, the fourth "wireless IP era" is characterised by mobile audio-visual content consumption, subscription and pay-per-use revenue models and the elimination of scarcity in relation to both spectrum and network access (15-20). The transitions to the third and fourth technological eras in this model will be highly dependent upon infrastructural expansion. While they will also be characterised by convergence, wireless technology of the fourth era, "by eliminating the costly last mile of delivering Internet service, allows the proliferation of broadband networks, thus mitigating concerns about market power" (21).

Canadian content quotas, as regulatory instruments, were most suitable for the first era and still workable for the 500-channel era, though under pressure, with regulation of broadcasting and telecommunications running along parallel lines of

controlled access to networks (23). However, "many regulatory instruments will be simply unworkable once broadcasting becomes Internet-based" (24), as the very viability of traditional broadcasters becomes at issue and expenditure requirements become fully obsolete. At this point ownership restrictions also become obsolete. Production subsidies remain viable, but it becomes difficult to determine who to tax or levy in order to build production funds (ISPs? The general public?). The problem of public access to publicly-produced Canadian content, however, is eliminated by the distributive power of the Internet, though this reality is entirely contingent upon net neutrality, another instance in which "broadcasting converges with the issues addressed by telecommunications regulation" (26). The content-funding issue becomes particularly "acute" in stage four, the Wireless IPTV stage, as it becomes difficult to levy ISPs in a highly competitive network market "which will leave less slack available ... to support Canadian programming" (26). On the other hand, this competitive market will result in less concern over discriminatory (i.e. non-neutral) network practices and public access to publicly-produced content should be better than ever before.

In all of these eras, the authors argue, policy and regulation must take into account the restraints imposed by technology. Ownership regulations, for instance, may be of debatable effectiveness in any era – since "corporations are likely to be motivated by the bottom line, not others' conceptions of patriotic responsibilities" – but "such a debate will ultimately be moot as technology," i.e. the proliferation of unregulated networks, "makes such restrictions impractical" (27). In this understanding regulators have different "degrees of freedom" in the various technological eras, though we exist in all such eras in various ways at once: "while we are generally in stage two, there are lingering elements

of stage one, and with the changeover to all-digital [television] transmission by 2011, emerging elements of stage four" (27). Competition between the stages, public opinion, and the relative progress of transitions should therefore all be taken into account in the crafting of regulatory frameworks. In the short-term, the report concludes, broadcast distributors should be subject to access regulation should be subject to access regulations in the sense of mandatory carriage of Canadian channels and net neutrality, not the wholesale access regulation suggested in the Berkman report. "Until stage four arrives, there will likely be a limited number of facilities-based providers of broadband" (29), and therefore the CRTC should have jurisdiction over providers to ensure competition and non-discriminatory practices. This is not a particularistic and timely principle, however but "the basic access principle is the same one that has historically guided telecommunications policy: parties should have access to networks on commercially reasonable, arm's-length terms that do not reflect the network owner's potential conflicts of interest resulting from a desire to limit competition" (29). Net neutrality serves this principle, but the authors speculate it may not be necessary in the fourth era. Overall, regulation can still rely on the economic policy articulated in the *Telecommunications Act* and because of technology's relation to markets similar principles should be adopted in the *Broadcasting Act*, though a merger of the two would be premature (30). The remaining "broader question is whether the current regulatory instruments are appropriate in a converged world when many of the current instruments used to promote Canadian content through quotas will become obsolete," particularly the ownership question, which must be reassessed (30). Rather than reflexively defending the "status quo" (31) when it comes to ownership, the authors argue that public policy goals, in light of radical

technological change, must be changed to "ensure that Canada is positioned at the forefront of the digital economy" (31).

While the C.D. Howe report conceded the point of communications regulation for production and access to Canadian cultural content, the author of a similar report on the Canadian approach to communications regulation from the Atlantic Institute for Market Studies (AIMS) did not. Accordingly, the AIMS report was highly concerned with the duplicative and overlapping roles of the CRTC, Competition Bureau and Industry Canada, especially in spectrum management. The "supposed need for and efficacy" of communications regulation for culture, the author argued, "has been eroded by technological change" and at any rate cultural initiatives should be under the purview of elected officials, not an independent agency such as the CRTC. In outlining a new "institutional structure" for communications regulation, therefore, key questions become the determination of which issues go to the political arena and which to an arms-length body, where to foster competition and where to intervene with regulation and what "tool" can best meet regulatory objectives. In terms of Canadian content and the cultural history of communications regulations, the author argues that "cultural regulation via the CRTC should cease" (Munro 3), effectively relegating the question of whether the cultural objectives should be incorporated into telecommunications policy as it converges with broadcasting to the sidelines.

The transition to digital broadcasting transmission, freeing up spectrum and transforming this resource from one of scarcity to one of abundance, therefore precipitates radical change in Canadian communications regulation, because the "binding technical scarcity of the spectrum resource has been the cornerstone of arguments for

Canadian-content regulations" (Munro 19). While the author in any case equates content rules with "neomercantilism," his assessment of the changing technological context is similar to that of the C.D. Howe report: "technological advance as exemplified by the growth of new media has rendered the existing paradigm of broadcasting regulation obsolete" (Munro 20). Furthermore, "Canadian consumers now have access to once-unimaginable levels of choice and diversity in broadcasting content – except to the extent that their government denies them this choice" (Munro 20), an implicit argument against domestic ownership requirements that limit available network-providers in addition to content regulation. Rather than considering, then, whether new media should be regulated, the CRTC should consider whether *old* media should be regulated in the face of the new, in recognition of the fact that "new technology and convergence have shattered old paradigms" (Munro 19).

Relying as they do on the scarcity justification for cultural regulation, both of these approaches present a suggestive conjunction of radical demands from new technology that limit old structures, with traditional arguments relating to those structures that predate such technology. Arguments in defence of the traditional cultural framework are often framed in a similarly negative vision: one the one hand, proponents of deregulation emphasise what cultural policy cannot achieve and why it cannot intervene in the face of new technology, while on the other, proponents of the traditional public-interest framework come out simply against the proposals of the opposite camp, failing to articulate how a Canadian system might change in line with the media it regulates. Some positive exceptions in the cultural system include the creation of the Canada Media Fund in March 2009, which will subsidize Canadian independent production through the

merger of the existing Canadian Television Fund and the Canada New Media Fund. As such, however, the new fund does not represent a significant new investment or radically new approach to Canadian broadcast media policy, though it does at least recognize a continuum between traditional television and new media in providing support for content that appears on multiple platforms (Canadian Heritage). One of the clearest positive articulations of a Canadian cultural policy in relation to digital technology came from Tom Perlmutter, the director of the National Film Board (NFB) in a January 2008 address which announced the launch of an NFB online portal for streaming Canadian productions. Comparing the impact of digital technology to that of the industrial revolution, Perlmutter invoked the rise of the new digital media culture alongside that of the political culture of the Obama campaign, the President's "Rooseveltian fireside chats ... now privileging YouTube over radio and television" (2). But the borderless universe of online media and the Internet is not quite borderless, especially in the Canadian context, where traditional cultural concerns about American cultural dominance, as the most popular websites in Canada, of course, are American-owned. While Canada, unlike other countries, "is lagging behind" when it comes to adjusting to this new context, an "essential first step is to understand that to create digital networks without Canadian content is to hand over control of essential parts of our economic, cultural and social well-being to others" (2). A coherent cultural policy for the digital age would then not emphasise restrictions on access but serve the purposes of diversity across the networks.

The digital age therefore, in Perlmutter's account, enables the NFB to serve Canadians better but also results in a revitalization of the NFB as a cultural institution. Having lost its audience in the 1990's, the NFB became at this time, despite its

international renown, a "brand with incalculable but under-realized value" (4) within Canada. Seizing the opportunities presented by new media in the 2000's, and able to take risks where the private sector could not, the NFB, Perlmutter contends, became "among the first to set the norms for the Web as a creative documentary medium in and of itself" (5). He brings "the strands of the argument together" in a nationalistic appeal to an underlying rationale for Canadian policy unifying cultural and digital matters: "On the one hand, we have this incredible creative laboratory and on the other, a digital revolution. Bring those two together and you have an explosive mix for seizing control of the digital space, managing it for the benefit of Canadians and setting foundations for the creative economies of the future" (5). Moreover, the NFB portal is exemplary of an inherent public good of digital media combined with policy through its contributions to the accessibility of public media, opening up thousands of works in its formerly inaccessible archives to a wide audience. Going beyond the rhetoric of transformative industrial revolutions, Perlmutter compares this open distribution model to the "famed philosopher's stone of the alchemists transmuting the inert into gold" (5). Drawing millions of viewers from within and without Canada's borders in 2009, Geist argues that from "a public policy perspective," the NFB initiative successfully exports the Canadian "brand" and makes publicly-funded content accessible to taxpayers, in contrast to the "closed" character of other publicly-funded content, from the CBC's restrictive licensing regime to the controlling impetus of Crown Copyright ("NFB Hits"). The NFB project combines elements of cultural policy recommendations from both the C.D. Howe and AIMS reports – content subsidization, capitalization upon the accessible and widely distributive nature of the net, and location within a cultural department accountable to

voters rather than arms-length authority – and an appeal to the importance of a domestic stake in owning communication systems at odds with them both. In all three visions, technology transforms the Canadian institutional mediation of culture.

Industry and the "web of things"

While culture has traditionally informed one perspective on Canadian communications regulation and the Department of Heritage one of its ruling bodies, Industry Canada and competitive markets have informed a corresponding perspective. For many, digital technology is equally as transformative for industry as it is for culture, if not more so. The wide-ranging impact of digital technology on all aspects of the economy has made communications regulation, in this context, a central part of an overarching social digitisation. Network infrastructure, especially for the "next-generation connectivity" of a high-bandwidth ubiquitous wireless era is often the focus of plans for a digital economy, as in the government's digital initiatives in the 2010 budget and Throne Speech which cited the need to foster the adoption of ICTs across all sectors of industry. Both of Canada's main political parties have led forums and conferences on the digital economy, aiming to take leadership positions on digital issues.

Chief among these was the Canada 3.0 Forum, a two-day conference in 2009 coordinated by Industry Canada, in which participants discussed how Canada could lead the digital economy. The titular digital reference of the conference was to the semantic web, an online milieu proceeding from the participative and socially networked web 2.0 towards a "web of things" where "the browser acts like a personal assistant and 'learns' how to anticipate our needs" and all data is "stored in the cloud … which means we can access our files and records from anywhere on any device (computer or mobile phone) at

any time" (Cappelli). The ideal of the semantic web aims to eliminate the gaps between objects and their descriptions, identifying the reference and retrieval of information in a way that would enable the establishment of systems and applications operating at the speed of digital and the flexible logic of conversational communication. Canada's 3.0 Forum resulted in the Stratford Declaration, a "Canadian manifesto" (Cappelli) that recognized Canada's lack of leadership in the digital world and articulated the need for the nation to upgrade its infrastructure, and regulatory and legal environments for the twenty-first century. The Declaration stipulated the need to marry creativity to technology in the Canadian environment in order to incubate digital innovation. It was, however, more of a broad national injunction capturing a mood rather than an enumeration of specific policy and industry goals. "Canada must set an ambitious target," it stated, "to become the first truly digital nation in the world – and move forward with urgency and determination toward this goal" (Industry Canada, *Proceedings*, 22). The Minister for Industry also identified government priorities for a digital economy, including e-commerce, privacy and security laws that would "give Canadian consumers more confidence and protection as they spend more time online," the encouragement of commercial ICT adoption, and the need for a "whole-of-government" approach rather than separate departmental initiatives (Industry Canada, *Proceedings*, 4). Typical of the 2009 policy debates relating to digital technology, priorities for Canada also included broadband access to underserved areas, financing the infrastructure of next-generation networks, net neutrality, the paucity of Canadian content online, delayed copyright and anti-spam legislation and the lack of a federal department dealing specifically with digital communications.

The Liberals also held a roundtable in February 2010, hosted by the critics for culture and heritage, similarly positioned as a discussion of "what actions Canada needs to take now to become a leader in the innovative world economy of the 21st century: the digital economy" (Liberal Party of Canada). It focused on knowledge, creativity and the Internet, including a rehash of the copyright debate, and covered the particularly Canadian problem of rural and remote access to high-bandwidth networks. In a column titled "Where is Canada's plan for the digital age?" the Liberal critic for industry, Marc Garneau, linked the current need for a "renewed vision" on the economy to mid-twentieth century ambitious Canadian plans to take strategic leads in the nuclear and aerospace industries. Garneau's column, however, largely focussed on faulting the Conservative government for slow movement on IP legislation, lack of clarity about deregulation and its confusing interventions in CRTC decisions, arguing that the clear political expedience of these decisions signify a lack of a "coherent" digital policy across government departments. Such a policy, Garneau suggests, should aim to achieve three goals: 100 per cent Internet connectivity across the country, a competitive environment to facilitate next-generation high-bandwidth networks, and a reformation of "our laws to ensure the Internet remains a free and open platform for the sharing of ideas." While cultural communication policy may then provide a "microcosm" of change wrought by digital technology, from the industry perspective digital is a macrocosm, pulling together a diverse array of policy areas within a shared universe requiring, at the least, coordination if not perfect alignment of principles. For this reason, many of the important issues from the industry perspective are reflected in comprehensive digital policy initiatives that have come out of national governments.

"Government 3.0"

Garneau's call for coherency is predicated in part upon a normative international communications environment, where other countries "get it" but where Canada is at risk, characteristically, of falling behind international standards for digital policy in the twenty-first century. Such policy does not consider the effect of digital technology according to discrete categories, but unifies it around a single national strategy, as in the comprehensive policy statements from countries such as the UK, Australia, New Zealand, France and Germany, all of which seek to establish universally accessible national broadband networks and to promote investment in infrastructure leading to a web of "symmetric services" and high-capacity applications that move beyond the predominantly one-way flows of the first-generation web, in which most end users simply received or downloaded information (CRTC, *Navigating Convergence*, 82). In other words, they aim toward near-future universal citizen access to "Web 2.0" by subsidizing, through various means, broadband service for remote areas and low-income households, and envision, in the long-term, the integration or migration of integral national infrastructures and services on to a semantic web ("Web 3.0"), with a revolutionary impact on sectors such as healthcare, education, hydro, transportation and finance (*Australia's Digital Economy* ii). New Zealand's digital plan, for instance, prefaces its recommendations with an articulation of the alignment of national policy goals and the potential of the semantic web: "In the future, an interactive web will link not just computers, but other critical infrastructure such as buildings, transport systems and the energy grid. This 'internet of things' will allow us to transform the ways we use

resources, travel, communicate with each other, learn and earn a living" (*The Digital Strategy 2.0*).

In the Australian plan, the government is cast primarily as an enabler or facilitator of the digital economy, and it is up to industry to realize its value. Government is therefore responsible for digital infrastructure and regulation and industry for technological adoption, skill-building and viable content revenue models, with the remaining responsibilities for digital literacy and "engagement" allocated to "community." Though taking on the role of enabler, government commitment in this strategy is in the considerable form of the establishment of an Australian National Network for broadband entailing public investment of up to AU$43 billion over eight years with the aim of "providing broadband services to Australians with speeds of up to 100 megabits per second in urban and regional towns" and wireless and satellite services of up to 12 megabits per second to all other areas (9). The impetus for this initiative is perceived Australian lag, compared to other nations, on broadband and e-commerce adoption in business, reflecting similar Canadian concerns about lacking domestic telecommunication competition and relatively high prices and low speeds for Australian customers. In light of the scope of this initiative, the Australian plan holds off on updating the national communications regulatory framework and copyright law, both under pressure from convergence, though it does note that "it is important to compare Australia's laws with international counterparts to ensure that Australia represents an attractive value proposition for digital economy companies" (20). It does propose review and updating of privacy laws for the "21st century" in order to protect online consumers and increase confidence in the digital economy through e-security and cyber-safety

initiatives. A digitally literate and skilful workforce for this economy will be developed in part through an Australian "Digital Educational Revolution" (44), entailing government investment of AU$2 billion over five years. Finally, while implementing the digital economy plan will require coordination within the government and across levels, a complementary task to implementation will be the development of better benchmarks and datasets in which to measure Australia's progress, comparative to other nations, in the global digital economy.

While Australia's digital strategy, fairly typically, took the guise of a primarily economic plan, the digital strategy that emerged from the UK in June 2009 from the departments for culture and industry with the publishing of the *Digital Britain* report, implied, true to its title, a vision of a sweeping national transformation. "The communications sector underpins everything we do as an economy and society, to a degree few could have imagined even a quarter of a century ago," the authors wrote, linking the economic "information revolution" to a "quiet revolution" on the level of the individual, which "has delivered seamless connectivity almost everywhere" (7-8) with the proliferation of the devices of Robinson's second-wave cyberculture. Estimating that "Digital Britain sectors" account for ten per cent of annual British economic production, priorities remain tied to the digital economy and the appropriate sites of government intervention, particularly through a commitment to universal national connectivity at 2 megabits per second by 2012. Challenges to the national digital agenda come from the systemic problems of governance, jurisdiction and governance on the web, and from the potential obstacles of network availability, affordability and relevance at the individual level. Access becomes all the more pressing as the nation reaches a digital tipping point:

where once it was advantageous to be online, it now becomes a disadvantage to be offline. In addition to its short-term universal access commitment, then, *Digital Britain* proposes a "Next Generation Fund" to be financed through a levy on phone lines to subsidize the delivery of a next generation network to the "final third" (14) of the nation that would not be sufficiently served by market forces. In addition to numerous other proposals on the digital front (public broadcasting, education, spectrum allocation and digital transmission upgrades among them), the report also outlines plans to modernise British communications regulation by giving the independent regulator, Ofcom, a duty to encourage investment and competition in the telecommunications sector for the benefit of consumers and to alert the government periodically about the state of the national digital infrastructure. This modernisation would also give Ofcom new powers in the realm of intellectual property enforcement in the service of British digital cultural industries, reflecting an unequivocal stance that piracy is theft and "will be prosecuted as such through the criminal law" (17). The framework that *Digital Britain* proposed for this copyright enforcement policy, which would give Ofcom considerable interventionist powers if other educational initiatives did not reduce piracy by 70 per cent, was one associated with the international industry lobby and known variously as a "graduated response" or "three strikes" approach, in which alleged copyright infringers would be punished, after two warnings, by disconnection. Unsurprisingly, the legislative changes proceeding from this framework would face resistance.

Finally, *Digital Britain* considered the government impact on the digital economy outside of its overall policy framework, that is, as a provider of public services, large scale purchaser of digital systems, rights holder of massive amounts of data and content,

and as a "strategic hub for the development of Britain's future digital strength" (23). In light of these roles, the government determined to begin the process of transitioning to the web for the provision of public services and opening up its data to the public in order to realize the value of its holdings.

The immediate legislative changes entailed by *Digital Britain* were set out in the Digital Economy Bill, introduced soon after the report's release, which covered radio licensing, the universal broadband commitment, public service content and intellectual property protection. It was this last legislative provision that proved to be a source of intense controversy and overwhelmed public and government debate surrounding *Digital Britain*. Critics focused on the "three strikes" policy, perceived as a disproportionate punishment presuming the guilt of the accused, and a clause which gave the secretary of state the power to change copyright law with little oversight in order to respond quickly to new forms of piracy (one way of crafting lasting "technologically neutral" legislation). The socially sweeping vision of the web articulated in *Digital Britain* was seemingly replaced with a narrower vision and broad powers for restricting its uses, "less about creating the digital businesses of the 21st century than protecting the particular 20th century business models used in music and film … Instead of treating the web as a platform for possibilities, it recasts it as a tool for mass theft" ("Digital economy bill"). The government's commitment to universal access was markedly at odds with its wholesale endorsement of strict disconnection provisions. The intellectual property provisions caused further controversy in relation to the liability that institutional and collective wireless providers would have for every possible infringement carried out on their networks. This prompted protests from the British Hospitality Association as well as

an open letter from leaders of various British educational organizations pointing out that "it is not clear what the status of public intermediaries would be in relation to the terms of the Bill" and arguing that their digital services, such as wireless networks, could not withstand the burden of investigation, policing and enforcement that the bill seemingly placed upon their provision (Ayris et al.). The "Lords' Joint Committee on Human Rights," also found fault with the bills lack of due process for users accused of infringement, since it defined "no process of appeals with no presumption of innocence" (Arthur). As the bill moved toward its third and final reading, an amendment replaced the offending clause that had given the government power to change copyright law with little oversight, replacing it with a provision that would allow "rights holders to apply for a court injunction forcing broadband providers to block public access to offending websites" (Bradshaw and Palmer). However, given that this amendment placed the full burden of legal costs to fight such injunctions on ISPs (who presumably therefore would not fight them), the UK's leading digital firms, including Google, Yahoo, Facebook, EBay and its largest ISPs, objected to it, publishing an open letter in the *Financial Times* arguing that "the rules, if they become law, would fail to tackle copyright infringement as intended" and threaten free speech (Bradshaw and Palmer). The bill however did pass, before an election call would have killed it, in April 2010.

The UK was not alone in its difficulty with "three strikes" legislation. When the French government, proceeding from its own digital strategy, created the "first internet police agency in the democratic world which would track abusers and cut off net access automatically to those who continued to download illicitly after two warnings" it actually undermined its hard line stance on IP protection. Forced through by France's President

and Culture Minister after it was first rejected by parliament, the legislation was rejected by the country's Constitutional Council, a top judicial body which "declared access to the internet to be a basic human right, directly opposing the key points" of the new law (Bremner). This development mirrored Finland's move to make 1 megabit broadband web access a legal right in October 2009 (Reisinger) and the controversy that engulfed the New Zealand government's own efforts to enact a three strikes policy. Germany declined to adopt such a policy, saying a "three strikes" style model would violate its privacy laws (Cheng), while in the midst of the furor over ACTA, the Australian Department of Foreign Affairs declared that no such policy would be enacted in that country (Winterford). Finally, amidst concerted global pressure from the industry lobby on national governments to adopt "three strikes" provisions in 2009, the same year was also "a breakthrough year for the Pirate Party," a political movement campaigning on a platform that included shortening copyright terms, legalizing file sharing, and endorsing net neutrality, privacy, transparency and other IP reforms (Ernesto). The Swedish branch of the party gained two seats in the European Parliament, while in Germany it entered parliament after an elected official switched over to its cause.

The combative network-based politics of the pirate party, derived as they are from cyberculture and its free and open source software movements, stand in contrast to the model of digital governance (presumably derived from the same sources) of *Digital Britain*. The "time is now right," the report suggests, to enact a governmental metamorphosis, "to make the step change to the next, third, phase – not merely Government on the web, but Digital Government Phase Three: Government of the Web" (196). There are concrete policy goals associated with this coming phase, including a

"target of closing more than 95% of citizen- and business-facing websites" by 2011 in order to move them to a "public" cloud, "where services can run on any server anywhere in the world" (194) which would entail overcoming issues around data location, security and reliability. This "G-cloud" depends on the appropriate and secure management of citizen data: "If we see data as an innovation currency in the digital age," and after reading *Digital Britain*, it is implied, how could we not, "public data has a value but is in open circulation; personal data is put in safe deposit" (195). The integrity of a government representing the interests of the new digital citizen will rely, this suggests, on the decided and highly effective enforcement of that division.

The British Prime Minister Gordon Brown expanded on this element of governance in *Digital Britain* in a speech considering Britain's digital future, invoking a public service ethos of the semantic web, which might open "up the possibility of by-passing current digital bottlenecks" but would also require "radical proposals" from policy. British initiatives for the digital revolution, summed up as home access to super-fast broadband, open and interactive government data and the economisation of public service provision through digitisation, justify any necessary radicalism because they will eventually add up to the "reinvention of policy-making processes" and the "renewal of politics itself." On the way to this renewal, however, the citizens who "have never accessed the Internet" become "trapped in a second tier of citizenship ... denied a fundamental freedom in the modern world: to be part of the internet and technology revolution." This revolution stems not just from increased opportunities for government-citizen interaction or increasing amounts of open government data, but a challenge to the "policy-making monopoly of ministers and the civil service," in which government

becomes a citizens' platform: "All that is required is the will and willingness of the centre to give up control."

Proposals for a digital Canada

The closest Canada has come to an official national digital strategy was probably a rumour preceding the March budget that suggested the government would release a broad plan dealing with spectrum, telecommunications, broadband, healthcare and other digital matters in the wake of the momentum created by the not-quite anti-spam and copyright bills (Fournier), though such a comprehensive plan did not materialize. In recognition of this policy gap, a Canadian think tank, Nordicity, had already released a report called "Towards a National Digital Strategy," partly inspired by the vision of *Digital Britain*, which attempted to set out the rationale for a holistic strategy and to propose a process for generating one in Canada.

The Nordicity report proceeded on the contention that Canada lacks a digital strategy that "recognizes the huge impact of digital technologies on the workplace and society; facilitates the creation and distribution of content on digital platforms; and provides the appropriate incentives to ensure universal accessibility to broadband and digital TV services" (5). The interlocking issues of digital literacy, infrastructure (broadband access) and the culture industries would therefore provide a digital policy framework. In the absence of a holistic strategy, the report argued, a growing chorus of stakeholders in Canada had been advocating on digital initiatives but from piecemeal perspectives. In particular, the Canadian attention to digital commerce in 2009 needed to widen to "include the content side of the equation" (7).

Tackling its three subjects of concern, the report argued that Canadian policy should broadly foster digital literacy and creativity through workforce training and citizen engagement with the provision of digital services in public, private-sector and educational institutions. New platforms, decreasing advertising revenues and piracy also necessitated a strategy that would stimulate digital content creation, not just focus on opening broadband service and capitalizing on digital infrastructure, which would miss the "corresponding link to content and the need to create incentives for Canadian content developers" (15). A problem particular to the Canadian cultural production sector is a lack of capital to exploit IP, with Canadian producers "often compelled to sell their IP rights just to get their products made" (15). Since the organizations that buy these rights often do not exploit them, the Canadian cultural digital economy suffers from the unrealized value of these "warehoused" rights. As for the traditional cultural regulation of broadcasting, the authors argue, a digital strategy might provide long-term guidance for CRTC decisions, while ISPs should no longer be exempt from regulation (16). The traditional "dual system assumption of Canadian regulation, "whereby private broadcasters as well as public broadcasters are expected to contribute to the objectives of the *Broadcasting Act*" (16), also needs to be re-examined as platforms converge. Finally, the report notes, despite all the attention to copyright in 2009, the government's copyright consultations were not undertaken within the context of a holistic perspective on digital policy that might have improved their relevance.

While the authors share the widespread concern over Canada's lagging broadband performance, they argue that "it is more important to establish a process for setting and revising targets for the ongoing upgrading of broadband services, rather than freeze a

target around a particular speed objective" (21). A holistic digital strategy would also address broadband issues existing outside the realm of the CRTC, including access for low-income households and the wider implications of net neutrality. The transition from over-the-air to digital television transmission signals is also particularly problematic for Canada because in this case "the advent of digital technologies may decrease the level of TV services available to Canadians" (23). In order to foster the development of digital infrastructure the government will also have to find new funding from source such as spectrum auctions or a levy on ISPs.

Towards developing a digital strategy, then, Nordicity suggests "design principles" aiming to overcome polarization of government departments, including the establishment of a national digital panel and coordination with provincial levels of government and recognition of already-existing municipal initiatives, the level at which Canadian digital strategy-making now tends to operate. Without a holistic strategy, the "debate will be mired in the arcane and fragmented languages of broadcasting regulation, copyright revision, technological innovation, cultural subsidies and broadband infrastructure" (38), leaving Canada with reactive, narrow and piecemeal digital solutions.

As the Nordicity report notes, another source of calls for the government to develop a digital strategy has been the CRTC, which made the case again for a national digital strategy in a February 2010 report elucidating the challenges facing the Canadian regulatory framework in the current technological environment. In this report the Commission identified two outstanding trends within the communications field, fragmentation and consolidation. As digital technology produces an environment of

"choice, convenience, immediacy and the ubiquity of communications" (2) services converge, driving systemic change. While in the mid-term a handful of "gatekeeper" companies that control access to networks impute a need for consumer protection, the shape of the next-generation access environment "seems largely dependent on whether new wireless entrants can establish themselves as viable competitors" to incumbent cable and telephony providers (3).

The consolidated structure of these incumbent providers slices "across the emerging issue of ensuring that broadcast programming reflects both national and local interests ... and the issue of access to competitive telecommunications services" (38), i.e. the 2009 fee-for-carriage conflict and the question of competition in Canada's telecommunication industry and Canadian access to broadband. In 2008, 80 per cent of communications revenues in Canada were generated by eight companies, and eight companies controlled, directly and indirectly, 97 per cent of all television revenues. The natural tendency toward vertical integration within the industry, however, has been forestalled by regulation (40), though recent government machinations have rekindled longstanding rumours of a merger of two major telecommunications companies, Bell and Telus. Broadcasters in particular may be served by further consolidation with distributors "or if they take on the role of gatekeeper to Internet content" (40).

Extrapolating the regulatory implications of this converged environment, the Commission argues that a "holistic approach" is required for broadcasting and telecommunications sectors, or at the very least a systemic understanding of their interaction (41). As for the current fragmented environment, in which consumers may go outside the traditional Canadian broadcasting system to acquire content, also entails a re-

evaluation of the traditional balance in which commercial access to the system is swapped for contributions to the promotion of Canadian content, dependent as this is upon the territorial and geographic integrity of a Canadian rights market. The old understanding in the telecommunications system, in which protection from competition was exchanged for the obligation to serve the public, is also under strain. However, "technology trends driving fragmentation and pressure on traditional systems are relatively slow-moving" (44), while the "natural" tendency to horizontal and vertical integration is balanced by regulation for diversity and competition.

In this context, the Commission notes, loosened foreign ownership restrictions may appear attractive to government and consumers, especially if it continues on it current trajectory of a non-interventionist approach to the telecommunications market and forebears from regulation that would open up infrastructure to new entrants. In this case, loosened ownership restrictions might logically result in lower retail prices, but

> convergence makes it increasingly difficult to separate network elements from content. The requirement to maintain Canadian content assets in domestic hands, in the Commission's view, requires that existing foreign ownership restrictions be maintained ... [the Commission] has made clear its position that control of communications companies should remain in domestic hands. (46)

Ultimately, there are no incentives for multi-nationals to produce Canadian content and even in the digital age "a Canadian capacity to reflect Canadian cultural values must be protected" (46). In April, the Commission Chair reiterated this position in front of a Parliamentary Committee called in the wake of controversy over the Globalive case.

In addition to these considerable regulatory strains, developments in the communications industry have begun to impinge on interests outside the scope of regulation, the CRTC notes, particularly in the realms of competition and copyright policy, taxation, privacy and spectrum management. "The development of a domestic digital economy suggests the need," then, "for a holistic review and comprehensive strategy. There is momentum within government, private enterprise and civil society to consider a national digital strategy as has been contemplated or undertaken in other jurisdictions" (48). In the undertaking of such a strategy, the Commission argues that clarifying the "treatment of converged entities will be important," i.e. the question of whether ISPs that deliver traditional broadcasting content are subject to the cultural requirements of the *Broadcasting Act*. The Commission also notes the looming issue of piracy in the future fortunes of broadcasting and telecommunications companies, a "key challenge ... which cannot be understated" (48). While it mentions the controversy-inspiring "three strikes" policy, it does not venture very far into that territory, advocating that a "Canadian solution to ensuring the continued viability of the Canadian broadcasting industry may require a partnership with ISPs in one form or another" (48).

A digital strategy, of course, will cover a wide range of issues but it must also, the Commission argues, "consider the economics of competition in the communications sphere," that is, a digital strategy must take a holistic approach to competition as a function of market forces versus regulatory intervention, getting to the crux of an ongoing argument or current "tension," as the report puts it, "between advocates of unencumbered market forces as the means to create competition, and those who predict the emergence of a facilities-based duopoly with respect to residential services" (48). Above all, in the

pressing matter of achieving universal national access to advanced digital infrastructure, the government must be cognizant of the fact that under the current infrastructure the regulator cannot be a means to this end (49). Moreover, the approach to such a strategy must not get wrapped up in the technological-economic aspect of the equation but keep in mind the age-old question of content:

> A world-leading broadband network infrastructure is not an end in itself. The "pipes" are only useful inasmuch as they are used to deliver services, applications and content to Canadians. It will be necessary to ensure that Canadians can contribute to and see themselves in stories that are accessible on multiple digital platforms, whether from private, public or community sectors. The role of the public broadcasters in this environment will be a key consideration. (49)

One reaction to this CRTC report came from wireless providers who accused the CRTC of making a "regulatory power grab," portending struggles for the "fourth" technological era forecast in the C.D. Howe report. A regulatory official at Telus said that he construed the "document as being a regulatory manifesto for the perpetuation of regulation in the face of the incredible choice and diversity and individual freedom that the Internet has provided Canadians" (McNish and Marlow). These accusations came in the lead-up to a CRTC hearing on what the Telus official called a "narrow" issue of whether the regulator should have authority to protect "against wireless service discrimination" (McNish and Marlow), a determination related to the broad issue of affordable remote and rural access to increasingly demanded high-speed services. In Canada, such broadband access is often impossible to secure or prohibitively expensive in areas outside of metropolitan centres. How to serve rural Canadians and overcome this "digital divide," then, signals a coming

conflict pitting government and regulators against telecommunications companies in a fight over who will fund the remote networks bringing the digital economy to Canada's rural communities. While providers argue that "without huge government subsidies, they could never earn a profit building expensive wired connections to sparsely populated rural regions" (Marlow and McNish), Clement recently told reporters that "Canada's broadband leadership has 'vanished,' and the digital divide ... will not be bridged by government alone" (Marlow), especially considering the government's 2010 commitment of $225 million for remote access hasn't yet been deployed because of uncertainty over how fast speeds should be and where networks should be built. In comparison with the dollar amounts of other national funding schemes and in light of the billions the sector has invested in infrastructure, industry in Canada then makes the case that it, not government, is in a leadership role when it comes to the digital economy. While the government continues to study the issues from established perspectives, through an ongoing Canadian Heritage committee on new media and recently announced Industry consultations on the digital economy, proactive initiatives in Canada have often come from municipalities and individuals working from without both industry and government (Mulley).

Conclusion

The result of piecemeal digital policymaking in Canada has often been fraught initiatives seeking broad changes in the service of specific interests. The uncertainty proceeding from various incomplete interventions in policy regimes from both internal and external parties has weakened the independence of independent public communications institutions, including the CRTC and CBC, which subsist on politically

shaky grounds. Ambiguous signals on the key question of foreign ownership have provoked the country's financial sector (disappointed in the tantalizing hope of a few mega-mergers) and a domestic culture industry (convinced that the government is moving toward dismantling institutional support for its existence). Meanwhile, uncertainty about the grounding of Canadian communications regulation itself – the justification for domestic ownership and for regulatory intervention at all – contributes to conflicting visions for its future. Many theorists have argued that this comes from a constructed obscurity of the public interest justification for regulation, and that Canadian ownership requirements do not suggest a patriotic link between owners and support for domestic content but give the regulator leverage and authority that it would not otherwise have over transnational organizations. Moreover, the communications regulation is not wholly justified by the scarcity of the spectrum resource, but by democratic and public interest objectives for communications in themselves. The "justification for regulation is to make sure there is a Canadian broadcasting system in the first place," and while economic regulation will always remain an integral part of the framework, argue Salter and Odartey-Wellington, in the current climate the balance has tipped too far in the economic direction to the detriment of the social and cultural objectives expressed in the *Broadcasting Act* (170). The would-be globally competitive giants in the converged Canadian communications sector have reduced the CRTC's leverage; loosening ownership restrictions would result in lesser leverage still.

Contextualizing the history of the CRTC within a constantly changing technological environment, Salter and Odartey-Wellington therefore argue that public interest objectives can be preserved, if there is political will, within the specific category

of broadcast media despite overarching convergence in the communications sector. If we preserve this distinction, as most short-term perspectives on the Canadian regulatory framework do, then there are two central questions facing current Canadian communications regulation. For broadcast, the question is backward-looking, asking whether old media should continue to be regulated in the face of the new, which have been ambiguously exempted under the current framework. In the telecommunications sector, the question has become one of competing economic models for regulation predicated, on the one hand, on traditional monopoly- or oligopoly-based networks with universal service commitments, and on the other, ambitious access regulation aiming to promote intensive competition and innovation. Both sides of this argument aim for the same objective, the establishment of comprehensive national high-bandwidth broadband networks that are cast as emergent and transformative (or revolutionary) communications utilities, straining the limits and delimitations of regulation.

Taking a broader perspective on the digital policy debates in Canada in 2009 in which to contextualize the specifically regulatory debate is useful, then, in elucidating how new media and digital technologies are at any rate always already part of regulated systems, whether this regulation comes from international government policy frameworks or, in a broader understanding, from highly developed converged systems of production, distribution and participation that have concrete consequences for the freedoms users have on networks. The "crises" of fragmentation and lack of control characteristic of the fee-for-carriage, piracy, and privacy debates are often met by the rise of newly integrative "second wave" structures. Hence the organizational theory which suggested that an information economy would lead to decentralized, less hierarchical media organizations

(Küng) proved to be at odds with the growing convergence of communications in the twenty-first century. The transfer of power, then, from content producers to carriers, entails a translation of public interest objectives to the realm of telecommunications not as a means of curtailing the liberties inherent to the new networks, but as a means of counteracting the restrictive modes of regulation, or interested interventions, already determining their uses.

As in the net neutrality debate, which translated the usual preoccupations of Canadian communications policy – media diversity in a converged environment and the implications of domestic ownership – from the realm of broadcasting to that of telecommunications (as the effect of control of the network on the information it carries and the capacity of Canadian-owned infrastructure) a national digital strategy might translate the public interest aspect of communications to match its dispersal, from an economic perspective, across various sectors of governance. In the immediate Canadian situation, a digital policy would also enable government and its institutions to form proactive and positive initiatives rather than reactive and defensive ones, provide grounding for decision making in independent communications bodies, and address the problem of deferred and deflected political decisions in the face of consumer and industry lobbies. As has been noted by many commentators, a policy linking digital technology distribution, production and Canadian cultural policy would also serve to address particularly Canadian problems of centre-margin relations in national networks aimed at solidifying national identity. It should be noted that to the extent such a policy is pursued, the universal availability of high-bandwidth network connections becomes a problem for culture.

Finally, the question of digital technology policy and national territoriality negotiates a difficult "slippage," in Canada and elsewhere, where the particularities of nation-states in some cases are invoked as justification for particularistic policy, while in others, globalized industry and a normative international legislative environment are determinative of domestic matters. In this way national digital economies are always doubly competing with other discrete national economies as well as participating in an inclusive global industry of free-flowing information. The risk that a political economy perspective has perceived here, as in Abramson and Raboy's analysis of the transformation of the meaning of the "information society" in the 1990's, is another instance of convergence, in this case between trade and communications policy enabled, at that time, by the divergence of the industry and cultural perspectives, while at the same time "the information society project was ... dispersed across the field of governance" (778). The resulting implication, that the role of government would be that of "facilitator" of economic flows of information, and that "public interest representation" would take on the "guise of consumer representatives" (781) is certainly very evocative of the role that existing national digital policies see for government as "enablers" of commerce and for citizens as government-platform users, digital workers and confident digital consumers. However, the interactive opportunities of digital economies and the grounding of reform movements on the consumer-interest perspective have also suggested the positive aspects of digital mobility and possibilities for resistance in user-appropriation.

At the close of what we might term "first wave" cyberculture, focused on the liberating potential of anonymous networked communication, Abramson and Raboy suggest that what is at issue in the grounding of cyberspace is "not simply whether

regulation will bump out libertarianism," which may, as the web becomes part of everyday culture and social infrastructures, be inevitable, "but why: to act as financial regulator" (788). From this perspective Canada's "lagging" digital performance, relative to other networked nations, implies, a "backwardness" that on the hand has resulted in a national digital divide and a government culture almost totally uninterested on web-enabled transparency and open data initiatives, but on the other, the absence of "draconian" copyright regimes that threaten privacy and a domestic communications industry that has resisted integration to transnational corporatism. The broader question this suggests is whether overcoming the former must inevitably be linked to realizing the latter, as has been the case in many other jurisdictions. The rhetoric of government 3.0 does offer an alternative vision of how grounded networks might serve democratic politics, partly through the administration of unimpeded information economies, but also through a change in the "medium" of government from roughly one of broadcasting (top-down, centre-margin) to one of decentred communications utility, though it is, as with the obverse side to the digital economy, mirrored by the potential for perfectly controlling and authoritarian networked regimes. In any case, the "revitalization" of politics posited by Brown, which the web was once supposed to enable by its potential for perfect anonymity, now becomes a function of the perfect identity of information.

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