Globalization, the Internet economy, and Canada

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Information and communications embody the very existence of Canada. At the risk of focusing only on an abstracted part of his argument, Cole Harris (*this issue*) elaborates on the importance of transportation and communications in Canada's past and speculates on their role in the country's future. He expresses unease in the dichotomous role that communications and information systems have for maintaining and transforming national identity and for absorbing the national soul within a broader continental, if not global, culture. The juxtaposition of Harris' important essay with the equally absorbing paper of Glen Norcliffe (*this issue*) unites issues of cultural transformation with those of economic development. All five biographical sketches developed by Norcliffe draw out the importance of communication and information in linking personal and corporate agenda with goals of global economic hegemony. They attest to Canada's role as both agent and object of globalization.

While Canada is not unique in its relationship to the global community, Canadian scholars have played a leadership role in advancing theoretical and scholarly understandings about the positioning of regional and local interests within the sphere of expanding international influence over culture and economy. Harold Adams Innis (1894-1952) and Marshall McLuhan (1911-1980) are exemplars. Roger Hayter and Trevor Barnes (*this issue*) draw on Innis' *The Fur Trade in Canada* (1930), his influential contribution to understanding Canada's distinctive economic and political development in terms of resource exploitation for external markets. In *Empire and Communications*, Innis (1950) moves beyond Canada to explore more generally the historical paths of nations and empires relative to their use of communication modes, laying the groundwork for broad trans-disciplinary advances in communications studies.

Innis and McLuhan were seeking to understand social development. While Innis saw both the potential and the threat of communications technologies to Canada's national fortunes and cultures, his work was influential primarily within the intellectual community. McLuhan, an exhaustive scholar and a recognized communications theorist, studied the influence of media advertising on public consciousness. With publication of *Understanding Media* (1964), he emerged as a public icon of the shrinking world and its possibilities.

McLuhan's coining of 'global village' became a mantra for advocates of alternative lifestyles and social systems. The seemingly geographical absurdity of merging 'village' with 'global' poses an enticing gestalt of geographical interpretation that is equally but differently at ease with the conceptions of Walt Disney or Conrad Black as it is with the champions of 'place' in current social-science and humanities thinking. This apparent contradiction opens the concept and geographical reality of 'Canada' to exploitation by the new digital economy, a subject that warrants discussion in any overview of Canada's economy.

There are three objectives for this companion piece to Norcliffe's contribution. First, it summarizes the significance of the information and communications technology (ICT) sector on electronic commerce in Canada. Second, mindful of the concerns of

McLuhan and Innis, it assesses information technology, particularly the Internet, as a facilitator in the structural bondage of Canadian communities with the globalized economy. The third objective invokes concepts of social capital and radical technology to explore questions about the likely impact of electronic commerce on the culture and economy of Canadian communities. Drawing on scarce empirical documentation and on theoretical insight, this piece explores potential outcomes that could benefit the global balance sheet of Canadian commerce but threaten local place-based social capital and regional infrastructure.

A summary of ICT and Internet-based electronic commerce in Canada

Three recent reports provide the foundation for a brief overview. First, Industry Canada (1999) offers an interesting promotional document extolling the competitiveness of Canada among world nations in the ICT sector. Second, the *Information and Communications Technologies and Electronic Commerce Survey* of approximately 23,000 Canadian firms in 1999 gives what Statistics Canada dubs as "possibly the first economy-wide survey in the world to measure the value of e-commerce" (Statistics Canada 2000, 2). Finally, the Canadian E-Business Opportunities Roundtable (The Boston Consulting Group (Canada) 2000)[1] documents the vision of a consortium of leading ICT and related commercial firms on how to promote Canada as a leader in Internet commerce. These reports are mined for empirical representation of where Canada stands today within the realm of electronic commerce and for insight into the mindset of the principal contemporary Canadian agents of globalization.

Canada has made extraordinary achievements in expanding network linkages on the information-highway, a factor that could benefit significantly the global competitiveness of her ICT regional clusters. Industry Canada notes that more than 90 percent of Canadians are potentially accessible via two national cellular networks, and that additional carriers are quickly expanding digital cellular telephone services across the country. Several hundred Internet Service Providers allow access to a variety of on-line resources (e.g., chat rooms, bulletin boards, and Web page hosting services), and public-access Internet for remote rural communities has expanded from 20 to approximately 2,000 between 1994 and 2000. Clearly,

the Internet is accessible to most Canadians, with many households linked to high-speed DSL and cable modems. High home computer penetration rates, and low Internet access charges relative to international standards offer a hospitable environment for electronic commerce. Table 1 presents several recent indicators of Internet access and use by households and businesses for making purchases and sales.

In general, Canada is well served with the infrastructure needed for internationally competitive electronic commerce. A centrepiece strategy is the Canadian Network for the Advancement of Research, Industry, and Education. CANARIE promotes collaboration among more than 500 industry, academic, and government participants. By 2001, these high-tech and knowledge-based collaborators will be served by a fast optical fibre national network (CA*net3) at more than 40 gigabits per second – roughly 16 times faster than the fastest current initiative in the United States (the Abeline network).

A majority of Canadian businesses use e-mail and the Internet. Yet, the sale of goods and services from businesses to consumers (B2C) via the Internet is low (see Table 1). Only 10 percent of businesses in 1999 sold goods and services over the Internet, representing less than 0.2 percent of total operating revenues (compared with 0.6 in the United States). Statistics Canada's Internet survey shows that Internet sales did not exceed 1.5 percent in any economic sector even though 22 percent of private-sector firms maintain websites. Notably, the survey did not include proprietary networks, which service significant electronic data interchange among some of the largest ICT firms, falling into the category of business-to-business (B2B) e-commerce.

There is considerable discrepancy in the estimates of e-business. In contrast to the Statistics Canada survey, the Roundtable (2000, 6) reports in excess of $28 billion in revenues (1.5% of total GDP) and 95,000 jobs in 1998, and sees this increasing to $156 billion and 180,000 additional jobs by 2003. They include in their numbers both direct e-commerce revenues and the revenues of companies that provide products and services to enable e-commerce. Although Canada ranks second to the United States in the global share of e-commerce revenue, the Roundtable sees prospects for significant growth. Canada's success in this area will depend, however, on adoption of strategies to protect home markets, to shift Canadian e-commerce purchases from American to Canadian sites, and to intensify

Table 1
Canadian Internet commerce

Internet/E-commerce indicator		Year	Billion Cdn $
Global Internet commerce[1]	total	1999	195.4
	expected	2003	2,810.0
Canadian E-commerce[2]		1999	
Business to business (B2B)			9.57
Business to consumer (B2C)			1.45
Total			11.02
Total (expected)		2003	93.67
			Percent
Canadians Accessing Internet[3]		1996	23
		1999	49
Internet Access by Region[4]		2000	
Atlantic			43
Quebec			40
Ontario			53
Manitoba/Saskatchewan			48
Alberta			52
British Columbia			53
Canadian Internet users who have		1996	11
made purchases by Internet[3]		1999	25
Canadian small and medium-sized		1996 (1st quarter)	15.2
enterprises (SMEs) connected to		1999 (4th quarter)	65.1
Internet[5]			
Canadian businesses with Websites[6]		1999	
Private sector			21.7
Public sector			69.2
Canadian businesses selling		1999	
goods by Internet			
Private sector			10.1
Public sector			14.5
Canadian businesses purchasing		1999	
goods by Internet			
Private sector			13.8
Public sector			44.2

SOURCE: Compiled by Industry Canada, Canadian Internet Commerce
Statistics Summary Sheet, August 22, 2000 (See http://e-com.ic.gc.ca)
from the following sources -
1   International Data Corporation
2   Boston Consulting Group
3   A.C. Nielsen The Canadian Internet Survey, 1966, 2000
4   A.C. Nielsen, Internet Planner 2000
5   Statistics Canada
6   CFIB Internet surveys, 1996, 1999

Canadian business presence on the Web.
   The Roundtable sees the establishment of geo-graphically defined 'e-business clusters' as critical for any successful strategy to enhance Canada's position in electronic commerce. These are equivalent, in principle, to Britton's (1996) 'high-tech centres' and to Industry Canada's (1999) 'ICT clusters'; however, the Roundtable (CBOR 2000, 7) sees Canada's e-business clusters (Toronto, Ottawa, Montreal being the most significant) as 'nascent' in comparison with US counterparts in Boston, New York City, and San Francisco. Neglected in the Roundtable discussion is any attempt to understand the relationship between e-business clusters and more balanced notions of regional development or to assess the social, cultural, and economic costs associated with the possible displacement of place-based commerce.

Information technology and the globalization of Canadian communities

With inevitable improvements in network bandwidth and service quality, information technology is likely to broaden its influence over the Canadian economy and related social processes. This may be of special concern to non-metropolitan Canada (see Gilbert and Villeneuve 1999), but the question is one that faces information societies at all geographical scales. The reports mentioned in the last section adopt a globalization perspective based on enhanced integration of the worldwide economy. This intensified globalization is facilitated by international regulatory regimes, metropolitan dominance over international capital, standardization of communication and transaction processes, and the ability to move information and money with exceptional speed and precision. Information technology is but one tool in this globalization process, but an important one. In surveying 'The New Economy', *The Economist* (2000, 40) highlights this close relationship: "By reducing the cost of information and communication, IT has helped to globalise production and capital markets. In turn, globalisation amplifies the economic gains of IT."
   The concept of human extensibility (Janelle 1975) describes how individuals and institutions use technology to project their presence and ideas beyond their immediate locales. With an estimated 350 million worldwide users and a projected one billion users by 2004 (*The Economist* 2000, 5), the Internet radically transforms the ability to extend one's presence at geographical scales far beyond local regions and to do so simultaneously with any number of other individuals and institutions. Unlike the broadcast media, however, the relationship is reciprocal; any of the 350 million other users can just as easily

make contact with any single user. The interactive quality of the Internet penetrates the home, the firm, and other institutions with an unparalleled variety and quantity of content. The ability of the Internet to bypass scrutiny at national frontiers and to penetrate other political, economic, and cultural boundaries makes it an ideal vehicle for promoting a variety of causes and for meeting a number of information needs in society. But, given the dominant source regions of Internet content (derivative mostly from the United States), it is also emerging as a prominent instrument for building the requisite consciousness of consumption that serves the interest of global capital, the linguistic dominance of English, and the standardization of culture. One manifestation of this is the increasing role of on-line marketing.

The transition to on-line marketing masks global disparities in information infrastructure and generates concerns for equity, unbalanced development, and regional dependency. Nonetheless, little academic or policy attention has been directed to the prospect that Internet commerce and cultural products might diminish the success of local commercial and cultural institutions, and foreclose opportunities to establish social networks based on established lifestyles of face-to-face socialization within local settings. Through Internet infrastructure, it is possible that some of these elements of localized place-based 'community' will be displaced by the offerings of cyber communities and cyber commerce originating mostly from the major ICT centres of the United States, and to a lesser extent of Europe and Asia. Concepts of *radical technology* and *social capital* are called upon to explore this clash of interests and possible outcomes.

The Internet as radical technology

Information technology and especially the Internet exhibit many of the properties of a radical technology (RT), a concept developed by Ivan Illich (1974). RT refers to a technology that undermines the existence of prior technologies and of established customs to the point where those unable to make the transition to a new way of doing things are often disenfranchised. A classic example is the automobile. It benefits society in many ways. For individuals who are unable to drive or to own one, however, the automobile poses problems associated with the increasing distances between residences and basic service facilities, the demise of local public and private services

within range for walking and public transportation, the transfer of basic services from rural centres to larger places, and the deterioration of public transportation infrastructure. In this light, consider the following questions about the Internet:

- Does it undermine the provision of services at local levels to the point where they are eliminated or modified to such an extent that large proportions of a local population lose access to what once was provided locally by bricks and-mortar facilities?
- Does it retard the growth of a market threshold to support entry of desirable local services?
- Does it create remoteness in parallel with its ability to shrink the significance of distance and to demote the role of space and place in human activity patterns?

The Internet, as an open and interactive technology without filters or censors, has enormous potential to penetrate human consciousness and to reshape our social spaces within the framework of a globalized economic system. To the extent that it displaces local services, the Internet creates distance that it alone can overcome, but only for those with the technical wherewithal to use it. As we become increasingly tied to Internet infrastructure and more reliant on its content for information and entertainment (much of which originates elsewhere), its use becomes a forced requirement rather than an option. There is a shift from a discretionary to a mandatory commitment of personal time budgets and community time supply (see Carlstein 1982) to keeping up with the latest software and Internet search engines. For those without access to the prerequisite technology, there is the potential loss of personal autonomy through forced dependence on those who do. In a geographical sense, there is a loss of continuity (temporally and spatially) with both the culture and the economy of regions and localities. The Internet is a radical technology.

Internet consequences to local social capital

According to Coleman (1988) and Woodlock (1998), the quality of human relationships at the group level is conditioned by the strength of networks that imbue a society with social capital. Social capital thrives on relationships nurtured through repeated contact, familiarity, accrued trust, and mutual support, often expressed in the sense of obligation that is shared among neighbours in the setting of real places.

Hanson (2000) raises questions regarding the suitability of cyberspace connectivity as a substitute

source for social capital at the place-based community level. While there are opportunities for cyber networks to complement place-based social capital, they might also detract from communities by diversion of personal time that could be employed in establishing and strengthening existing social ties at the everyday place level. Even if Internet resources are available universally, inequities in the ability to exploit it may remain, based on knowledge levels, language, and access to the latest web design tools and expertise, among other factors. According to Hanson, it threatens to strengthen rather than neutralize existing social cleavages based on class, political disposition, or professional interest, and may weaken society's ability to communicate across these barriers.

The rapidity of Internet acceptance in the very short time frame since its inception make empirical answers to the above questions and issues both difficult and premature. Yet, by the time detailed empirical evaluation becomes possible, it may already be too late to alter the path of change or to make adaptive adjustments that make the most effective use of the new technology and that protect long-term social benefits of more traditional practices. It is worth noting that the critique of the automobile never began in earnest until the 1970s, long after urban spatial structures and human activity patterns had responded with greater distances between activity sites and automobile dependence.

Extra-local dependence – a community's reliance on more distant and higher-ordered centres of the global metropolitan hierarchy – provides one standard for assessing the impact of globalization on local infrastructure. The transition from bricks-and-mortar commerce to e-commerce could have significant impact on such a measure, making it a reasonable surrogate for monitoring changes at local and regional levels.

Extra-local dependence

The ease and speed by which individual/community time supply and income can be transferred to extra-local destinations poses an exceptional dilemma for developing countries, but even within a country such as Canada, both peripheral and central regions could be impacted adversely. These transfers may offer local benefits in the form of services and information not otherwise available, but the global centralization of Internet technology may favour accumulation of capital at the upper levels in the global urban hierarchy and drain the time and income resources from local regions. This idea corresponds with the view of

Jane Jacobs (1972) regarding the magnification of global-level and intra-national discrepancies in development through the dominance of transnational capital and the infrastructure advantages of wealthy, densely developed regions. Armstrong and McGee (1985), using Latin America and Asia as examples, advance a similar argument related to the cultural and information products associated with information technology. The implications of easy penetration of international capital through electronic commerce and other Internet-based connections need to be grounded in assessments at local levels and to be cognizant of a region's position in the hierarchy of globalization. Although Canada has significant ICT concentrations, and is second only to the United States in electronic commerce, almost half of all purchases by Canadians over the Internet are from foreign sites, a situation that the Roundtable (CBOR 2000, 16) portrays as a "supply-side deficit for Canadians in business-to-consumer e-commerce".

Little is known about how electronic commerce and entertainment affect the ability of localities to sustain and attract establishments that promote net social gains to a community. For example, to what extent might Internet offerings compete directly with bookstores, public libraries, greeting-card shops, drugstores, and local newspapers? Does the increasing magnitude and allure of Internet offerings divert a community's time supply and income from the locality and from the support of local enterprise to the profit of extra-local destinations? In projecting the potential of 180,000 new Canadian jobs in Internet-related activities by 2003, the Roundtable (CBOR 2000, 7) sees the Internet as "enabling [Canadian] companies to compete internationally with a virtual, instead of local, physical presence" but notes "80 percent of e-commerce jobs [are] assumed cannibalized from bricks-and-mortar operations" (*ibid.*, 14). No assessment is provided as to the social impact of such displacement with e-commerce on community infrastructure, but the Roundtable makes the implicit point that such job creation will be limited primarily to Canada's e-business clusters. The other important issue is competitiveness relative to other global centres. The Roundtable cites the example of Amazon.com to illustrate " . . . how foreign online competitors can steal share in what has traditionally been a domestic market" (*ibid.*, 14). Related job losses in such areas may be made up for by growth in local warehousing and delivery services, but there is need to examine

the implications of such tradeoffs on the social cohesion and cultural integrity of community life.

Conclusions

Canada's vision of a nation-wide information and telecommunication infrastructure was and is central to strategic efforts to maintain some control over domestic information transfers and to position Canada favourably in the global information economy. This development also creates a conduit for exit of Canadian capital to external markets and for the extraction of bricks-and-mortar business from small-town Canada to the metropolitan locations of e-commerce enterprise. This loss could accelerate as department stores (e.g. The Bay and Zellers) discount stores (e.g. Wal-Mart), mail-order firms (Sears), and new Web-based merchants broaden their e-commerce offerings (currently including tools, furniture, electronics, small appliances, toys, clothes, perfumes, pharmaceutical goods, watches, home accessories, books, CDs, and computers, to name a few). Even Conrad Black's holdings in Canadian newspapers have shifted to electronic publishing, possibly responding to anticipated profit margins and to the ability to service a potentially larger market from a more centralized origin.

The ICT sector will remain fundamental to Canada's economic future and to her position within the global system, and e-commerce will be one of the vehicles that condition the interplay between local economies and globalized markets. Mitigating the impacts of this radical technology on the social capital of community life will be one of the challenges of the next fifty years. The Internet offers opportunities to improve the distribution of social and economic services, but the challenge is to maintain non-economic values based on appreciation of what society shares at local and regional levels. Internet commerce has the capacity to impede or to improve place-based opportunities for jobs and the provision of supportive social infrastructure. As Canada's regional development initiatives focus on physical infrastructure for high-speed movement of massive amounts of information among transnational firms, it is useful to reflect on the role that 'grounded' social and economic resources at local levels can have for the attraction of capital and for the local survival of home-grown enterprises. Information technology should and can foster the formation of social capital by improving human resources for education, health,

and emergency response, and by nurturing the sense of sympathy and obligation to one's neighbours. The commitment for global linkage must not overshadow human needs rooted in the basic socio-economic circumstances provided at local and regional levels. As Shrecker (1997) and Teeple (1995) observe in their reviews of globalization, success in this endeavour could be central to maintaining social civility in the century ahead. Success for Canada in this context is to avoid the cultural deterritorialization described by Norcliffe and to heed the wisdom of Harris – to eschew the annihilation of the past.

Notes

1 Referred to, henceforth, as the "Roundtable"

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