Digital Restructuring: Gender, Class and Citizenship in the Information Society in Canada

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‘Digital restructuring’ denotes a phenomenon integral to but also distinct within economic and political restructuring broadly conceived. The concept of restructuring can be modified with ‘digital’ to forefront the important technological dimension of global restructuring, as well as to indicate developments associated with the new ‘information economy’. Digital technology and digitization have been integral to the scope and speed of the global economic and political restructuring of recent decades. They have constituted the technological conditions for some of the more characteristic aspects of this process; from the flexibilization or outright shedding of labour, to the mobility of production and capital and the globalization of trade and financial markets. This paper seeks to debunk much of the corporate and state mythology of digital restructuring currently in circulation by drawing upon the analyses of digital technology and restructuring advanced by critical scholars and progressive social movements, and to highlight the dangers to progressive political movements and discourses posed by the very nature of these representations.

Increasingly, corporate leaders, government officials, and media pundits portray the restructured near-future of advanced capitalism as a ‘digital’ one, forefronting the centrality of digital technology and the digitization of information to the social, economic, and political changes currently sweeping Canada, as well as the rest of the OECD. Moreover, they allege, the digitally restructured information economy and society will feature greater economic growth and employment, improve the quality of work and family life, achieve greater access to opportunity, education, training, and health care for the economically and socially marginalized, and enhance the quality of democracy and political participation. Corporate and state discourses in Canada rehearse this mantra of the ‘horizontalizing’ and democratizing logic of digitalization in myriad representations of the putative economic, social, and democratic benefits of digital technology and the information society offered up to workers, consumers, and
citizens. This paper aims to debunk much of the corporate and state mythology of the ‘information society’ currently in circulation by drawing attention to the many ways in which digitalization manifests features, effects, and tendencies which are demonstrably inegalitarian and anti-democratic, and to highlight the challenge posed to progressive social change by the very nature of the way in which digital technology and the information society are represented.

Many scholars, trade unionists, and feminists have recently begun drawing attention to the problematic nature and effects of digitalization in terms of gender, class, and democratic citizenship (Aronowitz and Cutler, 1998; Menzies, 1996). Their work brings into increasingly sharp focus what we might call ‘digital restructuring’, that is, the integral role played by digitalization in the economic and political restructuring which has swept the major industrialized countries since the 1970s. New information technologies have constituted the technological conditions of possibility for numerous aspects of this neo-liberal restructuring agenda (Deibert, 1997; Hepworth, 1991). Neo-liberal restructuring in general is informed by a very different logic from that attributed to digitalization in popular mythologies, one involving a decreased role for the state as a purveyor of public goods and lever of democratic power along with the increased influence of ‘market forces’ in all aspects of economic and social development, including public policy. Far from adhering to an egalitarian and democratizing logic, neo-liberal restructuring has produced a significant polarization of economic, social, and political power in the OECD countries, shifting power increasingly in favour of the already powerful (Bakker, 1994, 1996; Brodie, 1995, 1997). We maintain that digital restructuring is embedded in and participates in this logic in a variety of ways, and that the rhetoric and politics of the digital or information society must not be allowed to become detached from this fact.

In addition to its socio-economic effects, digital restructuring harbours implications for democratic citizenship which are ambiguous at best. While often touted as the harbinger of a new participatory phase of democracy and democratic citizenship, digital restructuring can be shown to dovetail with an increasingly hegemonic neo-liberal model of the state and citizenship which promises to undermine rather than advance the democratic rights, as well as the economic and social welfare, of the majority of citizens in the OECD (Brodie, 1997).

Critical perspectives on digitalization are in danger of being neutralized, however, as a result of the powerful mythologies perpetrated in state and corporate representations of digital technology and the information society. Disturbingly, state and corporate discourses of digital restructuring largely ignore the role it has played in deepening economic, social, and political inequality. Curiously, however, these same discourses respond indirectly to concerns over employment, equality, and access which have been at the forefront of social movement politics for decades by portraying digitalization as the technological solution to these chronic problems. However, if corporate and state discourses of the information society implicitly acknowledge the socio-economic shortcomings of advanced capitalist democracy, they undermine criticisms aimed at digital restructuring. Indeed, state and corporate mythologies of digitalization and the information society may well serve to conceal as well as neutralize
resistance to the underlying logic of digital as well as economic and political restructuring.

While the concept of digital restructuring may well be applicable to all of the major capitalist countries, our discussion is confined to the case of Canada. Drawing on examples from the Canadian case, we argue that digital restructuring has played an integral role in the Canadian political economy as a whole, and has contributed to producing the distinctively neo-liberal socio-economic contours it now shares with all of the OECD countries, including chronically high unemployment and growing income polarization, increasingly tenuous and contingent forms of work and employment, and rising barriers to opportunity, education, and health care faced by marginalized groups, particularly women, low income earners, and persons of colour. The discourse of our alleged digital near-future is especially germane to the Canadian case, where state and corporate representations of digital restructuring have increasingly portrayed it as central to Canada’s future economic, social, and democratic development. Corporate and state hyperbole regarding the potential of the Information Highway, in particular, depict it as the solution to a host of economic, social, and political problems plaguing Canada. Disturbingly, the way in which digital restructuring has been represented to Canadian workers, consumers and citizens, as both inevitable and benign threatens to neutralize progressive efforts to draw attention to its negative effects, and to resist the larger neo-liberal restructuring agenda of which it is an integral part. In our opinion, the manner in which digital restructuring has both been implemented and represented by the state and capital in Canada reveals both dangers as well as lessons for those on the forefront of progressive social and political change.

None of this is to endorse some new anti-digital Luddism. We take the position that new technologies are ambivalent; often associated with the accumulation strategies of capital or the strategic interests of states and military agencies, new technologies are also prone to engendering unintended consequences, for better or worse, and are open to progressive cooptation and subversive appropriation. However, the rhetoric and ideology of digitalization and the information society must be interrogated and disrupted before current relations in the information economy and society between corporate producers of digital technology and content, on the one hand, and workers, consumers, citizens, and governments, on the other, become frozen.

Digital Restructuring and the Logic of Neo-liberalism

‘Digital restructuring’ denotes a phenomenon integral to but distinct within economic and political restructuring broadly conceived. The concept of restructuring can be modified with ‘digital’ to forefront the important technological dimension of global restructuring, as well as to indicate developments associated with the new ‘information economy’. Digital technology and digitization have been integral to the nature, scope, and speed of the global economic and political shift to what has been variously described as the new ‘post-industrial’, ‘postmodern’, or ‘post-Fordist’ phase of capitalism (Bell, 1973; Harvey, 1989; Amin,
1994; Kumar, 1995). They have constituted the technological conditions for some of the more characteristic aspects of this process; from the loosening up of so-called labour market ‘rigidities’ and outright shedding of labour (Menzies, 1996; Aronowitz and Cutler, 1998) to the mobility of production and capital and the globalization of trade and financial markets (Hepworth, 1991; Comor, 1994; Deibert, 1997). None of this is to downplay the importance of the economic, political, legal, and ideological dimensions to these changes, which in Canada have played at least as important a role in the advent of globalization and neo-liberalism (Panitch and Swartz, 1985; Panitch, 1987; Brodie, 1997).

Technologically speaking, digital restructuring refers to two interrelated developments which have dramatically reshaped the nature of production and economic activity in advanced capitalist economies in the last three decades. The first is computer hardware and software technology. The introduction of computerized production equipment and processes has had effects upon the nature, rate, location, and relations of production in advanced industrial societies no less significant than previous technological developments, such as mechanization and electronics. These effects have been dramatically felt in almost all sectors of industrialized economies, from primary industry and manufacturing to the services sector, the fastest growing and now dominant sector in advanced capitalist economies. The introduction of digital technology into production and the marketplace has been partly responsible for many of the recent employment, labour market, and income trends associated with economic and political restructuring.

The second, more recent dimension of digital restructuring consists of what has come to be called the ‘digital’ or ‘information’ economy. Based on the increasing capacities and applications of computer hardware and software, and fibre-optic telecommunications technologies, this ‘new economy’ is based on the production, commodification, and circulation of ‘information”—data, technical information, news, and entertainment—for consumption by corporate and mass consumers. At the heart of the ‘digital economy’ lies the emergence of the ‘information highway’. The emergence of the information highway promises to accelerate the pace and alter the nature of industrial and economic change already initiated in the first phase of digital restructuring.

In our view, digital restructuring has been integral to the broader processes of post-Fordist economic and political restructuring, which have been informed by a polarizing logic of shifting economic and political power increasingly in favour of powerful economic actors in the private sphere at the expense of the state, women, workers, and citizens in general (Brodie, 1995, 1997; Bakker, 1996). Moreover, the way in which digital restructuring has been mythologized in state and corporate discourses dovetails with what Brodie calls the neo-liberal ‘meso-discourse’ of ‘performativity’, in which economic and political restructuring are portrayed as inevitable, universally beneficial, and gender neutral (Brodie, 1997, p. 234). In the first part of our argument we attempt to trace the linkages between digital restructuring and the nature and effects of economic and political restructuring in general, with particular emphasis on Canada. In the second part, we show how state and corporate discourses concerning digital
Digital Restructuring
technology and the information society obscure and deny these links, while
simultaneously reinforcing the neo-liberal discourse of ‘performativity’.

Digital restructuring has without question been integral to the process of
increasing the global mobility of capital and investment. In the absence of the
power, capacity, and speed of contemporary digital communications networks,
the current global markets in financial and investment services, currency and
equity trading, and the general permeability of national boundaries to the flow
of capital and investment would not be feasible (Castells, 1989; Hepworth, 1991;
Deibert, 1997). The current round of economic globalization and the liberalization
of trade and investment have as their technological conditions of possibility
the carrying-capacity, speed, and penetration achieved by digital technology in
the last two or three decades (Deibert, 1997). This is not to take a technological
determinist viewpoint but, rather, to emphasize the degree of fit between what
Deibert has recently called the ‘hypermedia environment’ of digital technology
and telecommunications and the interests of prevailing transnational social forces

Digital technology has shaped the nature of more mundane commercial
activity as well. Digital technology and computer software have been exploited
in a myriad of new commercial applications, from ATMs, electronic data
interchange, and Internet shopping, to inventory control and just-in-time delivery
systems (Menzies, 1996, pp. 69–72). Digitally-based micro-economic manage-
ment practices and commercial applications have exploded in the past decade
and have been a major catalyst of economic restructuring at the micro as well
as the global level.

Perhaps most significant, for our purposes, has been the impact of digital
restructuring on employment, labour markets, and work in the advanced indus-
trial economies. Most profound has been the ways in which it has facilitated the
replacement of human infrastructures with technological ones in the economies
and the workplaces of advanced capitalism. The computerization of production
and administrative processes have enabled both the private and public sector to
shed millions of redundant workers and surplus clerical staff. Recent studies
referring to ‘vanishing jobs’ (Osberg et al., 1995), the era of ‘post-work’
(Aronowitz and Cutler, 1998), the ‘jobless future’ (Aronowitz and DiFazio,
1994), and even the ‘end of work’ (Rifkin, 1995) all suggest some correlation
between computer and information technology and job loss. The impressive
trends in economic growth, investment, and productivity in the absence of any
substantial increases in employment or investment in human capital, so charac-
teristic of economic restructuring in the last two decades, are attributable at least
in part to digital restructuring. It remains to be seen whether the new infor-
mation economy will produce enough jobs, and employment of similar remuner-
ation, security, and benefits, to offset the losses of employment in those sectors
and job categories most severely affected.

Digitalization has affected the nature of work performed in the economy as
much as the quantity of employment. Digitalization has facilitated the explosion
of non-standard forms of employment and part-time work, which have been
integral to the process of restructuring labour market ‘rigidity’ and promoting
‘flexibility’. In the explosion of myriad forms of tele work, telecommuting, and
home-based work and consulting we can see the way in which digitalization enables the decoupling of work and place (Greenbaum, 1995; Menzies, 1996), which dovetails with the overall trend in post-Fordist capitalism toward the decoupling of work and employment (Aronowitz and Cutler, 1998). Digital technology and digitalized workplaces have been at the centre of the development of new ‘flexible’ patterns of work, new ‘flexible’ workers, and new sites of production such as the home and the call-centre (Menzies, 1996).

Conditions within the workplace itself have been affected by digital technology as well. The advent of computers and network software has increased the productivity of labour, as well as offering employers access to data on production, inventory, and employee performance. Recent studies also suggest that digital technology widens the gap between skilled and unskilled workers, bifurcating the labour force into an elite force of knowledge workers and an army of deskilled and unskilled workers (Economic Council of Canada, 1990; Yalnizyan et al., 1994; Symons, 1997). Such a gap is also reflected in differential rates of the marketability and portability of skills, rates of remuneration, autonomy and creativity, and job satisfaction between technologically skilled and unskilled workers (Symons, 1997). Digital technology also constitutes what Franklin calls a ‘prescriptive technology’, whereby users must adapt to the technology, performing tasks and adhering to work routines prescribed by a technological production process in which autonomy and latitude for creative decision-making by individual workers is seldom required and generally discouraged. Franklin suggests the effect of such technologies is one in which workers become increasingly acculturated to compliance and conformity (Franklin, 1990, pp. 18–32). Digital technology has also given birth to new forms of human performance monitoring and surveillance, which have also been incorporated into production and human resource management strategies (Lyon, 1994; Menzies, 1996).

Finally, recent efforts at government restructuring have had a digital dimension as well. The very ‘face’ of government in Canada has been overhauled in recent years, as front-line workers have been replaced with self-serve computer terminals and kiosks, and automated telephone answering systems (Menzies, 1996, p. 8). Heavy investment in digital technology, among other factors, has enabled governments in Canada to shed thousands of workers from the public payroll. In Canada, between 1992 and 1995, the federal government alone dedicated over $10 billion to information technology expenditures, at the very same time as it announced plans to cut 45,000 jobs from the federal civil service (Menzies, 1996, p. 8). Governments have also exploited digitization for its data-collection and analysis capabilities in order to refine statistical databases and records-keeping systems. These have been used not only to fine-tune social policy and programmes, but also to augment social surveillance and control in such areas as currency control, tax collection, social assistance, and law enforcement (Hewson, 1994; Gill, 1995; Lyon, 1994).

Having said all of this, however, digitalization has been mythologized in corporate, state, and popular rhetorics and discourses of the information society as a panacea to the hardships and anxieties increasingly experienced by citizens and workers. Among the putative advantages of digitalization identified in
corporate, state, and popular mythologies are: employment growth and prosperity; increased personal autonomy; enhanced interpersonal communication and family life; social, ethnic, racial, and political harmony; international cooperation and integration; and access to education, health care, and opportunity for women and marginalized peoples. Such discursive representations of the reality and promise of digitalization are belied, however, by the findings of researchers who examine digital restructuring from the perspectives of feminism and political economy. Digital restructuring, we will show, is cross-cut by gender and class relations of power and inequality. Indeed, the matter takes on greater urgency as our economically, socially, and politically restructured near-future looks increasingly like a digital and informational one. Our task now is to materialize the distinct gender, class, and political dimensions of digital restructuring in Canada.

Digital Restructuring: The Canadian Case

Behind the rhetoric of digitalization lie some disturbing realities which call for a more critical and prudent approach to the adoption of digital technologies and embrace of the new ‘information economy’. Some of those surveyed below include: the effects of digital technology and digitization on both the quantity and quality of employment in Canada; occupational hierarchies and income distribution; gender dimensions of digital technology and the digitally restructured economy; and the socio-economic dimensions of Canada’s ‘information infrastructure’, that is, differential rates of computer ownership and network access on the basis of gender and class.

Employment, Gender, and Class in Canada’s Information Economy

To a considerable degree, many of the disturbing trends characteristic of, but not unique to, Canada’s political economy are partially attributable to the impact of digital restructuring. Chronic high unemployment in Canada has been produced, at least in part, by the introduction of digital technologies which have enabled private firms to shed hundreds of thousands of full-time, permanent positions from the economy or, more recently, to transfer work across national boundaries (Menzies, 1996; Yalnizyan, 1994). While investment in and production of digital technologies clearly has some potential to create new jobs as well as destroy old ones, there is little evidence supporting the claim that digital restructuring creates as many, if not more, jobs as it destroys. Whether the introduction of new information technologies has led to a net decrease in overall employment is still unclear, at least in the Canadian case. In spite of considerable state and corporate hyperbole regarding the positive correlation between digitalization and job growth, sober analysis has demonstrated nothing more positive than the conclusion that, while no ‘job killer’, information technology has produced no employment bonanza either (Conference Board of Canada, 1996). In fact, the experience of the information technology sector in Canada itself mirrors the phenomenon of jobless growth observed throughout the OECD during the most recent economic expansion. Between 1990 and 1995, the information technology sector in Canada grew by an impressive 50%, from 5.5% to 7.6% of GDP.
Meanwhile, employment in the sector rose by an anaemic 2.5%. What is clear is that new information technologies eliminate certain kinds of work and displace workers, creating problems of ‘adjustment’ in the near term at least. In the past, such workers have been soaked up by emerging new sectors, such as witnessed in the transfer of many industrialized workforces from manufacturing to service-based work. It is still unclear where today’s displaced workers will go, although the picture is starting to come into focus.

Digital restructuring has helped lower labour costs through the broad-based ‘feminization’ of labour in recent decades, by contributing to the growth of part-time and non-standard employment in Canada. The overall trend in employment growth in recent years has seen an increasing proportion of new jobs which are part-time, casual, or contract-based, and less well-paying and tied to fewer benefits than the traditional forms of employment they increasingly replace (Yalnizyan et al., 1994). Non-standard employment in Canada accounted for roughly 50% of all new jobs created between 1981 and 1986, such that it now represents fully one third of all employment (Economic Council of Canada, 1990, pp. 11–12). Many of these non-standard forms of employment have been created or enabled by the application of digital technology to production or service delivery in such forms as tele-work, homework, and consulting (Menzies, 1996, pp. 114–117). A critical evaluation of the effects of digital restructuring on employment and economic development must look beyond job creation figures and assess the nature of the positions actually being created in terms of remuneration, benefits, job security, and working conditions.

Digital restructuring has also contributed to growing occupational hierarchies and income disparity in Canada. Digitalization has resulted in an increased polarization of the workforce on the basis of the education and skills required for employment, as well as employment opportunities, job security, and earning potential, which increasingly accrue to the most digitally expert and literate. Analysts speak increasingly of the bifurcation of the labour forces of advanced capitalist economies between well-educated, highly skilled ‘knowledge workers’ and an increasingly large information economy ‘underclass’ of peripheral, relatively uneducated, and unskilled workers competing for low paying and increasingly contingent and temporary work (Symons, 1997, pp. 198–203). One Canadian study concludes that ‘virtually all of the recent employment growth has involved either highly skilled, well-compensated, and secure jobs or unstable and relatively poorly paid jobs’ (Economic Council of Canada, 1990, p. 10). Developments in the services sector, by far the largest employer in Canada, bear this out. Digitalization has been aggressively pursued in dynamic services such as financial services and telecommunications, resulting in significant layoffs of tellers, operators, bookkeepers, and even middle managers (Yalnizyan et al., 1994, pp. 103–117). There is little evidence that the new information economy has produced a net increase of jobs of similar remuneration and appeal to soak up those displaced by service-sector digitalization and automation. Those who have escaped these cuts, as well as new-hires, tend to be among the best educated and technologically trained, and therefore best paid, in the workforce, while those displaced have been com-
Digital Restructuring

... forms of employment (Yalnizyan et al., 1994; Economic Council of Canada, 1990).

The bifurcation of the labour force also shows up in income distribution as well, where a growing trend towards ‘hour-glass’ economies and societies is emerging throughout the OECD. In Canada, the polarization and general decline of middle and working class incomes is readily apparent from the increasing numbers of employees earning below the national average (Economic Council of Canada, 1990; Yalnizyan et al., 1994). According to one study, by the late 1980s in Canada, average hourly earnings in non-market and dynamic services were 117% and 111% of the national average, respectively. However, in traditional services, by far the larger employer, employees earned only 73% of the national average (Betcherman, 1992, p. 131). As interest in digitalization spreads to non-market services like education and health care, the kind of shake-out witnessed in the dynamic services is likely to be duplicated, exacerbating this trend. The effects of digital restructuring have no doubt contributed in part to the emergence of this ‘hour-glass’ phenomenon.

The two-tier system increasingly characteristic of occupational structures and income distribution in the information economy is reproduced in the quality of working life as well. While middle and upper–middle class professionals voluntarily take advantage of digital technology to achieve more autonomy and flexibility in terms of work, personal, and family life, the impact of digital restructuring on the quality of working life has been a double-edged sword. Elite knowledge workers experience high degrees of autonomy and flexibility in their work, take advantage of high demand and highly portable skills, and operate on the basis of relations of cooperation and partnering with peers (Symons, 1997, pp. 203–205). The information-worker ‘underclass’, meanwhile, engages in increasingly repetitive and stultifying tasks related to data entry, processing, and extraction, under working conditions in which hierarchy, subordination, and electronic surveillance figure prominently (Bryant, 1995; Symons, 1997).

Ursula Franklin’s analysis of technology is particularly useful in helping us to understand the effects of new technology on the scope for creativity and autonomy available to workers. Increasingly, she argues, Western technology has assumed a ‘prescriptive’ form, in which an emphasis on process specialization, precision, prescription, and control has exacted a considerable ‘social mortgage’. By narrowing the scope for creativity, decision-making, and discretion for individual workers such technologies acculturate workers to increasing levels of compliance and conformity (Franklin, 1990). Recent studies of some of the uses and applications of digital technology and digitization bear witness to their prescriptive nature and tendency to produce conformity and, in some cases, coercion (Lyon, 1994; Bryant, 1995; Menzies, 1996; Symons, 1997). One author conjures up images of the post-industrial ‘virtual workshop’ and the ‘silicon work cell’ to describe working conditions for the new information underclass (Menzies, 1996, p. 37). Therefore, while no doubt a boon to middle and upper–middle class professionals, its negative effects on the working life of average Canadian workers compel us to question corporate and popular mythologies regarding the emancipatory logic of digital technology.
Feminist analyses of digital technology have also revealed the profoundly gendered nature of the division of labour within the new information economy. In addition to its contribution to the ‘feminization’ of work in general, many new digitally-enabled forms of non-standard employment are doubly feminized insofar as women are disproportionately overrepresented in more contingent forms of work closely identified with the information economy, including homework and telework (Menzies, 1996, pp. 114–117). Part-time workers in Canada enjoy less protection and fewer statutory benefits than full-time ones, and in the case of some new forms of digitally-enabled work such as homework, possibly none at all (Economic Council of Canada, 1990). In so far as women constitute the majority of workers employed in such jobs, the negative effects of digital restructuring on employment incomes, benefits, and job security will fall disproportionately upon them.

We are also witnessing a certain ‘technological masculinism’ within high-tech employment itself (Sawchuk and Crow, 1995). The effects of the gendered division of labour are manifested in the masculinization of computer technical expertise (Benston, 1989; Brunet and Prioux, 1989; Balka, 1997) and hardware and software development (Stromber and Arnold, 1987; Jansen, 1989; Taylor et al., 1993). At the same time as the digital technology sector has been experiencing impressive growth, there has been a worldwide decrease in the numbers of women in computer science (Wright, 1997). Therefore, whereas men increasingly dominate decision-making positions with regard to the design and manufacture of high-tech digital communications equipment and computer hardware and software, and creative positions with regard to programme and information product content, those for whose use and surveillance much of this digital technology is being designed are low paid, increasingly vulnerable part-time women workers within advanced capitalism, as well as the army of women workers on the global assembly lines of the developing world (Gender Working Group of the United Nations Commission on Science and Technology for Development, 1995).

In our view, moreover, the gendered nature of digital restructuring goes well beyond its tendency to produce certain ‘feminizing’ effects, and to rest at the heart of the very logic of digital restructuring itself. Prescriptive technologies are gendered by their very nature, according to which productive activity is increasingly divided between a small group of individuals engaged in technology design and control functions and a much larger group of workers orthopedically trained and fitted to meet the needs of technology and various rigidly prescribed work routines (Benston, 1989; Webster, 1993; Balka, 1997). Digital restructuring has had many of the effects it has precisely because its very logic as a prescriptive form of technology entails increased occupational hierarchy, centralized coordination and decision-making, and rigid subordination and compliance for those on the lowest rungs of the production ladder.

The Information Infrastructure: Affordability, Access, and Information Have-Nots

In addition to its effects on employment, class, and the gendered division of
labour, the extent to which digitalization will enhance the lives of Canadians as individuals, as members of racial, ethnic, and linguistic communities, and democratic citizens also depends on the affordability and accessibility of the technology and communications networks central to full participation in the new ‘information society’. Indications are that affordability of and access to the ‘information infrastructure’ that supports meaningful participation in the information economy and society is a serious problem for low income earners, women, and people of colour in Canada. Recent studies indicate that access to digital technology for personal and civic projects is far from universal, and that a strong correlation exists between household income and access to digital technology and communications networks. According to a 1996 Statistics Canada survey, fewer than 35% of Canadian households owned personal computers, and only 15% used modems (Statistics Canada, 1996). Household Internet subscription in Canada stood at 13.3% in 1996, according to a survey by A.C. Nielson (1997). A 1995 study correlating computer ownership with income level found that 86% of households with incomes over $100,000 owned computers, versus only 28% for households earning under $20,000 (Frank, 1995). An ongoing study of Freenet users in Ottawa, the nation’s capitol, reveals distinct correlations between access to and use of the Internet and such variables as income, education, and occupation. Of Ottawa Freenet users, 50% were university-educated, and fully 70% were either university students or salaried professionals (Symons, 1997). Significant inequalities of ownership in and access to Canada’s information infrastructure exist on the basis of region and age as well (Frank, 1995).

The problematic effects of unequal access to the information infrastructure have been felt by Canadians not only in their capacities as workers or low income earners, but as members of other marginalized groups in Canadian society, as well, particularly women and people of colour. Ascertainning women’s and marginalized people’s access to digital technology, such as the Internet, for entrepreneurial, educational, or political purposes is difficult, however. Various US studies indicate that women participate on the Internet at rates anywhere from 13 to 40% (Shade, 1993). Culturally, the media continues to represent the information highway as ‘unsafe’ for women and children by sensationalizing the availability of pornography online (Elmer Dewitt, 1995), cyber-harassment and the information highway chat culture of flaming (Herring, 1993; Adams, 1996). In sum, the information highway is male-dominated, and in its popular culture portrayal it gets constructed as an unsafe place for women and children—infantilizing women and discouraging their participation.7 Further critical analyses of the gender and racial dimensions of patterns of ownership and use of information technology and the Internet will be crucial to disrupting and unmasking corporate and state representations of the information economy and society. Network access and participation, whether through personal computers or terminals at work or public libraries, will be crucial for meaningful participation in the information economy and society. As these analyses have shown, in Canada, as elsewhere, we still fall far short of the technology diffusion and network access necessary to support anything like genuine ‘digital democracy’.
Digital Restructuring and Canada’s ‘New National Dream’: Corporate and State Representations of the Information Highway

For the last decade, business and the state in Canada have represented digitalization and the development of the information society as central to a ‘new national dream’ of enhanced employment, economic prosperity, national dialogue, and democratic participation. Clearly, such representations need to be challenged. We argue that both this overly sanguine rhetoric, as well as the Canadian state’s policy position on the information society, dovetail neatly with the ‘performative’ logic and discourse of neo-liberal restructuring suggested by Brodie. This is not to deny the progressive and democratic potential of digital technology but, rather, to point out that digital restructuring as carried out so far has been extremely uneven in the benefits as well as costs accrued within Canadian society. Furthermore, as we will show, much of the potential for digital technology to overcome forms of inequality and barriers to full participation in Canadian society is being undercut by the very means—commercialization, privatization, and deregulation—with which the state and capital in Canada have chosen to implement digital restructuring and the transformation of Canada into an information-based economy and society.

Underlying corporate and state rhetorics and discourses of digital restructuring is an even more profound adherence to neo-liberal economic ideology and public policy. The alleged benefits of digitalization will be most fully realized, we are told, if the Canadian state pursues a political agenda consistent with economic neo-liberalism, globalization, trade liberalization, and the marketization of social life, including the commercialization of the information society. In other words, while state and corporate representations of digital restructuring tout it as a progressive force for the transformation of Canadian society into a less stratified, more egalitarian, consensual, and democratic one, its underlying neo-liberal, performative, and prescriptive underpinnings are more likely to produce a society of an opposite character, with implications especially deleterious to the interests of women, the poor, and other marginalized groups in Canadian society.

Corporate Discourses of Digital Restructuring

Corporate discourses of digital technology, digitalization, and the information highway portray them as key to ensuring the international competitiveness of Canadian enterprise, promoting economic growth and development, and, with shocking disingenuity, as means to overcome economic, social, and political inequality. Opinion leaders within the country’s information technology industries tout digital technology and the information highway as critical engines of future economic growth and job creation, while corporate advertising to information technology consumers portrays it as key to individual economic opportunity and success, personal fulfilment and self-improvement, and democratic and community awareness and participation on the part of all Canadians.

Corporate opinion leaders have unanimously endorsed the rapid adoption of digital technology and implementation of digital restructuring in the Canadian economy and workplace, on the argument that the ‘information economy’ will
Digital Restructuring

be the engine of future economic growth, development, and job creation in Canada. In a 1989 speech on the deregulation of telecommunications service in Canada, Royal Bank President and CEO, Allan Taylor, likened this and other initiatives to promote competition and investment in information technology to a ‘new national dream’ (quoted in Cowan Buchwald, 1997, p. 167). Similar views continue to be held and propagated by decision-makers and opinion leaders within Canada’s information technology industry (Business Quarterly Editors, 1994). The Information Technology Association of Canada (ITAC), meanwhile, has been a vocal exponent of the economic and social benefits of digital restructuring within the Canadian public policy debate (Task Force on Public Policy for the Information Infrastructure, 1994).

Meanwhile, the corporate ideology of digital restructuring touts it as key to progressive social and democratic development as well. In an article which reflects much of the corporate hyperbole surrounding the socially and politically levelling or ‘horizontalizing’ effects of information technology, William Etherington, President and CEO of IBM Canada, claims that ‘access to information of all kinds is no longer a privilege restricted to elites’, and that ‘data democracy is bound to thrive in a networked world’ (Business Quarterly Editors, 1994, pp. 86–87). While this may indeed constitute part of its potential, the material realities of digital restructuring undercut it, as we have seen.

Nowhere, however, has corporate Canada propagandized more sanguinely, and cynically, the progressive, egalitarian, and democratizing potential of information technology than in the images it has served up for consumption in popular culture and commercial advertising. Two recent examples are IBM’s ‘Solutions for a Small Planet’ campaign, and the Bank of Montreal’s ‘Can a Bank Change?’ and ‘mbanx’ campaigns. These are worth examining at some length, as they reveal the extent to which progressive concerns regarding unemployment, equity and access have permeated popular consciousness in Canada, while betraying a refusal on the part of Canadian capital to acknowledge the extent to which digital restructuring contributes to these problems. More troubling is the degree to which these images and campaigns appropriate and coopt both the substance and the style of progressive movement politics which have been on the forefront of exposing inequality in Canada.

IBM’s ‘Solutions for a Small Planet’ campaign portrayed information technology products as important new tools to promote economic growth, employment opportunity, self-actualization, social harmony, and international cooperation and development. IBM embarked on a new advertising strategy in the mid 1990s with a financial commitment to spend $500 million with Ogilvy and Mather, one of the largest advertising firms in the US. The ‘Solutions for a Small Planet’ campaign was designed specifically for IBM’s ‘ThinkPad’ laptop PC, and IBM spent approximately $45 million on this campaign (Johnston, 1996).

‘Solutions for a Small Planet’ was a worldwide campaign in the television and print media which went through several phases. In the original television campaign, 28 different spots portrayed stereotypical American representations of various countries which included Greece, Ireland, China, Australia, Morocco, Thailand, Brazil, Italy, Czechoslovakia, France, and Argentina. The narratives of most of the advertisements emphasized moments of connection, communication,
and discovery shared among friends, family, or close communities. As viewers of the advertisements, Western audiences were encouraged to believe that the diffusion and penetration of Western information technology promoted worldwide economic growth and independence, international cooperation and development, and global cultural understanding.

One of the many ironies of the campaign is the fact that prior to its conception, corporate restructuring within IBM itself saw mass layoffs of upwards of 40,000 employees worldwide. At the level of ideology and corporate mythology, IBM places itself at the forefront of a global technological and economic watershed in employment, economic growth, personal autonomy, interpersonal and cultural communication, and international development. Meanwhile, at the material level, restructuring imperatives exacted a heavy price from IBM workers.

Turning to the Bank of Montreal’s ‘Can a Bank Change?’ and ‘mbanx’ campaigns, one observes the same substantive appropriation of the progressive political agenda regarding economic development, self-actualization, and cultural understanding as in the IBM campaign, as well as an even more explicit and cynical affectation of radical ‘chic’. These campaigns were launched in the mid to late 1990s, with the ‘mbanx’ campaign preceded and foreshadowed by the ‘Can a Bank Change?’ campaign. The latter television campaign featured jaunty, handheld video images of placards and protest signs emblazoned with crudely wrought slogans, designed to resemble news footage, accompanied by the voice-over asking ‘Can a bank change?’. While the advertisements suggested that notoriously conservative bankers, at least at the Bank of Montreal, listened to the complaints of customers, the real revolutionary and progressive force for change turned out to be the Bank of Montreal itself, as it embarked on an aggressive strategy of investment in information technology and marketing online financial services. That is, the real revolutionary is ‘mbanx’!

The ‘mbanx’ campaign accompanied the launch of the Bank of Montreal’s new online banking and financial services network. The ‘mbanx’ advertising campaign was launched with Bob Dylan’s ‘The times they are a’ changin’, the 1960s anthem of social change and political protest. It was followed by a series of vignettes of individual children of various sexes, races, and ethnicities emphasizing different components of how the ‘times they are a’ changin’. For example, a First Nations girl tells us to ‘remember who we are’, and that ‘everybody is important’. For Bank of Montreal workers, meanwhile, the introduction of mbanx is eerily reminiscent of the IBM story, in so far as aggressive investments in new information technology and online banking services will enable the banks to shed thousands of clerical and teller positions (Yalnizyan et al., 1994, pp. 103–117).

Both the IBM and Bank of Montreal campaigns appropriate the substantive concerns, political rhetoric, and counter-cultural style of new social movements, not unlike many campaigns since Benetton’s successful appropriation of racial politics and global harmonization in the early 1980s. IBM’s ‘Solutions for a Small Planet’ makes reference to Schumacher’s 1973, Small is Beautiful: Economics as if People Mattered, Lappe’s 1971, Diet for a Small Planet, McRobie’s 1981, Small is Beautiful, and finally, the political slogan of the
environmental movement, ‘think globally, act locally’. By portraying itself on the cutting edge of the information ‘revolution’, the Bank of Montreal takes up the revolutionary pretence of information society gurus and popular media, such as *Wired* magazine. The IBM and Bank of Montreal campaigns are insidious deployments in both content and style of the discourses of social movements, commodifying ‘dissent’ as a means to boost the consumption of information technology. Together they convey the message that social change is possible through the purchase and use of digital technology at home, at work, and at school. We might be tempted to laud them for their apparent sensitivity to the inequalities faced by marginalized groups within Canadian society were IBM and the Bank of Montreal not so insidiously silent on the realities of digital restructuring for such groups and blind to the ways in which digital technology perpetuates and deepens the disadvantages they face.

If, at the level of the popular mythology and ideology of digital restructuring, businesses in Canada have portrayed themselves as technological revolutionaries and social progressives, they have unanimously articulated and endorsed the socially and politically retrograde agenda of neo-liberalism and globalization in their communications to government and with one another. The corporate perspective on the implementation of digital restructuring and the construction of the information highway infrastructure in Canada unanimously envisions private sector, free market competition as the driving force. Opinion leaders in the information technology sector endorse an almost exclusively market-based model for investment in and development of Canada’s information highway infrastructure, through maximizing its commercial uses and appeal, and reject all but the most limited and selective forms of government involvement to mitigate the negative effects of digital restructuring (Business Quarterly Editors, 1994).

**Digital Restructuring, the Information Highway, and the State in Canada**

State representations of digital restructuring feature the same overly sanguine and hyperbolic rhetoric about the progressive and egalitarian promise of the information economy and society as found in corporate discourse. Touted as key to Canada’s future prosperity and employment growth, however, the alleged promise of the information economy also excuses the state from playing a meaningful role in mitigating the detrimental economic effects of global restructuring, in so far as it allows governments to offload responsibility for economic development and employment growth onto the private sector. Meanwhile, any detrimental effects on democratic equality or participation as a result of government restructuring can purportedly be overcome by the democratizing effects of widespread digital technology and the digitization of information.

At a 1994 conference on digital technology and the Internet, Industry Minister, John Manley, expressed the Canadian government’s rose-coloured expectations for the impact of digital restructuring and the Internet on the lives of Canadians. ‘[They] will see’, he claimed:

> an improvement in the quality of their lives as they gain access to the employment, educational, investment, entertainment, health
care, and wealth-creating opportunities represented by the creation of this network and the services it can provide. (Manley, 1994)

With these expectations in mind, the Government of Canada established an Information Highway Advisory Council (IHAC) in the same year, with a mandate to advise the government on the public policy framework appropriate to maximizing the economic and social potential of digital technology and the Information Highway. IHAC, which issued its Final Report in autumn 1997, was a 29-member Council heavily weighted with representatives from the information and communication technologies industry. Representation of the labour movement was through a single Council member, J.C. Parrot, a vice-president of the Canadian Labour Congress. There was no formal participation by groups representing women, low income earners, or people of colour.

Beginning with the ‘promise’ of the information economy and society, IHAC indulges in the same rhapsodic hyperbole as that of the information technology companies and their corporate clients. In the new information economy and society, according to IHAC:

No longer will distance pose an obstacle to economic development, social intercourse, learning, voluntary action, adequate health care, business success or full participation in society and Canada’s national cultural dialogue. [...] Knowledge will become increasingly available to everyone [...] Everyone will be not only a consumer of knowledge and content, but also a creator. Canada’s national cultural dialogue and political discussion will take on a liveliness and depth that will strengthen national, regional, and local communities. (IHAC, 1997, C.1, p. 2)

One of IHAC’s major assumptions, here, is that there is a positive relationship between digital restructuring and economic development. Transforming Canada into a knowledge-based economy and society is treated as key not only to its international competitiveness, but to its progressive economic and social development as well. In the new global information society, IHAC argues:

Communication infrastructures carrying information-based services will gain in importance at the expense of transportation infrastructures. In a global economy based on exploiting information, the capacity to innovate will be an essential source of comparative advantage. Prosperity will depend on a country’s ability to apply technology creatively in devising new and consumer-valued information products and services. [...] Canada must keep abreast with, if not ahead of, its major trading partners in efforts to create this new economy and society. (IHAC, 1997, C. 1 p. 2)

On the question of employment growth and opportunity, IHAC has been equally sanguine, even in the absence of convincing evidence of any positive correlation
between employment and digital restructuring. ‘We believe’, its members wrote, that ‘the information highway promises the best opportunities for economic growth and job creation over the long term […]’ (IHAC, 1997, C. 6, p. 5) In short, IHAC takes the view that government policy should be framed in such a way as to facilitate and hasten Canada’s transformation to a knowledge-based economy and society. Such a transformation should constitute the main objective of Canada’s long-term economic and social development strategy. It is noteworthy, however, that IHAC also insists that responsibility for this new technological and global ‘national policy’ should rest with the private sector.

To its credit, IHAC did acknowledge that digital restructuring posed certain challenges on the economic, social, and cultural fronts. In dealing with the challenges of digital restructuring IHAC acknowledged that workers might face ‘short-term’ job loss and dislocation (IHAC, 1997, C. 6, p. 5), and that certain ‘groups’ in Canadian society appeared to ‘lag’ behind other citizens in terms of access to digital technology and the information highway (C.4, p. 5). For the most part, however, IHAC treated geography and distance as the main obstacles to accessing digital technology and network connection, and claimed that the effects of other factors such as income, gender, age, and disability are either not yet known or in need of further study (C. 4, pp. 5–6).

While IHAC reports referred frequently to social and cultural issues raised by digital restructuring, it tended to give much more weight to an entirely different agenda of concerns from that most frequently emphasized by progressive social movements. Of the many challenges facing the new information economy and society, IHAC placed overwhelming emphasis on technical and commercial ones. Much of its Final Report is devoted to discussion of network bottlenecks and slowdowns, or to commercial concerns over security and intellectual property (IHAC, 1997, C. 3, pp. 4–7). Issues which IHAC tends to treat as ‘social’ relate to privacy, offensive material, and Canadian content (C. 3, pp. 10–12). Relative to the list of issues and concerns raised by progressive social movements, IHAC’s is a modest and conservative social agenda. And here, again, the Council’s view on the appropriate government mechanisms to deal with them is predictably neo-liberal. Offensive content on the Internet, for example, should not be regulated or censored by the government, since this might endanger investment in Internet content creation and production (C. 3, pp. 10).

To the extent that IHAC recognized any social challenges to its otherwise optimistic vision of the digital future, it proposed only a narrow range of modest government policies and programmes with which to respond to them. IHAC argued that the current ‘fiscal environment’ limited the government’s options in the areas of unemployment and labour adjustment. Far from recommending any new programmes or spending, the Council viewed labour adjustment problems related to digital restructuring as largely ‘short-term’ (IHAC, 1997, C. 6, p. 5), and adopted no more than a lukewarm approach to substantive ‘mitigating mechanisms’ (C. 7, p. 5). As to the appropriate response to the slow uptake of digital technology by certain groups in Canadian society, the Council rejected the principle of universality outright, and recommended only selective targeting of identified groups (C. 4, p. 5).
Indeed, through IHAC, the Canadian state’s discourse on digital restructuring and the information highway has become firmly embedded in the economic restructuring discourse of ‘performativity’, which stresses both the inevitability and benefits of private sector competition, free markets, and government deregulation and downsizing. From the outset, the Council declared its adherence to the neo-liberal agenda, strongly endorsing the direction of OECD economic policy as the framework within which to promote information technology-led economic growth (IHAC, 1997, C. 1, pp. 2–3). Consistent with this agenda, IHAC insisted in no uncertain terms that the major force behind investment in and development of Canada’s information economy and society must be private sector competition. ‘[I]n the new information economy’, the Executive Summary claims, ‘success will be determined by the marketplace, not by government’ (p. 3). Other than acting as a ‘model user’, the only role deemed by IHAC as appropriate to government is that of a referee establishing and overseeing the rules of free and fair competition in information technology development and information infrastructure (IHAC, C.2, p. 3). The only significant substantive role for government recommended by IHAC, ironically, is as a business ‘partner’ in subsidizing or underwriting the costs of information technology research and development, and in assuming the financial burden of providing otherwise unprofitable access and services to groups or geographic areas (IHAC, C.2, pp. 7–9). Thus, IHAC proposes to continue the longstanding tradition within the Canadian political economy of private accumulation at public expense. Otherwise, IHAC took the position that Canada’s ability to transform itself and tap into all of the potential benefits of the information revolution rests with the degree to which the government allows for the maximum degree of both privatization and commercialization in the development of the infrastructure and content of the information highway.

Whatever concerns the Council expressed with regard to questions of access are quickly subordinated to neo-liberal truisms and homilies about the virtues of competition and markets, in spite of historical evidence to suggest that privatization and commercialization in other aspects of Canada’s information infrastructure, such as radio, broadcasting, cable, or public libraries, have failed to address these concerns in the past (Mosco, 1990; Cowan Buchwald, 1996). In terms of the economic and social challenges identified for Canada’s transformation to an information economy, its diagnosis of the nature of those challenges, and its policy recommendations to the Canadian government, IHAC’s views are clearly and explicitly embedded in the ideology of neo-liberal economic and political restructuring. Thus, no matter how progressive or socially sensitive its members may appear to be, these challenges will in our opinion be exacerbated by the very means by which IHAC proposes Canada’s information economy be developed.\footnote{11}

When the contents of the various IHAC reports and recommendations are examined in detail, the extent to which the Canadian state has been seduced by the ideology of digital restructuring becomes disturbingly clear. IHAC not only engages in the most intellectually questionable hyperbole with respect to the progressive merits and potential of the new knowledge-based information economy and society, but adheres doggedly to the neo-liberal agenda of
Digital Restructuring

economic and political restructuring as well. The economic and social problems posed by digital restructuring are only vaguely acknowledged or alluded to in IHAC documents. To the extent that economic and social inequality, for example, are acknowledged, in fact, the new information economy and society is portrayed as a technological solution to problems associated with social development in societies, like Canada, burdened by geographic barriers to access and universality. IHAC claims that the future of economic development, employment growth, and social equality rests with Canada’s ability to rapidly transform itself into a knowledge-based economy; but also argues that the likelihood of reaping these benefits rests with the extent to which the Canadian state relinquishes its traditional legislative and regulatory role in the economy and turns the task of economic development over to the private sector as much as possible. Evidence suggests that this combination of technological utopianism and economic and political neo-liberalism will not only perpetuate, but perhaps deepen, the existing inequalities and difficulties engendered by digital restructuring and suffered by workers, women, and people of colour in Canada.

It has also become apparent that the ideology of digital restructuring is being used to excuse the various ways in which governments have begun to restructure themselves through public-sector downsizing, the restructuring and digitization of services, and reductions in social services and funding. To a considerable degree, there is an expectation that technology will not only pick up the slack, in terms of job creation and the provision of services, but in fact enable governments to ‘do more with less’, as they are wont to say. While state discourse and policy on the information highway acknowledges some of the criticisms of economic and digital restructuring, its overriding commitment to the global neo-liberal economic and political agenda undermines the effectiveness of any policies targeted at offsetting their negative consequences. By insisting on the role of the private sector as the engine of investment, development, and job creation in the information economy, on the rapid commercialization of the information highway and the preservation of only a relatively narrow ‘public lane’, and on a very limited and selective definition of the appropriate role of government in developing and regulating the information highway, the Canadian state takes the risk that the material realities of digital restructuring will only continue to grow more deeply entrenched.

Conclusion

While the official ideology and rhetoric of the information society ignores and misrepresents the gender, class, and political dimensions of inequality inherent within digital restructuring, these same discourses respond indirectly to progressive concerns regarding equality, accessibility, and employment. It is a measure of the relative success of these progressive forces, perhaps, that so much corporate and state discourse has been fashioned in such a way as to acknowledge progressive critiques of Canadian society indirectly, by touting digital restructuring as a technological solution to problems of unemployment, equality, and access to education, information, and services. These discourses must be more deeply interrogated and unmasked, however, in order to reveal the
underlying corporate and state commitment to the logic of neo-liberalism in which digital restructuring is embedded, and to show how adherence to such a logic is bound to perpetuate and deepen the very problems which it is reputed to solve. The rhetoric of the information society in Canada functions as a ‘performative’ meso-discourse, to use Brodie’s terminology, in its own right. It jibes with both neo-liberal claims that restructuring is inevitable and that an increased reliance on market forces is desirable, socio-economically benign, and gender neutral. Furthermore, hyperbolic claims regarding the politically egalitarian and democratizing logic of digital restructuring itself excuse the retreat of the state from its previously more activist, welfare state form. In other words, we suggest that the rhetoric and ideology of the information society has served, along with numerous other factors, to clear the way for the consolidation of the new post-Fordist economy and neo-liberal state form in Canada.

The task of unmasking the rhetoric of the information society to reveal the realities of digital restructuring has been rendered more difficult by the very nature of the ways in which digitalization has been represented to us in state and corporate discourses. At the level of popular culture, we have observed a cynical and insidious cooptation of the substance and style of progressive politics in state and corporate discourse alike, the effect of which is to both coopt and neutralize progressive critiques of restructuring and the failure of governments to offset its negative effects and consequences. Corporate and state discourses of the information society claim that digital technology addresses social inequities, barriers and access—thus digital technology is presented as a solution to social movement concerns. At the same time, corporate and state discourses of restructuring and digital technology valorize and universalize a vision of society peopled by decontextualized, individual ‘wired’ consumers and entrepreneurs, a society in which women, low income earners, and people of colour will continue to be marginalized, at the very same time as the redistributive and equalizing policies and programs of the welfare state are rolled back, withdrawn, and delegitimized.

As a result of the work of critical researchers, feminists, and trade unionists we have increasingly acquired the means with which to disrupt and debunk corporate and state mythologies of the information society. This same work has also demonstrated an abiding need for democratic participation and state support and involvement in the construction and regulation of the digital economy, society, and polity. In addition to reviving the state’s role as a meaningful actor in the Canadian economy and society in general, there is a demonstrable need for state policies and programmes which address the problems of dislocation, training and adjustment, exploitation, and the lack of affordability and accessibility of education and health care which digital restructuring threatens to exacerbate. Among other measures, in order to ensure that the new information society is genuinely consistent with economic, social, and democratic development in Canada, the Canadian government must provide meaningful programmes to meet the adjustment and training needs of workers displaced by digital technology, establish a less punitive and more generous unemployment insurance scheme, restore adequate funding to the education and health care sectors, invest in a new public information technology infrastructure, and provide for a relatively wide,
Digital Restructuring

accessible, and non-commercial ‘public lane’ or ‘electronic commons’ on the information highway. In the short term, however, the neo-liberal juggernaut steams ahead. The likelihood that the Canadian state will return to its prior welfare state form, in which it saw itself as a purveyor of certain public goods and as a vehicle of democratic representation, seems remote. More is the pity, as previous market-based approaches to developing Canada’s information infrastructure, as well as its social capital, have already proven themselves inadequate. In the meantime, critical perspectives on digital restructuring must continue to be supported, articulated, and proliferated; not in the manner of a knee-jerk rejection of information technology, but in the hope that it may be developed, applied, and diffused in a manner genuinely consistent with the principles of egalitarianism, self-development, and democracy.

Notes

1. Gurus of the digital age, such as Nicholas Negroponte, Donald Tapscott, and David De Kerckhove, have been highly influential in capturing and shaping the corporate, state, and popular imaginary of the digital or information economy and society (see Negroponte, 1995; Tapscott, 1996; De Kerckhove, 1995).

2. A recent series of sessions held at the University of Tampere, Finland, entitled ‘Rhetorics and politics of the information society’, suggested as much, given the frequency with which presenters reported on the connection being made between digitalization and economic restructuring by many governments, including the governments of Finland, Canada, Singapore, Wales, and the EU, among others. The sessions were sponsored by the International Social Science Council in conjunction with ‘Crossroads in Cultural Studies: 2nd International Conference’, University of Tampere, Tampere, Finland, 28 June–1 July 1998.


4. Ursula Franklin, for example, makes a nuanced distinction between ‘prescriptive’ and ‘holistic’ technologies (Franklin, 1990). Recent discussions of the rise of an oppositional ‘global civil society’ and global social movements in response to economic globalization uniformly stress the importance of digital communications networks. See, for example: Deibert (1997); and Lipschutz (1992). On progressive uses of the Internet, for example, see: Lee (1997); Spender (1995); ‘Anarchists find their own order on Web’, The Globe and Mail, 3 January 1998.

5. Menzies defines the ‘information highway’ as ‘a webwork of powerful (high capacity) computer-communications networks capable of handling everything from video to voice, text to computer data and graphics, interchangeably, interactively, and at lightning speeds’ (1996, p. 7).

6. This is not, as we have indicated above, to deny the importance of other factors, particularly political and legislative changes which have targeted labour market ‘rigidities’, such as employment standards, unemployment insurance, and workers’ compensation, and which have disempowered the primary vehicle of workers’ resistance to such changes by eroding collective bargaining rights. Canada has witnessed just such a legislative onslaught at both the federal and provincial levels for the last two decades. For example, see: Panitch and Swartz (1985) and Panitch (1987).

7. This is not to dismiss the many women who are actively shaping and intervening on the ‘information highway’. For example, see Cherny and Weise (1996).


9. On Benetton’s exploitation of social issues in its advertising campaigns see, for example: Giroux (1994) and Tinic (1997). Other examples of advertisers whose campaigns have appropriated social movement rhetoric include Warner bras, TAMPAX feminine hygiene products, and NIKE running shoes.

10. On the recent corporate commodification of radical dissent and counter-cultural style, see, for example, Frank and Weiland (Eds) (1997).
11. The lone dissenting voice from the Council narrative was that of Canadian Labour Congress representative, Jean-Claude Parrot, pertaining to the impact of the information highway on Canadian workers. While his dissenting report is made available for consultation, its content neither shapes nor makes its way into IHAC policy recommendations.

References


Gender Working Group of the United Nations Commission on Science and Technology for Development.


