Navigating the seamless environment in the global supply chain:

implications for Canadian regions and workers

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ABSTRACT

When work is 'boundless' and 'seamless' where and how do workers' lives intersect with the space-time continuum of place-based communities? Who and what are they accountable to? Telemediation is fragmenting work across increasingly complex, transnational networks. Workers in these networks must negotiate through a multitude of temporal, contractual and trans-cultural milieus. This paper traces the trajectory of the work experience using case studies of telemediated work relationships in various points in the global supply chain and analyses the implications of telemediated spaces for the quality of workers' lives. Drawing on an analysis of case studies conducted by the EMERGENCE Canada project, this paper argues that telemediated work represents a shift in the scale at which many aspects of daily life unfold, and that some of the assumptions upon which workers' lives are governed must be reconsidered.

Introduction

Telemediation is fragmenting work across increasingly complex, transnational networks. Workers in these networks must negotiate through a multitude of temporal, contractual and trans-cultural milieus resulting in profound changes in 'who does what work, when, where and how' (Huws, 2000). This paper seeks to understand the consequences of these changes on the lived experience of workers in their workplaces and communities. Focusing on the 'seamlessness' or value chain integration (the a-spatial dimension) and 'synchronicity' (the temporal dimension) in the workflow of telemediated employment, the significance for workers' lives and the policy implications are examined.

The trajectory of the work experience is traced through case studies of telemediated work relationships in various points in the global supply chain, a process also described as 'global sourcing.' These case studies derive from research being conducted by the EMERGENCE Canada project that is investigating employment relocation practices for business functions including: data processing; systems and software development and maintenance; accounting and financial management; telesales; customer services; training and staff development; and editorial and design

functions. The employment relocation ranges from outsourcing, where a firm or individual provides services to another firm in a separate location governed by some form of contractual agreement, to geographically distant intra-corporate transactions where services are provided to one branch of a firm by another branch of the same firm. The case studies¹ are of telemediated employment in Canada from, and to, the US and Asia. The research is part of an international project on outsourcing² (Huws, this volume). A qualitative case study method³ was employed that investigated the quality and described the characteristics of the telemediated jobs. It also identified technological, organisational and human capital factors that facilitate and constrain the development of new forms of telemediated work.

The research employs an analytical framework that captures how the intersection of structural influences and worker agency mediate the impact of telemediated employment. The framework allows for the identification of social groups particularly at risk of social exclusion amidst the new patterns of employment that are emerging in the global knowledge society, while also illuminating new opportunities for women and other groups presently disadvantaged in the labour market. The research illustrates that the capacity of workers to make choices about the intensity, duration and expectations of work is being compromised to the imperatives of a 'seamless' work relationship in this telemediated environment and demonstrates patterns of polarisation at both the macro (regional/community) and micro (worker) levels. 'Seamlessness' does not necessarily mean the neutralisation of differences as there are regions and workers that are gaining from employment relocation while others are becoming increasingly disadvantaged. While there are predictions that telemediated work will 'flatten' the unequal division of labour between developed and lesser developed countries (Friedman 2005), as well as between regions within countries, others cite the existing balance of power between transnational corporations and their workers, and between developed and lesser developed countries, which is reinforcing centralisation of control and technologies (Huws 2003).

The European, Australian and Asian EMERGENCE projects identified several trends in outsourcing that have been substantiated by the Canadian case studies. In

1 The case studies have been conducted by researchers in the EMERGENCE Canada project which is examining telemediated employment relocation of firms within Canada and between Canada, USA and Asia, and is comparing these practices to ones in the EU, Australia and Asia. Funding for this project is through a grant from the Social Sciences and Humanities Research Council of Canada (SSHRC) Initiative on the New Economy Program jointly sponsored by Industry Canada. This project has conducted 14 case studies across Canada. For further details see: <http://www.chs.ubc.ca/emergence>.

2 EMERGENCE Canada is a daughter project of an interdisciplinary, international project, EMERGENCE (Estimation and Mapping of Employment Relocation in a Global Economy in the New Communications Environment): <http://www.emergence.nu>, under the direction of Ursula Huws. This research project has conducted over 150 case studies within companies in 18 different European countries, Australia, Canada, and Asia, studying the global outsourcing and work relocation patterns that are emerging as a result of telemediated work. Surveys were also conducted in the European Union and Australia that studied large samples of companies on their telemediated employment activities (see Standen, this volume).

3 Interview schedules were adapted from the European EMERGENCE project for the source, destination, and, where necessary, intermediary companies. The questions include: general characteristics of the company; motives of management; the process of relocation; organisational structure and corporate culture, enabling technologies; impacts and effects in source and destination enterprises; employment effects; consequences for labour; economic consequences of relocation; impacts on government; and organisational and human resource issues. Key informants were from management, human resources, project managers, workers, and where appropriate, union representatives and policy makers.

particular, it was found that the 'source/destination' distinction did not adequately capture all dimensions of the employment relocation, either because third parties were involved in intermediary roles or because the restructuring involved a dispersal of activities to multiple locations, or conversely, a concentration in a single location of activities previously carried out on many sites. The Canadian case studies, because they were done several years after the EU studies, depict a more evolved use of intermediaries and a lengthening and interweaving of the global supply chain.

Canada in the global supply chain

Businesses of every magnitude are developing strategies for 'global sourcing,' the 'process of identifying, evaluating, negotiating and configuring supply across multiple geographies in order to reduce costs, maximise performance and mitigate risks' (Aberdeen Group 2003). Kotabe (1992) describes global sourcing as the management of the interfaces between R&D, manufacturing, and marketing on a global basis so that a firm can exploit both its own competitive advantages and the comparative advantages of various countries. Porter (1986), among others, introduced the value chain concept to understand the management of interrelated value-adding activities of a corporation on a global basis. These activities include material procurement, technology development and engineering (R&D), manufacturing, marketing, finance, and human resources management. Gereffi, Humphrey and Sturgeon (2005) have developed a typology of governance patterns in global value chains which range from high to low levels of coordinating functions and power differential. The global strategies introduced by corporations seek to gain competitive advantage on a global basis through the arrangement and coordination of these dispersed activities. While national boundaries have largely become insignificant to international trade, the diversity of local environments still plays an important role in both facilitating and inhibiting an optimal global strategy for corporations.

The complex systems that have arisen through ICTs have advantaged some countries over others in global sourcing opportunities. The Centre for International Development (CID) at Harvard University's 'Network Readiness Index' (NRI) places Canada's position at twelfth out of 75 countries (CID 2002)⁴. Canada has a small population, well-developed infrastructure and human resources but often without the capacity to take on major relocated employment. Notwithstanding its relative status, Canada has achieved many of the necessary preconditions for attracting and sustaining a variety of telemediated work arrangements across a range of economic sectors. Canada benefits from an advanced communications infrastructure and is ranked fifth in the world for broadband penetration. Canada also has the third highest proportion of internet users among the population relative to other countries – preceded only by Sweden and the United States. Moreover, most Canadian businesses are regular internet users. As of 2003, 76% of all Canadian firms use the internet, and 92% of all Canadian firms with 20 or more employees do so. Complementing this high degree of internet

⁴ The NRI, an international assessment of countries' capacity to exploit the opportunities offered by ICTs, and the first global framework to map out factors that contribute to this capacity, defines network readiness as the degree to which a community is prepared to participate – or has the potential to participate – in the Networked World.

connectivity is a population with the necessary skills and education levels amenable to more advanced telework activities, with 55% of the total population over 15 years of age having completed some level of postsecondary education (Statistics Canada 2001).

Nevertheless, Canada is in an interesting position because it acts both as a source of outsourcing work within Canada and abroad, and a destination for work outsourced by international firms. However, in Canada as a whole, and in individual provinces, a relatively low proportion of GDP is derived from outsourcing. The total flow of outsourcing activity represents \$30 billion CAD annually, representing just slightly more than half a percentage point of the global outsourcing market. This backs up the assertion that Canada is a relatively small player in the world of telemediated employment (Statistics Canada, 2004a). However, growth in Canada's ICT sector is quite robust, with inflows and outflows increasing by 25% and 23.2% respectively over a two-year period. A study, which focused on the impact of offshore IT Services on Canada's IT Landscape found that outsourcing within North America is growing at an average of 10 to 15 per cent annually (PricewaterhouseCoopers 2004). A Canadian Federation of Independent Businesses study of global sourcing trends (2000) reported that outsourcing is a business strategy adopted by nearly 80 per cent of Canadian businesses in the manufacturing and transportation sectors, as well as in certain service sub-sectors. Canada is seen by some US corporations as more favourable as a source than an offshore option. Mayo, Kido, Westcott and Yesner (2004) queried 127 US IT executives regarding their sourcing decision-making processes and the results demonstrated that cost is no longer the primary reason to select an offshore supplier. Until cost savings reached 50% or higher, experience and the availability of technical expertise were the prime determining factors⁵.

Global sourcing is cited by Canadian corporate CEOs and business leaders as one of the most important corporate strategies for remaining competitive in terms of reducing overhead costs, increasing supply-chain efficiency and allowing for a greater internal focus on core products and services (CATA, 2005). This mode of industrial organisation has many advantages for business, such as increased flexibility (being able to meet just-in-time delivery requirements), access to advanced technology and expertise, specialisation of companies in fields of real competitive advantage, a decreased costing structure, and as a growth strategy. Cost savings are achieved through economies of scale and cost differences between regions and/or companies. Corporations which do global sourcing are striving for 'seamlessness' or value chain integration in their workflow.

A 2005 study⁶ identified that the majority of both outsourcers and providers who responded to an online survey had their corporate headquarters based in Canada and that the work was staying in Canada. Almost three-quarters (72%) of

5 The EU EMERGENCE survey, carried out in 2000, found a similar situation (see Huws and O'Regan, 2001)

6 The online survey was an EMERGENCE Canada / CATA (Canadian Advanced Technology Association) Initiative that was intended to capture a broader, more collective view of the issues being identified through EMERGENCE Canada's studies. While not a statistically valid sample because the survey received only 69 completed responses, the results do mirror common trends in the case studies and those of much larger random employer surveys carried out by EMERGENCE in Europe and Australia. (See Gurstein, P., C. Mochrie & K. Wennekes with U. Huws 2005).

outsourcers indicated that their outsourced work was done within Canada. When asked about preferred locations for outsourcers to source their work the majority also preferred locations within Canada or within close proximity (local or nearshore). In addition, almost three-quarters (72%) of the clients of Canadian-based providers were Canadian. The next largest client base is the USA. Of the Canadian firms, more than three quarters were located in Ontario and a combined 51% of Canadian respondents reported either Toronto (21%) or Ottawa (33%) as their home base. This was reflected in the EMERGENCE Canada case study research, the majority of whose investigations involved relocation that was occurring within Canada by Canadian firms or subsidiaries of firms. Another interesting trend is that offshore provider firms are establishing local offices in Canada. The size of provider companies varies by business function: for professional, scientific and technical services, companies are small, with highly skilled and specialised employees; for the service sector, companies are large, with many employees who require minimum training.

This survey captured telemediated professional, scientific and technical services such as software development. It did not pick up lower-skilled service activities involved in global sourcing such as contact centres and data processing. While most of the telemediated employment relocation activity for professional, scientific and technical services is clustered in metropolitan areas of Ontario, Quebec, Alberta, and British Columbia, which already benefit from large traditional business sectors, contact centres are more footloose. Shearmur (2004), in a study to identify locations in Canada where information technology enabled services (ITES) employment has recently grown, found that the vast majority of this employment is located in Canada's metropolitan areas. However, he found that call centres and customer service IT-enabled outsourcing activities are growing in remoter areas and in rural locations.

Dimensions of employment relocation

A large array of locational categories is needed to describe the new telemediated relationships that are forming in global value chains⁷. 'In-sourcing' refers to work that is provided on the work site by a company contracted to provide services or business functions previously done by the contracting company or government agency. 'Off-sourcing' denotes offsite relocation of work to another location of the same company. It can also mean offsite outsourcing of work to a contracted company that is located in the same geographical region. 'Near-shoring' refers to work that is outsourced to another country geographically close to the location of the company and 'offshoring' is when work is outsourced to another region of the world.

In this manner, a company could decide to restructure its company so that only a core of services is provided internally. The rest may be handled by an on-site contracted company in charge of human resources, offsite sourcing to another branch of the company in another province that provides customer support and telesales, near-shoring of training and staff development to a US company and offshoring of software

⁷ The typology was developed to deconstruct the term 'outsourcing' as the various dimensions of each type have differing implications for employment patterns.

development to India. The value chain, however, does not stop there. The software developer in India might be outsourcing part of its work to one of its subsidiaries in China and the branch of the company where customer support and telesales is being handled might be subcontracting its work to home-based workers ('home-shoring').

The case studies⁸ analysed for this research involved employment relocation to, from and within Canada. Table 1 identifies the case studies by source, destination, business function and type of relocation. Intermediaries in the global supply chain predominate in the cases studied. Nine of the 13 cases studied had intermediary companies or offices of destination companies as the first point of contact for the outsourced work. All of the cases in which Canada was the destination for outsourced work had as the source American companies and in three cases (Prairiecall, Vericontact, Tektonix), intermediary US companies had located contact centres in Canada to do their customer service work.

This pattern is also found in cases where Canada is both the source and destination of the work, since six involve an intermediary company which has established an office in Canada through which the work is funnelled. In two cases (Techsupport and Softech), offices of global Indian outsourcing companies have been established in Canada where some of the work is being conducted whilst the rest is outsourced to India. The main points of contact for these relationships are the managers located in Canada, though relationships have also been established between the Canadian source workers and the destination workers in India, especially in the case of Softech where they are working on the development of the same piece of software. In two other cases (Bankco and Quebank) arrangements are similar except that the outsourcing companies are doing all of the work within Canada.

In the cases of Newco and Greyco, global outsourcing companies have signed contracts with government agencies to deliver services. Because of existing union contracts, these companies have set up offices in Canada and staffed them with unionised workers who previously worked for the government doing the same work. There is concern that once the union contracts expire the work will be offshored. This has happened with Telecomm where the work is being off-sourced from British Columbia to a branch of the Canadian company in a province where the regulatory environment allows more flexibility for the company to outsource work. Some of the work is being done in Alberta while the rest is being done in the Philippines.

Gameco and Designco involve creative services where portions of the work of video game development for Gameco and the production of architectural design and detailing for Designco are outsourced to China. In Datadig, data processing is offshored to Cambodia by a social enterprise company that aims to use outsourcing for human development purposes to give marginalised workers opportunities to develop skills and become self-sufficient.

8 Case study names are pseudonyms. The case studies were conducted for the EMERGENCE Canada project between 2004 and 2006.

Table 1: Relocation Dimensions

Case	Business Function	Source	Intermediary	Destination	Relocation Type
Canada as destination					
Prairiecall	Customer Services	Telecoms co., New York, USA	Outsourcing co., Maryland, USA	Contact Centre Prairie City	near-shore
Vericon-tact	Customer Services	Telecoms co., Virginia, USA	Outsourcing co., Colorado, USA	Contact Centre BC	near-shore
Tektonix	Customer Services	Financial co., Southern USA	Outsourcing co., Western USA	Contact Centre, Ontario	near-shore
Post-pro-duction Sound	Creative Services	Film Production co. LA, CA, USA		Sound Production co., BC	near-shore
Canada as source and destination					
Techsup-port	Technology Support	Financial co, Scar-borough, ONT	Outsourcing Co. from India, Ontario, Canada	Outsourcing com-pany, New Delhi, India	insource off-source/offshore
Bankco	Financial Services	Financial co., Ot-tawa, ONT	Global Business Services Co.	Office of Global Bus. Services, Ot-tawa, ONT	offsource
Newco	Customer Services	Crown co., Vancouver, BC	Global Outsourcing Company	Contact centre of Outsourcing Co., BC	offsource
Greyco	Customer Services	Government org, Victoria, BC	Global Outsourcing Company	Contact centre of Outsourcing Co., BC	offsource
Telecom	Technology Support	Telecoms co., Burnaby, BC		Tech. support to Alberta workers of BC Corp. and Philippines Co.	off-source/offshore
Quebank	Computer processing/technical sup-port	Financial group Montreal. Quebec	Global outsourcing company	Global outsourcing company, Quebec	offsource
Softech	Software De-velopment	Software co. Burnaby, BC	Outsourcing co. based in BC and India	Outsourcing co. New Delhi, India	off-source/offshore
Canada as source					
Gameco	Creative Services	Video game co. Vancouver BC		Games Dev. co., Beijing, China	offshore
Designco	Creative Services	Landscape Architecture Firm, Vancouver, BC		Architectural Firm, Beijing, China	offshore
Datadig	Data Process-ing	Historical research co., Ottawa ONT	Social enterprise, Boston MASS, USA	Social enterprise, Phnom Penh, Cambodia	offshore

Only two of the cases studied were outside large metropolitan Canadian cities: Prairiecall, in a small prairie city, and Tektonix, in a small Ontario city and involving

the near-shoring of customer services from the US. That both involve relatively low skilled customer service work supports Shearmur's finding (2004) regarding the concentration of IT work in large metropolitan areas, with only contact centres being developed in any appreciable numbers outside of these regions.

Regional Impact

While media reports in North America are widespread about job loss due to global sourcing, international studies have shown that outsourcing does not necessarily adversely impact local economies. Huws, Dahlmann and Flecker (2004) report that analysis of EU employment trends in the 'computer and related' and 'other business services' sectors reveals no evidence of net job loss between 2000 and 2003. In these sectors, where jobs are most likely to be affected by offshore outsourcing, there was net growth across all EU Member States, with no state losing employment in 'other business activities' and very rapid growth in some countries, most dramatically in the Czech Republic. In computer and related services there was also net employment growth in every Member State except Denmark. However they note that this may in part be an effect of the increase in outsourcing of business services from other sectors; job growth, or stability, in computer and related services may conceal job losses in manufacturing. The report concludes that offshore outsourcing is rapidly becoming part of normal business practice; and there are strong pressures on companies to follow suit in order to remain competitive, despite a risk of failure. While the corporate cultures in North America are different from those in the EU, what can be learned from the EU research is that job loss in one part of the supply chain may coexist with job growth in other parts.

Research to date, however, has not found such a clearly negative situation in Canada. Statistics Canada data supports this conclusion and suggests that the net impact may be more positive than negative, with service sector trade revenues showing more gains than losses through outsourcing (Statistics Canada 2004b). The impact of global sourcing on regional and community development varies by community location – whether it is rural or urban, how remote the location is from a large metropolitan centre, community size and the type of business activities a community wants to attract or retain. For example, companies are finding it attractive to locate contact centres in Canada in urban areas where they can find a skilled, multilingual labour force. Other companies are relocating some business functions to remote regions where there is a regulatory climate and benefits that support their activities.

Global sourcing results in increasing expectations of flexibility and mobility of labour, resulting in further employment relocation if the conditions change in a particular locale. While there is specialisation of companies and regions in fields of competitive advantage, the reliance on advanced technology and global expertise creates highly unstable employment. The reasons for locating work in a particular region may vanish. Economic processes and corporate strategies that led to the original relocation may lead to further reorganisation, threatening the employment created through the first relocation. The organisational and technological change necessary for relocating work may result in forms of work organisation and information systems that make employment easy to relocate again (Flecker & Kirschenhofer, 2002).

While outlying Canadian communities, often led by provincial initiatives, in New Brunswick, Ontario, Saskatchewan, and British Columbia, are seeking to attract call centres to enhance employment, or compensate for a declining industry, it is yet to be determined whether these new jobs have helped provincial and local economies. The Australian EMERGENCE study showed mixed experiences with rural call centres (Standen and Sinclair-Jones 2003). The same mobility that enables new rural jobs increases vulnerability to relocations offshore to benefit from cheaper labour or to replacement altogether through technological advances like automated voice recognition. Those call centre jobs which are less vulnerable to quick relocation are often centrally located, out of a need for a specific type of expertise or language capability. Nearly 70% of all call centre jobs in Australia have concentrated in and around its two largest cities, Melbourne and Sydney. This metropolitan location (or at least proximity) is particularly strong among private sector activities, but less so for call centres performing work outsourced by government agencies. As a result, Australian rural policy-makers have had second thoughts about continuing to pursue these activities (and offering financial incentives) without more clarity on their longer-term local impacts.

However, professional, scientific and technical services such as software development are in a very different position in terms of enhancing regional economic development. While outsourcing of these services does occur, it is not necessarily a threat for the Canadian economy. For example, Arora and Gambardella (2005) found that most software activity outsourced to countries with emerging industries (such as India) entails lower value-added aspects of the production process, and this will continue to be the case for quite some time. As a result, these offshore activities do not necessarily detract from programmers doing higher-level work and firms may benefit from outsourcing more routine activities, gaining an edge on competitors and being able to grow their companies in a more carefully planned manner. Also, where higher-value software and advanced technology activities are outsourced from US firms, these tend not to be sent to offshore locations, but to 'near-shore' ones within the USA or in Canada. Thus for the major urban communities in Canada global sourcing may be more of an opportunity than a threat, providing specialised employment clusters.

Table 2 illustrates that in Canadian destination case studies there were some job gains. For three of the four cases, however, these job gains were associated with government inducements to relocate their offices in Canada. Where Canada was both the source and destination for the outsourcing, there was displacement of workers from particular locales but no job losses except where part of the work was outsourced to another country. Even in those cases, especially in the Softech case, the outsourcing was seen by the source company as a strategy to expand the company gradually without having to hire workers and then fire them when the work ended. In Canadian source cases there were no job losses reported because two of these cases (Gameco and Designco) entailed specialised creative services not easily found in Canada, and the Datadig case involved relatively low skilled data processing work for marginalised workers in Cambodia.

Table 2: Employment Impacts at Source and Destination

Case	Job Losses at source	Other lost opportunities in source region	Canadian destination	Canadian Gov. support (any level)	Job Gains at destination	Technology transfer for destination	Other regional capacity gains	Impacts on Canadian region involved	Summary of impact for Canadian Regions
Canada as Destination									
Prairiecall	P	n/a	Y	Y	Y	Y	Y	Positive	Jobs added in downtown node (shopping mall)
Vericontact	Y	Y	Y	Y	Y	Y	Y	Postive	Jobs added in a designated node, within good transit access
Tektonix	P	n/a	Y	Y	Y	Y	Y	Positive	Jobs gained and helped failing downtown
Post-production Sound	P	n/a	Y	Y	Y	Y	Y	Mildly positive	Jobs gained, but outside designated node
Canada as Source and Destination									
Techsupport	P	P	Y	X	Y	Y	Y	Mildly negative	Jobs lost in several Canadian regions due to outsourcing
Bankco	Y	X	Y	X	X	X	Y	Mildly positive	Jobs transferred within same region and kept in existing node
Newco	Y	Y	Y	Y	Y	Y	n/a	Negative	Jobs lost in government and union membership
Greyco	Y	Y	Y	Y	Y	Y	n/a	Negative	Jobs lost in government and union membership
Telecom	Y	n/a	Y	X	Y	Y	n/a	Negative	Jobs formerly in designated node were lost
Quebank	X	X	Y	Y	Y	Y	P	Neutral	Displacement of workers within the same region
Softech	P	Y	X	X	Y	Y	Y	Mildly negative	Lost revenue opportunities for other regional firms
Canada as Source									
Gameco	X	P	X	X	Y	Y	Y	Mildly positive	Company planning to maintain and add jobs over longer term
Designco	X	X	X	X	P	Y	Y	Neutral	No jobs lost or created in Canada
Datadig	X	X	X	X	Y	Y	Y	Neutral	No jobs lost or created in Canada

Y = yes; X = no/not; P = presumably (not explicit, inferred); n/a = information unavailable or unclear

While the motives for delocalisation of telemediated work identified in the case studies involved some relatively predictable factors, such as: cost savings achieved by economies of scale; cost differences between regions and/or companies; availability of labour and expertise; and a high degree of digitisation of information and electronic access to it, they also include less obvious factors such as infrastructure capabilities and government support that have an important bearing on locational decisions.

The impact of telemediated employment on employment patterns in Canadian regions varied by the location. In the Prairiecall and Tektonix cases this was very positive as they are both located in small cities with high unemployment. Having contact centres located in these cities means that they can use their presence to attract other similar businesses.

The most negative impacts identified were from the Newco, Greyco and Telecom cases. The Newco and Greyco cases involved government 'contracting out' of work formerly done by government workers to global outsourcing corporations. While existing unionised government employees have been relocated to the outsourcing companies' contact centres in the same cities as the previous jobs there is no guarantee that, after the existing union agreements expire, these jobs will not be relocated outside Canada, since these corporations have consolidated business functions such as technology support in Asian countries in other contracts. Widespread government employment contracting out could have significant negative impacts on regional employment. The Telecom case was similar in that a national telecommunication corporation was relocating work to other regions of Canada where the employee standards and regulatory climate are more relaxed and the unions do not have as strong a presence. From this province they are also outsourcing to the Philippines.

The creation of 'seamless borders' (National Law centre 1993), the harmonisation of rules governing trade and investment across nation states, does not advantage all regions to the same extent. Canada's regions are not competitive against other global regions (India, China) that offer highly skilled labour at a fraction of Canadian salaries. However, as a 'near-shore' option Canada does offer an educated, multicultural workforce with multi-lingual opportunities at lower cost than the USA.

Within Canada, regions where there is regulatory flexibility together with government policy intervention and heavy investment in IT infrastructure and development have shown growth in telemediated work. The concentration of telemediated services clustered in those provinces with large traditional business sectors, such as Ontario, Quebec, Alberta and British Columbia, suggests a possible correlation or synergy between existing services and those areas amenable to IT growth. The 'death of distance' hypothesis that postulated that telemediated services would locate in relatively cheap, rural areas has not necessarily been shown to occur.

Canadian metropolitan urban and suburban areas are attractive for outsourcing opportunities because of a large pool of potential workers with suitable skills (including different languages) and availability (flexible working hours). However, this can lead to intense competition for staff, and skilled workers being a scarce asset. Canadian rural areas are attractive because of a lack of alternative economic opportunities ensures low staff turnover. Rural areas, though, offer limited resources in terms of the numbers and profile of available workers and often a poor technology infrastructure.

The flexible worker

'Seamless enterprises' (Dimancescu 1995) are generated by the breaking down of barriers between departments and functions within organisations to create cross-functional teams and more agile, competitive enterprises. While a seamless work environment between geographically dispersed workplaces can be made possible through IT technologies, flexible labour markets make it operational. These labour markets have flexible employment patterns in terms of the hours worked, pay arrangements, contracts, and hiring and firing of workers, flexibility of skills within the workplace, and flexibility in the locations where work is to be performed.

Harvey (1989), and others subsequently, have hypothesised that the emergence of flexibly specialised demands for labour are the outcome of a Post-Fordist, multi-layered, comparatively unobtrusive, and continually transforming contingent labour market consisting of both white and blue collar workers. Attempting to define contingent work has proven to be a tenuous task because of the continually transforming nature of an economy that is constantly creating new work arrangements between the decentralising firm, and its workers. In trying to keep up with the accelerating pace of the economy, definitions of new types of contingent work are continually being constructed, deconstructed and reconstructed again. Contingent workers differ from traditional, permanent full-time employees in five key ways: job insecurity; lack of predictability in terms of the knowledge of both the conditions under which an event will occur and the expected effects; lack of control over how and when the work is performed; the nature of the psychological contract; and the social comparison process with referent non-contingent workers (Beard and Edwards, 1995).

Huws (2003) analyses labour flexibility as a result of the restructuring process related to commodification and investigates, 'the processes by which various activities have become commodified ... and the effects that these processes have had on labour both within and without the cash nexus' (62). These processes have blurred the boundaries between economic sectors as well as between paid and unpaid work and rendered them dynamic and unstable. She argues that an analysis of employment restructuring must incorporate a consideration of the changing sexual and racial division of labour. This is corroborated by the Canadian cases, shown in Table 3, that reveal a distinct division of labour according to gender, ethnicity and age. Higher skilled employment, such as software and video game development, is predominantly young and male dominated. Lower skilled employment in customer service contact centres⁹ is dominated by women, new immigrants and visible minorities. This finding substantiates research on call centre workers across Canada which found that an average of 70-72% of all workers in all sites were women and that a high proportion of call centre employees were under 29 years old and recent immigrants (Buchanan and Koch-Schulte 2000). Those working for private sector outsourcing companies are mainly young, but those working on government outsourcing contracts are middle-aged, owing to existing union contracts which have sought to maintain the workforce that existed prior to the employment relocation (Newco and Greyco). However, there is no guarantee that this workforce will remain when the contract expires.

9 "Contact centre" is a term used instead of 'call centre' because this work is now being done in some centres totally via the computer while in other centres the telephone is linked with a computer.

Table 3: Workers' Profiles

Case	Outsourced Labour		Source Worker Profile	Destination Worker Profile
	'High Skill' ¹	'Low Skill'		
Canada as Destination				
Prairiecall		Customer service agents	N/A	Young, 70% female, High School education or less
Vericontact		Customer service agents	N/A	Young, 60% female, minorities, new immigrants. High School education or less Starting wage - CA\$9/hr.
Tektonix		Customer service agents	N/A	Young, 70% female, High School education or less
Post-production-Sound	Sound engineers		N/A	Young, male, higher education or special skill set
Canada as Source and Destination				
Techsupport	Technology support		Middle-aged, 60% male, minorities, High School	Indian, young, 80% male, university education
Bankco	Technology support		Middle-aged, 60% male, High School	Young, 75% male, university education
Newco	Manager of agents	Customer service agents	Middle-aged, 90% female, High School	Middle-aged, 90% female, High School Education
Greyco	Managers of agents	Customer service agents	Middle-aged, 70% female, High School	Middle-aged, 70% female, High School
Telecom		Customer service agents	Middle-aged, 70% female, High School	Philippine, young, 80% female, higher education
Quebank	Technical support	Data processors	Mature, mostly French Canadian	Young, mostly multi-cultural
Softech	Software Developers		Young, 75% male, minorities, university education	Indian, young, 75% male, higher education
Canada as Source				
Gameco	Video Game Developers		Young, 90% male, university education or special skill set	Chinese, young, 90% male, university education or special skill set
Designco	Designers		Young, 75% male, university education	Chinese, young, 75% male, university education
Datadig		Data Processors	N/A	Young, 50% male, less than High School

Workers' positions in the flexible labour market are reflected in their control over their temporal and spatial relations. While for both 'high' and 'low' skilled workers, there is a blurring of the distinctions between work and personal life, their position in this market affects the strategies available to them¹⁰. For a low-income single parent contact

¹⁰ While useful categories to differentiate between those workers whose work requires a specialised

centre worker forced to work a split shift that impedes her ability to care for her family, it is the employer who controls the flexibility. This flexibility creates precariousness both in employment relations and domestic commitments. By contrast, for a software developer who can work at home one day a week, flexible work hours allow for control over his work life, which enables him to fulfill both work and domestic responsibilities. However, as will be shown in the following section, even for 'high skill' workers a seamless work environment results in vulnerabilities.

Consequences of seamless and 'in-sync' relationships

Corporations that outsource want full integration with the work processes of the source company. While this corporate arrangement eases concerns for the source company, the striving for 'seamlessness' and 'synchronicity' for a geographically dispersed workforce has consequences for workers' livelihoods, job security and working conditions.

The consequences are both temporal, such as working to a timeframe imposed by another global region ('in-sync'), and a-spatial in the need to integrate work activities 'seamlessly' with those of clients and to make invisible the location and culture of the global region and company that the outsourced worker belongs to. 'Seamless' work environments create situations where workers may need to feign cultural and/or community affiliations to ensure smooth working relationships with remotely located clients or co-workers. Huws (2006) refers to this as 'virtual identities' – pretences which could involve anything from accent training to constantly monitoring the progress of sports teams in remote co-workers' home towns, to even more subtle adaptations.

The Vericontact case illustrates the precariousness of the experience for low skilled workers that has resulted in stressful working conditions, uncertain job security and reduced wages. The case involves an outsourcing arrangement between a source company located in Virginia and Iowa, USA and a destination service provider company located in Colorado with the contract carried out exclusively by a contact centre located in Vancouver, British Columbia (BC).¹¹ The Vancouver contact centre provides third party verification (TPV) for customer service orders made by the source company. Sixty percent of the 400 workers are women. Forty employees are Aboriginals¹², the majority being under 35 years old and recent immigrants from Asia

skill set and analytical capabilities from those who work is more routinised, the designations 'high-skill' and 'low-skill' can be misleading. Contact centre work is not necessarily 'low-skill' as it requires a sophisticated understanding of both technological and interpersonal skills, and the ability to work under stress, which is rarely recognised by its low wages. Call associates have to strictly adhere to a script while maintaining a cordial phone presence and completing the transaction within an allotted period of time that is closely monitored by supervisors. Mirchandani (2003) and others describe the skills necessary in the service sector as 'emotion work' or emotional labour, which requires that certain emotions have to be displayed by workers. The difficulties of maintaining the expectations of emotional labour results in the frequent burnout by service sector workers (Zapf, Vogt, Seifert, Mertini, & Isic 1999).

11 The number of different languages spoken in the region was a key determinant in the decision to establish the contact centre in Vancouver, and in general, the destination company found there to be a highly skilled labour force in Vancouver to draw from, labour costs were relatively low compared to the USA, and the technology infrastructure was in place.

12 The destination company was founded by women of Native American descent and is committed to providing employment opportunities for this population in line with a general commitment to principles of corporate social responsibility. The destination company has partnered with a Vancouver community organisation to build and train a workforce of First Nations people.

and Latin America hoping to use their contact centre work experience as a stepping stone to further employment. Because call centre agents on this contract require very few technical skills, it is considered an entry-level position and a high school education is not required. They are paid on an hourly basis. The wage rates are below industry average, beginning at CAN\$9 per hour and increasing by CAN\$.25 per hour after the three month probationary period and again over time in relation to performance. Employees do receive extended coverage for medical and dental services, paid vacation, and three paid sick days as well as insurance.

Agents receive approximately 70 calls per 6.5 hour shift. Some work five days a week, but the length and quantity of shifts generally depends on call volumes. Full-time shifts had recently been reduced by one hour from 7.5 to 6.5 hours because of financial difficulties in the source company. They receive one 15-minute paid break and an unpaid 30-minute lunch break. There are also some part time employees and others that work split shifts, i.e. two hours in the morning and two hours at night. The earliest shift starts at 5:00 am and the latest ends at 9:15 pm. The turnover rate at the company is between 10% and 14%, which the managers claim to be industry level. The rate varies, however, by the job and skill set. There is therefore very low turnover among the highly technical and specialised jobs but higher rates of turnover among the TPV agents.

The BC-based destination centre managers emphasise that the company has a 'seamless relationship' with the source, communicating on a daily basis and working collaboratively to address problems and enhance services. However, the destination contact centre agents in Vancouver are acutely aware of their surveillance. The source company from the US is constantly monitoring them for quality and speed of service. The invisibility of their identities adds to their work stress. The Vericontact workers are not supposed to reveal any details of their work location to the consumers that they are in contact with, because they work for a US firm for American clients and contact only American consumers. TPV Agents are monitored by supervisors at both companies and must comply with a list of stringent rules pertaining to how they speak and perform on the job¹³. They receive ongoing feedback and coaching from their 'quality coaches' who contact supervisors when the call associates deviate from the script. There is also a very low tolerance policy such that those agents – and supervisors – who are not performing are put on probation. One of the contact centre workers describes this monitoring:

'They connect to every call; they are connected to every call through the computer, through the systems...Every, every call is recorded...[Source company] have a group of people monitoring every call, and here [destination company] has a group, called quality coaches, which are the same activities.'

'First is, like in my case, two days ago, no, yesterday, one of them [quality coach] she says "I was listening to your last call, and you said something that is not really right. Because this is the case, blah, blah, blah, blah"...And regardless of your experience, sometimes the customer tries to handle, to drive the call. And saying for example, "Hurry up, hurry up; I'm in a hurry. I'm in a hurry; I'm in a

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Standards for call response time and quality were written into the contract with the destination firm.

hurry. Hurry, hurry, hurry". And because of that you say something not exactly true, but not exactly wrong.'

'We have to follow our script. And after the script you can rephrase that. But sometimes you don't follow the script as strictly just for one word and it would be something that we call "escalation". Escalation which is a big problem or it's only called "deficit" which is a minor problem. But internally our quality coaches, they can tell us where we are failing. What did we do wrong? But sometimes it's [source company] who is listening [to] the call, and the warning comes directly from [source company].'

The restructuring that has occurred in the company, such as reducing hours of work, has negatively impacted women as they are now often forced to take split shifts which affect reproductive activities such as their ability to care for their families. Because of the vulnerability of the workforce (i.e., immigrants, minorities), workers are reluctant to express dissatisfaction with their working conditions and salaries as many have few other employment opportunities. This was described by one contact centre worker:

'Well I come from Mexico. I have a university degree. And in Mexico my university degree is Electronic Engineer. And I was working for several years in the IT industry... But you know I was immigrant; it's sometimes very difficult to get job here because of the lack of Canadian experience. So I started working with a frozen vegetables packer, temporary work, and after that I get this job.'

Vulnerability and stress resulting from the highly pressurised work environment is not only found among low skilled workers but also among outsourced high skilled workers. In the Softech case, the corporate relationship involves software programmers in Canada and India working on the same piece of software.¹⁴ The Indian programmers are all highly educated with many having Masters degrees in electronic engineering. They are generally young, with the majority being male. They are paid well above the average wage in India.

The outsourcing relationship has been designed so that the Indian programmers are, 'just like in the building' and 'incorporated into all development processes.' They work 'in sync' with the workers in-house. This works well for the source company from Burnaby, BC in that it allows flexibility to monitor the productivity of individual software developers located in a Software Technology Park, in Noida, a suburb of New Delhi, India. They use MSN Chat and email to address issues within the team, and phone only rarely. The 'in sync' relationship that the source company has with the Indian software developers means that the staff in India have to manage their time and resources in order to accommodate that relationship and that work must be 'seamless' with those of their clients. A project manager in India describes what they are trying to give their clients as 'a good, visible and invisible quality of the product.' Achieving this invisibility results in extraordinary demands on staff time. A software developer from the Indian company comments,

'If I need to stay late I'll stay late till one or two a.m., that's okay with me because that comes as a part of your job.'

14 An Indian entrepreneur/engineer who immigrated to Canada is a co-founder of the Vancouver/New Delhi destination company with a man in New Delhi. In North America, there is a team of five people in Vancouver selling the company's Indian services. The company in India has 80 software developers and a management team of about ten people including the five people in Vancouver.

The Human Resources Manager in India sees no difference in attitude between the male and female staff (a ratio of 7 to 3) though she does acknowledge the extra family demands placed on women:

'In fact you will find the females are – there is no hindering factor ... that was a few years back that ... she is not going to be in office beyond six, or anything because being a global interaction project we do have people who have to sit late also at night, because of the timings and other things, or the upload is happening or there are a number of activities because of which they have to stay there. But – Oh I find the females staying late equally or they would be working equally hard. Even if it is coming at odd hours in the office, to office, or anything of that.'

She further comments on the health impacts of the pace of work on the staff:

'You talk to a number of [software] developers here, they come even on weekends because the project requirement is there, the project pressure is like – so slowly and steadily, like family also takes for granted, that fine, because it is required, because you are running for your life, because you have to grow in your life because you have to grow in your profile, your career is there and you are young. You find a lot of young age heart, strokes and stress, blood pressure these are the common diseases you'll find in India. Anybody you talk to at thirty or forty, you will find all these things have become common because of high pressure and a person is unable to see that what are they doing different.'

The stress felt by these Indian workers in trying to adapt to a 'seamless' work environment imposed from North America as described above appears to contradict Friedman's (2005) assertion of the 'flattening of the world' that results from outsourcing of jobs to countries such as India:

'it is much easier and more satisfying... to work hard in Bangalore than to pack up and try to make a new start in America. [Through these arrangements] they can... make a decent salary, and not have to be away from families, friends, food and culture. At the end of the day, these new jobs actually allow them to be more Indian' (Friedman, 2005:28).

Rather than being allowed to be more Indian, these workers appear to be neither Indian nor North American but inhabiting a hybrid culture demanded by the 'virtual identity' they must assume.

The Canadian software developers in the Softech case are not immune from vulnerability. They are constantly on guard, aware that their jobs may be lost to outsourcing, and perceive that they must perform for both their Canadian managers and their Indian counterparts.

In the larger set of EMERGENCE Canada results, in six cases, all involving contact centre workers (Prairiecall, Vericontact, Tektonix, Newco, Greyco and Telecom), the impact of having the work culture and expectations imposed by the source company has resulted in employees being highly unsatisfied with their employment status and companies with high staff turnover rates. In the Prairiecall case this was most strongly apparent. This was a case with: poor working conditions; an intimidating climate

of management-worker relations; and overt steps taken by management to prevent workers from unionising in response to workplace issues. One interviewee and former employee – terminated for voicing some interest in unionisation – described the extent of the toxicity:

'This girl's mother passed away and she was contacted at work [with this information].

Now when she was contacted at work to let her know that her mother had passed away, [the operations manager] picked up the phone and said, "sorry we can't talk to reps on the floor here" and hung up the phone ... There have been umpteen cases in that place there where people have been fired [by]... ill- experienced supervisors [who go on]... a power trip, [saying] "let's get rid of him, he's [been] sick", you know they're frustrated, it's an intimidation tactic, the operations managers have told all the supervisors that if they don't meet their ... target they've got to actually stand in front of all the operations managers in some sort of military humiliation tactic and actually present an IDP, which is an individual development plan to prove what you're going to do to get your team back up.'

In the Newco case, surveillance has created a fearful environment as voiced by one worker:

'The supervisors can go into your computer and look at exactly what you're doing at any time. If you're writing an email, they can look at the email while you're writing it.'

The environment is not conducive to addressing work improvements:

'What we're finding is it's less efficient now than it was, and they're actually – seem to be spending – the system things [and] they're spending time on monitoring the productivity. And I guess to be fair they have to analyse and look at peak times so that they can, you know, plan appropriate staffing. But the whole focus is on that and then not on the system changes to make it work more ... efficiently'.

The Human Resources Manager of the Destination firm also acknowledged some of this toxicity indirectly, and alluded to conflicts over unionisation:

'There are a lot of employee relations issues... because of the high stress level. We've, right from the get go, we've had attempts to unionise us. I've had a union campaign from the day I came in here, and it was already started. So as much as I'd like to say I resolved it, it was already started here before I ever got here, so we've done some things to thwart the union from forming here, and we think right now that we're over the hump...'

In the Telecom case, the negative impacts were also connected with worker intimidation and anti-union activities. The outsourcing of jobs from a Canadian source location to a destination in the Philippines in Telecom was highly controversial, and viewed by the unionised employees at the Canadian source firm as a direct act of aggression by management towards the unionised staff. In describing this example, which had occurred after the union had sought to add a particular group of staff then classified as management to their membership, one interviewee explains:

'The union contested [management's refusal] and took it to arbitration; won the case and the company's response was to get rid of the work ... a portion of that

work, a great deal of that work, I guess went to the Philippines and they now answer when any of the employees at work phone that have a structural problem with the backbone or the network systems... they phone that number and then they pick it up and that's who deals with it. It is sad. There were hundreds of jobs that were actually lost; I guess we never had them within the [union] but we had the right to have them and yet were lost.'

The impacts of global sourcing on workers' agency are varied. These impacts tended to be more positive or benign where work with higher skill levels was involved, or when the aim of the arrangement was explicitly to build worker capacity (Datadig). Clearly, beneficial impacts on worker agency, provided in the Datadig case through worker education and capacity enhancement, provided workers with opportunities for advancement and widening career choices. Where the impacts were largely negative, the skill sets tended to be lower. Several policy responses to these findings present themselves for discussion in the conclusion.

Policy implications and conclusions

These cases illustrate how globalised production relationships impact people working in these new structures and systems. There were positive outcomes to global sourcing in some parts of Canada that resulted in this form of employment bolstering otherwise stagnant regions (Tektonix and Prairiecall), source to destination job transfers staying in the region (Bankco; Quebank, Newco and Greycos)¹⁵ and companies being able to 'grow' in an orderly manner (Softech, Gameco and Designco). In addition, good salaries enabled Indian workers to remain in their communities without having to seek employment elsewhere (Softech and Techsupport).

These outcomes must be tempered, however, with the toll that global sourcing places on regions and workers. This mode of industrial organisation results in increasing expectations of flexibility and mobility of labour, resulting in further employment relocation if the conditions change in a particular locale. While there is specialisation of companies and regions in fields of competitive advantage, the reliance on advanced technology and global expertise offers highly unstable employment. The reasons for locating work in a particular region may vanish. Economic processes and corporate strategies that led to the relocation may lead to further reorganisation threatening the employment created through the original relocation. The organisational and technological changes necessary for relocating work may result in work organisation and information systems that make employment easy to relocate again, resulting in regional disparities both between countries and within countries. However, while conditions may look bleak in marginalised regions, and for workers made redundant, global sourcing need not necessarily mean the end of effective regional and local control over economic development and liveability.

Telemediated employment practices are redefining the workplace, and flexibility and control within it, changing employment and contractual relations and creating new risks of stress and diminishing well-being. In order to understand the implications for workers there is a need to acknowledge the differential impact

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While this is the current situation, there is uncertainty about future relocation.

of policies on various segments of the population. While governments in many jurisdictions see positive attributes to the employment created by contract centres, among other knowledge-based industries, rarely do they see the consequences of these initiatives in reinforcing a polarised labour force. Government employment creation policies need to develop strategies in concert with employers and employees that recognise that the quality of the jobs is as important as the quantity. Any strategy would need to be multi-faceted to recognise the scope and the complexities of the flexible workplace. To further this understanding, a redefinition of the workplace would have to be proposed in concert with new forms of co-operation between the various actors in the knowledge-based economy, skill development, a re-evaluation of employment and contractual relations, and a recognition of the risks of stress and diminished well-being that globalised work might produce.

A significant issue is unequal access to resources, infrastructure and training. While women in Canada are quickly seeing the economic opportunities that access to IT can provide, they still lag behind men in the use of new technologies and applications. Training in Canada is inadequate to keep up with the demand for skilled IT workers and, in addition, it is hard to keep trained women workers with families in employment because of the demands of combining childcare with demanding careers. Coupled with the need for training is the need for recognition that childcare must become a societal issue and addressed at that level.

What interventions are possible while recognising the difficulties in addressing equity issues for low-income information workers? Union representation would ensure that these workers would at least have minimum working standards but, because of the opposition to unions by employers, union organising has only had a limited success. Government recognition of the rights of these workers would have to be in place before their working conditions could improve. Fudge, Tucker and Vosko (2002) in their discussion of how Canadian law distinguishes between employment and self-employment, recommend that labour protection laws should be redesigned in order to accommodate the varied conditions under which different forms of paid work are performed. Coupled with this is the need to recognise that the 'seamless' work environment has its own set of health risks. Stress and burnout are not just an individual problem, but also a societal problem affecting a large segment of workers. While improved training opportunities to upgrade technical skills are important, equally important is training in interpersonal skills to build the confidence to be able to negotiate opportunities for advancement and improved working conditions.

The new world of work has become precarious. This shift in the labour market is contributing to further demarcation between 'core' positions with secure job tenure and good pay and 'peripheral' employment found at the margins of the market, where remuneration, benefits and job security are more limited. Global sourcing is implicated in new barriers to social inclusion for some social groups in the paid labour force, while simultaneously engendering new opportunities for inclusion among others.

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