

Regions and firms in eWork relocation dynamics:

Pittsburgh's call centre industry

Chris Benner,

Chris Benner is an Associate Professor in the Human and Community Development Department at the University of California, Davis, USA.

ABSTRACT

This paper attempts to contribute to our theoretical understanding of the relationship between regions and the location dynamics of telemediated employment through an analysis of the regional dynamics shaping the call centre industry in Pittsburgh, which has grown significantly despite the increased possibilities for offshoring. Focussing on fundamental dimensions of the call centre labour process, it suggests that there are particular features of the Pittsburgh region that are not only important components of firms' decisions to locate call centre work there but also influence their processes for doing so. These features are rooted in the industrial history, socio-demographic dynamics and cultural factors in the region that increase the level of 'stickiness', or propensity of enterprises to stay in the area.

Introduction

In the last decade, dramatic improvements in the capabilities of information and communication technologies (ICTs) have significantly increased the depth and complexity of remote interactive communication, resulting in new patterns of employment location and relocation both within the United States and internationally. Daily media reports highlight a significant relocation of work to India, where thousands of customer service representatives, software developers, and financial analysts now routinely handle daily work for US-based corporations and customers. According to some estimates, as many as 14 million US jobs have the potential to be outsourced overseas (Bardhan & Kroll, 2003). As the capabilities of information technology continue to increase, possibilities for information exchange, knowledge development, and interactive learning available in remote locations are likely to continue to increase significantly as well. In this context, there is a strong potential for large amounts of telemediated work to move overseas to countries with adequately skilled workforces and telecommunications infrastructure, but with significantly lower costs.

At the same time, however, many efforts to outsource or relocate work overseas have failed, as unexpected complications, rising costs, and lower quality have undermined the benefits sought by companies overseas. Furthermore, international

outsourcing of ICT-enabled work is still dwarfed by the extent of this work in the United States. Today an estimated six million workers are employed in the US in various types of remote telephone call centre, with over 10 million employed in ICT-related occupations increasingly being conducted in new, relocated sites around the country (Atkinson, 2004; Datamonitor, 2003; Hecker, 2005; National Research Council, 2001). The limited international mobility of telemediated work is often linked to localised educational levels, common cultural norms, national regulatory systems, and a need for periodic face-to-face communication and other localised learning processes, suggesting that much of the growth and relocation of telemediated work may continue to stay in the United States.

As the EMERGENCE¹ research efforts have shown, developing robust understandings of why firms relocate eWork requires more than an understanding of simple location factors (e.g. costs of labour, real estate, regulatory climate) and instead requires a detailed attention to the historical trajectories, processes, and socio-technologically embedded labour processes that shape decisions about the location of eWork (Huws, 2003). Most of the EMERGENCE research has focused on these processes at the firm level, within the context of national regulatory systems. Many of the processes shaping work location, however, are rooted at a regional (metropolitan) scale, particularly as they relate to labour market dynamics, local production complexes (clusters) and historical 'layering' of previous rounds of capital investment and accumulation (Massey, 1995). We therefore need more robust theoretical constructs for analysing the regional processes that shape decisions for locating eWork.

This paper attempts to contribute to this theoretical process by analysing the regional dynamics shaping the call centre industry in Pittsburgh, which grew significantly in the 1990s and continues to this day to add new employees, despite the increased possibilities for offshoring. I analyse dynamics in the regional industry by examining processes of restructuring in four dimensions of the labour process that are fundamentally shaped by information technology: space, work, employment and time. Through this examination, I suggest that there are particular features of the Pittsburgh region that are important components of firms' decisions for locating call centre work there and processes for doing so. These features are rooted in the industrial history, socio-demographic dynamics and cultural factors in the region that increase the level of 'stickiness' of enterprises, or their propensity to stay in the area.

This paper is structured in the following way. I start by briefly reviewing recent literature on the scale and processes of outsourcing in the US. I then turn to an overview of Pittsburgh, and particularly the call centre industry in Pittsburgh. This is followed by an analysis of call centre labour processes in the region along the four dimensions of space, work, employment and time. I conclude by exploring the implications of this analysis for theoretical understandings of how regional processes shape telemediated work in our global economy.

¹ The EMERGENCE (Estimation and Mapping of Employment Relocation in the Global Economy in the New Communications Environment) Project is the most comprehensive, systematic global study of employment relocation, combining both quantitative and qualitative analysis in understanding the scale and processes involved in employment relocation. Initially funded by the European Commission's Information Society Technologies Programme from 2000 to 2003, the methodology has been subsequently replicated in Asia, Canada and Australia. For more details, see <http://www.emergence.nu>.

Offshoring: tidal wave or small trickle?

There has been a growing sentiment in the USA over the past few years that the growth in outsourcing work to India by US firms is the first step in a major relocation of telemediated work overseas. Much of the analysis of this phenomenon to date has been conducted by international consulting firms, whose objectivity in the matter must be questioned, since many of them are involved in helping firms to relocate work. Yet the large scale of their predictions suggests a need for serious academic attention as well. McKinsey and Associates, for example, predict that total offshore employment in the service sector will reach 4.1 million jobs worldwide by 2008 (McKinsey Global Institute, 2005). John McCarthy of Forrester Research estimates there will be 3.4 million jobs offshored from the US alone by 2015 (McCarthy, 2004).

Warnings about the potential dangers of large-scale outsourcing are not limited to international consulting firms, but also include more careful analytical research. In a detailed analysis of the work characteristics of all occupations in the US, Bardhan & Kroll (Bardhan & Kroll, 2003) estimated that as many as 14 million US jobs may be at risk, though they are careful to state that they do not believe anywhere near that number will actually relocate. Princeton University economist Alan Blinder, in reviewing the potentially revolutionary impacts of the development and diffusion of information technology, argues that 'the total number of current US service-sector jobs that will be susceptible to offshoring in the electronic future is two to three times the total number of current manufacturing jobs (which is about 14 million)' (Blinder, 2006).

On the other hand, there are a number of studies that find that the numbers of IT-enabled service jobs that have been offshored to date are still small, and suggest that the scale may remain limited for some time to come. While there is some disagreement on specific numbers, nearly all sources estimate that total information technology enabled services (ITES) and business process outsourcing (BPO) employment in India was of the order of 400,000 people in 2006 with another half a million employed in information technology, software and R&D positions (NASSCOM, 2006), though growth was substantial. The US Government Accountability Office in a detailed review of the evidence available at the time, not only found a similar limited scale of offshoring but also provided evidence that suggests a more limited impact than some estimates. They pointed out that most business service imports still come from high-income countries, that less than 1% of mass layoffs were attributed to overseas relocation and that 70% of foreign direct investment from the US was still going to high-cost developed countries while India only accounted for 0.4% (GAO, 2004). Even some consulting firms recognise the limited scale of offshoring currently, with Datamonitor (2004), for instance, predicting that a total of only 5% of all call centre seats would be offshored by the year 2007.

Clearly the factors shaping the location, quality and character of telemediated work activities are highly complex and still poorly understood. Some factors – such as labour costs, infrastructure, tax and regulatory structure – shape location and growth trajectories in ways quite similar to manufacturing industries (Giaoutzi &

Nijkamp, 1988). Yet the interactive and service elements of the work brings in a wide range of cultural, linguistic, quality, communicative and learning process factors that are not well understood, but potentially remain more important than cost factors in shaping telemediated work location patterns (Kugelmass, 1995). Part of the difficulty in analysing these processes is rooted in the ways that the development and relocation of telemediated work undermines the usefulness of many of the conceptual categories that are typically used to analyse employment growth opportunities. For example, integrated ICT systems blur the boundaries between firms, with the legal 'employer' frequently having less influence on employment conditions or management practices than other firms who may subcontract the work, but retain extensive monitoring and control systems within the workplace. In essence, technologically-integrated global networks of firms, rather than single employers, are increasingly shaping conditions of employment and employment growth (Castells, 1996; Gereffi et al., 2005; Graham, 2000; Graham & Marvin, 2001; Shapiro & Varian, 1998; Sturgeon, 1999; Sturgeon, 2002).

Similarly, the rapid pace of change in information technologies is changing the meaning of a 'job' or even a 'career' (Bridges 1994; Farber 1996). New technologies are resulting in rapid changes in skill requirements and work practices, creating entirely new job categories (such as 'webmaster' or 'call centre operator') while rendering others obsolete (such as 'typesetter' or 'filing clerk') (Huws, 2003; Laudon & Marr, 2003). As a result, working lives more frequently include multiple jobs, employers and occupations, with constantly changing skill requirements (Peiperl et al., 2000). Telemediated work also challenges traditional notions of the 'workplace', as telecommunications networks link workers and customers via 'telemediated space' across vast distances, including different countries with different cultural norms, regulatory regimes and social institutions that fundamentally shape work place dynamics (Graham, 2000; Green, 2002; Lash & Urry, 1994). Thus, to effectively analyse employment conditions and dynamics in telemediated work, there is an urgent need to develop theoretical frameworks and concepts that more effectively capture the blurred institutional and spatial boundaries, dynamic processes, and complex employment practices that characterise this type of work.

In analysing the factors shaping the location and character of telemediated work, this paper utilises an analytical framework that is built around four dimensions of the labour process: Space, Work, Employment, and Time, abbreviated to 'SWET' (Benner, 2006). These are fundamental, irreducible dimensions of any labour process which are being dramatically reshaped by information technology. While it is useful to separate these dimensions for analytical purposes, they should be understood in an integrated way, as four dimensions of the same lived experience of labouring. None of the dimensions is meaningful except in the context of how it interacts with the other dimensions. Yet by highlighting each dimension in turn, we can gain deeper insights into critical aspects of labour process restructuring.

Before discussing this framework in more detail, I will first turn to an overview of the call centre industry in Pittsburgh, which will provide the contextual basis for the more detailed SWET analysis.

Pittsburgh and call centre work

Pittsburgh is famous for its history as the core of the US steel industry, first developed in the late 1800s. At its peak, Pittsburgh was the fifth largest metropolitan area in the country and produced two-fifths of the entire nation's steel (Lorant, 1999; Muller, 2001). The decline of the region's steel industry actually began after the first world war, but the region was particularly devastated by the recession and deindustrialisation of the 1980s. In just six years, between 1980 and 1986, the region lost 42.6% of its manufacturing jobs, with 50% of this loss in the steel industry (Detrick, 1999).

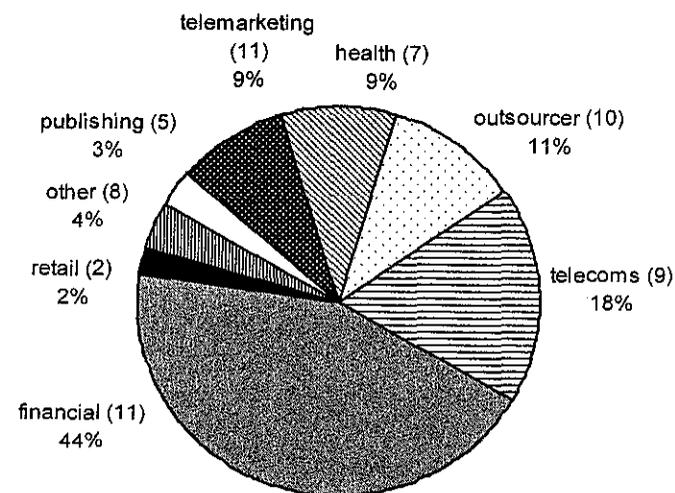
Despite this collapse in manufacturing, total employment in the region declined only by 7% during this time, as the region's education, health care, financial and other service sectors took up some of the slack. Overall employment in the region has retained some resilience. Thus, for example, the total population in the 7-county metropolitan area declined by 12% from 1960 to 2000, dropping from 2.77 million to 2.43 million. At the same time, however, there has been a tremendous hollowing out of the City of Pittsburgh itself, and of Allegheny County, the core county in the metropolitan area. Pittsburgh itself lost 45% of its population between 1960 and 2000, dropping to only 335,000 in 2000. Allegheny County lost 21% of its population in this time, and saw its portion of the total population of the region decline from 59% to 53%². The result of these patterns has been significant urban sprawl, disinvestment in many areas of Allegheny County (including large vacant land and declining real estate and office building prices), and a significant ageing of the population, as young people have migrated to other parts of the country in search of better employment opportunities (Brookings Institution, 2003).

One of the types of work that has grown in the Pittsburgh region since the early 1990s is work in call centres. Call centres are workplaces consisting of dedicated phone-agent positions in which employees integrate telephonic and computer technologies while interacting in real time with customers over the phone line, allowing for temporal co-presence without spatial co-presence. Call centres exist in dozens of industries, most prominently in financial services, telecommunications, and the travel industry. Since call centres are integrated into the operations of companies in many different industries, and since standard occupational classification systems don't distinguish most call centre occupations, there are no reliable statistics on the extent of call centre work. According to the Pittsburgh Regional Alliance, however, there were in 2006 at least 86 call centres in the Pittsburgh Region, employing an estimated 27,000 people. Of these, an estimated 60 centres employing more than 20,000 people were in Allegheny County itself, the core county of the metropolitan region.

Of all the centres in the region, an estimated 44% are in the financial services industry (see Figure 1). Call centres in the telecommunications industry (18%), general industry outsourcers (11%) and those in the health care industry (9%) make up the bulk of the remaining centres. There is a significant spatial variation of call centres by industry within the metropolitan region. Financial services call centres

are predominantly concentrated in the city of Pittsburgh itself, or in the immediately surrounding municipalities. Indeed the three largest call centres in Allegheny County, and five of the ten largest call centres, are in financial services. This reflects a close connection between call centre operations and the other activities of banks, credit cards, and investment service firms in the area. Call centres that exist more in the periphery of the metropolitan region tend to be smaller, and are more concentrated in telecommunications, insurance and general outsourcing industries (see Table 1).

Figure 1 Estimated Call Centre Employment by Sector, Allegheny County, 2006 (number of centres in parentheses)



Gaining accurate counts of call centres and employment in call centres is notoriously difficult, yet, according to figures gathered by the Pittsburgh Regional Alliance, the number of people employed in call centres in the region grew from 25,300 in 2004, a growth of more than 5% in two years. While these numbers may not be exact, newspaper reports either of call centres growing or of new ones being established in the region during that time lend support for the presumption that there has been growth in call centres in the region. Table 2 lists call centres that have expanded in the region between 2004 and 2006.

Many call centres are doing well in the region in part because of its relatively low land and labour costs. As Figure 2 shows, wages in Pittsburgh are generally lower than the US average, including for customer service representatives and switchboard operators, two of the most common call centre occupations. Average wages amongst telemarketers in the Pittsburgh MSA are actually higher than the national average, but as shown in Figure 3, the higher wages in Pittsburgh are only at the upper end of the wage distribution within the telemarketers occupation. The median wage and wages at the 10th and 25th percentile are significantly lower in Pittsburgh.

² All population figures have been calculated by author, based on data from the US Census Bureau, Historical Decennial Census Population and Housing Counts, retrieved on April 17, 2007 from <http://www.census.gov/population/www/censusdata/hiscendata.htm>.

Table 1: Call Centres in Allegheny County and Pittsburgh

Ten largest call centres in Allegheny County	
Company	Location
Mellon Financial Corporation	Pittsburgh, Allegheny County
PNC Financial Services	Pittsburgh, Allegheny County
National City Bank	Pittsburgh, Allegheny County
Precision Response Corp.	West Mifflin, Allegheny County
EchoStar Communications	McKeesport, Allegheny County
Federated Investors	Pittsburgh, Allegheny County
CVS/Pharmcare	O'Hara Twp, Allegheny County
Cardholder Services	Pittsburgh, Allegheny County
OSI	Robinson Twp, Allegheny County
Aetna/US Healthcare	Green Tree, Allegheny County
Ten largest call centres in Pittsburgh MSA, outside Allegheny County	
Verizon Wireless	Cranberry, Butler County
Liberty Mutual	New Castle, Lawrence County
Service Link	Alliquippa, Beaver County
TeleTech Holdings Inc.	Uniontown, Fayette County
CallTech Communications Inc.	Glendon, Fayette County
TMS Intersarch	Indiana, Indiana County
OSI	Canonsburg, Washington County
Reese Teleservices	Indiana, Indiana County
Commonwealth Group	Uniontown, Fayette County

Source: Pittsburgh Regional Alliance, http://www.pittsburgh-region.org/public/cfm/d_and_d/index.frm?FUSEACTION=AllCallCent, Updated May 2006

Table 2 Call centres that have opened or expanded in the Pittsburgh MSA, 2004-6

Year	Company	Event
2006		New national real estate leasing services call centre in Pittsburgh, with initial agreement to create 88 new jobs and eventually 150
2005		New 100 person centre in Robinson, focusing on medical advice/coaching for Medicare and Medicaid recipients
2005		Announces hiring 300 new people for new contract related to an unnamed automotive industry company
2005		Announced increase of 250 workers in Pittsburgh, most in call centre
2004		Announced expansion of West Mifflin Centre from 600 to 1000 jobs, as a direct result of expansion from an unnamed client
2004		Announces opening of 200 person centre in Hopewell Township (Alliquippa), Beaver County
2004		Expects to expand from 360 to 400 workers in Cecil Township, Washington County, as business expands
2004		Announced expansion of HQ in Beaver County, Hopewell business and Industrial Park
2003		Announced new contract with Spiegel, to do more collections, which will add 200 jobs to bring total to 800 downtown
2002		Announced it will hire up to 500 people laid off from Kaufman's when it was shutdown. Many of the Kaufman workers had been in the credit department

Source: Pittsburgh Post Gazette and Pittsburgh Business Times, various articles

Figure 2: Wages by Occupation, Pittsburgh and US, 2003

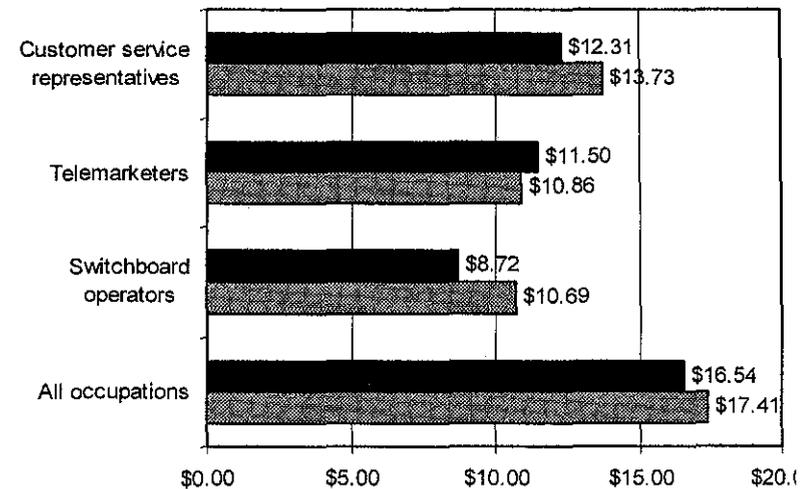
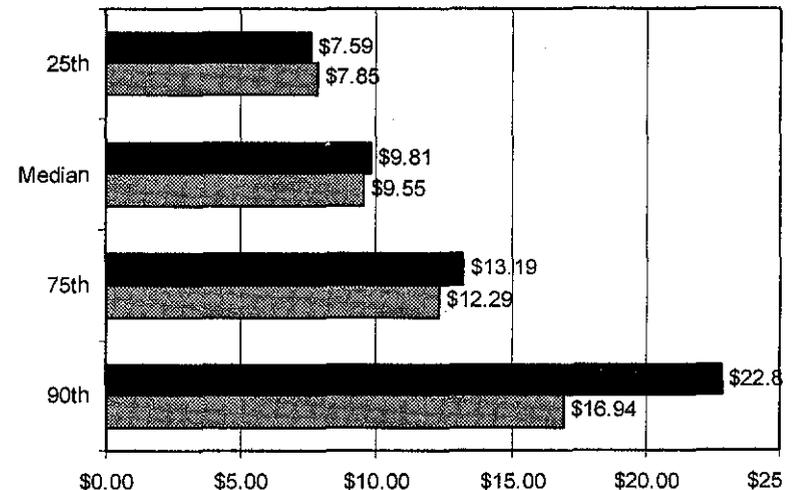


Figure 3: Hourly Wage Rates by Percentile, Telemarketers, US and Pittsburgh



Pittsburgh's call centre industry: a SWET analysis

I now turn to the SWET analysis of call centre work in Pittsburgh. As already noted, a SWET analysis can be applied to any type of labour, though the factors that are most salient will vary depending on the specific context. In what follows, for each of the four dimensions, I describe the dimension itself, the specific application to call centres, and then a discussion of how the Pittsburgh region shapes dynamics in each of the dimensions.

Space

Space is the material support for time-sharing social practices (Castells, 1996). With the increased development of information technology, telemediated space has become as important as territorial space in supporting labour processes in many contexts. These changes in the spatial forms in which labour activities take place – the constantly shifting territorial location of productive activities, the changing nature of the communicative ties (e.g. telephone, email, web, video-conference, travel) that link multiple production sites and the development of material dimensions of the production spaces themselves – are shaped by a range of social actors, often with contradictory goals and perspectives. Understanding the nature of the social space produced in the struggles between these actors is an essential step for understanding the implications of labour process restructuring (LeFebvre, 1991).

In call centres, *telemediated* space consists of interactive telecommunication links, computer and web-based data systems, and complex performance monitoring systems which support the interactive communication between workers and customers, and the relationship between workers and their supervisors (which is frequently shaped by monitoring of labour activities by supervisors through telemediated space) (Callaghan & Thompson, 2001; Richardson & Gillespie, 2003). The *territorial* labour space consists most prominently of the cubicle-dominated office complexes that are the site of daily work activities. Territorial space also includes, however, the broader context – most particularly the urban infrastructure of buildings, transportation systems and utility networks – that shapes business processes and the links between residential and work environments (Graham & Marvin, 2001). *The critical factors to analyse for call centres are the ways that the telemediated and territorial spaces shape the business networks and social networks of workers, and how these networks in turn shape the quality and quantity of call centre jobs in any particular place.*

In Pittsburgh, there are a number of regional spatial factors that contribute to the strength and viability of local call centre work. The first major factor is the availability of inexpensive land and buildings appropriate for call centre facilities. As discussed previously, the Pittsburgh metropolitan region, particularly the city of Pittsburgh and surrounding parts of Allegheny County, experienced a significant decline in employment in the latter half of the twentieth century. As a result, a large amount of buildings and land has been made available for other developments. Perhaps the most striking example of this is the EchoStar Dish Network call centre in McKeesport. The site is located on land formerly occupied by a major US Steel steel mill. The mill stopped operating in the 1980s and in 1990 the land was acquired by the Regional

Investment Development Corporation of Southwestern Pennsylvania, a government sponsored redevelopment agency for the region. After environmental remediation and building preparation, the RIDC began looking for clients and in 1998 EchoStar was one of the first to establish itself in the new industrial park area, initially occupying 105,000 square feet of a one million-square-foot building, previously used for making seamless pipe (Blair, 2002). It quickly expanded to employ 1,000 people doing customer service work and has maintained roughly that number ever since. Substantial commercial real estate is also available in the downtown area, which has experienced significant hallowingout, due both to declining population and to increasing sprawl to suburban counties. Cardholder Management Services (CMS), for example, operates an 800-person call centre in a building that used to house the Frank & Seder Department store downtown (Lindeman, 2002). The company moved to Pittsburgh in 1999 in part to take advantage of the available real estate.

Pittsburgh also has certain spatial advantages because of its position within the broader geography of the East and Central parts of the US. Pittsburgh has an award-winning airport and until 2005 was a major hub of US Airways. The region is within a 90-minute flight of an estimated 70 percent of the US population. Thus, for companies wishing to locate call centre operations outside of the core metro areas of the East Coast and Chicago, but within easy access of major corporate offices or headquarters, Pittsburgh provides a reasonable choice.

The spatial factors of reasonable real estate access due to a hollowed out urban core and accessible location within the geography of the US apply to a number of other 'rust-belt' cities in the USA. Pittsburgh also has a significant spatial advantage, however, due to the strong history of financial services firms that grew in the region, originally linked with its industrial history. As the core of the US steel industry from the late 1800s through the first half of the 20th century, Pittsburgh also became a major centre for banks and financial service firms that got their start financing steel and other related manufacturing industries. The Mellon Financial Corporation and PNC Bank (Pittsburgh National Corporation) are the two largest financial services firms headquartered in Pittsburgh, and both have their origins in financing the iron and steel industry in the area. Each has very large (2,000+ person) call centre in the region. National City Bank, Citizen's Bank, and Federated Investors are other prominent financial service firms in the region with major (500+ person) call centre operations. These large firms have also stimulated the growth of a variety of smaller, more specialised, financial service firms, including National City Home Loan Services and Cardholder Management Services (credit card collections), and more general outsourcing firms that focus on financial services clients, such as OSI Outsourcing and Precision Response Corporation. Pittsburgh clearly doesn't compete on the scale of New York, San Francisco, or Charlotte, NC as a major banking centre. But it is ranked tenth in the country by SNL Securities, based on assets held by banks headquartered in the region, despite the region as a whole being only the 21st largest Metropolitan Statistical Area (MSA) and Pittsburgh being only the 58th largest city in the country³. The close proximity of general financial services contributes to the importance of call centres in the region's employment structure.

3 <http://www.census.gov/popest/cities/files/SUB-EST2005-all.csv>

The factors discussed above all relate to Pittsburgh's territorial space, and provide an indication of some positive factors that would lead to call centres remaining in or even growing in the area. In terms of telemediated space, Pittsburgh has a capacity similar to most large US metropolitan areas. This includes a recent fibre-optic network installed by Verizon Communications that reaches a number of suburban locations as well as downtown areas.⁴ Thus, there is little to distinguish Pittsburgh from many other US metropolitan areas in the sphere of telemediated space, beyond simply having the necessary infrastructure to provide high-speed telecommunications access.

Work

The term *work* refers to the actual activities people carry out while engaged in the process of production. It includes the physical skills and cognitive processes involved, the tools and technology used, and the relations with other people – customers, co-workers, colleagues from other firms, suppliers and so on – that they engage in during the process of performing those activities. The quality of work itself is related in part to the level of education required to perform it, the complexity of the cognitive and relational skills involved and the economic value of the information and knowledge required to perform that work. Increasingly one of the most critical additional factors shaping the quality of work is the extent to which the work involves tacit knowledge. Understanding struggles over tacit knowledge has been a central focus of research on the labour process for many years (Attewel, 1987; Braverman, 1975). These debates have become increasingly important as the development and diffusion of information technology create new opportunities for codifying knowledge that was previously highly contextual and rooted in workers direct experience (Zuboff, 1988). Work that primarily involves non-tacit, codifiable knowledge can more easily be automated or relocated to low-cost areas of the globe (Maskell et al., 1998; Storper, 1997). Tacit knowledge, in contrast, is more resistant to automation or cost-based competition, and as a result can form the basis for improved work opportunities. Furthermore, if this tacit knowledge is effectively translated into improved business operations, it can lead to the ongoing competitive success of enterprises, creating greater opportunities for more work of a higher quality (Nonaka & Takeuchi, 1995).

In call centres, work includes both general and specific skills. General skills are applicable beyond the call centre environment, and include computer skills (e.g. the ability to operate a mouse, enter data into a database, and navigate in a Windows and web-based environments) and customer service skills. Specific skills may be specific to the firm or industry, and include more specialised computer skills (e.g. the ability to use customised database systems, perform specific data-entry protocols, and manipulate dedicated software applications) as well as knowledge of the particular product or service that forms the content of the interactive communication with customers. *In analysing the forces shaping the quality and growth of work in call centres, critical factors to look at include the formal education and training required to perform the work, the nature of the tacit knowledge involved, and how the tacit knowledge developed in the labour process is translated reflexively into changes in future work opportunities.*

4 <http://pittsburgh.bizjournals.com/pittsburgh/stories/2005/05/02/daily27.htm>

A full evaluation of work processes in the call centre industry in Pittsburgh, as elsewhere, can only be achieved through detailed examination of particular call centres. Yet it is possible, at least on a broad scale, to distinguish both demand and supply side factors that shape the richness of work processes in call centres in the region.

On the demand side, as seen previously, there is a significant number of call centres in financial services. In some cases, the existence of people with experience working in financial service related occupations has directly contributed to growth in call centres in the area. When Cardholder Management Services announced plans to expand their call centre operations in May 2003, for example, they cited the availability of former employees of Mellon Bank as a primary motivation for locating in the area (Lindeman 2003). The region has also been the site of a significant workforce development training program in financial services funded by the Department of Labor and Industry.⁵ Whilst this program is small in terms of the number of people trained, it is one of only four priority industry training initiatives that emerged out of a region-wide workforce development planning process in the late 1990s, headed by Mark Norderberg, the Chancellor of the University of Pittsburgh. Along with information technology, metals manufacturing, and health care, the financial services industry, including call centres, was identified as a strategic growth sector for the region.

Part of the strength of the region for call centres is rooted in the characteristics of the supply side of the labour market. Call centres typically employ a disproportionate number of young workers, and female employees. With 33 colleges and universities (including, most prominently, the University of Pittsburgh and Carnegie Mellon University) enrolling 135,000 students, the region has a large number of college age students, providing a ready pool of educated part-time workers for call centres in the region. Nearly 70% of all people employed as telemarketers in the region are under 35 years old, and nearly 50% of customer service representatives are under 35.⁶ The decline of manufacturing in the region has led to the entry into the labour force of an increasing number of older women, as ageing families suddenly face the loss of stable manufacturing jobs and try to secure their income from other sources. This has also proven to be a support for call centres in the region.

Employment

Employment refers to the nature of the relationship between worker and employer, the processes employers use in directing, motivating and monitoring workers' activities and the types of compensation provided for the activities performed. What is critical here is the nature of the human resource management practices used, the organisational, legal, and regulatory context shaping employer-employee relationships and the systems involved in distributing the economic surplus produced in the work process (Stone, 2004). A comprehensive analysis of compensation systems encompasses not just wages and benefits, but also gains accruing to workers from overall company spending patterns (e.g. revenue invested in total compensation, employee training, and processes

5 <http://www.iet.dug.edu/fswi/index.htm>

6 Data supplied by the Centre for Workforce Information and Analysis, PA Department of Labor and Industry.

designed to improve employment conditions), along with governmental taxation and social programs that shape social wage expenditures. With the growth of global, technologically integrated labour processes there is also a need to analyse the factors shaping distribution of surplus value within global value chains (Gereffi et al., 2005).

Characterising employment practices in call centres is extremely difficult, given the enormous variation in the industry. Management practices, for instance, can vary tremendously, between extremes of highly Taylorised, routinised, and heavily monitored mass production models on the one hand, and more high quality, professional, customised service models on the other. Similarly, wages vary from the very low pay characteristic of near sweatshop conditions to highly paid professional-level compensation. Despite this variation, there are two sets of tensions that shape nearly all call centre employment systems. First, in relation to management practices, there is typically a set of tensions that centre around the ability of employers to monitor effectively only certain aspects of the telemediated interactions that form the core of the call centre labour process. Thus there tends to be a continual struggle between, on the one hand, management and compensation systems linked to quantifiable targets developed out of monitoring systems and, on the other hand, less easily measured but still valuable interactive communicative skills that are often the most important for customer satisfaction in call centre operations. Second, since call centres are characterised by the telecommunications-based linking of different organisational and spatial contexts, they are arguably at the leading edge of the new networked organisational forms that are undermining the effectiveness of historical labour market regulations and institutions that assume stable, long-lasting, and direct relationships between employers and employees (Benner, 2002; Osterman et al., 2001; Stone, 2004). *How these tensions are resolved in any particular context shapes the quality of employment to a significant degree.*

In Pittsburgh, there are two major factors that can be identified that contribute to the buoyancy of call centres in the region. In terms of wage rates, as discussed previously, wages in Pittsburgh are generally lower than national averages, making it a viable place for call centre work. More important than this factor, alone, however, are the relatively low housing prices in the region. According to the National Association of Realtors, the median sale price of existing single family homes in the Pittsburgh metropolitan area was only \$116,100, ranking 134th out of the 156 metropolitan areas surveyed by NAR, and just over half of the national average of \$219,000. These low housing prices – a result of the declining population of the region over the last four decades – means that the low wages in call centres don't translate into such low purchasing power as might otherwise be expected. In other words, the low housing prices almost serve as a social wage, supporting the continued existence of low wage employment in the region while buffering potential labour opposition that might otherwise result from the low wages.

Related to this is another factor that is somewhat more speculative, but has to do with the lack of unionisation and general quiescence of workers within call centres in the region, despite the low wages and sometimes poor working conditions. Unions in the Pittsburgh region were strong in traditional manufacturing and mining

industries (e.g. the United Steelworkers of America and the United Mineworkers of America). These unions have been in heavy decline since the 1950s. The unions that have been prominent in other parts of the country, such as the Service Employees International Union (SEIU) or the Hotel and Restaurant Employees Union (formerly HERE, now UNITE HERE), have seen little activity in the region. Pittsburgh has an extremely small immigrant workforce, and one of the oldest age distributions of any metropolitan region in the country (Pennsylvania has the second highest percentage of residents older than 65, after Florida). The Communication Workers of America (CWA) had unionised some of the call centre workers in US Airways, but was never able to leverage this strength into other sectors. When US Airways merged with America West, they closed their Pittsburgh call centre and consolidated in the Phoenix area. Thus, aside from a few small call centres in the utilities industry, the entire call centre workforce in the region is non-unionised, and there is little labour unrest. Again, this contributes to the stability of call centre employment in Pittsburgh.

Time

Time in this context refers to the temporal dimension of human activity and social interaction in the labour process, requiring attention to both individual and economic trajectories to be fully understood. For individuals, this implies a focus on careers not jobs, with 'careers' understood as applying to all workers and referring simply to the evolving sequence of work-related experiences over the span of a person's life-time (Arthur et al., 1989). For economic trajectories, the analysis of labour time requires an increased attention to the evolutionary trajectory of the product or service being analysed, the organisational context in which that product or service is produced, and the implications of these changes for labour processes. Contemporary changes in time both for individuals and for economic trajectories can be broadly characterised as involving speed up, greater unpredictability and volatility, more frequent non-linearity (as disruptive technologies and competition destroy entire industries or require workers to pursue entirely different career trajectories), and the increasing blurring of boundaries between firms, and between labour time and non labour time (Arthur & Rousseau, 1996; Benner, 2002; English-Lueck, 2002; Smith, 2001).

The analysis of time is especially important in the context of call centre work for two reasons. First, for individuals, the nature of the labour process in many call centres is such that few workers stay in call centre work for longer than a few years. Repetitive, stressful and emotionally draining work means that many workers face 'burn-out' within a short period of time. Furthermore, the transferability of many of the required skills (e.g. customer service relationship skills, general computer and data management skills, and broad industry related knowledge) means that many call-centre workers can reasonably hope for improved employment elsewhere over time. Second, for economic trajectories, with the rapid development and diffusions of a range of internet, telecommunications, and software technologies enabling significant restructuring of work process and relocation of employment, the labour

process and job opportunities in call centres are shifting very rapidly. *Understanding the social, informational, and institutional processes that shape these individual and economic trajectories is thus essential for understanding developmental trajectories in call centres.*

In Pittsburgh, in terms of individual trajectories, there are few opportunities for advancement within call centre work itself. The predominant groups of workers in the industry are young college students or people entering the workforce for the first time. Beyond entry-level positions, there appear to be few higher paying positions in the industry. There is a potential for people in call centre work to obtain skills that can be applied in other employment settings. These skills include customer service experience, core computer skills, and industry knowledge (depending on the type of work they are doing). Yet job growth in the region as a whole has been stagnant or slow-growing, so there have been few opportunities to move to other positions within the region. As a whole, the region faces a substantial exodus of young workers, and call centre workers seem set to follow the same pattern (Hansen et al., 2003).

In terms of industry trajectories, it appears that many of the companies that have call centres in the region also have corporate headquarters in the region. This includes the major financial firms (Mellon and PNC) but also some of the smaller, privately owned outsourcing firms in the region (such as Reese Teleservices). As call centres have evolved, the proximity to corporate headquarters remains important for ensuring management practices and for quality control systems (Grougiou & Wilson, 2003; Richardson & Gillespie, 2003) as well as offering a possible avenue of career development. These linkages in the Pittsburgh area are poorly understood, but are likely to be an important part of the process that has led to the concentration of call centre firms in the area.

Conclusion

The SWET analysis of labour processes in Pittsburgh's call centre industry must be treated as an indicative, rather than a definitive assessment. It is based primarily on secondary material and data analysis – a full assessment requires significantly more qualitative and in-depth research. Nonetheless, the analysis presented here suggests some important features of the way that the regional context shapes growth and dynamics of call centre work in the region. To summarise:

First, in terms of space, Pittsburgh is well positioned for call centres within the US context. It has the necessary telecommunications infrastructure for call centre growth. As a declining region it also has readily available real estate yet is also spatially proximate to a strong financial services cluster and well-positioned to serve markets east of the Rocky Mountains.

Second, work practices in Pittsburgh call centres vary and skill requirements vary as well. Yet the region seems to have a large enough pool of well-educated workers to provide a strong workforce for the industry and there are dedicated training programs to channel people into call centre work.

Third, in terms of employment, wages rates in the region are significantly lower than national averages. The low cost of living in the area mean that the social costs of low wages are much less than they might be otherwise. The workforce is relatively quiescent in the area and there is little labour unrest.

Finally, in examining temporal trends in the industry, it seems that career ladders are relatively limited, given the lack of growth in related sectors. There seem to be some evolutionary trends within call centres in the region linked to corporate headquarters but it is questionable how long this will contribute to the 'stickiness' of call centres in the region.

Overall then, this assessment of the labour process in Pittsburgh's call centres provides a somewhat mixed picture. The spatial assets, workforce strengths and strong local linkages in the region contribute to the growth and vibrancy of call centre work. The low wages, poor career ladders, and questionable economic trajectories in the region nevertheless raise some concerns about the longer-term viability of work in the region.

What I hope this analysis clearly demonstrates, however, is the importance of incorporating regional dynamics into an analysis of relocation processes. Clearly the growth or decline of call centre work in a region will be fundamentally shaped in part by corporate decisions and processes of restructuring that are specific to particular firms. Nonetheless, the regional dynamics shape these corporate decisions in ways that help explain some of the overall patterns of relocation and growth.

© Chris Benner, 2007

REFERENCES

- Arthur, M. & D. Rousseau (1996) *The Boundaryless Career: A New Employment Principle for a New Organizational Era*, New York, Oxford: Oxford University Press
- Arthur, M., D. Hall & B. Lawrence (1989) *The Handbook of Career Theory* Cambridge, New York: Cambridge University Press
- Atkinson, R. (2004) *Understanding the Offshoring Challenge*, Washington, DC: Progressive Policy Institute
- Attewel, P. (1987) 'The Deskilling Controversy', *Work and Occupations* 14:323-346.
- Bardhan, A. & C. Kroll (2003) *The New Wave of Outsourcing*, p. 12. Berkeley: Fisher Centre for Real Estate & Urban Economics, University of California, Berkeley
- Benner, C. (2002) *Work in the New Economy: Flexible Labor Markets in Silicon Valley*. Oxford: Blackwell Press
- Blair, J. (2002) 'Echostar Communications Picks Up where US Steel Left Off', *Tribune-Review*, Pittsburgh
- Blinder, A. (2006) 'Offshoring: The Next Industrial Revolution?' *Foreign Affairs* 85:113-128.
- Braverman, H. (1975) *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press
- Bridges, W. (1994) *JobShift: How to Prosper in a Workplace Without Jobs*, Reading, MA: Addison-Wesley
- Brookings Institution (2003) *Back to Prosperity: A Competitive Agenda for Renewing Pennsylvania*, Washington DC: The Brookings Institution
- Callaghan, G. & P.Thompson (2001) 'Edwards Revisited: Technical Control and Call Centres', *Economic and Industrial Democracy* 22:13-37
- Castells, M. (1996) *The Rise of the Network Society*, Cambridge, Mass.: Blackwell Publishers
- Datamonitor (2003) *United States Call Centres: Industry Profile*, New York: Datamonitor
- Detrick, S. (1999) 'The post industrial revitalization of Pittsburgh: myths and evidence', *Community Development Journal* 34:4-12
- English-Lueck, J. (2002) *Cultures@Silicon Valley*, Palo Alto: Stanford University Press
- Farber, H. (1996) 'Are Lifetime Jobs Disappearing? Job Duration in the United States: 1973-1993' in J. Haltiwanger, M. Manser & R. Topel (eds) *Labor Statistics Measurement Issues*, edited by Chicago: University of Chicago Press

GAO (2004) *International Trade: Current Government Data Provide Limited Insight into Offshoring of Services*, Washington, DC: General Accounting Office

Gereffi, G., J. Humphrey & T. Sturgeon (2005) 'The governance of global value chains', *Review of International Political Economy*, 12:78-104

Graham, S. (2000) 'Constructing Premium Networked Spaces: Reflections on Infrastructure Networks and Contemporary Urban Development', *International Journal of Urban and Regional Research*, 24:183-2000

Graham, S., & S. Marvin (2001) *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*, London: Routledge

Green, N. (2002) 'On the Move: Technology, Mobility, and the Mediation of Social Time and Space', *The Information Society*, 18:281-292

Grougiou, V. & A. Wilson (2003) 'Financial service call centres: problems encountered in the grey market', *Journal of Financial Services Marketing* 7:360-368

Hansen, S., C. Ban & L. Huggins (2003) 'Explaining the "Brain Drain" from Older Industrial Regions: The Pittsburgh Region', *Economic Development Quarterly*, 17:132-147

Hecker, D. E. (2005) 'High-technology employment: A NAICS-based update', *Monthly Labor Review* 128:57-72

Huws (2003) *When Work Takes Flight: Research Results from the EMERGENCE Project*, IES Report 397, Brighton: Institute for Employment Studies

Lash, S. & J. Urry (1994) *Economies of Signs and Space*, London: Sage

Laudon, K. & K. Marr (2003) 'Information Technology and Occupational Structure' *Proceedings of the Association for Information Systems*, Pittsburgh, PA. Retrieved May 30, 2007 from <https://archive.nyu.edu/handle/2451/14212>

LeFebvre, H. (1991) *The Production of Space*, Oxford: Blackwell

Lindeman, T. (2002) 'Kaufmann Workers Offered Jobs: Credit Card Company Intends to Hire 500.' p. A-1 in *Post-Gazette*, Pittsburgh

Lindeman, T. (2003) 'Card manager to add 200 Downtown Jobs', *Pittsburgh Post-Gazette*, Pittsburgh

Lorant, S. (1999) *Pittsburgh: The Story of an American City*, Pittsburgh: Esselmont Books

Maskell, P., H. Eskelinen, I. Hannibalsson, A. Malmberg & E. Vatne (1998) *Competitiveness, Localised Learning and Regional Development: Specialisation and Prosperity in Small Open Economies*, New York, London: Routledge

Massey, D. B. (1995) *Spatial Divisions of Labor: Social Structures and The Geography of Production*, New York: Routledge

McCarthy, J. (2004) 'Near-Term Growth of Offshore Accelerating', Cambridge, MA: Forrester Research

McKinsey Global Institute (2005) *The Emerging Global Labor Market*, Washington DC: McKinsey Global Institute

Muller, E. K. (2001) 'Industrial suburbs and the growth of metropolitan Pittsburgh, 1870-1920.' *Journal of Historical Geography* 27:58-73

NASSCOM (2006) *Indian ITES-BPO Industry: NASSCOM Analysis*, New Delhi: National Association of Software and Service Companies

National Research Council (2001) *Building a Workforce for the Information Economy*, Washington, DC: National Academy Press

Nonaka, I. & H. Takeuchi. (1995) *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, New York, Oxford: Oxford University Press

Osterman, P., T. A. Kochan, R. M. Locke & M. J. Piore (2001) *Working in America: A Blueprint for the New Labor Market*, Cambridge, MA: MIT Press

Peiperl, M. A., M. B. Arthur, R. Goffee & T. Morris (2000) *Career Frontiers: New Conceptions of Working Lives*, Oxford: Oxford University Press

Richardson, R. & A. Gillespie (2003) 'The Call of the Wild: Call Centres and Economic Development in Rural Areas', *Growth and Change* 34:87-108

Shapiro, C. & H. R. Varian (1998) *Information Rules: A Strategic Guide to the Network Economy*, Boston, Mass.: Harvard Business School Press

Smith, V. (2001) *Crossing the Great Divide: Worker Risk and Opportunity in the New Economy*, Ithaca, N.Y.: ILR Press

Stone, K. V. W. (2004) *From Wigits to Digits: Employment Regulation for the Changing Workplace*, Cambridge: Cambridge University Press

Storper, M. (1997) *The Regional World: Territorial Development in a Global Economy*, New York: Guilford Press

Sturgeon, T. (1999) 'Turn-key Production Networks: Industry Organization, Economic Development, and the Globalization of Electronics Contract Manufacturing,' in *Geography Department*. Berkeley: University of California.

Sturgeon, T. (2002) 'Modular Production Networks: A New American Model of Industrial Organization', *Industrial and Corporate Change* 11:451-496

Zuboff, S. (1988) *In the Age of the Smart Machine: The Future of Work and Power*, New York: Basic Books

About this journal

The globalisation of world trade in combination with the use of information and communications technologies is bringing into being a new international division of labour, not just in manufacturing industry, as in the past, but also in work involving the processing of information.

Organisational restructuring shatters the unity of the traditional workplace, both contractually and spatially, dispersing work across the globe in ever-more attenuated value chains.

A new 'cybertariat' is in the making, sharing common labour processes, but working in remote offices and call centres which may be continents apart and occupying very different cultural and economic places in local economies.

The implications of this are far-reaching, both for policy and for scholarship. The dynamics of this new global division of labour cannot be captured adequately within the framework of any single academic discipline. On the contrary they can only be understood in the light of a combination of insights from fields including political economy, the sociology of work, organisational theory, economic geography, development studies, industrial relations, comparative social policy, communications studies, technology policy and gender studies.

Work Organisation, Labour and Globalisation aims to:

- bring together insights from all these fields to create a single authoritative source of information on the new global division of labour, combining theoretical analysis with the results of empirical research in a way that is accessible both to the research community and to policy makers.
- Provide a single home for articles which specifically address issues relating to the changing international division of labour and the restructuring of work in a global knowledge-based economy.
- Bring together the results of empirical research, both qualitative and quantitative, with theoretical analyses in order to inform the development of new interdisciplinary approaches to the study of the restructuring of work, organisation and labour in a global context.
- Be global in scope, with a particular emphasis on attracting contributions from developing countries as well as from Europe, North America and other developed regions.
- Encourage a dialogue between university-based researchers and their counterparts in international and national government agencies, independent research institutes, trade unions and civil society as well as policy makers. Subject to the requirements of scholarly peer review, it is open to submissions from contributors working outside the academic sphere and encourages an accessible style of writing in order to facilitate this goal.
- Complement, rather than compete with existing discipline-based journals.
- Bring to the attention of English-speaking readers relevant articles originally published in other languages.

Each issue addresses a specific theme and is also published independently as a book. The editor welcomes comments, criticisms, contributions and suggestions for future themes. For further information, visit the website: <http://www.analyticpublications.co.uk>

Editorial board

Work Organisation Labour and Globalisation is edited by Ursula Huws, Professor of International Labour Studies, Working Lives Research Institute, London Metropolitan University, UK and the director of Analytica. The editorial board includes:

- Elmar Altvater**, Department of Political and Social Sciences, Free University of Berlin, Germany
- Chris Benner**, Department of Community Development University of California, Davis, USA
- Manuel Castells**, Emeritus Professor, Department of City and Regional Planning, University of California, Berkeley, USA
- Mikyung Chin**, Department of Political Science, Ajou University, Korea
- David Coates**, Worrell Professor of Anglo-American Studies, Wake Forest University, North Carolina, USA
- Sujata Gothaskhar**, Programme Officer, Committee for Asian Women and Researcher with The Forum, Mumbai, India
- Jörg Flecker**, Scientific Director, Forschungs- und Beratungsstelle Arbeitswelt (FORBA), Austria
- Barbara Harriss-White**, Professor of Development Studies, Queen Elizabeth House, Oxford University, UK
- Andrew Jackson**, Head of Research, Canadian Labour Congress, Canada
- Doreen Massey**, Faculty of Social Sciences – Geography, Open University, UK
- Pamela Meil**, Institut für Sozialwissenschaftliche Forschung (ISF), Germany
- Niels Møller**, Department of Manufacturing, Engineering and Management, Technical University of Denmark
- Vincent Mosco**, Canada Research Chair in Communication and Society, Queens University, Canada
- Rajneesh Narula**, Professor of International Business Regulation, University of Reading Business School, UK
- Markus Promberger**, Head of welfare, labour and social inclusion research, IAB (Institute for Employment Research), Federal Employment Agency, Germany
- Norene Pupo**, Director, Centre for Research on Work and Society, York University, Canada
- Monique Ramioul**, Head of Labour Sector, Higher Institute of Labour Studies, Catholic University of Leuven, Belgium
- Gerhard Rohde**, Head of Industry, Business and Information Technology Services, UNI, Switzerland
- Gérard Valenduc**, Research Director, Fondation Travail-Université (FTU), University of Namur, Belgium
- Geert van Hootegem**, Professor of Sociology, Katholieke Universiteit Leuven, Belgium
- Desirée van Welsum**, Directorate for Science Technology and Industry, OECD, France
- Anita Weiss**, Professor of Sociology, National University of Colombia, Colombia