

Technology, Work Organisation and Job Quality in the Service Sector

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This special issue volume is concerned with how technology is changing the nature of work and working conditions while generating new products and new forms of service delivery. The five articles included in this volume cover service work, from the routine and clerical through to highly credentialed and professional work. Although some of the established challenges concerning the impact of ICT on work and workplaces are evident in the articles, it is also clear that new service delivery processes demand new skills and training to some extent. Overall findings indicate that while ICT competencies are important, they need to be supplemented by the soft skills that are crucial for effective customer interactions and more open work systems with greater autonomy and participation whereby flexible work teams can have a positive impact on job quality outcomes. This introductory article examines technology and the changing nature of work through three strands of interpretation, prior to introducing the five articles in this special issue.

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Technology and the Changing Nature of Work

Technological change is relentless and its ability to transform work, skills, workplaces, lifestyles and the quality of life has been an ongoing issue of analysis since the industrial revolution. The development of an appropriate theory to explain the interrelation between these issues has been subject to a range of overlapping and conflicting interpretations. Consequently, the aim of this introduction to the special issue outlines three different strands of interpretation which are summarised in Table 1. The first strand concerns the structural explanation of the relationship between technology and work in the context of capitalism. This was proposed by Marx (2010) who argued that the introduction of new technology and work methods enabled capitalists to both gain greater control over work and increase work intensity. This was accompanied by the degradation of workers, particularly craft workers' skills, in order to achieve greater productivity (Harvey 2006). In this analysis, Marx (2010) commented from his broader analysis of the logics of capital accumulation, which did not engage with the subjective views of workers. This position was criticised by Thompson (1963) in his classic work on the making of the English working class, where he condemns Marxist theory for failing to engage with workers as historical subjects who resist management attempts to exploit them through collective action.

The publication of Braverman's book *Labor and Monopoly Capitalism* (1974), was a clear attempt to follow through on Marx's ideas on the labour process. Braverman (1974) argued that scientific management and new technology had resulted in the deskilling of craft workers as well as administrative workers. Subsequent debate concerning Braverman's thesis explored a large range of empirical studies which contradict this structural position. The first and most important related to collective worker resistance to the process of deskilling, and managerial attempts to gain consent as evident in the work of critics such as Burawoy (1979). The second concerned the possibility of workers being provided with some autonomy with the introduction of lean management in the labour

process to improve efficiency and quality as distinct from deskilling, was defined by Adler (1994) as Democratic Taylorism. Thirdly, a range of studies provide examples of upskilling occurring in a range of workplaces by granting employees greater autonomy with the introduction of new digitally controlled technologies (Boreham et al 2008). Such views have been evident since the 1970s in experiments arising from the socio-technical tradition in the Industrial Democracy project in Norway (Thorsrud and Emery 1970). This approach culminated in the so-called high performance work systems (HPWS) approach in manufacturing which promoted the idea that employee shop floor participation led to greater organizational performance (Appelbaum et al 2000). HPWS research has been abundant since the term was conceived and frequently situated within the human resource management (HRM) literature (for example, Way 2002; Combs et al 2006; Boxall & Macky 2009; Posthuma et al 2013).

A more far reaching variant of issues concerning upskilling and autonomy for workers is apparent in the work of Castells (1996, 1997 and 1998) in his trilogy on the Information Age, which claims that the interaction of ICT and organisational structures, work and skills has led to new flat and flexible network organisations with information occupations, where knowledge is continually updated (Doogan 2009). Such views have been criticised by Boreham Parker, Thompson and Hall (2008) and Doogan (2009), who have argued that the evidence of such change is lacking with regard to lower skilled occupations and that the potential of technology for democratic control is lacking. Such views are also technologically determinist in the way they present the future of work (Boreham et al 2008). Possibly the term 'flexible capitalism', which refers to workers being asked to behave nimbly, be open to change on short notice, to take risks and be less dependent on regulations and formal procedures, encompasses more of these situations (Sennett 2011).

The second strand of interpretation concerns the relationship between new technology and work and concerns the introduction of new technology in the workplace alongside the context of industry and national level institutional arrangements with regard to industrial relations, training and occupational structures. These arrangements have recently been discussed with regard to debates on the Varieties of Capitalism literature (Bosch et al 2009). Such recognition of national level institutional arrangements recognise how different forms of work organisation **and** levels of skill are possible, for example, with ICT in health advice concerning nurses in call centres in UK, Australia and Sweden (Russell 2012). In countries such as Sweden, unions supported by expert advisors and local union delegates have been involved in safer work organisation and employee participation in work with new technologies (Sandberg 2013). Such engagement can lead to changes to the form of technology to allow for greater employee discretion and the use of skill. For instance, in Sweden, nurses in call centres do not have to follow scripts which structure their responses in answering patient calls, whereas nurses in Australia have to use such technology (Russell 2012).

The third strand of the debate, social constructivism, also concerns new technology and work, and centres on the continuum from technological determinism to the use of technology, arising from how it is viewed by individuals and groups "in use" (Sandall 2013; Boreham et al 2008). In medical sociology, the definition of the meaning and use of technology is described as 'technology in use' (Timmermans and Berg 2003). Such social constructionist views about the use of technology can be seen as purely localised to a workplace and views of the actors. This particularism can mean that who wins and who loses amongst, for instance, workers and managers is not addressed (Boreham et al 2008) The impact of national institutions such as industry level collective bargaining and occupational training in Germany can influence the nature of the relationship of work roles with new technology (Thelen 2004). However, case studies can reveal how, in subtle (and not so subtle) ways, workers actually use technology and, in so doing, resist managerial attempts to control them. For instance, in

the case of the use of algorithms in responding to patients on line, Australian nurses have overridden the technology and personalised the interaction with patients (Russell 2012).

An analysis of these three perspectives indicates that an effective understanding of the interaction between work and new technology emphasises the need to combine (in a critical manner) the 'technology in use' perspective with the political economy views of labour process theorists. The articles included in this volume present research that considers the dynamics related to national institutional contexts concerning economics, labour-management relations and occupational structures providing a structural understanding of the various case studies.

Overview of the Volume

In this special issue volume, the contributors consider how technology is changing the nature of work and working conditions, and how it impacts on core job attributes such as training and careers, and on other aspects of work linked to job quality such as job satisfaction. The five articles cover service work, from the routine and clerical through to highly credentialed and professional work. The advent of mobile communications technology has allowed work and organisations to be reconstructed; and for workplaces and work relationships to be altered. Consequently, it is no surprise that call centres feature in four of the five articles since they have been set up across all industries and occupations enabling services to be delivered in new ways and in new locations (Burgess and Connell 2004). Not only have organisations restructured their front and back office operations, they can now relocate service delivery to remote locations. This means that the services sector has been subject to the same structural challenges and adjustments that, in the past, have been the provenance of the manufacturing sector. Not only have new workplaces been generated, but service jobs can now be redesigned, outsourced and offshored to locations removed from the service organisation and the consumer (Karmarkar 2004; Mattarelli & Tagliaventi 2012)

ICT has facilitated the development of new products, new forms of service delivery and the restructuring of services across all sectors (Abreu et al 2010). Call centres are the major manifestation of the restructuring of service delivery through the bundling of services and their delivery through external service centres. Service delivery can be standardised, mass produced and operate on a continuous basis through call centres that are removed from the organisation through outsourcing and offshoring. ICT has also generated new products and processes such as online shopping and social networking. Thus, traditional service industries from retailing through to ticketing are being transformed. In addition, professional services can be restructured in terms of service delivery and work organisation from architectural design through to accounting services. In this volume, the contributors discuss how ICT has impacted on work (job design, job skills), the conditions of work (autonomy, work intensity) and the quality of work (satisfaction, relations at work, work life balance). These are the core issues in the analysis of labour process. The five articles examine recurring themes concerning issues of control, autonomy, job satisfaction and management models within the context of call centres, health, nursing and software services.

Organisation of the Volume

The first article in this volume by Gough, Ballardie and Brewer contributes to an understanding of the interconnections between new digital technologies, the work of nurses and their professionalisation, particularly in relation to theoretical debates about technology and the shaping of skill sets and work processes associated with patient care. The nurses studied were under continuous pressure to increase the number of patient discharges to meet state government key performance

indicators (KPIs). In Victoria, the nurses union, the Australian Nurses Federation, achieved improved nurse-patient ratios following a strong industrial campaign in 1999-2000. However, pressure to increase the number of discharged patients and bed occupancy rates by 100 per cent meant that nurses remained stressed. Differentiating between clinical and information technologies and the specific contexts within which they were employed (high/low dependency wards; teaching/non-teaching hospitals) revealed the complexities and variability of the relationship between nurses and new technologies. In both high and low dependency wards, the use of highly sophisticated clinical technology made the work of nurses easier and quicker. The use of this 'freed-up time', in the context of increasing patient flow rates, was diverted to processing more patients and to using computers, rather than time spent directly with patients. However, findings indicated that the introduction of new Information Technology systems, without any consultation with nurses as end-users, resulted in both increased nursing workloads and a shift to less direct patient interaction.

The second article by De is also located in the health sector, but examines the challenges of professional service delivery through call centres. Call centres not only allow for the delivery of routine services, they also support the delivery of complex services in the professional care sector (Russell 2012). De examines the role of the manager in a professional service delivery environment, that of nursing services. Here, the manager has to reconcile the demands of service delivery models through ICT platforms, with the professional standards required for the provision of nursing services. Using a health care call centre as a case study, De demonstrates the tension of delivering services efficiently and effectively. The demands for standardised and efficient service delivery have to be reconciled with the requirements of an autonomous professional health care model of detailed consultation while accommodating the different needs of patients. The manager not only has to reconcile and negotiate a process for dealing with the competing demands of professional service delivery, there is also the need to train professionals to deliver services through an ICT medium. The findings suggest that strategic HRM practices are necessary to support the professional workforce in adapting to an ICT delivery environment.

The next article by Sardeshmukh and Srinivasen examines the software services sector in India, a new and growing sector with challenges that concern employee turnover and retention. Call centre service delivery is a relatively recent and growing process that has impacted on all sectors. ICT development has also seen the emergence of new products and sectors such as the software development sector that supports and drives new products and processes. In turn, the software sector utilises call centre arrangements to deliver and maintain products. It has the features of being new, of possessing all the challenges linked to ICT-based service delivery and, in this case, being remote from core markets based in North America and Europe. This article conceptually examines the impact of extensive and intensive ICT-based working environments on employment conditions and work life balance outcomes for employees. The article concerns a conceptualisation of software service engagements in terms of duration, complexity, frequency and the degree of discretion afforded to call centre operatives. Into this mix should be added spatial and cultural distance. Specifically, customers are remote from the call centres and based in different countries, while for the call centre operatives there are the pressures on work life balance that are normally associated with continuous production. These concern evening and weekend work and, on top of these pressures are the demands of the intensive service delivery model associated with call centres. The authors argue that, one way to alleviate the stress and fatigue of operatives is to extend customer interactions and enhance employee autonomy as this will not only lead to more effective engagement, but will also assist in reducing the tension and fatigue associated with the job and support work life balance. The workplace model and

the style of management were shown to have an impact on the job quality of employees and, in turn, to impact on key variables such as trust and commitment.

The fourth article by Hannif, Connell, McDonnell and Burgess examines training and development initiatives, how employees access training and development, and whether call centres support career development. Many of the earlier “sweatshop” reviews of call centres (Taylor & Bain 1999) highlighted deskilling, extensive managerial control, high staff turnover and minimal career opportunities. As the call centre sector has expanded and evolved, the diversity of work and the need for training programs around not only ICT use, but soft skills, has also developed (Grugulis & Vincent 2009). Using both qualitative and quantitative methods, these issues are examined within ten Australian call centres of varying size from various sectors. Two thirds of respondents stated that they intended to develop a career in the industry and seven in ten reported that they believed there were promotional opportunities emerging in their current organisation. Despite these findings, the evidence also suggests that more needs to be done both to create coherent career paths and to establish structured, accredited training programs for call centre employees as it was found that training programs were often informal, ad hoc and internally provided, not linked to industry recognised qualifications and were not accredited.

The final article in this volume by Hannif, Cox and Almeida examines how management style, workplace relationships and ICT influence job quality outcomes in call centres. Through the examination of two call centres, they highlight contrasting cases of managerial styles and workplace organisation. With regard to the first case study, *Govtcall*, it was found that management systems were ICT driven, calls were heavily scripted, there were extensive controls and KPI driven work process removed employee autonomy, reduced team work and team-based learning, and impacted negatively on job satisfaction. Employment conditions were stressful and control mechanisms were found to be coercive. In *Govtcall*, the managerial style and approaches to employees had a negative impact on job satisfaction, increased their work stress and resulted in limited trust in management. In contrast, concerning the second case study, *Marketplus*, the operatives and the teams were accorded greater autonomy, there was an open door style of participatory management and employers were satisfied with their job and had trust in management. Operatives were committed to the organisation and there was recognition for individual and team performance. Thus, it was concluded that management systems are important, and the way that they harness ICT can have a major impact on organisational and employee well-being.

Conclusions

In summary, this volume highlights how ICT has transformed work and work organisation while generating new products and new forms of service delivery. Traditional challenges and debates concerning the impact of ICT on work and workplaces are evident. New service delivery processes have developed that, in turn, demand new skills and training and allow for the outsourcing and offshoring of service delivery. Lloyd and Payne (2009) argue that, within this context, there is a need for a thorough debate concerning what is meant by a skilled job in an expanding service sector economy. ICT can support work systems that are driven by intensive monitoring, controlled service delivery and tightly regulated work teams. The evidence presented here suggests a downside to these arrangements in terms of employee turnover, trust and job quality. Thus, several authors recommended the introduction of more open systems with greater autonomy and participation whereby flexible work teams can have a positive impact on job quality outcomes. In terms of training, the case studies demonstrate that ICT competencies are important, but they need to be supplemented by the soft skills that are crucial for effective customer interactions.

A number of the scenarios outlined in these articles support the disconnected capitalism thesis (DCT) proposed by Thompson (2003; 2013). The DCT central argument proposes that there is growing divergence between employer objectives in the work and employment spheres as workers are

being asked to invest more of themselves (effort, commitment and new aspects of labour power such as emotions) at work, “yet employers are retreating from investment in human capital, which is manifest in declining security, career ladders and the like” (Thompson 2013:473). The continuing advances in ICT and new forms of service delivery call for ongoing research into the relationships between ICT platforms, where there is a balancing of service delivery needs (standardisation, short engagements) and the requirements of professional services and management systems concerning autonomy, training and development and service engagements/career prospects. Alongside this, it is proposed that the need for a thorough debate concerning what is meant by a skilled job in the expanding service sector economy (Lloyd & Payne 2009) will require the attention of researchers in this field for some time to come.

Notes on editors

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References

- Abreu, M, Grinevich, V, Kitson, M and Savona, M (2010) ‘Policies to enhance the ‘hidden innovation’ in services: evidence and lessons from the UK’ *The Service Industries Journal*, 30(1), pp. 99-118.
- Adler, P (1994) “‘Democratic Taylorism’: the Toyota Production System at Nummi”, Chapter 11, in S. Babson (ed.) *Lean Work: Empowerment and Exploitation on the Global Auto Industry*, Wayne State University Press: Detroit.
- Appelbaum, E, Bailey, T, Berg, P and Kalleberg, A (2000) *Manufacturing Advantage, Why High Performance Work Systems Pay Off*, New York: Cornell University Press.
- Boreham, P, Parker, R, Thompson, P and Hall, R (2008) *New Technology@Work*, London: Routledge.
- Bosch, G, Lehdorff, S and Rubery, J (2009) *European Employment Models in Flux: A Comparison of Institutional Change in Nine European Countries*, Basingstoke: Palgrave MacMillan.
- Boxall, P and Macky, K (2009) ‘Research and theory on high-performance work systems: progressing the high-involvement stream’ *Human Resource Management Journal*, 19(1), pp. 3-23.

- Braverman, H (1974) *Labor and Monopoly Capital, the Degradation of Work in the Twentieth Century*, New York: Monthly Review Press.
- Burawoy, M (1979) *Manufacturing Consent, Changes to the Labour Process Under Monopoly Capitalism*, Chicago: University of Chicago.
- Burgess, J and Connell, J (2004) 'Emerging Developments in Call Centre Research' *Labour and Industry*, 14, 3, pp. 1–13.
- Castells, M (1996) *The Information Age: Economy, Society and Culture* Vol. I: The Rise of the Network Society. Cambridge MA. Oxford UK: Blackwell Publishers
- Castells, M (1997) *The Information Age: Economy, Society and Culture* Vol. II: The Power of Identity, Malden MA. Oxford UK: Blackwell Publishers
- Castells, M (1998) *The Information Age: Economy, Society and Culture* Vol. III: End of Millennium. Malden MA. Oxford UK: Blackwell Publishers
- Combs, J, Liu, Y, Hall, A and Ketchen, D (2006) 'How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance' *Personnel Psychology*, 59(3), pp. 501-528.
- Doogan, K (2009) *New Capitalism? The Transformation of Work*, Cambridge: Polity Press.
- Grugulis, I and Vincent, S (2009) 'Whose skill is it anyway? Soft skills and polarization' *Work, Employment and Society*, 23(4), pp. 597-615.
- Harvey, D (2006) *The Limits to Capital*, London and New York: Verso.
- Karmarkar, U (2004) 'Will you survive the services revolution?' *Harvard Business Review*, viewed 2 November 2013:
<http://www.u.arizona.edu/~jlzhao/SIRE/Uday%20Kamarkar%20HBR%20Services%20Revol%20ution.pdf>
- Lloyd, C and Payne, J (2009). 'Full of sound and fury, signifying nothing' interrogating new skill concepts in service work—the view from two UK call centres' *Work, Employment and Society*, 23(4), pp. 617-634.
- Marx, K. (2010), *Capital, A Critical Analysis of Capitalist Production Vol.1-III*, London: Lawrence and Wishart Electronic Books.
- Mattarelli, E and Tagliaventi, MR (2012) 'How Offshore Professionals' Job Dissatisfaction Can Promote Further Offshoring: Organizational Outcomes of Job Crafting' *Journal of Management Studies*, doi: 10.1111/j.1467-6486.2012.01088.x
- Posthuma, RA, Campion, MC, Masimova, M and Campion, MA (2013) 'A High Performance Work Practices Taxonomy Integrating the Literature and Directing Future Research' *Journal of Management*, 39(5), pp. 1184-1220.
- Russell, B (2012) 'Professional call centres, professional workers and the paradox of the algorithm: the case of telenursing' *Work, Employment and Society*, 26(2), pp. 195-210.
- Sandall, J (2013) 'Medical Technologies' in J Gabe and LF Monaghan (eds.) *Key Concepts in Medical Sociology*, Second Edition, Sage: London.
- Sandberg, A (2012) *Nordic Lights: Work, Management and Welfare in Scandinavia*, Stockholm: Bokus.
- Sennett, R (2011) *The Corrosion of Character: The personal consequences of work in the New Capitalism*, WW Norton and Company: Google E-Book.
- Taylor, P and Bain, P (1999) 'An assembly line in the head': work and employee relations in the call centre' *Industrial Relations Journal*, 30(2), 101-117.
- Thelen, K (2004) *How Institutions Evolve: The Political Economy of Skills Germany, Britain, the United States and Japan*, Cambridge: Cambridge University Press.
- Thompson, EP (1963) *The Making of the English Working Class*, New York: Vintage.
- Thompson, P (2003). 'Disconnected capitalism: or why employers can't keep their side of the bargain' *Work, Employment and Society*, 17: 2, pp. 359–378.
- Thompson, P (2013) 'Financialization and the workplace: extending and applying the disconnected capitalism thesis' *Work, Employment and Society*, 27(3), pp. 472-488.
- Thorsrud, E and Emery, FE (1970) 'Industrial democracy in Norway' *Industrial Relations: A Journal of Economy and Society*, 9(2), 187-196.

- Timmermans, S and Berg, M (2003) 'The Practice of Medical Technology' *Sociology of Health and Illness*, Number 5, Silver Anniversary Issue, pp. 97-114.
- Way, SA (2002) 'High performance work systems and intermediate indicators of firm performance within the US small business sector' *Journal of Management*, 28(6), pp. 765-785.

Table 1: Three Strands of Interpretation related to Technology and Work

Strand of Interpretation	Technology and work contexts
1	Concerns the context of capitalism which relates new technology and work methods to the ability for capitalists to gain greater control over work and increase work intensity.
2	Focuses on the relationship between new technology and work in the context of industry and national level institutional arrangements concerning industrial relations, training and occupational structures.
3	Social constructivism relates to new technology and work, ranging from technological determinism to the use of technology and how it is viewed by individuals and groups.