'Plus Ca Change, Plus La Meme Chose?' - Researching and Theorising the 'New New Technologies

Debra Howcroft and Phil Taylor

Waves of 'new technology' have typically been accompanied by widespread speculation regarding their economic and social impacts. Most notably, in the late 1970s and early 1980s, computerisation and the microchip prompted cataclysmic predictions regarding their effects for employment. For example, the World Centre for Computer Sciences and Human Resources estimated that, by the end of the 1980s, as many as 50 million people would be displaced by new Information and Communication Technologies (ICTs) (Braham, 1985, cited in Boreham et al, 2007: 3). In the aftermath of speculation on the 'Information Revolution', whether dystopian (Jenkins and Sherman, 1979) or utopian (Toffler, 1970), *New Technology Work and Employment* was established as corrective and as a forum for theoretically informed, empirically grounded research on the impact of technological developments on work, employment and workplace social relations. In place of grand theorising, then, the journal set itself the more prosaic but robust social scientific objective of describing, mapping and analysing emerging realities.

A subsequent 'wave' of ICTs was associated with the Internet - or 'the network' - and once again gave rise to unsubstantiated conjecture regarding societal effects. A populist account by Rifkin (2000) prophesised that market capitalism would be transcended by the rapid and thoroughgoing changes that would ensue. It was Castells (1996), though, who provided the most serious articulation of the transformational power of ICTs, his informational mode of development hearkening back to, and drawing upon, earlier formulations of the information society. *The Rise of the Network Society* can be critiqued on the grounds that its defining essence, *informational capitalism*, defaults in the final analysis to the familiar flaw of technological determinism. Castells attributed to this new generation of ICTs, *sui generis,* the ability to transform society. In so doing, the concept of technology as a social product, whose application to work and employment reflects the priorities of the holders of social and economic power, was diminished. This critical understanding has been core to this journal since inception (Baldry, 2011).

The problem of treating technology as a *deus ex machine* which can transcend society's relations of production has been starkly revealed in recent times. The optimistic march of the network society, was stalled by the dot.com crash (1999-2001), and then halted by the Great Crisis of 2008 and its recessionary aftermath. The very technological interconnectedness that hitherto had been hailed as positively transformational was now seen to contribute to the contagion of global crisis, as toxic debt flowed across the globe just as knowledge had done so previously. Self-evidently, then, global digital networks had proved incapable of overcoming the crisis-generating contradictions of capitalist political economy.

The New New Technologies

A new wave of digital technological now promises to reconfigure work, employment and the relations of production in the workplace and beyond. Commentators self-consciously try to avoid the optimistic-pessimistic manicheism of previous waves. Yet, despite ritualistic deference to the argument that technological innovation increases long-term prosperity and has ambiguous and uncertain outcomes, accounts tend to reflect the bleak contemporary context of recession and austerity. The imagined future conditions bear the indelible stamp of present conditions. Reprising

the 1980s, concerns have arisen over the consequences for employment. One study suggests that 47 per cent of jobs in the United States in diverse sectors, including transportation and logistics but mostly in white-collar occupations and professions, are at high risk through automation (Frey and Osborne, 2013). Brynjolfsson and McAfee (2012; 2014) extend the historical frame of reference to the industrial revolution, arguing that technologies (*A Second Machine Age*) will bring long-term benefits, but only after a period of hugely disruptive and disorienting labour market change. While the most vulnerable jobs will still be those composed of routine, repetitive tasks, this universal scenario is about to change. Due to the exponential rise in, and cheapening of, processing power, and the pervasiveness of digitalised information, often referred to as 'big data' (Mayer-Schonberger and Cukier, 2013), computers are being used to perform increasingly complex tasks more efficiently and effectively. The breaking down of cognitive jobs into ever smaller tasks (The Economist, 2014: 23) does nothing more than recall Braverman's (1974) analysis of the fragmentation of skilled jobs under Taylorism. Dire predictions are being made:

> The combination of big data and smart machines take over some occupations wholesale [or in others] allow firms to do more with fewer workers. Text-mining programs will displace professional jobs in legal services. Biopsies will be analysed more efficiently by image-processing software than lab technicians. Accountants may follow travel agents and tellers into the unemployment line as tax software improves (The Economist *ibid*].

Such predictions signify a relapse into the technological determinism that its authors claimed to be striving against. The weakness lies in failing to fully acknowledge contingent, complex, and unintended outcomes as employers use ICTs to restructure employment and reconfigure work. Undeniably, some jobs become obsolete and are displaced, but new ones are created and yet others incorporate elements of technologies that may be transformative. The totality of societal change may be greater than the sum of the constituent occupational parts.

As with previous waves, *New Technology Work and Employment* is seeking to provide a platform for rigorous research on the scale, nature and consequences of these 'new new technologies' in the domain of work which, given the permeable work-life boundaries of many workers, does not necessarily correspond to the confines of the traditional 'workplace'. However, the editors are aware that the technological baby should not be thrown out with the bathwater. The intrinsic properties of these technologies certainly portend significant change, even if the extent of their adoption, the precise manner of their implementation, their organisational effects and their consequences for workers will be the product of human agency. The strategic choices made by the dominant actors (employers, senior managers, government) remain of central importance, notwithstanding the fact they are mediated by contestation within the employment relationship.

Ursula Holtgrewe's overview of the 'new, new' technologies follows this introductory essay, and is intended to stimulate research based submissions and theoretical debate. She reflects on recent technological trends, noting the convergence of telecommunications and IT, the ubiquity of microchips, the omnipresence of the internet and, then, the much discussed, but little researched subjects in critical social science of 'cloud computing' and 'big data'. Later, she considers the ICT 'sector' and salient issues of skill and employment. She touches on 'crowdsourcing', a phenomenon that has generated much noise but little light (Howe, 2008). Parenthetically, the dramatic

emergence of these 'new, new' technologies confirms the journal's continued recognition of the value of the word 'new' in its title (Baldry, 2011).

Although Holtgrewe's article is a helpful point of departure, it does not exhaust the terrain. In addition to papers on cloud computing, big data and crowdsourcing, the editors are seeking submissions on a range of other subjects and themes. There is the impact of social media on the employment relationship, whether it is used by employers for extending surveillance and discipline, or by workers as expressions of resistance, contestation and organising (e.g. Valentine et al, 2010; Schoneboom, 2011). Innovations in labour utilisation and scheduling software are restructuring the temporal dimensions of work and potentially have considerable impacts for workers' lives. That such technological developments may be related to flexible working arrangements, perhaps even zero hours contracts, indicates the need for focused empirical study.

Then, there is the widely-reported spread of lean working, performance management and the extended surveillance, discipline and control, most often based on digital measurement and monitoring (Carter et al, 2011; 2013; Taylor, 2013). The technological underpinning of work intensification has long been acknowledged, albeit in general terms in information systems and with the introduction of stand-alone and networked PCs and so on (Green, 2005; McGovern et al, 2006). Specific, recent innovations attest to a more direct and inhumane overseeing; radio-linked armband tags (RFID), which microscopically monitor workers' effort and movements (Rawlinson, 2013; Panorama, 2013); GSMs, tracking devices, mobile phone technologies and laptops threaten the conditions of many workers, including those for whom mobility is an important part of their job, such as field engineers. 'Apps', either in relation to their development and production (Bergvall-Kareborn and Howcroft, 2013), or in terms of their impacts on work and employment, remain a relatively unexplored area. We need to know more about the implications for university and college lecturers that follow from the introduction of MOOCs (massive open online courses). This is a diverse potential agenda that constitutes a tremendously fertile area for research.

New Technology, Work and Employment – Researching the 'New New' _and_ the New

To the journal's credit it has already begun to publish work analysing the 'new new technologies' and their manifold impacts. Work blogs and blogging have drawn increasing attention from the perspectives of the interests of both employee and employer (Richards, 2008; Richards and Kosmala, 2013; Schoneboom, 2011). A related area of interest has been the use of the internet and/or social media by unions for organising workers (Fitzgerald, et al, 2012; Martinez Lucio et al, 2009; McBride and Stirling, 2014; Panagiotopoulos, 2012). Other topics include the impact of 'smart phones' on the work of professionals (Villadsen et al, 2014).

Notwithstanding the 'new new' subjects, an 'interim' audit of _New Technology, Work and Employment's_ contents following the institution of its new editors (2012), reveals continuing themes of enduring significance. Hardy perennials include the call or contact centre, with recent contributions adding to our knowledge of the phenomenon; on team leaders (McDonnel et al, 2013), imperfections in peer control (Ellway, 2013), temporality and spatiality (Ibrahim, 2012) and consent and resistance (McCabe, 2014). Previous coverage of the global relocation of call centre and service work (Howcroft and Richardson, 2008; Taylor et al, 2009a) has been extended by an examination of the important issue of employee attrition in Indian call centres (Deery et al, 2013).

Similarly, the stream of articles on teleworking shows no sign of abating, to such an extent that it continues to be the most prolific source of submissions to the journal (Fonner and Stache, 2013; Gold and Mustafa, 2013; Hilbrecht et al, 2013; Neirotti, 2013; Sardesmuch et al, 2013; Sayah, 2013; Wheatley, 2013). New expressions of familiar refrains include the evolving significance of new technologies for professions (Paton et al, 2013) and expert labour (Fincham, 2013; Gleadle et al, 2012) and the evolution of generalised control systems, such as ERP (Maas et al, 2013).

As Baldry (2011) observed, employment relations and human resource management policies and practices have been a particular foci for the journal. Several articles in recent volumes highlight this close connection. Cushen and Thompson (2013) explore and expose the contradictions between high commitment HRM policies for skilled knowledge workers in a high-tech company and their lived experiences and attitudes, concluding that they can be simultaneously high-performing and uncommitted. Beirne (2013) examines change within the UK's Royal Mail and the emerging patterns of resistance. Gekara and Fairbrother (2013) consider the consequences for labour in what might be considered a traditional industrial setting, that of the docks and waterfront.

NTWE has always engaged with analytical frameworks developed by scholars working in proximate disciplines. Recently, value chain perspectives have been adopted for they are clearly pertinent to ICT-structured and controlled networks of production, service delivery and distribution and, of course for the position of labour within them (Taylor et al, 2013). Earlier coverage of transnational governance and coordination (Howcroft and Richardson, 2008; Upadhya, 2009; Thite and Russell, 2010) has been supplemented by a recent study of labour in the supply chains of the food retail industry (Newsome et al, 2013).

The transnational production network, specifically the manufacture of electronic consumer devices, has been the launch pad for an important innovation. Much of Chan's (2013) article on working conditions on the assembly line and in the dormitory regime at Foxconn in China consists of a first person testimony, in this case that of a young female, recently-migrated worker who was driven through desperation at her working and living conditions to attempt suicide. It is a quintessentially contemporary take on commodity fetishism. The branded electronic devices on the shelves of the gleaming high street store embody, as a defining aspect of their desirability, the most advanced micro-technologies. Far removed from the domain of consumption lies the materiality of production and the harshness, indeed inhumanity, of the social relations of the outsourced factory regime from which the devices derive.

Similar to the 'On the Front Line' initiative of *Work, Employment and Society* (Taylor et al, 2009b), the journal invites crafted first-person narratives that are situated within contexts that help explain their significance. These first-hand accounts can provide insights into actors' experiences of ICT-related work and employment that ordinarily cannot be delivered within the strictures of a 'conventional' academic article. In the case of the testimony of the Foxconn worker, an accompanying article (Chan et al, 2013) provided a broader political, economic, spatial and sociological analysis that located her experiences within the position of labour. Such companion pieces are also welcome.

One of the strengths of *New Technology, Work and Employment* is that it is a broad church. As Baldry (2011, 180) noted, the journal has always published articles from diverse disciplines and fields of study within the social sciences; sociology, psychology, economics, political-economy, organisational behaviour, industrial relations. Far from seeking to change this catholicism, the new editors wish to encourage an expanded disciplinary diversity. For example, as indicated, studies that use the global value chain or global production network frameworks will invariably be multi-disciplinary, perhaps integrating organisational behaviour or employment relations with human or economic geography, development studies and with what might be considered, in its own right, the loosely integrated tradition of GCC, GVC and GPN studies. The spatial is becoming less an accompaniment to, and more an integral element in, work and employment studies (McGrath-Champ et al, 2010; Taylor et al, 2013).

It may seem too obvious to state that the contents of the journal reflect its title. A 'legitimate' NTWE article should satisfy the self-evident, basic criteria that it considers developments in new technology and relates them to the domains of work and employment. Any article can be positioned at a specific point along a notional spectrum that has 'new technology' at one end and 'work and/or employment' at the other. The 'new technological' element may be more or less explicit. The editors have no intention of altering the parameters of what should pass muster as a NTWE article, or privileging one or other ends of the spectrum. However, we are keen to ensure that articles that are weighted in favour of the 'new technological' or the 'new new technological' are particularly encouraged. To the disciplines highlighted by the outgoing editor, we would add 'information systems'. Submissions that can be situated on the technological side of the spectrum must nevertheless engage substantially with work and/or employment concerns.

Consistent with the orientation of the journal, the editors are putting together a new and enlarged international editorial advisory board with a number of criteria in mind. First, the board will contain long-standing board members and supporters of the journal who will provide helpful continuity with the traditions of NTWE. It is gratifying that a core of individuals in this category, whose contributions in some cases stretch back to the 1980s, have volunteered their services. Second, as the geographical breadth and impact of the journal have expanded, so too will the board become more international. It will include members from the more established, in journal terms, geographies of Europe, North America and Australasia as well as from the developing countries of the global south. Third, the composition of the board will remain sensitive to and aligned with disciplinary requirements, areas of expertise and subject specialism. In addition to areas of traditional strength, the board will include members with knowledge of information systems and ICTs. Fourth, given the methodological openness of the journal, the board will contain members with complementary strengths in qualitative and quantitative methods and techniques. Fifth, although NTWE will remain resolutely independent intellectually, a small number of non-academics with relevant professional expertise or experience will be invited to participate. The new board will become fully operational during 2014.

In conclusion, it is necessary to return to our point of departure. Society appears to be on the verge of a new wave of technological adoption that presages significant changes in the worlds of work and employment. Commendably, *New Technology Work and Employment,* throughout its history, has been consistently critical of populist accounts predicting wholesale social change based upon an un-dialectical technological determinism. That the hoped for, or feared, paradigm shifts associated with

particular technological developments were not realised should counsel us to be cautious regarding this unfolding wave. Just because ICTs may have the capacities to bring about far-reaching changes does not mean that they will occur. The microchip and the PC did not create a jobless future. The network did not lead to a crisis-free, non-hierarchical world. Nevertheless, we should be open to the potentially considerable impacts for work and employment of the current crop of ICTs. If re-treading the well-worn path to technological determinism spells danger, then, conversely, neglecting to investigate this wave of technological change would be a failure of critical social science.

This essay and the article by Holtgrewe which follows are intended to stimulate rigorous, theoretically informed and empirically grounded research on the 'new new technologies'. It may be that this is first time that songwriter Stephen Stills has been quoted in a journal of social science, but his words seem highly appropriate: '*There is something happening here, what it is ain't exactly clear*'. It is the responsibility of social scientists of various disciplinary backgrounds to provide greater clarity of the work and employment consequences of big data, the cloud, crowdsourcing, automation and robotics, digital labour, social media, apps and the new technologies of worker surveillance (e.g. RFID) and, of course, of worker responses and contestation. Alongside this novel territory, the journal will continue to provide a broad platform for research on all aspects of the 'new technologies', that either contribute to existing debates on established themes of significance or open up new lines of inquiry or theorising.

References

Baldry, C. (2011) 'Editorial: chronicling the information revolution', *New Technology, Work and Employment*, 26:3: 175-182

Beirne, M. (2013) 'Interpretations of management and modernisation at the UK Royal Mail: shifting boundaries and patterns of resistance', *New Technology, Work and Employment*, 28.1: 116-129

Bergvall-Kareborn, B. and Howcroft, D. 'The future's bright, the future's mobile': a study of Apple and Google mobile application developers', *Work, Employment and Society*, DOI: 10.1177/0950017012474709 Accessed 2 February 2014

Boreham, P., Parker, R., Thompson, P. and Hall, R. (2007) *New Technology@Work*, London: Routledge

Braham, P. (1985) 'The effects of IT on employment', in Open University text, *IT and Change in the Workplace*, Milton Keynes: Open University Press

Braverman, H. (1974) Labour and Monopoly Capitalism – The Degradation of Work in the Twentieth Century, Monthly Review Press

Brynjolfsson, E. and McAfee, A. (2012) *Race Against the Machine: How the Digital Revolution is Acclerating Innovation, Driving Productivity and Irreversibly Transforming Employment and the Economy*, Digital Frontier Press

Brynjolfsson, E. and McAfee, A. (2014) *The Second Machine Age: Work, Progress and Prosperity in a Time of Brilliant Technologies*, New York: Norton

Carter, B., Danford, A., Howcroft, D., Richardon, H., Smith, A. and Taylor, P. (2011) '"All they lack is a chain": lean and the new performance management in the British Civil Service', *New Technology, Work and Employment*, 26.2: 83-97

Carter, B., Danford, A., Howcroft, D., Richardon, H., Smith, A. and Taylor, P. (2013) '"Stressed out of my box": employee experience of lean working and occupational ill-health in clerical work in the UK public sector', *Work, Employment and Society*, 27.5: 747-767

Castells, M. (1996) *The Rise of the Network Society*, Oxford: Blackwell

Chan, J. (2013) 'A suicide survivor: the life of a Chinese worker', New Technology, Work and Employment, 28.2: 84-99

Chan, J., Ngai, P. and Selden, M. (2013) 'The politics of global production: Apple, Foxconn and China's new working class', *New Technology, Work and Employment*, 28.2: 100-115

Cushen, J. and Thompson, P. (2013) 'Doing the right thing? HRM and the angry knowledge worker', *New Technology, Work and Employment*, 27.2: 79-92

Deery, S, Nath, V. and Walsh, J. (2013) 'Why do Indian call centre workers want to leave their jobs', New Technology, Work and Employment, 28.3: 212-216

Ellway, B.P.W. (2013) 'Making it personal in a call centre – electronic peer surveillance', *New Technology, Work and Employment*, 28.1: 37-50

The Economist (2014) *The Onrushing Wave: Briefing the Future of Jobs*, London: The Economist, 18 January, pp.21-24

Fitzgerald, I., Hardy, J. and Martinez Lucio (2012) 'The internet, employment and Polish migrant workers: communication, activism and competition in the new organisational spaces', *New Technology, Work and Employment*, 27.2: 93-105)

Frey, C.B. and Osborne, M.A. (2013) *The Future of Employment: How Susceptible are Jobs to Computerisation,* OMS Working Paper, Oxford: University of Oxford

Gekara, V.O. and Fairbrother, P. (2013) 'Managerial technologies and power relations: a study of the Australian waterfront', *New Technology, Work and Employment*, 28.1: 51-65

Gleadle, P., Hodgson, D. and Storey, J. (2012) '"The ground beneath my feet': projects, project management and the intensified control of R&D engineers', *New Technology, Work and Employment*, 27.3: 163-177

Gold, M. and Mustafa, M. (2013) 'Work always wins: client colonisation, time management and the anxieties of connected freelancers', *New Technology, Work and Employment*, 28.3: 197-211

Green, F. (2006) *Demanding Work: The Paradox of Job Quality in the Affluent Economy*, Princeton, NJ: Princeton University Press

Hilbrecht, M., Shawn, S.M., Jonson, L.C. and Andrey, J. (2013) Remixing work, family and leisure: teleworkers experience of everyday life', New Technology,

Holtgrewe, U. (2014) 'New, new technologies: the future and the present of work in information and communication technology', *New Technology, Work and Employment*, 29.1:

Howcroft, D. and Richardson, H. (2008) 'Gender matters in the global outsourcing of service work', *New Technology, Work and Employment*, 23.1-2: 44-60

Howe, J. (2008) *Crowdsourcing – How the Power of the Crowd is Driving the Future of Business*, New York: Crown Publishing Group

Janta, H. and Ladkin, A. (2013) 'In search of employment: online technologies and Polish migrants', *New Technology, Work and Employment*, 28.3: 241-253

Jenkins, C. and Sherman, B. (1979) *The Collapse of Work*, London: Methuen

Kidwell, R. and Sprague, R. (2009) 'Electronic surveillance in the global workplace: laws, ethics, research and practice', *New Technology, Work and Employment*, 24.2: 194-208

Maas, J-B, Van Fenema, P. and Soeters, J. (2014) 'ERP system usage: the pole of control and empowerment', *New Technology, Work and Employment*, 29.1:

Martinez Lucio, M., Walker, S. and Trevorrow, P. (2009) 'Making networks and (re)making trade union bureaucracy: a European wide study of trade union engagement with the internet and networking', *New Technology, Work and Employment*, 24.2: 115-130

Mayer-Schonberger, V. and Cukier, K. (2013) *Big Data: A Revolution That Will Transform How We Live, Work and Think*, London: Hodder and Stoughton

McBride, J. and Stirling, S. (2014) 'Green roots from the grass shoots?: The national shop stewards', *New Technology, Work and Employment*, 29.1:

McCabe, D. (2014) 'Making out and making do: how employees resist and make organisational change work through consent in a UK bank', *New Technology, Work and Employment*, 29.1:

McDonnel, A., Connel, J., Hannif, Z. and Burgess, J. (2013) 'Voices from higher up the ladder: exploring the team leader role in call centtres', *New Technology, Work and Employment*, 28.2: 145-159

McGovern, P., Hill, S., Mills, C. and White, M. (2007) *Market, Class and Employment*, Oxford: Oxford University Press

McGrath-Champ, S., Herod, A. and Rainnie, A. (2010) *Handbook of Employment and Society: Working Space*, Cheltenham: Edward Elgar

Newsome, K., Thompson, P. and Commander, J. (2013 '"You monitor performance at every hour": labour and the management of performance in the supermarket supply chain', *New Technology, Work and Employment*, 28.1: 1-15

Panagiotopoulus, P. (2012) 'Towards unions 2.0: rethinking the audience of social media engagement', *New Technology, Work and Employment*, 27.3: 178-192:

Panorama (2013) *Amazon – The Truth Behind the Click*, Broadcast on BBC1 29 November 2013, Accessed 15 January 2014 http://www.bbc.co.uk/programmes/b03k5kzp

Paton, S., Hodgson, D. and Muzio, D. (2013) 'The place of corporate professionalisation: analysing the corporate capture of professions in the UK', *New Technology, Work and Employment*, 28.3: 227-240

Rawlinson, K. (2013) 'Tesco accused of using electronic armbands to monitor its staff'. Independent, 13 February, www.independent.co.uk/news/business/news/tesco-accused-of-using-electronic-87-108armbands-to-monitor-its-staff-8493952.html Accessed

Richards, J. (2008) '"Because I need somewhere to vent": the expression of conflict through work blogs', *New Technology, Work and Employment*, 23.1-2: 95-110

Richards, J. and Kosmala, K. (2013) '"In the end, you can only slag people off for so long": employee cynicism through work blogging', *New Technology, Work and Employment*, 28.1: 66-77

Rifkin, J. (2000) *The Age of Access: How the Shift from Ownership to Access is Transforming Capitalism*, Harmondsworth: Penguin

Sayah, S. (2013) Managing work-life boundaries with information and communication technologies: the case of independent contractors', *New Technology, Work and Employment*, 28.3: 179-196'

Schoneboom, A. (2011) *Sleeping giants?: Fired workbloggers and labour organisation', New Technology, Work and Employment*, 26.1: 17-28

Taylor, P. (2013) *Performance Management – The New Workplace Tyranny*, Glasgow: Scottish Trades Union Congress

Taylor, P., D'Cruz, P., Noronha, E. and Scholarios, D. (2009a) 'Indian call centres and Business Process Outsourcing: a study in union formation', *New Technology, Work and Employment*, 24.1: 19-41

Taylor, P., Newsome, K. and Rainnie, A. (2013) '"Putting labour in its place': Global value chains and labour process analysis', *Competition and Change*, 17.1: 1-5

Taylor, P., Warhurst, C., Thompson, P. and Scholarios, D. (2009b) 'On the front line', *Work, Employment and Society*, 23.7: 7-11

Thite, M. and Russell, B. (2011) '"Next available operator: work organisation in Indian call centres', *New Technology, Work and Employment*, 25.1: 2-18

Toffler, A. (1970) *Future Shock*, New York: Bantam Books

Uphadya, C. (2009) 'Controlling offshore knowledge workers: power and agency in India's software outsourcing industry', *New Technology, Work and Employment*, 20.1: 2018

Valentine,S., Fleiscchmann, G., Sprague, R. and Godkin, L. (2010) 'Exploring the ethicality of firing employees who blog', *Human Resource Management*, 49.1:87-108

Villadsen, K., Cavazotte, F. and Heloisa, A. (2014) 'Corporate smartphones: professionals' conscious engagement in escalating work connectivity', *New Technology, Work and Employment*, 29.1: