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The employee and the Internet age: A reflection, map and research agenda

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Abstract

The main aim of this paper is to provide a systematic review of the burgeoning, yet far from cohesive, literature that surrounds employee use of the Internet, with view to reflecting upon the extent to which employees have more broadly (or not) benefitted in the Internet age. This is achieved by drawing on a range of literature associated with the study of employment and work organisations. Due to the nature of Internet communication technologies and how this conflicts with the much slower nature of academic output, the review and mapping exercise is supplemented by press reports of emergent employee uses for new forms of Internet-based communication technologies, such as blogs, social networking sites and wikis. The review is based on examining the shift from Web 1.0 to Web 2.0 and followed by an overall discussion of important employee-related changes that characterise the shift from the old to the new Internet. The main conclusion of the review is that the Internet represents a “double-edged” sword, yet the shift from Web 1.0 to Web 2.0 appears to have opened up fresh and exciting opportunities for employees to engage with their jobs, misbehave, shape trade union practices, and, challenge managerialist discourses. Finally, the findings are diagrammatically mapped out, the limits of the study are discussed and a range of important research opportunities and challenges are presented.

Introduction

The primary objective and nature of the early Internet (circa early 1990s to early 2000s) – now widely referred to as Web 1.0 – was to publish information for easy access by anyone using an Internet-connected Web browser (Murugesan 2009). However, in the first few years of the twenty-first century, new Internet technologies emerged that no longer limited Web-pages to asymmetrical broadcasts of information and opinion (Herring et al. 2004). What is crucial to note about such developments – denoted by the rise of blogs and micro-blogging, social networking sites, virtual worlds, peer-to-peer file sharing sites and wikis – is that new Internet communication technologies massively decrease the technical knowledge to post information to the Internet and that ordinary people need no longer be the passive recipients of Web-page information (Kolbitsch and Maurer 2006). In 2004 Tim O'Reilly invented the term Web 2.0 to define the apparent shift from an expert level information-centric and read-only Web to a forum of social interaction based on an amateur-driven read-write Web. Despite criticisms of such amateurish beginnings (Keen 2007) the past five years has seen Web 2.0 communication technologies increasingly deployed for business and societal use (Murugesan 2009). This is to such an extent that some commentators believe the broader Web 2.0 movement should also be understood as part of a larger part of the human rights movement (Birdsall 2007).

Generally, the Internet has become an increasingly common feature of the study of employment and overlapping academic disciplines. For instance, in its early guise of being an elite-led and asymmetrical broadcast of information and opinion, scholars across the broad and eclectic domain of employment studies discussed the Internet in relation to new employee possibilities for flexible working practices and job hunting (Applebee et al. 2000; Bentley and Yoong 2000; Breure and van Meel 2003), misbehaviour (Wen and Lin 1998; Block 2001; Lim 2002), and, union revitalisation (Pliskin et al. 1997; Diamond and Freeman 2002; Walker 2002; Martinez Lucio 2003). Further, studies that touch on the emergent social dimension of the Internet point towards other benefits for employees. Possibilities for employees under the new Internet include new spaces for employees to share employment and career-related knowledge and enthusiasm (Matzat 2004; Kaiser et al. 2007; Efimova 2009; Martin et al. 2009), push for more polyphonic forms of trade union representation (Carter et al. 2003; Saundry et al. 2007), and, create new opportunities for individualistic and self-organised forms of resistance under contemporary labour processes (Taylor and Bain 2003; Schoneboom 2007; Richards 2008b; Ellis and Richards 2009).

Yet, as shall become apparent later in the current research, it appears that employment-related scholarly research is struggling to keep up with Internet developments, such as, increasingly used and mainstream social networking sites (e.g. Facebook and LinkedIn) micro-blogging facilities (e.g. Twitter) user-generated video-sharing sites (e.g. YouTube) as well as recognising the pace at

which employees experiment and adapt such technologies to serve their many employment-related interests. Indeed, given the lead times of scholarly journal publications, perhaps the only medium that is capable of bringing such acts to wider attention is the through press reports. Indeed, it is suggested that at present scholarly attempts to map out and reflect upon employee uses for the Internet are limited without press reports of such activities. For instance, the following press examples of recent employee uses for the Internet are yet to attract scholarly attention – details of an emergent knowledge-management tool where employees can access and rate colleague expertise (Chubb 2007), a teacher “twittering” from the classroom via a Internet-connected mobile phone (BBC News 2009a), the use of Second Life to mount a “virtual strike” (Blackadder 2007), and, an office junior sacked for branding work as “boring” using Facebook (Swann 2009).

As such, the main of the current research is to review and map out a wide-range of extant academic research and emergent press reports so as to allow us to understand and provide a detailed and rigorous assessment of the value of the Internet to the employee. A further aim is to discuss and help summarise where scholars should direct future research in relation to this quickly-evolving and increasingly mainstream and everyday medium of communication (Haythornthwaite and Wellman 2002). To do this the paper is organised into three sections. Firstly, there will be a far more in-depth discussion of early employee uses for the Internet. It is important to recognise early employee uses for the Internet as such practices are likely to continue today, yet may be so ingrained in personal habits that they are rarely reflected upon, especially in comparison with more recent developments in Internet-based communication technologies. Secondly, there will be a far more in-depth discussion of employee uses of the Internet that recognises the increasing social, inclusivity and informal nature of such communication technologies. Intertwined with the latter half of the discussion is a consideration of press reports (circa 2005 to early 2010) that detail examples of the most recent and current employee uses for Internet-based communication technologies. Thirdly and finally, there will be an overall conclusion that reflects on employee activity in relation to the Internet age, maps out key findings, discusses the limitations of the study, and, points towards further research opportunities in this emergent field.

Early employee uses for the Internet

Given the existing long-term and wide-ranging nature of scholarly research in relation to the study of employment and work organisations, it is of no surprise to find that research that relates to employee uses for the Internet is divided on similar grounds. In other words, no one field comes close to exploring the full range of early identified employee uses for the Internet. The following sub-sections review a sample of such research based around conventional employment-related domains, such as, human resource management (HRM) organisational behaviour (OB) and industrial relations.

However, as there is little mention of early employee uses for the Internet in the field of industrial sociology, this dimension of employment-related study is left for subsequent sections of the current research.

Flexibility, job hunting and the Internet

Reviewing literature that relates to the practice of HRM allows a distinct way in which to view early employee use of the Internet. It clearly demonstrates, for example, that the Internet allows the employee flexibility in terms of where work can be done and the chance to more readily access information about job opportunities. Examples of what employees can expect to achieve from using the Internet include a contemporary means to interact and keep in contact with colleagues (Bentley and Yoong 2000), access, often on a remote basis, vital resources and knowledge systems for job purposes (Applebee et al. 2000; Ruggeri Stevens and McElhill 2000; Breure and van Meel 2003), take part in distance learning programmes (Homitz and Berge 2008), and, find a job and seek out career-related information (Miller and McDaniels 2001; Fountain 2005; Jansen et al. 2005; Hagglund 2006). It would seem, therefore, that employee uses for the Internet is understood in this domain in two particular ways. Firstly, the Internet represents a tool that employers seem keen to encourage their employees to use in relation to their formal job remit, particularly in the case of accessing business-related information quickly and efficiently in the non-office environment. Secondly, and closely linked to the previous point, such activities should also be understood in terms of accessing information that allows employees to develop in their roles either within or outside current employment.

However, there are also downsides in relation to early employee uses for the Internet. For one there is often, as Jansen et al. (2005) suggests, a significant mismatch between the terms used by employers to advertise jobs and opportunities on the Internet and the terms used by employees when searching for such jobs and opportunities via the Internet. As such, searching for employment-related information via the early Internet is often far from being an effortless task and instead it is not unusual for it to be a laborious, fruitless and frustrating activity. Indeed, Fountain (2005) believes a key problem with Internet-based job search is that there is too much labour market information available via this medium of communication, and even when good information can be found, there are serious difficulties associated with evaluating such information. Further downsides to the early Internet include information overload caused by excessive quantities of information (Ruggeri Stevens and McElhil 2000) and that the idea of nomadic working is typically overly romanticised, with the office being the employees' preference to get work done (Bentley and Yoong 2000; Breure and van Meel 2003). What is more, there is a subjective side to employee use of the Internet. For example, Applebee et al. (2000) found many employees who rated themselves as only having beginner-level information communication technology (ICT) skills – usually more than enough for most Internet applications – fall some way short of exploiting the Internet to the full.

New opportunities for misbehaviour

Not all the literature that surrounds employee use of the Internet is as positive as is the case with the previous sub-section. Indeed, it is quite evident so see from the OB domain that employee use, or perhaps employee misuse, of the Internet has also attracted a significant amount of attention. Indeed, studies in this domain appear to equate early employee Internet misuse with non-employment related activities conducted on work time. Examples of such activity conducted instead of, or concurrent to, official employee duties includes downloading MP3 music files and accessing streamed media (Valli 2004), surfing for non-work related information (Wen and Lin 1998), moonlighting for extra income (Adler et al. 2008), shopping (Chen et al. 2008), viewing pornography (Young and Case 2004), gambling (Blanchard and Henle 2008), conducting domestic chores (Block 2001), looking up football scores (Lim 2002), and, trading stock shares (Griffiths 2003). This list is far from exhaustive and merely serves to represent what is typically the basis for further scholarly contemplation of how to manage what have now become, even in such a short period of time, classic employee misuses for the Internet on work time.

In terms of defining employee misuse of the Internet in this sub-domain, it is typical to hear of labels most would interpret as having negative connotations. For instance, employee misuse of the Internet is commonly referred as “cyberloafing” (Blanchard and Henle 2008; Lim and Teo 2005; Lim 2002), “cyberslacking” (Block 2001; Garrett and Danziger 2008), “Internet abuse” (Griffiths 2003; Chen et al. 2008; Young and Case 2004), “non-business use of the WWW” (Valli 2004), and, “Internet deviance” (de Lara 2006). In more detail, Lim (2002) define cyberloafing as:

...any voluntary act of employees' using the companies' Internet access during office hours to surf non-job related Web sites for personal purposes and to check (including receiving and sending) personal email... (2002: 677).

Other definitions associate early employee Internet misuse with work-avoidance strategies (Garrett and Danziger 2008) and engaging in general non-business Internet activities on company time and using company resources (Block 2001). However, some believe that there are two primary forms of employee Internet misuse in the work setting: minor acts such as sending and receiving emails, and, more serious acts that breach wider and more entrenched social norms and mores, and include online gambling and surfing adult orientated Web sites on work time (Blanchard and Henle 2008). Indeed, there seems to be a consensus in this domain that misuse of the Internet on work time is caused by a combination of employee personality weaknesses and a failure by managements to control such activities (Chen et al. 2008). Ultimately, in this domain, employee misuse of the Internet is understood and investigated in terms of lost productivity and deviating from policies designed to foster employee compliance and engagement with broader corporate objectives and obligations. Further, it would appear that misbehaviour of this

kind is largely fuelled by how the introduction of the Internet to the work setting allows employees the distraction of unprecedented and potentially unlimited access to the world outside the work setting.

Receiving information from the union

Employee use of the Internet can also be understood outwith largely managerialist views of such activities. Indeed, if we consider literature from the field of industrial relations it can be clearly seen how employee use of the Internet can also be understood in terms of trade union activity. More specifically, early studies from this field tend to centre on the possible role of the Internet in trade union revitalisation. For instance, as one early study that relates the Internet to possibilities for collective labour suggests:

Our principle conclusion is that the Internet offers unions great opportunities to improve services and attract members because it bridges the gap between an increasingly heterogeneous and individualistic work-force and between the collective activity and solidarity that lies at the heart of trade unionism (Diamond Freeman 2002: 570).

Diamond and Freeman, however, deliver a stark warning to those who believe trade unions need do no more than simply invest in Internet communication technologies:

If, because of organisational rigidities, unions fail to exploit opportunities of the Web, we expect other organisations – Internet recruitment firms, occupational associations, ethnic or gender-based groups – to do so (2002: 570).

Indeed, further studies in this domain explore the role of the early Internet in relation to trade union re-vitalisation. For instance, Martinez Lucio (2003) sees the Internet as being vital to trade unions in terms of making information readily available to members and activists, typically in the form of static Websites and mailing lists. Ward and Lusoli (2003) in turn, believe the Internet and associated technologies should allow trade unions a new and novel way to modernise and democratise. However, Ward found little evidence of trade unions making gains on the back of such communication technologies with trade unions failing to make good use of such technologies to recruit new members, cater for existing members, as well as playing a part in public relations exercises. Further studies that consider possibilities for trade union revitalisation in relation to the early Internet present a more positive, yet cautionary view of what role the Internet may be able to play in union revitalisation. For example, Pliskin et al. (1997) found email helped a trade union secure a successful outcome to an industrial dispute. Barnett (2003), moreover, found that Internet-based communications helped maintain solidarity between striking press workers far more than conventional picketing activities. Further studies suggest the Internet can play a central role in the education of trade union activists (Walker 2002), as well as form an important starting point for emergent models of union organising based on individual service provision (Bjorkman and Huzzard 2005). However, none of

the above studies demonstrate the Internet to present clear advantages for the individual employee or the broader labour movement.

Emergent employee uses for the Internet

The shift from Web 1.0 to Web 2.0 should clearly not be seen as a singular event that happened over a few months during the first few years of the twenty-first century. The changes occurred over several years (and continue to do so in the present day) and for most part of this transition there was almost no explicit reference in the relevant academic literature to the terms Web 1.0 or Web 2.0. As such, literature discussed in this section has been selected on the basis of making explicit or implicit reference to new forms of Internet communication technologies. Yet, it is also apparent that the pace at which the technologies move, nor the pace at which employees have sought to exploit such technologies, has not been matched by the typical time to conduct scholarly research and the typical lead times associated with scholarly output. Hence, despite the limited credibility and possible bias of such resources, this section also draws, in varying degrees, on press reports of such activities and discusses such activities in relation to a range of inter-linked and less-than-inter-linked employment-related academic disciplines. The following section, as such, is sub-divided on the basis of discussing Web 2.0 communication technologies in relation to peer-based forms of knowledge transfer, even greater opportunities for misbehaviour, new forms of trade union organisation, and, new opportunities for subversion under contemporary labour processes.

The passionate Web

In the HRM domain the basis of the research seems to concern employees actively seeking to share personally held knowledge of jobs or organisational systems by way of Web 2.0 communication technologies. The outcome of creating such knowledge via new communication technologies appears to greatly benefit employees and employers who invest in such practices. Indeed, a range of scholarly studies have emerged over the past few years that considers how technologies, such as blogs, wikis, social networking sites, reflect positively on the flow of knowledge within and between work settings. For instance, there is evidence that employees appear willing to use the new Internet to develop and maintain professional relationships when assigned to work in virtual teams (Brown et al. 2007), to help mentor junior employees through distance or organisational learning programmes (Homitz and Berge 2008), and, to create peer-based networks of personal knowledge that in some cases extends out of the employer organisation to involve similar types of employees or other interested parties, such as customers (DeFillipi et al. 2003; Matzat 2004; Bryen 2006; Kaiser et al. 2007; Bradwell and Reeves 2008; Efimova 2009; Martin et al. 2009). Generally, such trends represent evidence of a shift from precise asymmetric elite-based and restricted knowledge sharing to less than precise peer-created far less restricted and formal channels of knowledge sharing.

Key findings to emerge from this genre of research seem to promote Web 2.0 communication technologies as having engaging qualities in that there is a wide-range of emergent evidence to support the view that employees appear overwhelmingly taken in by such knowledge sharing practices. For instance, Kaiser et al. (2007: 392) believe employee blogs “have distinct technological features that unleash passion for engaging in knowledge work”. Efimova (2009), moreover, explains how this may work in the work setting:

In Microsoft weblogs are used to support work in a variety of ways. They provide a space where bloggers share passion for their work and communicate with others across hierarchical geographical or organisational borders. Weblogs are used to engage with customers and to change the image of the company. They help to organise ideas serving as a personal knowledge base and to document work practices all in a place where others could benefit and provide a feedback. Using a weblog also results in an increased visibility of specific ideas expertise and opinions of its author. (2009: 191).

Further findings confirm the belief that employers who support the use of Web 2.0 communication technologies in the work setting help engage employees in terms of organisational learning and sharing knowledge and experiences (Martin et al. 2009). More generally, other advantages for employees in such situations includes developing effective networking skills that can play a vital role in reducing social isolation and stress associated with social isolation (Bryen 2006), creating a level of credibility in a relevant occupational field (DeFillipi et al. 2003), and, allowing convenient links to be maintained between employee and former colleagues (Bradwell and Reeves 2008). Overall, in this domain the scholarly evaluation of employee uses for Web 2.0 appears quite advanced and up-to-date. However, press reports suggest a small level of continuation in employee Internet-related innovations. Such innovations include knowledge management practices that involve moving away from blogs and the experimental up-take of recent Web phenomena such as Facebook LinkedIn and Twitter (Baker 2009) technological advances, that allows peers to easily “score” or “tag” an employee as experts (Chubb 2008), and, because such Internet activity is usually available to any Internet user there is also the chance that the employee may develop a wider reputation as a result of such activities (Mannino 2009).

Internet misbehaviour has left building

There appears to be little if any explicit recognition of the shift from Web 1.0 to Web 2.0 in the scholarly fields that surround employee misbehaviour. Yet, as shall be demonstrated, there is a steady stream of press reports detailing new Internet-based forms of employee misbehaviour. The necessity, however, is to consider how such acts compare with acts of misbehaviour discussed in the previous section. Before we can attempt to consider a comparative exercise a selection of employee Internet-based misbehaviour is provided in Figure One (below).

New Internet employee misbehaviour	Press report details
1. An employee infiltrates employer official Twitterfeed to post a message saying: "VodafoneUK is fed up of dirty homo's and is going after beaver."	Wray and Arthur (2010)
2. A nurse is suspended amid reports that photos of patients having operations were posted on the social networking site Facebook.	BBC News (2010a)
3. Staff at a hospital face possible dismissal after posting online pictures of themselves taking part in the "Lying Down Game."	BBC News (2009b)
4. Staff at shops owned by an electronic retailer have been caught insulting customers on a social networking site.	BBC News (2009c)
5. A prison officer is dismissed for gross misconduct after being caught making friends with inmates on the social networking website Facebook.	BBC News (2009d)
6. A secondary school teacher posts messages discussing her pupils on a social networking website (Twitter) and is now being investigated by her employers.	BBC News (2009a)
7. Thirteen cabin crew staff sacked by international airline over their use of a social networking website to call passengers "chavs."	BBC News (2008a)
8. A senior police officer loses out on the chance to become a Chief Inspector after he was found to have posted very personal information on the Internet.	BBC News (2008b)
9. A supermarket retailer launches an investigation after videos showing supposed current and former employees engaging in a variety of pranks in the company's stores were posted on video-sharing website YouTube.	The Guardian (2007)
10. Staff of politicians (US senators and congressmen) burnishing the entry of their employer in Wikipedia (staff of US senators and congressmen)	Barkham (2006)

Figure One: Ten examples of new Internet employee misbehaviour

With Web 1.0 and employee misbehaviour it has been previously stated that a major purpose of such activity surrounds the avoidance of work (Garrett and Danziger 2008) or indulge in domestic and broader non-work interests on work time via the organisation's IT systems (Block 2001). While there is no doubt such activities continue to occur in the work setting, and pose serious problems for employers despite sophisticated employer attempts to manage such misuse, the evolution of the Internet and the technologies associated with Internet access appears to have further increased the possibilities for employee Internet-based misbehaviour. In short, the activities outlined in Figure One go beyond cyberslacking and cyberloafing and at the same time clearly challenge existing views of employee-related Internet deviance. Such acts, moreover, present expanded opportunities for employees to play games on work time

mock management practices and customers and pursue interests that may conflict with professional obligations.

In more detail it is first of all apparent that some of the misbehaviour noted in Figure One involves employees accessing the Internet outwith the work setting. For instance it is unlikely that the employees involved in the majority of the cases noted in Figure One posted messages, photographs and videos via employer-owned Internet-connected computers. As such, Internet misbehaviour appears to be conducted increasingly, at least in part, outwith the work setting, and at the same time is noted for being more socially organised. Secondly, all acts of misbehaviour are externally directed suggesting Internet misbehaviour is increasingly an inter-organisational socially organised phenomenon. Thirdly, particularly in the case of the teacher posting messages to her Twitter feed, the act involved a mobile Internet-connected device – something that employers are likely to have far less control over when compared with their own ICT systems and hardware. Fourthly, a downside for employees using Web 2.0 is there appears to be a very new way that employers can catch employees breaching codes of conduct. For example, employees posting confidential images and information details of inappropriate relationships and overly frank details of personal lives to the Internet, via social networking platforms primarily designed for non-work entertainment. Finally, such activities also have clear potential to provoke new forms of conflict between employee and employer because of how new communication technologies overly blur the distinction between work and non-work activities. Taking all these observations together, it is reasonable at the very least to suggest that scholars need to revisit and redefine employee Internet-based misbehaviour.

Polyphonic trade unionism and novel forms of industrial protest

In the previous section it was suggested that it was far from clear if employees derived significant benefits when trade unions first took to the Internet. Indeed, important survey-based studies (e.g. Kersley et al 2006; Barrat 2009; Hale 2009) that focus on key indicators of trade union power and influence, such as, memberships, employer recognition, collective bargaining and strike action, seems to suggest that organised labour fell some way short of exploiting the early Internet. Yet, during the early-mid decade of the twenty-first century a small number of researchers considered whether the new Internet could provide trade unions with something the early Internet could not. Indeed, such studies prove to be all the more important as the latest research in the field of industrial relations suggests trade union members are more intense users of ICTs than their non-unionised counterparts (Masters et al. 2010).

An early case study of trade union activity and the new Internet actually involved, ironically, a bitter and lengthy “unofficial” dispute between the Dockers of Liverpool and Mersey Docks and Harbour Company. In reality, the Dockers’ trade union decided not to make the dispute official as it would make

them vulnerable to major fines and sequestration of their funds. However, it was this cruel twist of fate that may have allowed organised labour to re-think how it uses the Internet as part of recruiting and mobilising its memberships. What is important to note is how a global Internet-based campaign that surrounded this unofficial dispute allowed activists to produce new forms of power and representation. Indeed it was argued by Carter et al. (2003: 302) that the Internet “equipped the Dockers with new discursive frameworks allowing them to move outwith traditional trade union discourses and practices.” As such, in the absence of official and centralised trade union leadership, the new Internet-facilitated polyphonic forms of self-organisation and allowed new and flexible forms of power and representation to emerge. However, a broadly similar study conducted by Saundry et al. (2007) casts some level of doubt on the viability of polyphonic models of trade union organisation. As such, while they acknowledge that virtual forums designed to encourage employees to correspond with each other in a manner typical of the “old union hall” are important new developments for individuals and trade unions, they also believe the prospective of something more substantive to emerge from such settings is limited. Saundry et al.’s (2007) main criticisms of polyphonic models of organisation are summarised below:

First, one of the main selling points of Internet networks is their lack of organisation and hierarchy. Any attempt to adopt a clearer identity will ultimately undermine this. Second, their effectiveness and attraction lie in their ability to focus on a specific issue or narrow range of concerns that are directly relevant to users. The development of a more substantive organisational form would invariably imply a broader remit that has limited relevance to potential members. Third, they are dependent on anonymity which inevitably undermines any attempt to develop more substantive identity. Perhaps most importantly these ‘organisations’ do not have the necessary expertise, know-how or institutional interface that trade unions possess (2007: 188-189).

Interestingly, press reports, most of which are written by experienced labour correspondents, seem to put a more positive spin on the idea of trade unions benefiting from the new Internet. For instance, press reports frequently discuss novel forms of industrial protest or organising campaigns. An example of a new and novel form of industrial action includes a “strike” conducted in Second Life (see Blackadder 2007). Here protestors using avatars disrupted a meeting held by their employer in this virtual world. Another example comprises supporters of striking retail employees organising, via social networking sites and hand-held Internet capable devices, a “flash mob” (see Union Renewal blog 2008). Details of the flash mob incident are retold via the keepers of Union Renewal blog as such: “...almost 100 activists turned the store’s shoe department into chaos...People took their time at the checkout causing long waiting lines only to decide not to purchase their article after all.” A further novel use by trade union activists involves using social networking sites to “drum up support” for a trade union recognition campaign (e.g. see Hencke 2007). Generally, at whatever level and depth we have been available to examine trade union uses for the traditional or new Internet, it remains very

difficult to judge what extra benefits an employee may gain from being a member of an Internet savvy trade union.

News spaces for employee-led discourses

Surprisingly, there is very little mention of the early Internet in the field of industrial sociology and particularly in relation to studies and theories that surround labour process analysis. Indeed where references to the possibilities of linking subversive employee behaviour and the Internet are made they tend to be overly general. Amongst such scholars are Collinson and Ackroyd (2005) who, in referring to Naomi Klein's No Logo work on anti-globalisation, believe the Internet to be a valuable tool for spreading information about multinationals around the globe. Richards' (2008a) broad discussion of age-old and emergent forms of employee subversive behaviour, moreover, asserts how the Internet should be taken far more seriously by critical researchers as a tool and framework for employee-based defiant activities. In terms of empirical labour process studies of employee subversion and the Internet perhaps the only early standout contribution is Taylor and Bain's (2003) work on humour as subversion in call centre employment. In this instance, Taylor and Bain discuss how company email systems allow a very efficient and new way by which employees can circulate generic and self-authored material aimed at mocking "high-powered" management meetings and management attempts to monitor and control the minutiae of a call operator's daily routine.

Yet we should probably fully acknowledge the role press reporting has played in inspiring a range of critical labour studies surrounding the new Internet. For instance, press reporting has clearly been first to inform the world about employees who blog about their views and experiences of employment and employers. An example of potential employee power and employer angst is highlighted in this early press report concerning soldiers who blog from the frontline:

The war in Vietnam is often referred to as the first war on television and the wars in Afghanistan and now in Iraq will be known as the first wars to be blogged. A new generation of soldier bloggers in the US known as milbloggers are both fighting in the field and writing about their experiences. It is opening up a new window on modern warfare and is creating a new genre of war-time writing. However some of these pioneering frontline bloggers fear that the golden age of milblogging has already passed as military officials begin to clamp down on the unfettered online writing (Anderson 2005).

The activities of work bloggers have been at the forefront of ongoing press reports of such activity, yet are typically interpreted for wider public consumption on the basis of being blatant acts of employee subversion (see e.g. Spencer 2005; Joyce 2005; Berger 2005). Further, in more recent years press reports have been sensitive to and keen to sensationalise an apparent employee shift from publicly-viewable work blogging forums to more exclusive, self-organised social networking forums, such as, the "groups" feature on Facebook. Facebook-styled examples of employee subversion

include an office worker sacked for branding work as boring (Swann 2009), airline cabin crew sacked for criticising the employer's safety standards (BBC News 2008a), an Israeli soldier "relieved of duties" after posting details of "clean up raid" on a Palestinian settlement (BBC News 2010b), and, airline cabin crew releasing a list of strike-breakers for broader collegial and media consumption (Davies 2010). Given that the Internet is such a vast body of information and social interaction and such information and social interaction is variously easy or difficult to locate or access, it is important to note the extent to which the mass media and employers have become deeply embroiled in such activities that did not exist around five years ago.

Where critical scholars have made in-roads into the study of the new Internet the emphasis has so far been on employees using blogs and yet to move into the far more difficult methodological terrains of social networking sites. Key concerns raised by such scholars suggest employees should be afforded some level of protection when judged by employers to have made disparaging remarks about the company (Cote 2007). Further, writers have also attempted to clarify the legal status of such activities by comparing networks of bloggers to "the new union hall" and these social spaces deserve the same sort of comprehensive legal protection union halls received in the days of old (Gely and Bierman 2006). Recent empirical studies of work blogging practices, however, perhaps represent the most in-depth and rigorous insights into such practices so far. For instance, Schoneboom's (2007) study demonstrates how blogging forums are examples of new places for identity formation and a means to share a common disdain for corporate language. Moreover, Richards (2008b) observed how work blogging led to exciting new potential for self-organised and narrative-based forms of employee resistance. A further study by Ellis and Richards (2009) also suggests that work blogging practices offers the individual employee a voice free of hierarchy or the usual trappings that generally render the ordinary employee silent. All in all, studies that emerge from this domain indicate significant and ongoing potential for informal employee subversion practices by way of employee-led discourses, as well as tricky yet new and novel challenges and ethical dilemmas for critical researchers.

Discussion and conclusions: A reflection on being an employee in the Internet age

The final section is based on the following. Firstly there will be a brief summary of the opportunities afforded to the employee founded on the shift from the old to the new Internet. Secondly, opportunities afforded to the employee in the Internet age will be mapped out and further scrutinised in terms of the realities associated with such activities. Thirdly, limitations of the current research will be discussed followed by the presentation of a range of research opportunities and scholarly challenges.

Expanding opportunities for employees in the Internet age

Over the course of the main body of this paper, based on a systematic review of a wide-range of literature, there has been a discussion of how employee uses for the Internet have evolved since the Internet started to become a common feature of working and broader everyday life from the mid-1990s onwards (Haythornthwaite and Wellman 2002). The discussion suggests there has, indeed, been a level of evolution in how employees engage with Internet technologies in line with how Internet technologies have evolved. There is strong evidence, as such, to suggest that employees have moved some way beyond being passive recipients of Web-based information (Kolbitsch and Maurer 2006). There is also some level of evidence that part of this broader trend corresponds well with Birdsall's view (2007) of Web 2.0 being part of a larger human rights movement. To aid further discussion, the details of this shift is summarised in Figure Two (below).

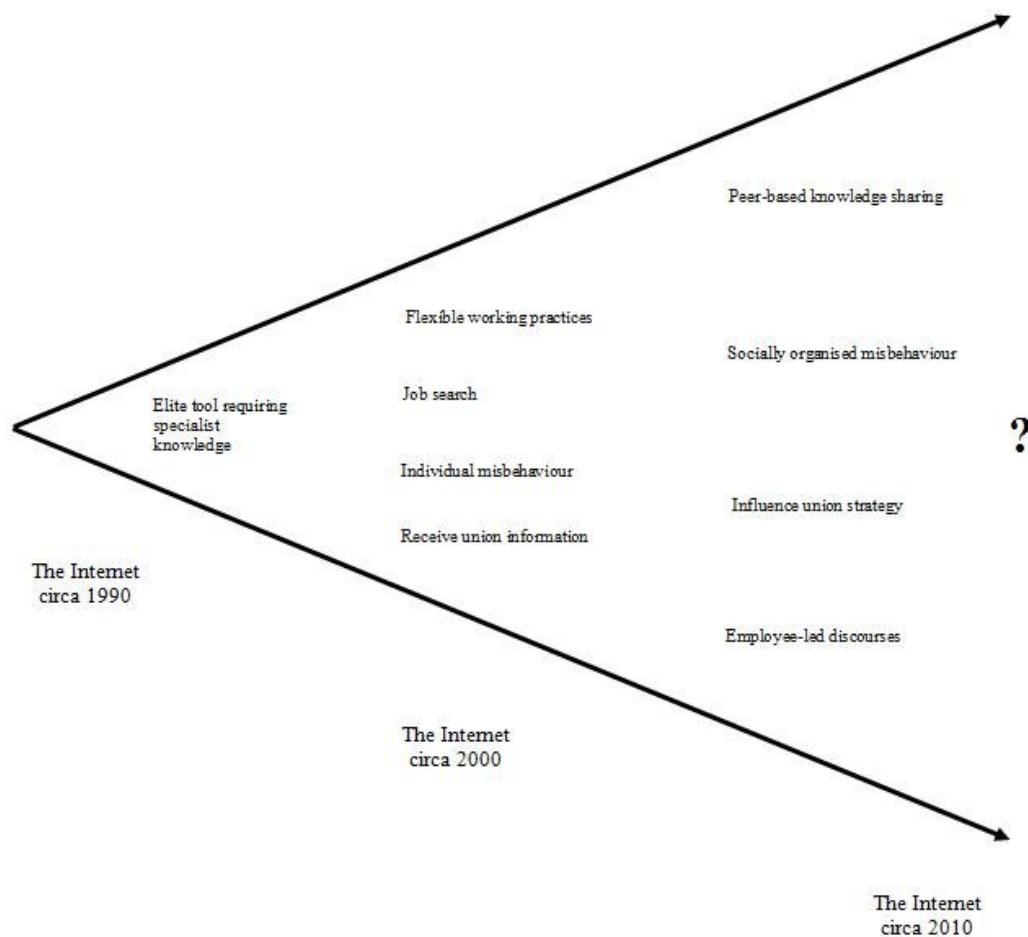


Figure Two: Expanding employee opportunities in the Internet age

Figure Two, for example, is a diagrammatical summary of the evident expansion of employee uses for the Internet, moving from the very early days of the Internet up until the current era that is dominated by the Web 2.0 format. However it should be restated that employee uses for the Internet under the Web 1.0 format are very much with us today and that Web 2.0

represents, more than anything else, expanded employee opportunities in the present Internet age. Indeed, in Figure Two it can be seen how early employee Internet applications, based mainly on asymmetrical broadcasts of information and opinion (Herring et al. 2004), have recently been superseded, via the social and read-write Web, with opportunities to self-organise knowledge networks, co-ordinate more sophisticated and complex forms of misbehaviour across work time and space, influence trade union practice, and, create new employee-led discourses surrounding work and employment. What is more, while we cannot predict future developments in Internet communication technologies, it is probably safe to say, by way of emergent and ongoing press accounts of such activities, that employee uses for the Internet is likely to expand further in the future, even if we cannot say what that may look like at the present moment. However, it should also be acknowledged that Table Two does not fully allow a greater map of employee uses for the Internet to emerge. Neither, moreover, does Figure Two detail the threats and realities of employee Internet use in the current age.

Mapping and assessing classic and new employee uses for the Internet

In one sense the earlier discussion of an eclectic range of scholarly literature and press reports of employee uses for both the old and new Internet allows us to create a detailed map of such expanding activities. However, we must also provide a balanced picture in terms of presenting the harsh realities that typically surrounds such activities. As can be seen in Figure Three, first and foremost, this is a map of employee uses for the Internet that represents Web 1.0 and Web 2.0 versions of the Internet. In other words, Figure Three shows well-known and emergent employee uses for the Internet, even if we do not know, as of yet, how universal or effective some of the newer activities actually are. In more detail, Figure Three identifies 14 employee uses for the Internet, and is reflective of uses shaped by and expected of employers, uses related to various forms of misbehaviour, uses associated with employee representation and labour as a wider political actor, and, uses as a means to counter managerial discourse.

Yet, it can be seen in Figure Three, how all employee uses for the Internet, in varying degrees, is subject to a range of problems. Threats, as such, are quite varied in nature and include problems and disadvantages with the legal system that surrounds such activities, the advanced but far from perfect technologies associated with the Internet, how powerful interest groups such as employers and the press take employees to task over such activities, and, how many employees struggle to self-regulate their own time and efforts in relation to such knowledge and discourse creation. As such, the new Internet represents very much a double-edged sword to the employee, although it

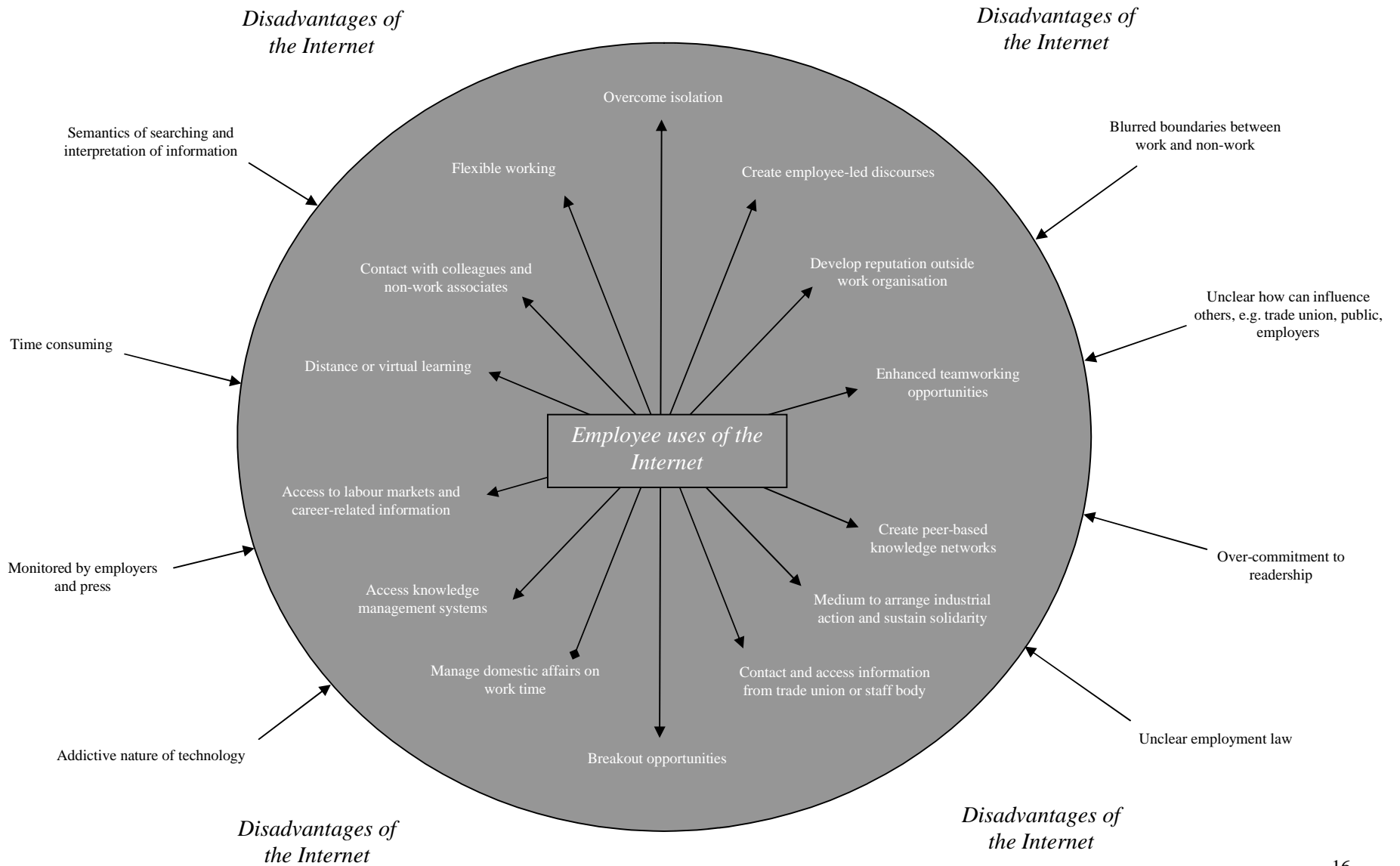


Figure Three: Mapping and assessing employee opportunities in the Internet age

would be quite reasonable to suggest the expanded opportunities presented to employees by Web 2.0 communication technologies represent real gains in terms of employee power, autonomy and self-organising capabilities. Furthermore, the earlier review not only allowed practical disadvantages for employees to emerge, it also revealed a wide range of unknowns and conceptual dilemmas to emerge too.

Study limitations and research opportunities and challenges

The current study is clearly noted by a range of strengths and weaknesses. Primarily, strengths should be seen in terms of drawing on a full and eclectic range of scholarly research, as well as attempting to fuse less reliable, yet significant sources of information, to present a longitudinal, up-to-date and reflective account of employee uses for the Internet. A further strength is in how the extant research and emergent press reports were discussed in terms of how the Internet has been theorised in recent years (e.g. see Murugesan 2009). However, it is also the case that the current research is limited in many ways too. For instance, press reports are indicators of what may well be happening in the Internet domain, but do not really allow us to assess in any credible manner how prevalent and effective new and emergent Internet-related activities actually are. Further, there are conceptual issues too, in that the vast majority of scholarly research that relates to employee use of the Internet is far from congruous and rarely makes explicit reference to changes in the nature of Internet communication technologies. Finally, it has just not been possible to pay attention and acknowledge the finer details of all the resources used in this review, and it is quite possible that some of the finer details have been lost due to the broad objectives of the current research. In short, while every effort has been made to conduct a robust and rigorous systematic review of the extant and emergent literature, such efforts must be understood in terms of the realities of systematically reviewing the work of many and work of various standing, in such a short piece of work.

Based to an extent on a discussion of the strengths and weaknesses of the current research, the paper, as such, concludes with a range of research suggestions and conceptual dilemmas for scholars who, inspired by this paper or otherwise, may wish to take up or attempt to solve. For such scholars, below, in bullet points, for easy consumption and assessment, are details of scholarly challenges that have emerged from this reflection and mapping exercise:

- Employment lawyers need to work on clarifying how employees stand in terms of using new Internet communication technologies to create knowledge and what is acceptable information to put on-line.
- Employee misbehaviour requires further conceptualisation in relation to the newest forms of Internet communication technologies.

- Far more research needs to be conducted to further investigate the role that the Internet can play in trade union re-vitalisation.
- Critical researchers need to conduct more virtual ethnographic or qualitative case studies based on employee uses of new Internet communication technologies, especially in relation to social networking platforms and hand-held devices capable of Internet connection.
- The literature on employee coping mechanisms needs up-dating to reflect the emergent coping qualities associated with Internet-based technologies.
- Organisational psychologists need to consider, in more detail, what it is about new Internet communication technologies that make them so enthralling to knowledge workers.
- Attempts should be made to assess the benefits to the employee of having an on-line profile or reputation.
- More generally, future studies need to move away from viewing employees as homogenous actors and reflect, for example, social identity, class, gender, and ethnicity.

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