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Judy Wajcman, Emily Rose, Judith E. Brown and Michael Bittman

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Enacting virtual connections between work and home

Abstract

The potential for information and communication technologies to reorganise time and space has emerged as a key theme in social theory. Affordances of the Internet mean that it has the capacity to affect temporal and spatial boundaries dividing work and home. Some theorists express concern that this may extend work into times normally reserved for family life, while others argue the Internet can encourage flexible work practices and result in better work life balance. Focusing on a nationally representative sample of Australian employees, we examine the purpose and timing of Internet use and its role in the interaction between these domains. We demonstrate that the Internet is being used for personal purposes during work time to a greater extent than for work purposes during non-work time. Furthermore, we show that use of the Internet for work purposes outside of work hours can assist work family balance.

Keywords

Internet use, employees, work/life interaction, spillover

A key theme of sociological theories on the social impact of information and communication technologies (ICTs) is their capacity to reorganise time and space (Castells 2000; Harvey 1990). In late modern society, our experience of social relations and our exchange of information have become dis-embedded out of specific places and time contexts and re-embedded elsewhere (Giddens 1990). The Internet, in particular, is identified as a key technology in the collapse of the traditional public/private distinction (Sheller and Urry 2003). The geographical separation of work and home, and the division of the day into working hours and free time, are both potentially threatened by ICTs. However, such theories have run ahead of the available evidence. This article draws upon a purpose-designed survey of the everyday uses of ICTs to examine these claims and to understand the way that ICTs are becoming integrated into people's daily lives.

A key site for the enquiry into temporal and spatial change, and the focus of this paper, is the division between work and home. Affordances of the Internet have been credited with the ability to blur the boundaries between these two life domains (Nippert-Eng 1995; Wajcman et al. 2009), potentially changing the dynamic of an increasingly strained relationship (Baxter et al.

2007; Pocock 2003; Pocock et al. 2007). Tensions between work and home have often been framed in terms of a conflict in the demands on an employees' time. The rise of dual-earner households together with the demise of 'standard working hours' have made the difficulties of reconciling time demands of paid work and family life a burning issue (Brannen 2005; Crompton 2002; Dex and Smith 2002; Lewis 2001; McKie et al. 2002). The potential for conflict of workplace and household 'temporal regimes' has been explored in Australia, Britain and the United States (Folbre and Bittman 2004; Hochschild 1997; Pocock 2003; Pocock 2006). However, little is known about how employees may be using the Internet to help with this issue.

An investigation into whether the Internet is playing a role in the weakening of work / home boundaries is particularly timely given that the process of Internet diffusion is now relatively advanced in Australia. Nearly three-quarters (73%) of households have Internet access at home (Australian Communications and Media Authority 2008b) and 89% of Australians use the Internet daily or weekly, either at home, work or elsewhere (Australian Communications and Media Authority 2008a). Earlier stages of Internet adoption generated an extensive literature about the potential for a digital divide, how the Internet could facilitate the democratization of media, affect political participation, encourage creative user-generated content, and enhance social capital (See review by Castells et al. 2007; DiMaggio et al. 2001; Katz 2003; Wellman 2001; Willis and Tranter 2006). Now that the Internet is at a more mature stage of diffusion, it is an opportune time to reflect on the relationship between technology and society and examine the specific ways it is being integrated into everyday life.

We do this by adopting an STS (science and technology studies) perspective that eschews technological determinism. This means that we reject the view that people have little control over the effects of technology and must largely accept its impact (Bijker et al. 1987; Cockburn 1992; MacKenzie and Wajcman 1999; Pinch and Bijker 1984; Wajcman 2002). Rather, STS

recognises the role of social factors that contribute to the design, technological content, diffusion and adoption of technologies. Such studies, in common with broad social constructivist approaches used in the organisation literature (Luff et al. 2000; Orlikowski 2007; Wajcman 2006), have repeatedly shown that the way technologies are adopted and used are not necessarily in line with uses intended in their original design, nor are the affordances of technologies necessarily utilised in the same way by all users. This conceptualisation of technology in social life is implicit in our research design. Using a quantitative approach, we seek an understanding of user decisions about the way they incorporate the Internet in their daily lives, specifically in relation to the purpose – be it for work or personal purposes – and time of use.

Writers within the sociology of work and organisations have given voice to the anxiety that ICTs, including the Internet, might extend employees' work days. Applications such as email and the ability to remotely access work files mean that work can often easily be carried out outside of the workplace and outside of work hours (Felstead et al. 2005; Kaufman-Scarborough 2006; Mazmanian et al. 2005; Towers et al. 2006). A recent Australian study highlights this and the contradictory nature of the technology's effects (Williams et al. 2008). Williams et al. (2008) notes that for some of the study participants, the work extension potential of the Internet was perceived as adding flexibility in their lives, while for others it reflected attempts to get through high workloads and manage personal responsibilities. Among the published studies, there is no nationally representative Australian data quantifying how the Internet may be used for work purposes outside of normal work hours, entering what is typically considered personal or family time. Nor is there any research focusing on how the Internet may be facilitating employees' family lives entering work time. Indeed, data collected on Internet use does not generally detail the purpose of use, that is, whether it is used for work purposes or for personal purposes¹.

Similarly, debates regarding 'spillover' between work and family life have not fully considered the role of the Internet. The concept of spillover has been developed to explore the strains between work and family domains (Crouter 1984; Edwards and Rothbard 2000; Greenhaus and Beutell 1985; Zedeck 1992). It refers to the process whereby the effects of one domain can influence the other. These effects can include mood, values, skills or behaviour (Edwards and Rothbard 2000). A British study on work to home spillover identified long working hours as the most dominant workplace practice contributing to negative work to home spillover (White et al. 2003). While much of the focus has been on negative spillover between work and home, it is also recognised that spillover can be positive, for example self esteem developed through work can have beneficial repercussions on an employee's home life (e.g. Crouter 1984). However, despite the apparent relevance of the Internet to these debates, the role of the technology has largely been ignored.

A notable exception is the American research by Chesley (2005). Her study of dual earner couples considers whether frequent use of the computer (for email and other Internet purposes) and mobile phones is linked to greater work family boundary permeability and whether this permeability has positive or negative consequences for both home and work. Evidence that ICTs increase negative family to work spillover was found for women but not men, while both women and men experienced increased negative work to family spillover. These findings, however, applied to the use of mobile phones, but did not hold for computer based technologies².

In this paper we build on the work of Chesley and others who contemplate the role of ICTs on the work/home boundary. We explore the role Internet use plays in the relationship between work and home for Australian employees in two key ways. Firstly, we determine the extent of Internet use for work purposes and for personal purposes, mapping the spread of this use on a

week day and weekend day. Secondly, we consider the effect of Internet use on the interaction between work and home life, particularly in relation to work life balance and spillover between the two realms.

Data detailing Internet use for work and personal purposes (on a week day and weekend day) is unique in Australia and presents a picture of how the Internet may be used to overcome the temporal division between work and non-work time. We determine the extent to which the Internet is being used for work purposes outside of typical work hours (i.e. weekday evenings and weekends), and the extent to which the Internet is being used for personal purposes during typical work hours. In contrast to Chesley's study (and also that of Towers et al (2006), which collected data on ICT use from Canadian Government workers), we draw on data from a nationally representative sample of Australian employees. A key part of our measure on the extent of Internet use is derived from a unique time diary. Time diary methods allow for the collection of accurate fine-grained information. In addition to being more reliable than survey data which relies on the memory of respondents (see Bianchi et al. 1996; Gershuny 2003; Robinson and Godbey 1997), the time diary uniquely enables us to study the spread of Internet use for work or personal purposes over the course of an average week and weekend day.

The interaction between work and home life is examined by considering the effects of Internet use on work life balance and on spillover between the two realms. We analyse data from a survey question asking about the impact Internet use has on participants' ability to balance their work and home life. Then, after examining some associations between pairs of variables, we conduct a multivariate analysis of a reduced form of the 'family strains and gains scale' to determine possible effects of Internet use on employees' sense of balance between their work and home lives (Broom et al. 2006; D'Souza et al. 2005; Strazdins et al. 2006; White et al. 2003).

In sum, this article attempts to further develop an understanding of how the Internet is integrated into everyday life. In particular, we focus on the role Internet use plays in the relationship between work and home life for Australian employees. While the technical capabilities of the Internet provide the potential to overcome the temporal and spatial divisions between the two domains, we present empirical findings of the way employees are actually appropriating this technology. Data on the extent to which and when employees are using this technology for work and personal purposes is presented. This highlights whether Internet use in relation to the two realms does occur in times outside of those typically designated for work and family life. Further detail on Internet use and its relationship to work and home life is established by considering whether technology use is connected to work life balance and spillover between the two domains.

Methods

Data source

This article analyses data from a purpose designed survey of individuals aged 15 years and older from Australian households. The sample, collected during 2007, was recruited by the commercial survey organisation ACNielsen using a composite method of both Internet and telephone interviews. The Internet sample was drawn from the YourVoice Internet Panel. This panel is identified using off-line methods (gathering respondents from other face-to-face and telephone surveys). Panellists were compensated for their time with rewards points that can be exchanged against goods and services. Generally, the characteristics of the panel are similar those of the total on-line population. Of the 3,469 households contacted by email, 19 percent of

households started the survey but failed to complete it. Other members of the household were invited to participate in the study meaning that households could contribute more than one person. One thousand, nine hundred and four individuals (from 1,434 households) completed the questionnaire component of the survey. Of these, 1,255 (from 950 households) completed the diary.

The off-line sample was recruited by telephone and completed instruments were mailed back to ACNielsen. Of the 737 off-line households contacted by telephone eligible to participate, 280 completed the questionnaire and 77 completed the diary. While other members of the off-line households were invited to participate in the study, none of the households contributed more than one individual.

The final sample was achieved by combining the on-line and off-line samples. Further, given that the focus of this study is on employees, a sub sample of workers (both full-time and part-time) was selected. A total of 850 employees (from 658 households) completed the diary. All analyses are weighted to compensate for the bias associated with the disproportionate sampling of Internet and non-Internet users. Weights are based on age, gender and Internet use (Australian Bureau of Statistics 2006).

Instruments and measures

The project employs a combination of novel methods of data collection that generate detailed, representative evidence about the usage of the Internet for work and leisure. The instruments used in the study that are analysed for the purposes of this paper are a questionnaire and a time diary.

Questionnaire items cover topics rarely brought together in a single study of the impact of the Internet on work life balance. Survey subjects responded to questions about the use of the Internet, control over hours of work, frequency of stressful working conditions, self-rated time pressure, and perceived effects of Internet use on work life balance.

The unique form of time diary was designed for this project to show when, how often, and in what activity context, people use the Internet and via which device, be it a computer or a mobile device. No other diary collects such detailed data on the way people are using technology. Previous time diary approaches to studying the use of ICTs have concentrated on capturing ICT use as one activity among many other activities. Our method assumes that ICT devices are a means of pursuing particular activities, but are not the activity itself. For example, communicating with a friend might be an activity but this can be done face-to-face, or with the aid of any number of communications applications, including e-mail, social networking sites or Internet-based voice or video communications, via a computer or mobile device. Therefore, the diary asked respondents to indicate which, if any, devices they used for every activity.

The diary took the form of a hardcopy booklet. Respondents were required to indicate how they spent their time during a 24 hours period by striking a line through appropriate boxes on a grid. The grid format consisted of pre-coded activities and context information (in rows) and 96 pre-coded 15 minute time intervals (in columns) from 4am one day until that time the next day. The total time spent working while using the Internet at home, on a diary day, was calculated by summing the time that all three conditions were satisfied.

The work-family strains and gains scale

A work-family strains and gains scale is used. This measure is based on a widely adopted multi-item scale with good psychometric properties (Marshall and Barnett 1993). It is designed to capture the transfer of job-related stresses to family well-being and vice versa. Respondents are asked to rate their level of agreement with two pairs of statements designed to measure work to family spillover and family to work spillover. An average score of both items derives a measure of both strains and gains. Again, drawing on the data collected in the time diaries, we explore the effect of the regularity of Internet use on both forms of spillover, while taking into account a range of demographic and job characteristics.

Results

Extent and distribution of Internet use for work and personal purposes

In order to gauge how Internet use affects the relationship between work and home life, we begin by examining the extent that the Internet is used for work and personal purposes, and the spread of this use over week days and weekend days. To determine the extent of Internet use of Australian employees, we present measures of both the frequency of Internet use and the amount of time spent on the Internet on a typical day. The frequency measure is provided through a survey question asking 'How often do you use the Internet (including email)'. The seven response categories in diminishing order of frequency of use were: several times a day; daily; several times a week; weekly; monthly; less than once a month; and never. This question allows participants to provide a picture of typical Internet use over a broad time horizon, compared to just a single day's use captured by the time diary. To compliment this approach and provide a more detailed picture of Internet use, we also draw on time diary data to provide a measure of time spent using the Internet on a week day and a weekend day. This measure also specifies the purpose of Internet use, be it for work purposes or non-work purposes³.

According to our survey, 78% of respondents use the Internet at least daily (from any location) and 89% used the Internet at least weekly (exactly the same proportion as found independently by the Australian Communication and Media Authority (2008a)). As one might expect, occupational differences account for much of the variation in those who frequently use the Internet. Managers and professionals (66%) are nearly twice as likely as other occupational groups (36%) to use the Internet several times a day ($p\text{-value} < 0.05$).

Details of Internet use on a week day and weekend day are shown in Table 1 below. Internet use is more common on a week day. Around two-thirds of respondents use the Internet on a week day and they do so for an average period of two and a quarter hours. On a weekend day, approximately 40% of respondents use the Internet and they do so for an average period of 50 minutes.

Table 1 also considers the purpose of the Internet use (although not the specific activities carried out). Unsurprisingly, Internet use for work purposes is more likely to occur on a week day (42% of respondents) compared with a weekend day (11% of respondents). The average amount of time participants spend on the Internet for work purposes is also greater on week days (96 minutes) compared with weekend days (17 minutes). These findings suggest that the Internet does not substantially extend the work week into times normally reserved for leisure – at the weekend. By contrast, the proportion of respondents using the Internet for personal use was similar on week days (45%) and weekend days (36%).

It is also notable that less than half of Australian employees use the Internet for work purposes on week days. This figure may seem surprising given that the Internet has been widely espoused as an integral tool for work. However, the Internet does play a major role in the work

day of approximately half of those who do use the Internet for work purposes on week days. This group reports using the Internet for work purposes for a period of three hours or more.

[Table 1 about here]

A crude indication of the extent that the Internet has been integrated into people's lives can be gathered by respondents' answers to the question 'How much would you miss the Internet if it disappeared today?' Response rates to the five response categories are as follows: I wouldn't miss it at all because my daily life could proceed as normal (12%); I would miss it sometimes (28%); I would miss it often enough that my daily life could not proceed as normal (7%); I would miss it often (21%); I would miss it an extreme amount (33%). Employees who are more likely to use the Internet for work purposes are more likely to report that they would miss the Internet an extreme amount (40% of managers and 36% of professionals, compared with 23% of trades people, and 26% of other non-professional occupations).

These findings mirror those found in a British study, using a similar question: 'If you would lose all access to the Internet from tomorrow onwards, would it be a problem for your everyday life, would it make no difference, or would it make your life better?' (Dutton and Helsper 2007). The British study found that nearly two-thirds (64%) of Internet users thought that losing the Internet would cause a problem to their daily life. This is comparable to the percentage of respondents in our survey who report that the loss of the Internet would mean that daily life could not proceed as normal, that they would miss the Internet often, or that they would miss the Internet an extreme amount.

In addition to knowing the amount of time people spend on the Internet, understanding when this use takes places can reveal the extent to which the Internet permeates the temporal

boundary between work and home. This information is captured by the time diary. Exploring the temporal spread of Internet use is important as it enables us to look beyond the narrow confines of time spent on the Internet and study the rhythms of daily use.

Figure 1 shows the frequency of employed people (n=729) using the Internet for work and personal purposes in any given 30 minute period during a week day. It indicates that work-related Internet use is mostly confined to standard working hours, rising sharply after 8am and declining around 5pm, with a small lunchtime dip. Work-related Internet use falls steeply after 5pm, trailing away towards zero as midnight approaches.

[Figure 1 about here]

As expected, there is a low level of Internet use for personal interests during standard work hours (8am-6pm weekdays), with an increase in the evenings. Common fears of employees spending large amounts of time on the Internet for personal purposes during work hours appear largely unwarranted. It should be noted that the pattern of low levels of Internet use for personal purposes is fairly constant throughout standard work hours. There is no great jump in the level of use at lunchtime. However, this use does not take up much time at work. It is also notable that the level of Internet use for personal purposes during standard work hours is higher than the level of Internet use for work purposes during typical non-work hours (i.e. weekday evenings and weekends). These patterns of use indicate that the Internet plays a greater role in facilitating boundary permeability in favour of people's personal life entering the work day, than in work life entering into home or family time. This is a rather novel finding as scholars have tended to focus on the Internet's role in extending the work day, rather than on how the Internet can provide access to family and friends (e.g. Towers et al. 2006).

Internet practices and work and family Interaction

Having described the general patterns of Internet use, we now turn to a consideration of how this use may affect the interaction of employees' work and home life. To begin with, we asked employed survey respondents to rate: 'What impact has the use of the Internet (including email) had on your ability to balance your work and home/family life?' on a five point scale, ranging from 'increased a lot' to 'decreased a lot'. Overall, the Internet was perceived as having a positive, rather than negative, impact on workers' ability to balance their work and home lives. Although 51% report no change, the positive effect is evident in the 41% reporting that the Internet increases their ability to find work life balance, as opposed to only 8% who felt that it had the opposite effect. Managers and professionals (37%) are nearly twice as likely as other occupations (22%) to report that use the Internet increases their ability to balance their work and family life compared to other occupations (p -value < 0.05). This indicates that people who are more likely to have Internet access at work find the Internet a useful tool for balancing work and home.

As mentioned previously, the possible spillover effects, beyond the mere extension of working hours, were further investigated by conducting a multivariate analysis of a reduced form of the 'family strains and gains scale' developed by Marshall and Barnett (1993). The family strains and gains items ask respondents to rate their level of agreement with two pairs of statements designed to measure two dimensions – work to family spillover and family to work spillover. Work to family spillover is captured by the statements: 'because of my work responsibilities I have missed out on home/family activities that I would have liked to have taken part in' and 'because of my work responsibilities my home/family time is less enjoyable and more pressured'. Family to work spillover is captured by the statements: 'because of my home/family responsibilities I have to turn down work or opportunities I would prefer to take on' and 'because

of my home/family responsibilities the time I spend working is less enjoyable and more pressured'. To derive a measure of both strains and gains, the average score of both items was calculated.

Of greatest analytic interest is the effect of Internet use on work-family and family-work spillover. Using diary data, we explore the effect of the regularity of Internet use while taking into account a range of demographic and job characteristics, which previous research has showed to be related to spillover between the two realms (Broom et al. 2006; D'Souza et al. 2005; Strazdins et al. 2006; White et al. 2003). Control variables include age, gender, family type, number of children and employment status. Age is categorised into 24 years of age or younger, 25 to 54 years and 55 years and over. Family type is classified according to whether the household contains a couple or lone parent and whether dependent or non-dependent children are present. Number of children in the family is a separate variable. Employment status distinguishes between full-time and part-time work. Job characteristics cover the employees' degree of control over start and finish times, the respondent's rating of work stress, the frequency of working unsocial hours, and preferred working hours.

The analysis uses hierarchical linear regression that takes into account that multiple persons come from the same household. The sample is limited to workers, who completed a diary on a week day and whose household comprises related individuals (n=653).

The results of the two analyses, which examine spillover from work to family and vice versa, are given in Table 2. The extent of Internet use for work purposes while at home is significantly related to work to family spillover (p-value < 0.05). However, contrary to expectations, the more time an individual spends using the Internet for work purposes while at home, the lower their measure of work to family spillover. For every one hour of work-based Internet use carried out

at home, there is a decrease in the work to family spillover scale of -0.11 after controlling for a range of job characteristics. This means that the use of the Internet to facilitate the practice of taking work home actually results in better work family balance. The more individuals did this, the more that they felt that they did not miss out on family activities, making home life more enjoyable and less time pressured. This result is pertinent given that a number of important job characteristics (such as work stress and working longer than preferred hours), which are associated with negative work to family spillover, have been taken into account (see White et al. 2003, 191).

Turning to family to work spillover, which measures the extent to which family or personal affairs intrude into the workplace, Internet use for personal purposes while at work is not significantly related to family to work spillover. Once again, job characteristics have a significant influence on family to work spillover, in particular the extent to which employees' working conditions are stressful, whether employees prefer to be working less hours, and whether employees have to work unsociable hours.

[Table 2 about here]

Discussion and conclusion

ICTs are playing a key role in the reorganisation of space and time in late modern society. This article attempts to move sociological discussion beyond general claims about the potential effects of the Internet on spatial and temporal boundaries to examine how the Internet is

actually being used in everyday life. The theoretical perspective developed in STS reinforces the need to look beyond what technologies can do to how they are actually being appropriated by users. This requires consideration of the role of users and other social factors in this process.

This article demonstrates that the Internet is a frequently used tool for many employed Australians. The time diary data show that, overall, 89% of participants use the Internet weekly. Distinguishing between week and weekend days, 64% of participants use the Internet on an average week day, while 41% of participants use the Internet on an average weekend day. Despite greater overall use of the Internet on week days, it is interesting to note that only 42% of employees use the Internet for work purposes on these days. This is surprising given the common perception that the Internet is an integral work tool and that experience of using the Internet is vital for gaining employment. However, of those who do use the Internet for work purposes on week days, half do so for a high proportion of their working day (i.e. three hours or more).

Most of the Internet use for work purposes on a week day occurs during standard working times of between 8am and 6pm, while most of the Internet use for personal purposes on week days takes place after 6pm. Only a small level of Internet use for personal purposes takes place during standard work hours. It would appear that while some Internet users are taking advantage of affordances of the technology to weaken the spatial and temporal boundary between work and home by allowing their personal lives into their work day, most are maintaining this socially constructed boundary. This is an example of employees making decisions about the way they engage with the technology. Some employees interpret the Internet as a tool that may assist them to attend to personal matters while at work. Others are

actively restricting their use to work purposes, thereby rejecting the technical capability of the Internet to connect work and home.

Internet use does not appear to contribute to the permeability of the work home boundary in the other direction. We found very little evidence of Internet use for work purposes, either on week days in the evenings or on weekends. This finding contradicts the common fear held by sociologists of work and organisations, such as Towers et al (2006) and Williams et al (2008). It would seem that users are resisting the possibilities that the Internet provides for work to be carried out during times beyond normal work hours and in a greater variety of places. These practices reveal that users are not interpreting the Internet as a work extension technology, rather they are maintaining the separation of times typically reserved for home and family.

That said, the Internet can potentially affect the boundaries between work and home in other ways. We considered how Internet use plays a role in the interaction between the two domains by examining its relationship to work life balance, and work to home and home to work spillover.

Australian employees are more likely to perceive the Internet as having a positive, rather than a negative, impact on their ability to balance their work and home lives. As we noted, managers and professionals are nearly twice as likely to report that Internet use increases their ability to balance their work and family life compared to other occupations. They are also nearly twice as likely to use the Internet several times a day, as opposed to those from other occupational groups. Ironically, it would seem that precisely those groups who use the Internet frequently, that is managers and professionals, are the ones most likely to experience any benefits this technology can offer in terms of managing work and home life.

The multivariate analysis using the family strains and gains scale found that Internet use for work purposes while at home is significantly related to work to family spillover. However, surprisingly, this finding reflects positive spillover; that is, the more time an employee spends using the Internet for work purposes when at home, the lower the measure of work to family spillover. For every one hour of work based Internet use at home, there is a decrease in the work to family spillover. This is the case even after controlling for a range of job characteristics that are associated with work to family spillover. In contrast to researchers' concerns about the negative potential of the Internet to extend work time into the private sphere at the cost of family life, it appears that employees who are using the Internet for work purposes when at home are doing so on their terms. The flexibility afforded by the technology is resulting in better work-family balance for these Internet users. User Internet practices appear to maintain the integrity of family life, while allowing employees to meet the extensive demands of their jobs. The multivariate analysis demonstrates that it is the general characteristics of jobs, rather than the use of new technologies for work, that is responsible for work to family spillover.

Furthermore, there is no evidence of family to work spillover resulting from the use of the Internet for personal purposes while at work. We found that employees are using the Internet for personal purposes during the work day (8am-6pm weekdays) to a greater extent than using the Internet for work purposes during non-work times. However, this private use during work time is not proving to be problematic for users. Once again, it would seem that these users are able to manage the technology such that its technical capability to permeate the temporal division between work and home is controlled.

In the wake of rapid and extensive diffusion of ICTs, this article provides a timely examination of the actual integration of the Internet into the everyday lives of Australian employees. Our findings reveal that only a small proportion of employees are taking advantage of the

affordances of the technology to permeate the temporal and spatial separation between work and home, by letting their personal lives into work time and space. Conversely, the Internet is associated with positive spillover from work to home when employees use the technology for work purposes when at home. Doing so facilitates increased work life balance for these employees. It is clear that employees are not simply responding to the Internet in accordance with its technical capabilities to overcome temporal and spatial boundaries. Instead, they are actively making decisions about how they incorporate the technology into to their lives in ways that are beneficial to them (MacKenzie and Wajcman 1999; Orlikowski 2007; Pinch and Bijker 1984). Australian employees tend to interpret the Internet as positively contributing to their ability to manage the work and home life. Their patterns of use reveal that this is achieved by the limited use of the Internet for personal purposes during work time and its seemingly strategic use by some employees for work purposes outside of standard work times. This research has highlighted that actual levels of access to the Internet at work will be a factor in the extent the technology can and will overcome the boundaries between work and home. The strength of our study is that it presents robust, nationally representative data on several dimensions of Internet use at work and at home. It is for future qualitative research to explore in detail how Internet users interpret and give meaning to their Internet use in everyday life.

¹ Two recent Australian reports have explored the activities of users in relation to the technology's media and creative potential. A report by Ewing et al. (2008), their first based on the findings of the Australian component of the World Internet Project (<http://www.worldinternetproject.net/>), focuses on the creative industries and the commercial application of the Internet more generally. An ACMA (2007) report on media and communications in Australian families is concerned with the impact of the Internet and other ICTs on children's lives.

² Chesley's (2005) measure of frequency of Internet use was collected at two points in time via survey questions administered in telephone interviews. Each of the couple participants in the sample were required to be working and remain partnered during both points of the data collection process.

³ Time diaries have been shown to provide a more accurate measure of time spent on given activities than survey questions when asking about a particular day, see Bianchi et al. (1996), Robinson and Godbey (1997) and Gershuny (2003). Survey questions rely on the memory of participants, whereas when people fill in time diaries they are asked in advance to note the time spent on a particular activity and often fill them in during the day.

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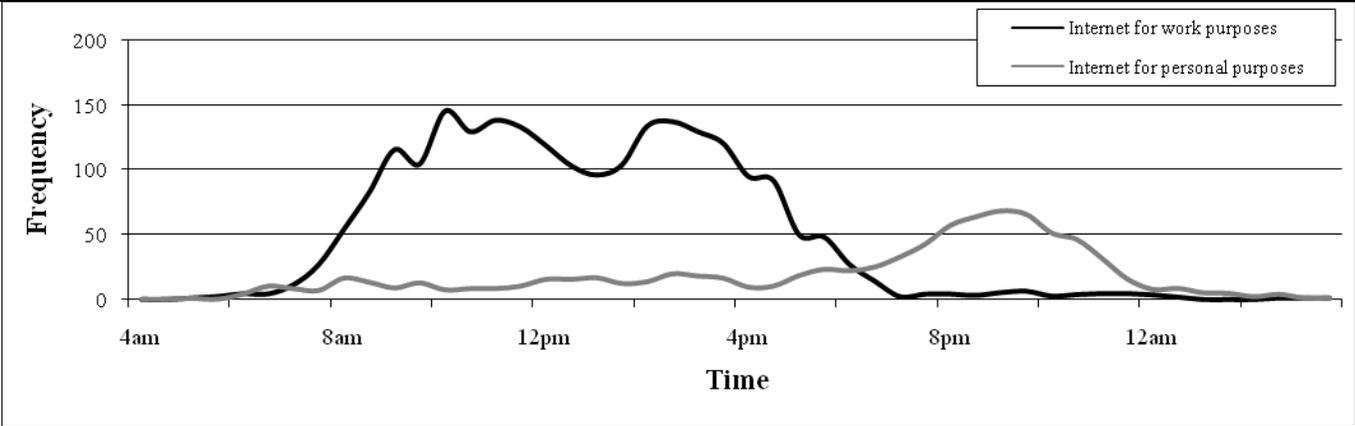
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Table 1. Time employees spend on the Internet (%)

	Weekday			Weekend day		
	Any Internet	Internet while working	Internet for personal use	Any Internet	Internet while working	Internet for personal use
None of the time	36.2	57.7	54.9	58.7	88.6	64.2
< 30 minutes	2.8	1.4	5.9	4.0	1.5	5.1
30 to 59 minutes	9.6	5.9	12.3	8.9	2.6	6.3
1-2 hours	14.6	9.4	15.6	14.3	1.9	13.0
2-3 hours	10.1	5.1	5.6	5.7	1.9	5.7
3+ hours	26.8	20.6	5.6	8.4	3.5	5.7
Mean minutes (SE)	134.0 (6.7)	95.9(6.0)	38.1(2.4)	50.1 (9.4)	17.2 (6.4)	32.9 (5.6)

Source: Time diary data



Source: Time diary data

Figure 1. Internet use by employed people on a week day

Table 2. Regression results for work to family and family to work spillover

	Work to family Estimate	Family to work Estimate
Intercept	2.42 ***	1.74 ***
Age		
<25	-0.11	-0.08
55+	-0.01	-0.01
25 to 54		
Gender		
Female	-0.14	-0.01
Male		
Employment		##
Part-time	-0.02	0.23 *
Full-time		
Family Type		
Others	-0.23	-0.08
Couple with children < 15	-0.10	-0.07
Couple without children	-0.06	-0.06
Couple with children 15+	-0.36	-0.20
Lone parent with children < 15	-0.12	-0.15
Lone parent with children 15+		
Number of children		
1	0.30	0.41
2	0.18	0.27
3+	0.29	0.11
No kids		
Occupation		
Managers	0.11	-0.13
Professionals	0.10	0.05
Trade	0.19	-0.07
Other		
Preferred weekly hours of work	###	##
Fewer hours than I do now	0.33 ***	0.27 ***
More hours than I do now	0.02	0.22
About the same hours as I do now		
Preferred start and finish times of work		
Some degree of control over start/finish times	-0.15	0.15
No control over start or finish time		
Unsociable work hours	##	##
Frequent	0.17	0.25 *
Sometimes	0.24 **	0.19 *
Infrequent		
Frequency of stressful working conditions	###	###
Frequent	0.88 ***	0.57 ***
Sometimes	0.47 ***	0.39 ***
Infrequent	#	
Internet for work purpose while at home	-0.11 **	
Internet for personal purpose while at work		-0.04

* p-value < 0.05, **p-value<0.01, ***p-value<0.001 for comparisons to referent group

p-value < 0.05, ## for p-value<0.01, ### p-value<0.001 for whole variable