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Recommended Citation

Harmer, Brian; Pauleen, David J.; and Schroeder, Andreas, "Cause or Cure: Technologies and Work-Life Balance" (2008). *ICIS 2008 Proceedings*. 163.

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CAUSE OR CURE: TECHNOLOGIES AND WORK-LIFE BALANCE

cause ou remède: les technologies et l'équilibre travail-vie

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Abstract

Knowledge workers whose employers allow them the freedom to access organizational resources from outside the premises, and/or outside normal working hours, are able to reach a new equilibrium in the balance between work and life. This research uses narrative method to obtain stories from a number of such knowledge workers in New Zealand, and observes how the participants make sense of the choices open to them, and reach decisions about them. The research finds that despite expressed resentments, such people have tended to move the equilibrium in ways that accommodate more work. Implications of this research are that despite the short term productivity gains, organizations would do well to ensure that these well motivated staff are managed for their long term well being and continued contribution to the organization.

.Keywords: Sensemaking, knowledge workers, autonomy, technology, mobility.

Résumé

Equipés en informatique, certains travailleurs de la connaissance sont capables de travailler dans des lieux ou à des moments de leur choix, hors du bureau de leur employeur. Ce papier se demande comment ils arrivent à un équilibre entre travail et vie, et quelles en sont les implications pour leurs managers.

Introduction

Quite ordinary technologies such as cell phones, laptops, and the ability to connect via the internet to distant resources, from anywhere, at any time have, in the last decade, empowered certain individuals to make new choices about where to set the boundaries between work and personal life. Previously, the amount of work that employees could take home was constrained by the capacity of their briefcase, or the extent to which useful communications could be enacted using fixed landline telephony. More recently, certain kinds of knowledge worker have gone beyond mere adoption, to intense appropriation of cell phones and laptops in ways that allow them to work anywhere, and at any time. For these kinds of worker, the traditional boundaries between what is work and what is private life have been eroded (Sadler et al., 2006). Though the phenomenon of work-life balance has been extensively studied, relatively few of these studies have explored the role of technology as a catalyst for change in this area. This research examines the ways in which adoption of technology impacts on the lives of knowledge workers, and the implications for the management of such people.

Context

For most people there are clear and impermeable boundaries that delineate times and activities that are indisputably in the domain of 'work', and everything else is regarded as 'life'. For the purposes of this research, work is defined as "the time and attention given to the affairs of the individual's primary employment, wherever and whenever it takes place" while life is understood to be "non-work time including, but not limited to, free time, family time, leisure time, and perhaps even paid work for other entities". The exclusion of 'work from 'life' does not indicate any value judgement on the part of the researchers, but merely reflects the language of the participants. Work-life balance, despite well meaning programmes on the part of some organizations to be 'family-friendly', is a subjective notion. Many government agencies offer vague and arguably unhelpful definitions such as "effectively managing the juggling act between paid work and the other activities that are important to people" (Work Life Balance Project, 2007). The underlying presumption of this research is that individuals reach their own continuously changing balance between work and life, while attempting to optimise their achievements in whichever mode is, for the time being, salient.

Our guiding research question asks: given the new possibilities provided by their adoption of productivity related technologies, how do information workers make sense of the work-life choices available to them, and how do they reach a balance between their 'work' and 'life' roles and achievements? Our secondary research question asks: how should such technologically enabled knowledge workers who operate off premises and in their own time, best be managed?

In the next section, we review some of the key literatures of technology enabled mobility, and of work-life balance.

Prior Scholarship

Adoption of new technologies has a widely known and ongoing body of literature (Ajzen, 1985; Fishbein et al., 1975; Rogers, 1995; Venkatesh et al., 2003). Mobile technology's adoption is a newer and less widely researched field, mostly focused on organizational use of such technology (Sadler et al., 2006). Paradoxically, comparatively few studies consider the impact on the individual's user's life beyond the organizational perimeter. Among those who do, are Isaac et al. (2006) who note the role that enhancement of self-esteem plays in the decision to adopt and appropriate new technologies. Others have picked up on this theme (Kleijnen et al., 2005; Standing et al., 2007). It is important to our research because individuals are deemed to derive enhanced self esteem from the implications of trust and autonomy conferred from being allowed to use these tools in an organizational context. Individuals empowered in this way are, consistent with social identification theory (Abrams et al., 1990; Hogg et al., 1988), often seen to reinforce their self-stereotype by spending more time using the equipment for organizational purposes (Isaac et al., 2006).

Technology Enabled Mobility

In this research we use the word 'technology' to refer to any combination of telephony, computers, hardware, software and networks used by the participants to access organizational and other information resources from any place outside the organization's premises, at any time. Much of the literature focuses on mobile appliances and their applications. This research is more concerned with behavioural issues surrounding the adoption and intensive use of technology. Of special interest is the notion that mobility is less about geographic location, and more about the theoretical implications of the interactions made possible by the technology. Interrelated dimensions of mobile interactions are spatial, temporal and contextual in nature according to Kakihara and Sørensen (2002). These dimensions are important to the discussion of how the technology-enabled individual makes sense of work-life balance.

Temporal Boundaries

Knowledge workers such as those who participated in this research suffer from what Perlow (1999) refers to as a time famine such that there are just not enough hours in the day to achieve all the objectives of both the work and the life domains. They have "too much to do and not enough time in which to do it" (p. 57).

In an earlier study, Perlow (1998) explores the idea of temporal boundaries: moments in time during the working day when the individual switches between being on his or her own time, to being at work. Managers according to Perlow, attempt to influence productivity within the work time boundaries in a number of ways. They impose time-related demands by setting up meetings, creating deadlines, and controlling vacations. During work time, managers exert further control by monitoring them for outward signs of productivity. Control is also exerted by the manager who can “model the behaviour they want to have exhibited” (Perlow, 1998, p. 328). If the manager works long hours and foregoes rest breaks, the employee gets the clear message that this is expected behaviour.

Reasons for operating within an expanded work-related temporal boundary vary, but one reason is the belief, based on popular myth, that such behaviours lead to accelerated access to wealth creating opportunities. For most, no such opportunity eventuates, and home life time has been sacrificed to no good purpose (Tapia, 2004).

Whatever the motivation, apportionment of time in the day is a zero sum game, and the decision to expand the temporal boundaries of work time must inevitably reduce the time available for home life. This may have consequences for the individual’s personal relationships, and the infinitely variable amount of tolerance to temporal boundary control endured by spouses and partners is often reflected by the individual, and thereby creates an additional level of complication for the manager (Perlow, 1998).

Erosion or manipulation of the temporal boundaries is not always driven by the organization. Individuals who choose to access work resources in what should be their own time, are often gratifying their own needs, even when the task is ostensibly for the organization. These needs may be related to their promotability, or simply the enhancement of their own self-image. Employees appropriating the technologies that give unsupervised external access to organizational resources often do so in the belief that they are developing expertise which will lead to the acquisition of further responsibility (Isaac et al., 2006).

Technology’s Role in Work-life Balance

Work-life balance has been extensively discussed in the HR literature and is an important issue in that domain (Fleetwood, 2007; Hyman et al., 2004). Many have stressed the importance of balance between work and life (Hochschild, 1997; Perlow, 1999), but few specify where it is to be found, or what constitutes a benchmark for an appropriate work-life balance. However, most know imbalance when they see it and regard an excess of time at work and the implied neglect of other relationships as a pathological condition in need of rectification.

Technology has an acknowledged, if ambivalent role in the achievement of a work-life balance. While technologies allow workers “flexibility in the timing and location of work” (Hill et al., 1998, p. 667), they also allow workers to break through the previously impermeable boundaries between work and life. Those who go all the way and adopt such concepts as the virtual office where work is in the home, must find a new shape to their lives and must define new ways of defining when they are at work and when they are not (Nippert-Eng, 1995). People in this situation are obvious candidates for the onset of workaholism (Hill et al., 1998), and this mode of working is perceived to have adverse consequences for family relationships.

Questions are asked about whether these new working situations are conducive to better balance between work and life, or are simply the path to new forms of imbalance (Fleetwood, 2007). Those who work in this manner are reportedly positive about the increased flexibility, but are aware of working longer, to the detriment of family, and with greater risk of burnout (Hill et al., 1998).

Recent mobility literature suggests that there are organizational and managerial pressures on individuals to adopt, and to adapt to, these enabling technologies (Sadler et al., 2006). One of these pressures is the implied and often resented expectation of being always accessible. For some individuals, unwilling or unable to separate work and family commitments, the pressures are seen to be self-inflicted (Hyman et al., 2004). The mobile phone is seen to have a particularly powerful role in blurring the boundaries between work and non-work, with its ability to intrude work related calls into private time and vice versa (Prasopoulou et al., 2006; Sadler et al., 2006). Personal digital assistants (PDAs) with their added ability to process emails are also recognised as an agent in the boundary management arena. Many users of PDAs have purchased them from their own resources, and arguably have more control over when or where they are used.

A body of literature is beginning to form exploring the broad social issues pertaining to mobile technology, including the merging of contexts brought about by these devices (Lowry et al., 2006). The ubiquity of the cellular phone and its almost universal adoption in developed societies have given them a near invisibility. New Zealand has

101.59 active mobile phones per 100 inhabitants. The United States has 83.51 and the United Kingdom 118.47. The global average is 49.28 per 100 inhabitants (ITU, 2007). The very ubiquity of this technology tends to support our belief that individuals have seamlessly and without conscious calculation reached an approximate but fluid equilibrium which moves to accommodate whichever domain is, for the time being, salient.

Sensemaking

Faced with a new situation, individuals attempt to discover how it relates to any or all of their repertoire of previously experienced situations, and thereby to select possible ways of dealing with it. Sensemaking theory offers a framework through which the process of accommodating to new situations can be examined (Chenail et al., 1997; Dervin, 1983; Dervin, 1998; Hales, 2007; Weick, 1969; Weick, 1995; Weick et al., 2005).

Sensemaking is usefully defined as “meaning creation based on current and prior interpretations of thoughts generated from three sources: external stimuli, focused retrieval from internal memory, and seemingly random foci in working memory; such sense making is constructed on cultural pilings held unconsciously in long-term memory”(Woodside, 2001, p. 248). Making situations and actions rational and accountable to others as well as to themselves, is the perspective on sensemaking offered by Allard-Poesi (2005). For the purposes of this research, sensemaking can offer an insight into how technology enabled knowledge workers such as our participants respond to their evolving situations.

Making sense of new situations is constrained, according to O’Leary and Chia (2007), by subconsciously invoked boundaries that limit possible understandings to those that are culturally acceptable to the individual. This is consistent with the notion of cultural pilings invoked by Woodside (2001).

Most scholars in the field acknowledge that sensemaking has a bias towards hindsight (Fischhoff, 2007). Sensemaking is “an ongoing, retrospective development of plausible images that rationalize what people are doing” (Weick, 2001, p. 460). For the purposes of this research, four characteristics of sensemaking proposed by Hales (2007) are used as a framework for the analysis of the participant narratives. Critics of sensemaking sometimes point to the things not included within it, or indeed concealed by it (Huzzard, 2004). For our part, we hold it valid to explore and use sensemaking, whether or not it conceals or diverts attention from other processes which we regard as outside our sphere of interest. In our own exploration, we deliberately avoid making value judgements regarding the choices made by our participants. Another important perspective is that sensemaking is a situated process: it takes place in a specific set of circumstances, space, time and mental disposition (Ciborra et al., 2006), and is thus unique to each situation and each sensemaker.

In sum, the literature shows that technology has an apparently significant effect on individuals, on the ways they work, and the choices they will make with regard to work-life balance. While the boundaries between work and life were once well understood, now they have moved and even acquired a degree of porosity. Literature from the traditional organizational based IS may be less useful than before in helping to understand these new realities. Sensemaking has the potential to allow us a better understanding of how adopters of enabling technologies arrive at understandings and make choices with regard to their work-life balance.

Hales (2007, p. 152) identifies four interrelated characteristics of the sense-making process:

1. environments are not passively experienced but actively ‘enacted’ through sense-making, individuals create an environment that is sensible and can be responded to in known ways;
2. problems are not so much identified as ‘set’, in that diffusely problematic situations are coagulated into specific ‘problems’ by virtue of the aspects of the situation that are attended to and the conceptual framework into which they are placed;
3. responses to these problems are rationalised in that they are retrospectively justified through the construction of a plausible story that accounts for outcomes;
4. sense-making involves the attempt to construct or maintain a positive, consistent, competent identity or sense of self.

Though these may not comprise all the characteristics of sensemaking, they provide markers by which sensemaking activity can be seen to be at work, and it is in this manner that they are deployed later.

Methodology

This is an explorative study intended to investigate how information workers make sense of the work-life choices available to them, and how they reach a balance between their ‘work’ and ‘life’ roles and achievements. Working at first with a small convenience sample of suitably situated acquaintances, we used the snowball technique to obtain a total of seventeen participants. Each can be characterised as a knowledge worker who has not only the skills and equipment required, but also the trust of his or her organization to access their information resources at any time and from any location.

We concur with those IS researchers who see sensemaking and narrative enquiry as a complementary methodological partnership, with narrative enquiry providing an appropriate data collection technique and sensemaking the means to understand the data (Alvarez et al., 2002; Pentland, 1999; Tan et al., 2003). Narrative enquiry allows us as researchers to collect participant stories about their experiences of new situations as close as possible to their lived experience as possible. Sensemaking theory provides a framework with which to examine the process used by individuals to come to terms with new situations. Sensemaking also provides a theoretical lens that can assist us to understand the phenomena under study (Buzzanell et al., 2005; Gioia et al., 1996; Schatz, 2005; Stensaker et al., 2007). In this study we use sensemaking at two levels. First, it is an observed behavioural phenomenon displayed by our participants as they constructed their narratives with us. Second, we use it as a lens through which we as researchers make sense of the data presented, both at the level of the single participant, and collectively for the whole study. Narrative method and sensemaking will each be discussed in more detail.

Data Collection – Narrative Inquiry

Narrative method has acquired respectability in a number of fields including education (Gudmundsdottir, 1999), nursing studies (Overcash, 2004), organization studies (Boje, 1999; Czarniawska, 1997) and, more recently, information systems (Dalcher et al., 2003; Ramiller, 2003; Tan et al., 2003; Trauth et al., 2006).

Narrative methods are used by researchers (listeners) to get as close as possible to the lived experiences of the participants (storytellers), and how the participant makes sense of such experiences. Long recognised as a collaborative venture between the storyteller and the audience, each narrative is the unique product of a single episode of storytelling. Depending on the degree of interest demonstrated, understanding shown, and perhaps questions asked, the story is embellished and adjusted according to the teller’s perception of the audience’s need. Thus the listener truly collaborates with the storyteller to convert mere story into useful and coherent narrative. Traditionally, it has been expected that a narrative will consist of a beginning, a sequential unfolding of events affecting the characters in the story (a plot), and an end, or outcome (Czarniawska, 1997). Recently, the notion of antenarrative has been described by Boje (2001, p. 3) who describes another kind of storytelling as “fragmented, non-linear, incoherent, collective, and pre-narrative”. Consistent with sensemaking’s notion of retrospective interpretation, he goes on to define such stories as antenarrative, or the precursor to narrative.

Our own experience as researchers in the interpretive tradition tells us that many of the stories encountered every day are of just such a character, as opposed to the formally composed complete and tidy performances implied in the conventional definitions of narrative. However, the researcher must still find an appropriate way to interpret or make sense of the narrator’s own efforts at sensemaking.

Data Collection - Participant Selection

We obtained narratives from seventeen technology enabled knowledge workers in Wellington, the capital city of New Zealand. The first six were selected as a convenience sample of people already known to the researchers as belonging to the appropriate demographic. The sample was expanded to seventeen using snowball techniques. The participants can all be characterised as mid-career professional knowledge workers. There were twelve men and five women. Many of the participants were also responsible for managing others. All were authorised to access organizational resources using enabling technologies of the kinds previously discussed, from anywhere, at any time. Some were truly mobile, others simply chose to work from home as circumstances required. During interviews lasting up to one hour, each participant was invited to tell stories relating to their use of technology during their work and private lives. Participants were shown transcripts of the recorded interviews, and where appropriate, follow-up sessions were conducted to clarify uncertainties.

Data Analysis – Applied Sensemaking

Narrative analysis has occupied many scholars as a subject of debate (Alvarez et al., 2002; Bailey, 1996; Eastoe et al., 1999; Labov, 1997; Pentland, 1999; Squire, 2005), and once again, there is neither an agreed recipe nor ‘one best way’ for the analysis of narrative. However we share Boje’s (2001) view that the collaboration between storyteller and listener is essentially a sensemaking process. Various writers have put forward sets of characteristics of the sensemaking process (Dervin, 1998; Hales, 2007; Weick, 2001). We use Hales’ (2007) four characteristics of sensemaking as a framework to look for evidence of sensemaking behaviour in the construction of our participants’ individual narratives as they made sense of his or her technology-modified environment. Then recognising that our role as researchers was also one of sensemaking, we strived to discern from the collective narratives, the broad effects of technology on work-life balance.

Findings

The narratives obtained are intrinsically discursive, and some provide richer and more relevant material than others. Nevertheless all participants showed evidence at some level, of making sense of the opportunities to balance their work and life offered by their adoption of enabling technologies.

First Level Analysis of Narratives

Having read and re-read the transcribed narratives, we next used the four characteristics of sensemaking prescribed by Hales (2007) to illustrate examples of how selected excerpts from the transcripts map to the four characteristics of sensemaking behaviour.

1. Environments are not passively experienced but are sensibly enacted through sensemaking

Organizations and individuals act in their environments as if their interpretations were correct and thereby make that interpretation real for themselves and others, according to the sense they made of it.

A single man responsible for the systems architecture of a major corporate, Participant D lives a considerable distance from his place of work in the city centre. He is “always on”, and never far from one or more of the appliances through which he can connect to organizational resources for problem solving.

Home and work for me always tend to blur a little bit particularly because I’m on 24/7 call. I’m working with people in different time zones and sometimes as a result of that there’s not enough time during the day to get things done. So I will be regularly working remotely. It’s pretty common for me to sit down on a Sunday night and to log in and start catching up on emails, getting a few bits and pieces ready before the next day.

Participant D may be an extreme example. He carries his cellphone with him to martial arts classes and while sea-kayaking. When asked why he doesn’t make himself unavailable, he replied:

I actually feel more uncomfortable when my cellphone is turned off than when my cellphone is turned on. I have signed up for the “you missed a call” service so that when I do go out of coverage if someone tries to call me when I get back in coverage I get a text message telling me all the people that tried to call me while I couldn’t get the call. So I can then call them back.

This sense of being always available is reinforced by his own choices which ensure that he will continue to be contacted, which thereby further reinforces his own belief that it is important that he be always contactable. By these actions, he perpetuates an environment which he is comfortable that he knows how to deal with, notwithstanding that others might find this unacceptable. Likewise, participant B creates his own reality to fit with the circumstances of his life as a young family man with heavy work pressures:

So I promised to give someone something first thing tomorrow morning and I can do that. I go home and do that overnight. And sometimes ... I wake up at four in the morning and work on it then and that just works for me, because I go home, relax with [my daughter] and my wife. [My daughter] goes to bed early, she’s a little

kid and so, I'm relaxed. It's the best time for me to sleep, then I get up in the early morning and can be really ready for the day.

His work patterns might seem abnormal to others, but he has created an environment which suit his various obligations.

2. Problematic complex situations are made into specific problems according to the aspects on which the individual focuses, and that person's conceptual framework around the situation

Each person has particular concerns and prior understandings into which each emerging situation must be accommodated. Thus each person may make a different sense of a situation from a colleague depending on his or her unique priorities and preconceptions.

As an entrepreneur involved in making and selling innovative mobile technology, Participant T has some firm ideas on how technology should be used. One of his employees attempted to enhance his own life balance by the substitution of real computers with a more manageable mobile appliance. Though he might be described as a technophile himself, Participant T was not prepared to sacrifice high quality communication for the convenience of his employee.

We hired a consultant ... someone to look out for our interests in the States – and he got a Blackberry and he started drafting up memos and replies on his Blackberry and we asked him not to because we felt that the person couldn't adequately draft up a good note, or an informed comment on something, just on a Blackberry. You know there's a lot of benefit in people being able to take some time out and do some considered thought in writing up a response and we felt that the use of a Blackberry was just not adequate. They also travelled over to Europe. Instead of taking a computer they'd take the Blackberry. We said no you've got to take your computer we want you to get more serious, open up some attachments or do some calculations or look at something. You know the Blackberry's just not enough. And so we asked him to change that.

Despite the apparent paradox, Participant T's attitude to the adoption of certain devices is clearly shaped by his somewhat conservative attitudes towards what constitutes proper communication. Despite the variety of issues that might have been addressed here, Participant T reduces the issue to one of clear formal communication. As a person who lives and works in two cities, Participant C uses her technology to simplify matters:

The complication about living in two cities is that you've got to access all of the services that you would normally use like your hairdresser and your doctor and your dentist, as well as your banking and maybe even friends and colleagues that live in different parts of the country and overseas. So for me technology is an enabler, it enables me to schedule my life using various facilities both at home and at work to make sure that I don't forget things, which is easy to do when you live in two houses. I always have at hand some form of technology that enables me to get in touch with people. Either a cellphone or a laptop that I have internet capability on and I can do things like internet banking at 10 o'clock at night if I need to and I can order flowers to be delivered to my parents because it's their wedding anniversary and that sort of thing.

Participant C neatly solves many of the complexities of her long distance commuting lifestyle by reducing them to the single issue of effective technology enabled communication.

3. Responses to problems are retrospectively justified by the creation of plausible stories to explain the outcome

Drawing on the work of James (1890/1983), it is suggested that sense-makers take “a relative approach to truth, predicting that people will believe what can account for sensory experience but what is also interesting, attractive, emotionally appealing, and goal relevant” (Fiske, 1992, p. 879).

Participant R is a young married man with responsibility for the global support of software which has implications for the safety of the travelling public. His narrative contains several expressions of resentment and “elevated stress levels” at the intrusion of work into his home life. Nevertheless he is able to find a justification for an entirely voluntary excursion into the temporal boundaries of work, while spatially still at home.

Typical day would start after I've had a shower, had breakfast kind of thing ... I'd turn my computer on in the morning and check my home email ... but I'd also check my work mail at that point by connecting to the

network at work. Basically it's not necessary for me to do that but it's just a heads up to see what's in my inbox which gives me the opportunity to ... plan the day as I'm [commuting] which is helpful.(Participant R)

Despite his expressed resentment at the intrusion of work into his private life, Participant R justifies his option to log on to his work related email from home in the morning by rationalising that it enables him to prioritise anticipated tasks for the day ahead while commuting by rail. Another example of this aspect of sensemaking is given by participant D who suggests a reason why her manager seems to break disturbing news at the end of the day.

My boss is very good at sending announcements or major pieces of news out at six o'clock at night or typically seven o'clock on a Friday night when he's hoping he's not going to get a response.

The concluding point of that narrative fragment is clearly intended to provide a plausible explanation for a recurring pattern of action in her manager's use of mobile technology.

4. Sensemaking attempts to sustain or enhance the individual's positive self image

Consistent with the theories of social identification (Ashforth et al., 1989; Hogg et al., 2000; Taylor, 1989), individuals tend to make sense of their environments in ways that allow them to reinforce the positively distinctive stereotypes that they assign to themselves and their salient groups (Allard-Poesi, 2005).

Like many of the storytellers in this research, despite his expressed resentment about intrusions into his personal time, Participant R is perversely proud of his loyalty and helpfulness in dealing with these episodes.

So sometimes I might work from home. Then that is a two edged sword because it's convenient but it also tends to break down the separation between work and home and being someone perhaps with an over developed sense of loyalty and helpfulness to my clients I am sometimes prone to looking at my work mail at the same time I'm looking at my private mail at home outside of hours. (Participant R)

The preceding narrative fragment allows Participant R to justify his work habits to himself by laying claim to special levels of loyalty and helpfulness. Participant S is an academic who has a special interest in matters relating to mobility. He clearly indicates that he uses his technology to achieve a higher than expected level of productivity and achievement.

I can tell you about my last trip to Auckland. I woke up, the first thing I did was to go to the computer and check Wellington airport to avoid one of the things that happened a couple of times which is get in the taxi, go to the airport and they tell me there's no flights going out of Wellington or coming in ... Got there, did the check in, sat in the lounge and take out my [PDA] and checked my emails and things that were urgent. I replied and then got on the flight. [In Auckland] I went to my first meeting. On the way I check my email again. So I had my meeting, then I went to my second meeting and I had lunch and then had some time before my third meeting. I then went to my computer, plugged a wireless connection there, so then I went to my emails and in more than half a dozen words which was quite limited by the PDA, I replied to those emails which were urgent. Then I actually wrote the review that I had scribbled during the flight then I went to my fourth meeting and I needed to get some information back to the person on my third meeting. So within an hour after our meeting I was already sending an email to this guy with a couple of papers he asked for. (Participant S)

As with Participant R, this person makes sense of his actions by laying claim to the kinds of positive distinctiveness referred to in the Social Identification Theory literature (Abrams et al., 1990; Ashforth et al., 1989; Hogg et al., 1988). Participant C is a married public servant who manages a department.

The first point is that sometimes the value of me and my day is in meetings and doing stuff, interacting with people as opposed to just one big long chunk of writing which sometimes you have to do. But the question is when you can [fit it in]. And sometimes the best time to do that is overnight. And as I mentioned sometimes it works for me to wake up at four o'clock in the morning and be ready for the day. (Participant C)

Clearly, Participant C knows that work at four in the morning is abnormal, and like the other participants cited in this section, he makes sense of his choices in ways that allow him to feel special. He has not only the tools and the authority, but also the work ethic that motivates him to work at levels not matched by his peers.

Meta-Analysis

Recognising that our role as researchers was also one of sensemaking, in this section we tried to discern from the collective narratives, the broad effects of technology on work-life balance.

Environments are not passively experienced, but are sensibly enacted through sensemaking.

The narratives of our participants are open to a variety of interpretations. As researchers we sought to make sense of them as explanations of the ways in which our participants themselves made sense of the temporal, spatial and contextual changes to the balance between work and life after their adoption of empowering technologies such as networks, cellphones and laptops. We chose to use the stories as evidence of sensemaking activity and thereby enacted a sensible environment for the purposes of our research.

Our interpretation of the participants' stories tends to show how technology transforms the ways they are working. We perceive that it has done this by enabling the participants to expand the scope of what is possible for them. We further suggest that technology enables geographically distributed collaboration allowing participants to work from home or communicate with colleagues in other offices, cities and countries.

According to their own narratives, our participants especially valued the ability of their chosen technologies to facilitate work across temporal boundaries. Some participants used technology for the obvious purpose of gaining access to information and services while travelling across international time zones. Perhaps more significantly, we understood them to be both pleased and occasionally irritated with their ability to work at any time of their own choosing. Our understanding of this is that, although the technology makes possible the blurring of temporal boundaries, it is a matter of conscious choice to allow this rather than any employer imposition.

As we understood their narratives, technology allows them to choose between work and life in flexible and creative ways. These participants see the possibility to use technology to expand and enhance relationships with their families, or at least to ameliorate the worst effects of choices to do more work. It was clear from the stories that most knew that the balance had shifted in to accommodate more work rather than more personal or family life, and that this new state of equilibrium was in some sense prescriptive of future work-life patterns.

Problematic complex situations are made into specific problems according to the aspects on which the individual focuses, and that person's conceptual framework around the situation.

As researchers, we have focussed on those aspects of the narratives that we perceive to be related to ways in which the adoption of empowering technologies has altered the work-life balance for our participants. Further, we looked closely for elements of the narratives that showed one or more of the four characteristics of sensemaking activity as enumerated by Hales (2007).

Technology, according to the participants, is both a blessing and a curse. The intrusive quality of email was a frequent subject of the stories. Email was recognised as a terse communication method that could prompt inappropriate responses. Those carrying advanced PDAs such as the Blackberry, and to a lesser extent, SMS enabled cell phones were particularly conscious of the potential for messaging to intrude on their private lives at any time. The technology seemed to provide more capability than many of them were ready to use.

A management challenge, alluded to earlier, is related to time management. Since technology allows one to be always accessible, several participants felt pressure from work to be always accessible, some explicitly so. Surprisingly, some participants often struggled with self-inflicted pressure to make themselves available. Some were psychologically incapable of turning off the technology and controlling access in a way that would allow them to take full advantage of the technologically enabled possibilities for work-life balance. Some indicated an uneasy sense of the need to establish appropriate understandings about separation between the work and life.

Responses to problems are retrospectively justified by the creation of a plausible story that explains the outcomes.

We suggest that all research consists of retrospective attempts to create plausible explanations based on observation of phenomena that have occurred. There could be no room for debate that this is what happens in any attempt to

make sense of narratives. In our research, we have focussed on attempts to provide satisfactory explanations of the work-life balance choices made.

The commitment to work exhibited by our participants and others like them raises an important managerial issue about the relationship between productivity and expectations. Technology can be used to improve productivity. It allows easier access to people, information and more efficient ways of working. However, gains in productivity tend to lead to increased expectations on the part of employers, but also among employees as well. Not only must employees manage their own expectations, but their managers and organizations must also understand that there are limits to how much employees can do. Managing how employees make choices about work-life balance may be one of the looming workplace challenges.

Work-life balance can be seen, at least in part, to revolve around the increased flexibility that technology allows. Both employees and management need to understand what forms this flexibility takes and how it can be managed. Flexibility was frequently identified with having the freedom to trade blocks of time between work and leisure, particularly in order to meet family obligations. Unfortunately, the tradeoffs between technology, family, work and leisure are not always so clear, and the participants sometimes struggle to make sense of how technology is affecting their lives.

Sensemaking activity attempts to sustain or enhance the individual's positive self-image.

Technology seems to be a great enabler to our participants. It enables them to work as they wish and structure life accordingly. This 'enablement' almost seems to manifest as 'ennoblement' and for a number of the participants clearly enhances positive self image as their expert use of technology and their overriding commitment to their organizations made them—in their own estimation—essential to the organization. For example, participants invite admiration for the extent to which they sacrifice their home life to demonstrate commitment to work roles. Other narratives reveal the sense of self as being enhanced by intelligent use of the facilities offered to be more productive than most people even while on the road. Priority given to work related achievement is seen as a matter of considerable pride.

Our observations of participant attitudes in this context suggest that our participants combine their self belief with technologically enabled opportunity, and thereby generate a self-reinforcing perception in which their value as uniquely productive and essential members of the organization continues to increase.

Discussion

In this section we summarize our findings and discuss the implications of technology-enabled contemporary work practices for individuals, families and organizations.

Our findings tend to support our contention that technology allows individuals to conduct work (and non-work) activities at any time and from any place. Knowledge workers such as our participants appear to be making conscious choices to use technology to achieve whichever goals, work or life, are at present foremost in the thinking of the individual. We suggest that the key word here is "choice" and it reflects and supports the definition of "balance" which (Lowry et al., 2006) understood to be a "self-determined and subjective experience": the notion of human agency is fundamental to an understanding of what work-life balance means (ibid.). We agree with the notion of 'balance' as a subjective experience, noting that even as some of our participants indulge in what most people would regard as extremely unbalanced lifestyles heavily weighted towards work, they themselves are content with the equilibrium that they have reached.

Our research participants were mostly knowledge workers involved in information systems, who were partial to using technology. Some of them could be described as early adopters of technology (Rogers, 1995). The stories obtained in the course of our research tend to support the view that knowledge workers are comfortable using technology and able to use it to make their lives more flexible, a conclusion echoed by recent literature (De Bruin et al., 2004; Zorn et al., 2000). Based on some of the narratives we feel that technology has the potential to transform or empower the individual far beyond the expectations based on the recent past. Our participants were from a variety of personal circumstances, and subject to differing pressures from other parties—employers, families and the public at large—on what is, or is not, appropriate when it comes to work-life boundaries. However, it was also clear that not all that is possible, is appropriate. It may be unwise for an individual who has some work related thought, to put

that thought into immediate action even while engaged in some moment of personal relationship with a partner or spouse.

Of interest to organizations, we conclude that for many individuals the adoption and empowered use of technology reinforces the self-belief of employees, and their willingness to respond above and beyond normal hours, and regardless of location. Many of them work hard to demonstrate their indispensability to the continued success of the organization. This is in line with the findings of Lewis et al. (2003) that contemporary work, especially knowledge work, is a major source of status and identity. Changes such as these can occur in organizations whose management style assumes and perhaps expects that the employees can be trusted to deliver valuable outputs without the need for traditional bureaucratic models of supervision (Sørensen, 2004). Furthermore, they cannot happen in a climate of organizational paranoia about risks to security of information.

From our participants' narratives we have also found that the opinions of family, friends, peers and workgroups are all important to the participants depending on context, and may become more salient in one place than another. However, the stories obtained during this research focused more on influences from business rather than home though the domestic thread was often lurking just below the surface of the stories. Again, there are implications for the organization. Idiosyncratic working hours and the intrusion of business into domestic situations can impose a strain on domestic relationships, spouse, children and other dependent relatives (Hewlett et al., 2006). It seems obvious that these must be taken into account. Employees who work late into the night, or while on vacation might reasonably expect to be rewarded for their devotion, if not monetarily, then at least with the freedom to take compensatory time off from what are conventionally regarded as normal business hours. This is perceived by some as an issue of special relevance to working women (Wise et al., 2003). It might also be expected that the employee could make use of the technologies provided by the organization for reasonable personal purposes (Isaac et al., 2006).

Conclusion and Implications

Our guiding research question asked how do information workers make sense of the technology-altered balance between 'work' and 'life', and thereby justify their use of time, space and technology in order to be content with the equilibrium they reach between their 'work' and 'life' roles and achievements? We used the lens of sensemaking to understand how our participants were able to understand the effects of technology on their lives. Generally, these effects are seen as positive, but clearly the participants find that they need to manage these changes with some care. Technology is clearly influential on how our participants view themselves in the context of work. We conclude from their stories that, although most empowered technology users believe they have more freedom to choose their own work-life balance, nevertheless the majority of them have used this freedom to shift the balance firmly in the direction of more work. The fact that even relatively low level employees—not the 'extreme' employees who make extremely high salaries, referred to by Hewlett and Luce (2006) and Isaac et al. (2006)—are so strongly committed to work that they are willing to give it precedence over opportunities to do other things even at some cost to their other relationships begs for further research. Having identified a number of issues of interest, we also see a number of other topics worthy of further exploration. Among these is the management of technology in work-life balance and the specific skills and knowledge needed. Also worthy of further study is the gendered impact of these technologies. We interviewed men and women indiscriminately, without consciousness of possible differentiation in the ways in which the adoption of nomadic work roles would affect their work-life balance.

We secondarily asked: what changes are needed to the practice of management to cope with employees who are working in places and at times of their own choosing? Here we are forced to speculate. However, it seems clear that employers must become aware of the issues that accompany an 'anytime-anywhere' employee. These obviously include work-life balance issues as discussed in this paper, but extend to such issues as technology allocation, 24 hour information access, and information security. Further research might focus on the management implications of these emergent fluid pseudo-autonomous anywhere-anytime employees, and whether these changing patterns of work spell the beginning of a dramatic shift away from the traditional centralized Weberian bureaucracy and the "factory model" of work?

In terms of research we have used a combination of narrative enquiry to gather data and sensemaking theory to guide our interpretation of the stories our participants told us about their interaction with technology. These methods of data collection and analysis have wide scope and applicability whenever and wherever people use technology, particularly new or evolutionary technology, and we encourage further exploration of their use. Indeed we believe it

is also appropriate to explore the use of sensemaking in our own role as researchers. We therefore encourage researchers to use sensemaking reflexively to help them make explicit both the potential richness and the potential bias inherent in sensemaking.

Finally in closing we offer a modification of Lasswell's famous dictum, that communication is about "who says what to whom, in what channel, with what effect" (1948). Technology now allows for individuals, such as our participants, to choose what to do (work or life related), for which actors (peers, managers, customers, friends, etc), in what channel (phone, text, email, etc), at what time (now or later), in what circumstance (here or elsewhere, publicly or privately), and to what effect (increasingly hard to measure). Technology presents individuals with options. Individuals have many relationships that are affected by their technology adoption choices and work practices. Each individual has to make sense of the impacts of these choices on whatever relationship is salient at the time, and on life as a whole. Individuals need the knowledge and skills to be able to understand and manage the increasing complexity inherent in contemporary work practices. From an organizational perspective, we believe that despite the short term productivity gains from increased time in the work domain, organizations would do well to ensure that these well motivated staff are managed for their long term wellbeing and their continued contribution to the organization. Exactly how these things can be achieved is an important opportunity for further research.

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Acknowledgements

This project was supported by a grant from the (New Zealand) Foundation for Research, Science, and Technology, (contract number UOW X0306, Programme Title: Impacts of ICTs on work and communities).