Time and tide

Moving the boundaries: The impact of mobility on work and life

- Brian M. Harmer and David J. Pauleen
Many New Zealanders, especially those who are able to access organizational information remotely, are no longer making clear distinctions between work and private life. They are prone to attend to work matters in places and at times that were once walled off as belonging to their private life. This raises some important questions for individual and family, as well as for those who manage such individuals.

Some of us will remember that, in days gone by, the only link between work and home was the briefcase. At the end of the working day, the organizational worker would put aside all thoughts of work, and go home, for the evening or weekend, to enjoy domestic comforts, leisure pursuits and rest until the next working day. Normally, friends, family and the worker could all reasonably expect to enjoy each other’s company free from intrusion of work related matters during these regular and pre-ordained periods of absence from the place of work.

From the business perspective, the organization had to accept that the intellectual endeavours of the worker would be available during the core hours defined as the working day only. Within that time, it was conventionally the organization’s responsibility to provide the worker with the infrastructure (desk, telephone, filing systems, and more recently, access to fixed computers and workstations) necessary to the performance of the job, as well as to plan, supervise and manage the worker’s efforts in accordance with the classical models of organization described by Weber.1

Attempts by the worker to deal with business matters in any place other than the organization’s premises were constrained by his or her memory for organizational detail, and by the amount of printed material that could be carried in the briefcase. In recent times, the diffusion and appropriation of ICTs (Information and Computing Technology), particularly those associated with personal productivity has effectively broken down that barrier. Mobile telephony and the Internet are now ubiquitous and their adoption as personal tools has allowed the individual to overcome the constraints of office time and geographical location.

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Despite prevalent societal attitudes to the separation of work and private lives, the ubiquity of communication channels among adopters of productivity related ICTs requires a renegotiation of the boundaries between work and non-work. This has several significant implications, for the individual, for the individual’s family and friends, for the organization, and for the management process in respect of such individuals.

Our purpose in this article is to explore the perspectives of a sample group of New Zealanders, who epitomize participation in contemporary work practices through their adoption and use of network connected productivity tools such as laptops, cellular phones and other appliances, to discover the impact on their work and lives. We identify management issues of interest to the organizations for whom they work and offer guidelines to more effectively manage these new anytime, anyplace employees.

**RELEVANT PRIOR LITERATURE**

As with the more traditional adoption-use theories, mobile HCI (human computer interaction) literature has tended to focus on mobile technology use for work purposes within the work setting. However, according to Sørensen & Gibson’s empirical validation and fieldwork that looks at professional work practices as they are mediated by technology is lacking. In the context of the present research, there is particular interest in the impact of mobile or broadband connected technologies. A recent study of the consequences of such adoption in France examines the distinct behaviours of individuals and organizations in this respect, and differentiates between adoption and appropriation. It further notes that many adopters of productivity related technology place great importance on their ability to enhance their own sense of identity through distinctive technology enabled achievements.

From an organizational perspective, Czarniawska suggests that, in some circumstances, dependence on chronological time and centres of calculation as in the traditional factory model of organizing should give way to dispersed calculation and kairotic time (where kairotic time is understood to be temporal autonomy, such that work gets done at the right time, rather than when mandated on a calendar or project plan). In short, employees in such a situation need not work on the organization’s premises, nor even during the hours specified as normal by the organization. These ideas bring into question the appropriateness of the conventional Weberian bureaucratic model for the management of people working in dispersed locations on kairotic time.

**METHODOLOGY**

Our research topic is fundamentally a social and organizational issue, and one which demands a close scrutiny of the meanings that organizational actors give to various aspects of their business and working life as impacted by their technology choices. We have chosen to use narrative method as a means to access the ways in which participants understand their adoption and use of technology in work and life. Long accepted in other disciplines such as organizational studies, education and health, narrative method has now attained respectability in information systems research. Our choice of narrative method allowed our participants to share the richness of their stories in their own words. According to Sørensen and Gibson, the complexity of real-life technology use can not be captured in small-scale laboratory design projects, but rather requires understanding of the everyday practices of people.

Although there are many possible approaches to the analysis of narrative, it is generally acknowledged that there is neither a single fixed recipe, nor even a “best way” to do it. We selected a convenience sample of eleven individuals who were known to us as people who made extensive use of technology for personal productivity reasons, and invited them to provide a personal narrative related to their interactions with technology. After reading and re-reading the narratives we looked for emerging themes using the constant comparative method borrowed from Grounded Theory research.

**THE RESEARCH**

Our eleven participants provided one-on-one narratives during recorded interviews lasting up to an hour. After transcription and participant checking, we analysed their stories and discovered a number of recurring themes of interest to our purpose in this research. Three themes of particular interest were:

- the kinds of technology adopted,
- the kinds of impact experienced, and
- the constituencies impacted by such adoptions.

**Kinds of technology adopted**

Most commonly in this research, participants had adopted ordinary personal productivity technologies such as laptop computers, cellular phones, and PDAs. Despite the ordinariness of these technologies, the extent to which they had been appropriated profoundly affected many aspects of their lives in respect of work and home. As a generalisation, the technology adoptions described by our participants were not of an advanced kind. Rather they had been intensively appropriated by the participants, far beyond their utility value to their organizational roles, and had become part of the fabric of their lives.
One participant, as a charter dive boat operator, found that even such a mundane change as the adoption of the cellular telephone profoundly altered the possibilities open to his business.

Some of my customers were very wealthy men who had no time. And if they decided they wanted to go that minute because they wanted crayfish, or they wanted to get out in the sun or something, and they knew that I was around then they’d just ring me and at a moment’s notice I could do it. And so the cellphone was a significant factor in the profitability of my business. (Participant E)

Another participant, a single man with responsibility for the oversight of an extensive technical architecture in his work environment detailed a more adventurous level of technology adoption for use at home.

I have a lot of enabling technology in my house. My video recorder is a windows media centre fully kitted out, fully connected, programmable from anywhere. My telephone system in my house is a PABX that I’m working to put voice over IP so I can communicate that way. My play station is connected to the internet and so I can, when I want to sit and play games I can play games across the internet. (Participant P)

Software applications may also be regarded as technologies to be adopted. Especially interesting in the present context is the decision by some participants to use SMS or Instant Messaging in a business context. For example:

I will use instant messaging even to talk to people who are sitting on the opposite [workstation] from me. Sometimes there are conversations that you would ideally go off into a meeting room to have with them and these aren’t necessarily, you know, shouting and yelling conversations. It’s just the easiest way to have them in a crowded office space. And rather than distracting them from what they’re doing we’ll just use instant messaging to ask “what do you think of this?” or “Here, I’m sending you a document tell me what you want.” We use it that way. I also use it to communicate with people in other buildings and other countries. (Participant D)

Kinds of impact experienced
Impacts revealed in the narratives included freedom from the constraints of place, so that the individual was free to attend to personal or work matters from any workplace, home, or any other place, including while in transit. Similarly, individuals felt freed from the time boundaries imposed by the conventional working day, and could attend to matters related to work or their personal lives at various times that suited their own lifestyle or state of wakefulness.

Stories suggest that the balance has shifted in favour of the organization
These approaches are consistent with Czarniawska’s13 notion of dispersed calculation and kairotic time. The idea that personal matters are attended to only in private time, and that work matters are dealt with exclusively at work has become eroded to the point of irrelevance for most of the participants, though the stories suggest that the balance has shifted in favour of the organization. More time is spent attending to work-related matters from home, than is spent on private matters from the work place. Some, however, retained a lingering resistance to the unwanted intrusion of work matters into time set aside for personal pursuits. The ways in which the participants categorise the various kinds of impact are summarised in Table 1.

When discussing the kinds of impact, the participants provided story fragments that focused on three topics, that were deemed worthy of closer scrutiny:

- Autonomous time and dispersed calculation
- Personal versus work time
- Constituencies affected by changes

We will explore each in turn.

Autonomous time and dispersed calculation
For many, the benefit of new technologies arises from maximising the productive opportunities for each minute of the day. One participant makes use of his technologies to regain the time that once would have been lost during his twice daily 40 minute rail commute.

The remainder of the day is email communication and extensive use of the cell phone while travelling. I tend to make use of almost every minute of travel time for communications. To and from work, and even at the moment to and from lectures, when I travel between home and the city other than a little thirty second stretch [on the track] where there’s no coverage. (Participant R)

Liberation from the two constraints of chronological time and a centralized calculation location was raised by every participant. Almost all saw some positive aspect to being able to communicate with colleagues, or to tap into organizational resources at times outside the normal office hours or from places other than their own office workstation (Table2). Some examples cited were about remaining connected while travelling.

I was a masters student, and the technology enabled me [to participate] wherever I am. I could call in to the lectures from wherever I was and to me that was really important because it was a critical period that I was away. So I think for busy people who can’t attend face to face lectures that is a fabulous way that they can manage their lives really and I think that’s the important thing. It’s all about managing your time. (Participant K)

Likewise when I’m in Australia for work, I’ll be fully connected back to the office just as though I’m still sitting in there. I find that I’m having to dial in less so now than I used to but I’m still required as part of my job to carry my laptop everywhere wherever I go so my laptop and my cellphone are always at my side. (Participant P)

The positive and negative perceptions of the participants in respect of autonomous time and dispersed calculations are summarised in Table 2.

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<thead>
<tr>
<th>THEME</th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
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<tbody>
<tr>
<td>Kinds of impact experienced</td>
<td>Mobility</td>
<td>Always accessible</td>
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<tr>
<td></td>
<td>Enablement</td>
<td>Dependency</td>
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<td></td>
<td>Ease of use</td>
<td>Isolation</td>
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<td></td>
<td>Convenience</td>
<td>Increased expectations</td>
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<td></td>
<td>Working from home</td>
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<td></td>
<td>Information sharing</td>
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<td></td>
<td>Flexibility</td>
<td></td>
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<td></td>
<td>Access to information</td>
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<tr>
<td></td>
<td>Transformation</td>
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</table>

Personal vs. work time.
Participants valued the ability to trade working time outside of normal hours with the freedom to attend to personal priorities during the working day.

Sometimes it works for me to wake up at four o’clock in the morning and be ready for the day. Now the flip side of that is that there are times when I have to pick up my daughter from school, that’s at two forty in the afternoon which is a bad time for employers but it’s only an hour you know it can substitute for my lunchtime whatever. But it’s that sort of flexibility that’s important and that’s where the tradeoffs come in. (Participant B)
We use Voice over IP for virtual meetings with our head office in London all the time. Now given the time difference between the UK and here, there is no real overlap on office hours. Some of that happens outside of hours, I’ve got a broadband internet connection at home and I’ve got a connection to our network from home as well. So in fact I can work pretty much from home as effectively as when I’m in the office. (Participant R)

Constituencies affected by changes
Changes resulting from the adoption of ICTs affect not only the individual, the families and friends of the individual, but also the peers and managers in the place of employment.

With your own cell phone and with the industry available all the time, when you go on holiday you’re always contactable and that’s made it hard to separate the business and the non-work aspects. It’s always been a contention with my wife about how much, when I’m on holiday my cell phone will always go off. (Participant T)

Sometimes the adoption of technologies is seen by others to have an effect on the person who has adopted them, and indirectly this impacts the family.

And at home I’m getting more of an insight into some aspects of my life that technology hasn’t actually helped - all it’s done is tempted me into more time with technology but it’s not necessarily productive or even leisure time. I mean my wife says to me when you’re on the computer you’re stressed, even when you’re doing something for leisure and that says a lot about why I’m looking at leisure things. (Participant H)

Occasionally, the spouse or partner of the person adopting technologies is like minded and perhaps this alleviates the problem.

Fortunately my wife and I both have the same affliction to about the same extent so we understand each other. But you know, if she goes into the computer room and she’s going to check her mail and she says “I’ll be five minutes” then I’ll know that will be five computer minutes, and not five clock minutes. I’m just so grateful that she’s as much of a geek as I am otherwise she just wouldn’t understand it. (Participant R)

From the management side of the fence, one participant described his attitudes to his subordinates and why he had no particular qualms about intruding on the individual’s person time.

I don’t take any cell phone [calls] after hours. I might be an exception. I phone lots of people though, because for example one of my staff always left at three o’clock, because they needed to but I could phone her any time, and I did, and she didn’t mind that. The consultants who work for us, I take even more liberties with because they work for us and they’re charging for that time, to phone whenever I need to get stuff from them and talk with them. (Participant B)
Most often cited among the personal negative impacts of technology adoption is the sense of being always accessible, and always on call. The most extreme example of this in the present research makes himself available, even in a sea-kayak.

I went kayaking probably about two or three months ago, rolled the boat, and my dry bag leaked and I drowned my cell phone. When the insurance company said to me “well what were you doing with the cell phone in the middle of the ocean” I politely pointed out that work required me to have a 30 minute turnaround on response times and I was going kayaking for four hours. So it’s an accepted part of my life. (Participant D)

Frequently, the support for particular software packages is provided by organizations based on the availability of just one subject expert. Although this enhances the person’s self-esteem, it can put considerable strain on the individual and his or her family.

I can work from home as effectively as when I’m in the office. My clients are at the other end of a very long piece of wire which stretches to my house and also to my office. And there’s nothing really that I can’t do at home that I can do at work other than face to face time with other people in the office. 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 for looking at my work mail at the same time I’m looking at my private mail at home outside of hours. And slipping into work mode and answering questions from people at work which is a bit of a problem because it’s a bit of a work life balance issue for me. (Participant R).

It is evident from the stories that there are a number of constituencies who have a legitimate interest in the changes brought about by the adoption of the technologies under discussion as summarised in Table 3.

Not all of these factors are mentioned in all stories, but they clearly emerge as domains of interest to management, and will be examined in the next section.

**DISCUSSION AND IMPLICATIONS**

Organizations whose members must carry out information based tasks of the kinds undertaken by the eleven participants in this research, have the opportunity to maximise their productivity. It would be fair to observe that the stories provided by the eleven participants all paint a picture of highly motivated individuals who are committed to the organization and who, for the most part, gain a positive sense of self-worth from their ability to use these technologies and to deploy them for the achievement of personal and organizational goals. From this perspective, it might be that these individuals are atypical in respect of the workforce at large. Nevertheless, it is precisely such employees as these who present new management challenges, and new opportunities to enhance productivity. Accordingly, it seems appropriate for such employees that managers should pay more attention to the achievements being made by the individuals in their employ, and less to the location of the work, or the hours worked.

In Table 4, we highlight some of the major differences between conventional and emergent work practices that have been raised in this article.

Present day organizations represent a variety of structures and work practices. Some tend to be more traditional, others more emergent. Many include variations of the two. Conventional in-person supervision of people such as the New Zealand participants in this study is made more challenging by their working from places other than the employer’s premises. Such difficulties are compounded by the work that they do at hours of their own choosing outside the framework of the normal working day. Absence from work at any place or at any time, can no longer be construed as evidence of non-productiveness. The people in this study are autonomous, responsible, flexible and capable of a high degree of self-management. Arguably, there is little need for in-person supervision for such employees. Instead, managers might cease to worry about attendance and diligence, and instead learn to evaluate the employees according to the worth of their contributions to the organization, wherever and whenever produced.

The participants in this study paint a picture of hardworking people who seem to be making productive and effective use of technology. Most of them are employees working for organizations and from their stories

### Table 3

<table>
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<tr>
<th>CONSTITUENCY</th>
<th>POSITIVE OUTCOMES</th>
<th>NEGATIVE OUTCOMES</th>
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<tbody>
<tr>
<td>Individual adopter</td>
<td>Empowerment Transformation</td>
<td>Break down of separation between work time and private time</td>
</tr>
<tr>
<td>Family members</td>
<td>Ability to coordinate with family members</td>
<td>Intrusion on “private time”</td>
</tr>
<tr>
<td>Manager</td>
<td>Productivity gain Versatile workforce</td>
<td>Loss of perceived control</td>
</tr>
<tr>
<td>Organization</td>
<td>Productivity gain Reduction in required office space</td>
<td>Initial investment in technology</td>
</tr>
</tbody>
</table>

**Table 3 Effects on various constituencies**
we gather that they are providing excellent value to these organizations. Some of the advantages of having such employees are obvious; for example potentially twenty-four hours of work for the cost of an eight hour day. However, we can also see a potential downside including employee burnout, resentment, family problems and the like. While most of the narratives reported the participants’ views mostly as employees, two of them gave some fragmentary insights from the viewpoint of team managers. Being on both sides of the employee-manager divide, they were aware of the managerial implications of managing these kinds of employees. Still, despite the dearth of managerial input, it is possible to see some of the consequences for managers of the adoption of such technologies by their employees: lack of direct supervision, unconventional work hours, difficulties in evaluating employees’ contributions, and similar issues. Drawing on the reviewed literature and the participants’ narratives as well as our own analysis, we offer the following guidelines for the management of such individuals:

1. On a trial basis, allow all members of the organization who do not require on-site resources, or whose work does not require their continuous presence for the benefit of others, to make independent choices about the extent to which they adopt and appropriate personal productivity ICTs, and when and where they work. There should be an understanding that if the new autonomy proves to be unsatisfactory to management or the employee, then the status quo will be restored.

2. Understand that the employee’s sense of identity and positive distinctiveness is reinforced by the ability to use personal technological skills to achieve unique outcomes. Be prepared to identify suitable forms of public and private recognition of such outcomes.

3. Reach a clear understanding with each participating individual as to what achievements are expected, and by what date.

4. Have an agreed mechanism for establishing direct communications when necessary, using appropriate communication channels including, but not limited to, telephone, e-mail, SMS, instant messaging, and VoIP with or without videoconferencing.

5. Recognise that the company is buying achievements, not time, and except for their participation in necessary communication sessions, do not attempt to monitor the hours spent or the places from which participants work.

6. Have in place an agreed review process that, after suitable probationary periods, can be invoked to terminate or extend the arrangement for dispersed operations and time autonomy.

7. Be clear that recurring failures to achieve required outcomes due to adverse personal events or circumstances such as long term illness, dependent relatives, child minding obligations, other business commitments, etc, will lead to a review of the appropriateness, and likely termination of this mode of working for the employee concerned.

8. Recognise that dispersed calculation and kairotic time may have a disruptive effect on the partner and family of the employee concerned, and that some period of adjustment may be necessary to bring about reconciliation to altered lifestyles.

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**Table 4**

<table>
<thead>
<tr>
<th>ORGANIZATIONAL FORM</th>
<th>DOMINANT TECHNOLOGY</th>
<th>SPACE</th>
<th>TIME</th>
<th>INFORMATION DISTRIBUTION</th>
<th>PERSONAL EMPLOYEE CHALLENGES</th>
<th>MANAGEMENT STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory-like Traditional</td>
<td>Pre-ICT, pre-current (e.g. telephone)</td>
<td>Office, Organization is centre of calculation</td>
<td>Chronological Core hours</td>
<td>Top Down, Formal limited</td>
<td>Maintaining homogeneity, Follow rules</td>
<td>Conventional process-focused Weberian bureaucracy[1]</td>
</tr>
<tr>
<td>Dispersed, emergent</td>
<td>Current and emerging</td>
<td>Current and emerging</td>
<td>Kairotic, fluid</td>
<td>Decentralised, informal, instantaneous, tactical</td>
<td>Autonomous Flexibility and consistency; Constant, real time, negotiation of fluid work and life interactions. Sense-making Self-steering</td>
<td>A range of strategies are discussed in the text in this section</td>
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Further reading


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).

Further Research
The authors’ next phase of research will investigate organizational views of managing anytime anyplace employees. If you are a manager or executive and would like to share your stories, please contact the authors at brian.harmer@vuw.ac.nz or david.pauleen@vuw.ac.nz

References