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MOBILE PRACTICES AND THE INCREASING INDIVIDUATION OF WORKPLACE

Complete Research

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Abstract

An increasing portion of the contemporary workforce is using mobile devices to create new kinds of work-space flows characterized by emergence, liquidity, and the blurring of all kinds of boundaries. This changes the traditional notion of the term workplace. The study reported on in this paper focused on how people enact and make sense of new work space boundaries enabled by their mobile practices. A unique method of data collection—the use of cultural probes—was adapted to an online format to facilitate participant reflection and documentation of mobile practices. Coupled with in-depth interviews, this methodology enabled the thick description of how individuals enacted spatial, temporal, and psychosocial boundaries of workplace through their mobile practices. Findings show that the growing reality of workplace for many is that it is becoming less a singular place dedicated to work performed in a predictable frame of time and evolving more towards an idiosyncratic space that takes on the spatial and temporal requirements of the individual worker—the overarching claim being the increasing individuation of workplace enabled by mobile devices.

Keywords: enactment, mobile practices, boundaries, workplace, emergent organization

1 Introduction

Manuel Castells observed that “wireless communication technologies diffuse the networking logic of social organization and social practice everywhere, to all contexts—on the condition of being on the mobile Net” (M. Castells, Fernandez-Ardevol, Qiu, & Sey, 2007, p. 258). As individuals today increasingly take advantage of the ubiquity of the Internet and mobile devices, one context that is clearly changing is our notion of the *workplace*. No longer tethered to the brick-and-mortar space or the 9 to 5 workday, an increasing proportion of the contemporary workforce is creating new kinds of work-space flows characterized by emergence, liquidity, and the collapse of fixed spatial and temporal boundaries. This paper reports on recent research (2013) that explored how employees are enacting new kinds of work spaces through their mobile devices and how they are making sense of the ensuing changes in spatial, temporal, and psychosocial boundaries that are part of this (Davis, L.B.)

Mobile work today is far more expansive than earlier work arrangements that were enabled by technology such as teleworking and remote working. A much narrower segment of the population participated in the latter —primarily consultants, part-time workers, and those whose work required extensive travel. Today we observe that work which used to take place in a conventional office is routinely done at home, in a car, or within the kinds of public spaces (e.g., Starbucks) that have been described by Ray Oldenburg (1991) as “third places” (p. xvii).

Commenting on the decoupling of work and place in her ethnographic observations of empty cubicles and corridors in one office building after another in Silicon Valley, Jordon asked, “What’s happening? Where have all the people gone?” She reflected, “They have gone mobile” (2009, p. 1). Importantly then, such “decoupling” includes individuals who have a dedicated office space and schedule within the organization that employs them, but who are nevertheless opting to use mobile

devices to do their work at other times and places of their choosing. In fact, current data indicate that the actual number of individuals using mobile devices to work outside conventional time and place boundaries is increasing across all categories, *especially among those employed full time by organizations*. (Halford, 2005; The Dieringer Research Group, 2007)

These observations raise some interesting questions that formed the basis of the research reported on in this paper. What are individual patterns of usage—mobile *practices* that have implications for where, when, and how work is enacted; to what degree does the work enacted through mobile practices tend to blend, blur, or eradicate the more conventional demarcation between work and home or work and leisure; as individuals' work emerges more uniquely in the context of their particular lifestyles, and they experience a different kind of living in the world where the distinctions between work and personal or leisure are not so sharply drawn, what sense are they making of this; is this reconfiguration of overall lifespace liberating or constraining or a mixture of both; and what are perceived as the benefits or challenges?

Data reported on here come from research conducted by the author in a study exploring how employees enact and make sense of workplace boundaries enabled by their mobile devices. (Davis, L.B., 2013). This paper begins by providing a brief review of relevant literature followed by an overview of the research methodology, a description of major findings, and finally a discussion of overarching themes the author has gleaned from the data. Concluding remarks consider the implications of this study.

2 Literature Review

Scholars have pursued a number of paths over the past two decades in studying mobile work. One of the most prominent categories of research is that done around *teleworking and telecommuting*. Many of these studies have focused on the isolation and fragmentation of the teleworker. For example, Meerwarth et al. talked about the “sense of liminality, displacement, and in-betweenness that comes from living a nomadic life and feelings of fractured identity as a result” (Glusing, Meerwarth, & Jordan, 2008, p. 151). Youngblood (2008) asserted that distance isolates the teleworker from exposure to the rich detail inherent in the organizational culture and creates a challenge of working under conditions of missing context. Other studies have addressed the challenge of having no set boundaries around time and place: “The unstructured work day, and the uncertainties that come with the freedom (or burden) of defining one’s own work, work day, and space” (Glusing et al., 2008, p.78). If these observations reflect an accurate picture of mobile work today, then why are so many *choosing* to engage in it?

Telework research has also been extensively reviewed (Bailey & Kurland, 2002; Hislop & Axtell, 2009; Nansen et al. 2010; Wilks and Billsberry, 2007). Some of this literature begins to hint at the inadequacy of earlier research in terms of providing clarity and even the right focus for the current iteration of mobile work. Wilks and Billsberry (2007) performed case study research to update and challenge the defining characteristics of telework such as location of work, reduced travel, role of information communication technologies (ICT's), isolation, and whether all teleworkers can be defined as knowledge workers. They pointed out, the term *teleworking* may confuse rather than clarify what kind of workplace is being discussed: “Terms such as telecommuting, mobile working, e-working, remote working, and home working are sometimes used interchangeably with the term teleworking, often with confused varying implied modes of working” (2007, p. 169). In fact, they questioned whether teleworking can even be defined in the new world of work where technology, home, and work are so intertwined.

In their own extensive review of the telework literature, Bailey and Kurland (2002) asserted that three key questions—“Who participates in [telework], why, and what happens when they do?”—have largely been unanswered (p.385). They suggested that telework research going forward should reconceptualize telework in terms of *practice*, not frequency, include all parties that might be affected

when an individual teleworks, and move towards theory building to explain the dynamics of such work.

A second large body of research on mobile work centers on the issue of work-life balance. Research on work-life balance is extensive and has focused on several aspects. Boswell and Olsen-Buchanan (2005) observed how conflict ensues when work spills over into the home. Blake, Glen, and Mel (2000) examined how individuals negotiate the boundaries around their roles as they move between work and home. Tietze and Musson (2005) studied how increasing telework and new organizational flexibility have led to the colonization of the private sphere with images, practices, and values of the industrial sphere as paid work moves into the home.

Recent research in the work-life balance stream has included a more nuanced emphasis on the role of technology in the discussion. For example, Middleton (2007) observed how the use of always on-mobile devices exacerbates the conflict between work and personal activities and is ultimately shaped by unreasonable organizational demands and expectations regarding employee commitment and accessibility. Ladner (2009) focused on the potential role of organizations in developing policies that would address the division between private and work time as well as the possible need for collective actions (e.g., labor law, unions) to question and challenge the division between work and home that is being altered by the advent of mobile technologies.

Central to much of the work-life balance research is a focus on the boundary between work and home and maintaining work-life balance. However, it may well be that in today's context of ubiquitous computing where work can be performed "anytime and anywhere", the simple dichotomy of work and home (such that one should be balanced with the other) no longer applies. At a minimum, we don't know whether work-life balance is an overly simplistic idea when applied to mobile workplace or not because the bulk of the research is already contextualized within this framework.

As mentioned previously, there is a need for research on mobile work to bring in or develop robust theoretical frameworks that help to illuminate the complexity of how individuals enact, experience, and understand newly configured workplaces. While there is an extensive background and literature conceptualizing the workplace as a sociotechnical system (STS) (Emery & Trist, 1969; Trist, 1981), it may be that in the current ubiquitous computing environment the separation between the social and technical is even further reduced. Taking a postmodern philosophical view, Scott Lash (2004) referred to the new social technical as indicative of a new age: "It makes sense to understand the first modernity as comprising predominately a logic of structures. Then the second or reflexive modernity, if we are to follow Manuel Castells (2000), involves a logic of flows" (Lash, 2004, p. 49). Conjuring up a sense of a sharp boundary between the social and technical coming undone, Lash said that

in the first modernity, we were faced with relatively mutually exclusive and exhaustive systems: of (Parsonian) social systems on the one hand, and engineering-like technical systems on the other. The second modernity's totally normal chaos is regulated...by extraordinary powerful interlacing of sociotechnical systems. (2004, p. 55)

Much of the research in the STS stream has focused on the role of technology in shaping the social-technical arrangements of mobile work. For example Vartiainen and Hyrkkänen (2010) suggested that there has been a distinct evolution in flexible technology-enabled work moving from traditional telework (home-based work outside of the office) to e-work (flexible use of time and place using ICTs to communicate with the organization and/or employer) to flexible multilocation work (flexible use of time and space using mobile ICTs for work and collaboration from multiple places). Others, emphasizing technology, have stressed that it is about the *access* and *ubiquity* of the technology. Jordan (2009b) proposed that

as the Internet and the World Wide Web proliferate, and people live increasingly hybrid lives where the physical and the digital, the real and the virtual, interact, we are witnessing an

underlying process of technology-spurred blurring, resulting in major shifts in the cultural landscape of the 21st century.” (p.181)

Not all perspectives reflect the argument that the social transformations represented by mobile work are due primarily to evolving digital technology. Other scholars examining this phenomenon have emphasized the *mutual* shaping of the social and technical. Ferneley and Light (2008) noted, “Historically, there has been a tendency to assume that the ICT artifact is a self-contained entity that is affected and affects the social setting in which it is deployed” (p. 164). However, they pointed out that more recent empirical research has shown that “as the technology meshes with its social context of use, so humans appropriate technologies in new ways” (p.164).

Wanda Orlikowski, MIT Professor of Information Technologies and Organizational Studies, (2000) suggested that ubiquitous ICTs [e.g., mobile devices] are particularly malleable and users are beginning to interact with these new and emerging artifacts in different and unconsidered ways regardless of how they are controlled or directed. She proposed that a more useful approach, especially for emerging technologies, is to recognize the dynamic nature of such technologies, “the recursive and incremental nature of user interaction, and focus on what structures emerge as people interact recurrently with whatever properties of the technology are at hand” (p.407). Orlikowski’s approach with its emphasis on mutual shaping and emergent structure was adopted in the study being discussed here as a useful conceptual framework for understanding the structuring of workplace under conditions of mobile practice. The study was particularly informed by Orlikowski’s formulation of *technologies-in-practice* in which she proposed a *practice lens* to study “how people as they interact with a technology in their ongoing practices, enact structures which shape their emergent and situated use of technology” (p.404).

2.1 Summary and focus of study

A review of the literature that led to the focus of the study discussed here indicated that research on mobile work has not kept pace with the depth and scope of this contemporary form of work in a couple of important ways. Firstly, scholars have primarily taken a segmented approach to studying mobile work focusing their study on a particular type of work, worker, or mobile device. As digital technologies continue to converge, move to a mobile platform, and diffuse throughout a much greater segment of the population, it makes more sense to study *mobile work practices* regardless of who, where, and by what mobile device they occur.

Secondly, attempts to understand how employees view their mobile work in terms of reconstituting work-home-leisure boundaries have been constrained by an assumed work-life balance paradigm. When people adopt mobile devices to do their work in a number of locations, (physical and virtual) and at all different times, the whole notion of work as a definitive place and time frame (such that it should be separated and balanced with home or personal life) makes less sense. This is not to say that mobile workplace is not bounded in some way but rather that the way in which many individuals are adopting and adapting mobile devices to do work makes the enactment of these boundaries much more complex, emergent, and varied. The study discussed in the remainder of this paper asked the following questions:

RQ₁: What practices do mobile device users engage in that are implicated in their enactment of workplace boundaries?

RQ₂: What sense do mobile device users make of their practices in terms of affecting the boundaries between work, home, and leisure?

Some clarification of terms will be useful here. In the study, *workplace* was conceptualized as combination of spatial, temporal, and psychosocial boundaries. Partly this was considered a useful way of making the abstract social institution of workplace concrete and explicit in order to study how it is implicated in mobile device use to enact workplace. It also acknowledges that all change comes about in a historical context and that the place, timeframe, and norms of work constitute familiar

frames of this context from which we are beginning to evolve and change as individuals adopt mobile devices to enact workplace. The use of the term *boundaries* is distinct for each research question. Boundaries in question one refers to the workplace structure as spatial, temporal, and psychosocial boundaries. Boundaries in question two is used as a conceptual marker distinguishing work and leisure domains of an individual's overall lifespan. The use of term *mobile practices* is meant to keep the focus on *what* individuals do to enact workplace boundaries not the device they use. The only important characteristics of the device for the purposes of the study discussed here is that it is mobile and capable of an Internet connection.

3 Research Methodology

One of the goals of the study was to avoid studying the mobile practices of a narrow segment of the workforce. In order to achieve this, participants were initially identified through network sampling and then purposefully selected to represent multiple work contexts in terms of sector (e.g., technology, education), form (e.g., self-employed or working for a specific organization), role (e.g., manager, support, professional), and frequent use of different kinds of mobile devices (e.g., smart phone, tablet, laptop computer) to do work. Twenty-eight individuals between the ages of 26 and 70, with an even balance of gender participated in the study.

A challenge that had to be overcome is that the enactment of workplace boundaries via mobile work practices is not easily observed first hand. Nor is it a subject that most participants had previously considered and discussed. In order for individuals to begin to discuss their mobile practices they first needed some kind of a process to facilitate their reflection on the subject. In the best case scenario participants would be able to reflect away from the gaze of the researcher but the researcher would have access to the data generated. Given that goal, the study combined two strategies of inquiry to engage participants in reflecting and collecting data about their actual mobile work practices as well as in discussing the meaning of that data as it relates to the configuration of work space and overall lifespan boundaries.

One strategy involved the use of cultural probes whereby individual packages of mixed-media materials were given to research participants to allow them to document and record elements of their daily lives and thoughts. Originally conceived by Gaver et al. in 1999 in the context of systems design research, the use of cultural probes in qualitative research of this sort is fairly new (Robertson, 2008 p.1). Central to this method of data collection is a value for "uncertainty, play, exploration, and subjective interpretation" (Gaver, Boucher, Pennington, & Walker, 2004, p.53). This approach to data collection was thought to be consistent with having participants reflect on their mobile practices (in an open and exploring manner) and begin to articulate their own subjective description of these practices.

The cultural probes package for this study was adapted to an online format whereby participants were engaged through a secure website for a period of two weeks to reflect on their mobile practices and document these reflections. Documentation included journaling, photos, and storytelling—all designed to socialize participants into the project, so when later interviewed they were not putting words to inquiry for the first time.

The second strategy of inquiry involved conducting in-depth, semi-structured, qualitative interviews which built upon the rich (both visual and written) initial online data. The key focus of the interviews was to elicit discourse that revealed what sense individuals made about their mobile practices in construing boundaries and reconfiguring their overall lifespan.

Finally, thematic categories were culled from the initial exploratory research and interview questions and then, coding was done using the NVivo qualitative data analysis software package. An interpretive data analysis approach (Millar and Crabtree, 1999, pp. 127-141) was employed to identify key themes which are taken up in discussing the findings that are highlighted in the next section.

4 Findings: Mobile Practices and Shifting Workplace Boundaries

Key findings are summarized in Tables 1 and 2 below along with sample data and then followed by a more detailed discussion of their meaning. *Spatial boundaries* refers both to physical and virtual attributes of the spaces *where* individuals enact work; (b) *temporal boundaries* refers to the attributes of time *when* people enact work, including such aspects as responsiveness and interval of work time, as well as the hour of the day; (c) *psychosocial boundaries* refers to social and workplace norms pertaining to *how* individuals go about enacting work.

Sample cultural probes & interview questions	Key theme	Sample data
<p>1. Spatial Boundaries:</p> <p>I try to set up my work environment so that...</p> <p>A photo of different spaces where you end up doing your work with mobile devices</p> <p>A photo of a place you think of as your "office"</p> <p>Do you think of your work space as mostly physical or virtual or both? What meaning does this space have for you?</p> <p>How do you make choices about where to work?</p>	<p>Describing a workplace tailored to my own proclivities and needs</p>	<p>Much of my mobile work occurs here at home...or on the plane, in an airport, in the car, at the doctor's office, at my daughter's _____ (fill in the blank) practice and just about anywhere else there are a few minutes that allow time to check e-mail, text messages, or make phone calls. (Frank)</p> <p>I work from wherever I am...my apartment, brother's house, or a friend's home -as long as there is an Internet connection. (Martina)</p>
	<p>A sense of my own place</p>	<p>I like having a desk that has my stuff on it... my mess, a feeling like the space is mine and I have some sort of ownership over it. But I move a lot between offices, so I'm not always sure how to stake out my claim. I usually opt to hunker down with my laptop, smartphone, and a pair of headphones to create a kind of "my space". (Ira)</p>
	<p>Emptying out of the office...</p>	<p>Our offices or cubes used to be our home away from home—a place you could nest and have some real personality. As I walked through the office today, I noticed that most cubes were quite sterile. People just aren't there enough to want to give it a sense of permanence or commitment. (Jackie)</p>
	<p>Seeking out co-presence</p>	<p>Sometimes I will mix things up and go to a coffee shop to do work, and treat myself to a yummy dessert or drink, and sit with tons of other people behind their laptops doing whatever it is that they do. There's some comfort in working with strangers like that...I don't know why, but I like it. (Debbie)</p>
<p>2. Temporal boundaries:</p> <p>I start my workday...</p> <p>During work, I tend to take a break or 'play' when...</p> <p>A photo of the virtual space where you spend most of your working time (screen shot).</p> <p>Do you work in a certain timeframe?</p> <p>What is the choice about</p>	<p>A malleable workday</p>	<p>In general, the line between work time and "my time" is blurred. My access to various mobile devices defines my work time far more than a clock or calendar. When I'm working from home, it sometimes takes me 16 or 18 hours to complete 8 hours of work. It's not that I'm particularly inefficient, but more that the ready access to mobile work devices allows me to have great flexibility in when and where I work. (Frank)</p>
	<p>Increasing temporal space</p>	<p>Things are time sensitive, so I am constantly checking my phone and e-mail and responding immediately to anything that comes to me. I try to set up my work environment so that I never miss a thing and can respond to incoming activity in as close to real time as possible. (Jeff)</p>
	<p>The paradox of trying to "stay on top of it"</p>	<p>I've sat in bed answering e-mails before I go to sleep, but this inevitably leads to what my colleagues and I call "evening escalation:" the process where someone answers</p>

when you work based upon?		an e-mail you sent them at 11:00 p.m. almost immediately and it goes back and forth until someone decides they've had enough. I've had this go on for over an hour in some cases just because I didn't want to have to deal with something the following day. I see a lot of people who tend to operate like me responding to things immediately because they're busy and want it off their radar. But that sends a message that this thing can be dealt with immediately. (Ira)
3. Psychosocial Boundaries I turn off my mobile devices when... One of the real downsides of working with mobile devices is... Something you consider an interruption when you're working... What do managers of employees who increasingly engage in mobile work need to learn or do?	Conflicted notions of appropriate use Mobile practice norms in face-to-face meetings	I had a meeting with my manager today to discuss some serious topics about a conflict that we had on Friday and potential new opportunities for me within the company. I had my mobile device set to silent at the beginning of the breakfast meeting so that it would not interrupt us. My manager however, had his on vibrate, which it proceeded to do throughout the entire meeting. It was very frustrating, and I was more than a little annoyed. (Kerry) If I have a meeting, I tend to take a mobile device (either my phone or my laptop) to work on or use to accomplish other work if I feel like I'm not really needed at the meeting. In general, I've found that it's preferable if I bring a laptop or my iPad - people tend to see use of a phone in a meeting as rather disruptive. (Ira) It was very rude - people would just walk in, open up their laptops and continue working, obviously doing all sorts of other things in the meeting. (Jackie)

Table 1. Sample findings for RQ₁: What practices do mobile device users engage in that are implicated in their enactment of workplace boundaries?

Findings for RQ₂ revealed that there is much diversity in how individuals think and feel about the way in which the boundary between work and leisure is being altered by mobile practices. Four prevalent boundary configurations were reflected in the data as indicated in the table below.

Sample cultural probes & interview questions	Boundary configurations	Sample data
When the boundaries between work and home or leisure blur... The way I separate my work and personal life is... A photo + description of the mobile device you use most for work and the device you use most for leisure.	<u>Separate and Integrated</u> - enacting workplace boundaries in such a way that it sometimes blurs and other times keeps separate the domains of work and leisure (represented about a third of the participants)	So, even in those times when I'm working, when I'm in my office, I still take a little block of time and play a little bit. (e.g., Facebook, games) And even those times when I'm playing, I still take a few minutes to do some work. (Frank) Today was a holiday and although I usually blend and blur work and leisure and even brought my laptop home, I only checked email via my iPhone and consciously decided not to respond to anything until tomorrow. (Jackie)
Do you tend to blur work and personal endeavors in your	<u>Work Centric</u> -describes a mobile workplace that encroaches significantly into the domain of leisure. (represented about a quarter of the participants)	Without any clear boundaries of where work begins and ends, I err on the side of work. I think for me the difficulty is knowing when not to work. (Ira) My work blends into my home life, like when I leave my phone on my counter at home and make it a point to check it regularly as part of my home routine. But I don't really

work space or do you prefer to keep them separate? Can you give me some examples?		'play' at work. (Jeff)
In your use of mobile devices for work what are you learning about	<u>Separate</u> -the boundaries between the domains of work and those of leisure are purposefully kept separate. (represented only 3 participants)	Blending work and leisure isn't for me. I feel like I'm never unplugged. I've learned that I cannot blur the two. (Ann) When I'm on vacation, I do not do anything work related. I really try to disconnect from work and set clear boundaries with my teachers, staff, and families. (Debbie)
how you prefer to work? How you organize your work within your larger lifespace?	<u>Integrated</u> -indicates enacting mobile workplace in a way that fully integrates the domains of work and leisure. (represented well over a third of the participants)	When writing this journal, I realize that everything is really blurred between whether what I'm doing on my phone is work or recreation. When I use my phone for gaming, I also end up checking my mail for anything urgent. Vice versa, when I get an alert, after I deal with it, I usually play a short game or check Twitter. (Wayne) I like how my mobile practices allow me to mix up work and leisure space...it actually is freeing in some ways because I do what's important in the moment (Ruth)

Table 2. *Sample findings for RQ2: What sense do mobile users make in terms of how their practices affect the boundaries between work, home and leisure?*

5 Discussion

The research reported on here suggests that the workplace that is enacted through employees' mobile practices may create far more complex social technical relations than we have previously had to deal with, supporting Scott Lash's (2004) postmodern view of the new social technical as indicative of a new age. Following is a discussion of some overarching themes in this study that reflect this complexity and that both support and challenge earlier research.

5.1 The decoupling of work and workplace

Although the workplace has lost some of its legacy as a brick-and-mortar destination in people's minds, employees expressed that some sort of physical connection to space or place is still important. Individuals indicated how they sought out spaces in their homes, as well as nested temporarily in client offices, coffee shops, airplanes, and airport lounges to achieve some kind of work rhythm, routine, and role. This speaks to the powerful relationship between space and belonging on one hand, and on the other hand to the increasing provisional quality of space as mobile devices allow individuals to become untethered from a fixed office space.

A related consideration is what happens to the organization's physical workplace as employees "go mobile" — how do employees back in the office view that space? In her study of spatial shifts in an organization that recently instituted a policy of home working, Halford (2005) referred to the "*hollowing out of the fixed organizational work space,*" with work being relocated in the home or virtual space (p.10, my italics). This notion was echoed by those who participated in this study. Employees reflected that while mobile work practices relocates work to home, and other physical spaces [and virtual space], they observed a change in what used to fill the space in the traditional office—whether that involves people, artifacts, purpose, or vitality. (See Table 1 for sample data).

Perhaps as a reaction to the hollowing out of the traditional physical space as it shifts into the virtual, some employees indicated purposely seeking out a space with noise and people in which to do their work, a kind of being with others that has more recently been referred to as "copresence." Other

employees talked about the difficulty of thinking creatively in the sterile, silent cubicle-filled office space. One individual said her mobile devices allowed her take the local transit to the Ferry Building in downtown San Francisco, which is full of colorful noise and chatter, and use it as a work space for “thinking out of the box”. These key themes: *hollowing out of the office* and *seeking out co-presence* are further illustrated with sample data in Table 1.

Some employers are beginning to rethink the purpose of “office space” in light of mobile work. One individual described how her employer’s office work space has been designed first and foremost for connection and building relationships among coworkers with several “hang out” areas, murals on the walls, and comfortable couches. Notably, there weren’t any cubicle or separate office spaces. When she commented that she valued her work space at the company office for “building connections” and her work space at home for being “efficient and productive,” using her mobile devices to mediate between the two, the reversal of the traditional purpose of work and home spaces was striking.

Although popular press has emphasized the isolation of those who work via mobile devices at home, or en route, this inquiry revealed that employees were quite mixed on this issue. Some insisted there is no substitute for face-to-face interaction in developing good relationships with fellow workers, while another eloquently described the depth of connection with his virtual community of colleagues:

Occasional interruptions—a dog barking, the washing machine making noise, or infants cooing— actually served to bring the remote workers closer together. I can easily say that the co-workers from my Motorola days with whom I worked most closely, and whom I became socially close to, were often remote workers instead of the on-site workers. Because work and life were melded rather than balanced, it seemed quite natural to become close to my co-workers in a way that I did not do in previous jobs. (Jeremy)

5.2 Shifting temporal boundaries

The 9-5 workday as the defacto timeframe for full time employment is a deeply entrenched part of the larger cultural script relative to work time—at least in the US. This embedded notion of the fixed workday may account for the fact that many participants in the study describe themselves as working a “normal” schedule. However, detailed descriptions of their mobile practices revealed otherwise:

Saturday, I might sleep with my iPhone near my bed...so when the alarm goes off, I pick up the phone and I look at my e-mail. I’m often getting up early enough to see what’s going on overseas” and “it’s not uncommon for me to sleep with my laptop in bed. (Mary)

What was more typical of those enacting work through mobile devices was a *malleable workday* as indicated in the sample data for this theme. (See Table 1).

In addition to the fact that the temporal boundaries defining mobile workday have become more malleable, mobile devices seem to have increased the temporal pace of work for many. Individuals indicated that constant connection and response was the only way that they were able to manage increased throughput and “stay on top of things” in their work. They provided descriptions of working on vacation, checking mobile devices at 5:30 a.m., being able to work while sick via mobile devices, and using every spare moment such as waiting at the airport to respond to e-mails. There was a sense conveyed of wanting to reduce workload, avoid escalation of problems, and get closure.

A few participants were aware of the paradox of “trying to stay on top of it” and described the vicious cycle that their mobile practices of constant access and immediate response often created in terms of actual workload (see Table 1). Managers interviewed were also concerned about their own tendency to use their mobile devices to respond immediately, setting up their employees to work in the same kind of way.

5.3 Evolving workplace norms

The growing permeability between work and personal-leisure domains that mobile practices enable means that work space is often enacted in what individuals consider and label *private* or *public* spaces and times. The result is contested terrain where previously accepted social rituals are called into question. (An extreme example is the recent shooting of a man in a movie theater for texting, ([Man Killed in Argument over Texting at Movie Theater](#))). The study reported on here provided numerous examples of how such contention is playing out in the enactment of mobile workplace in the form of participants' stated confusion and ambiguity about the appropriate norms to outright boundary clash. (i.e., use of mobile devices in meetings) The appropriate psychosocial boundaries in the workplace once based on shared norms, agreements, and expectations about how we will behave with each other are being renegotiated in light of mobile practices. To some extent this renegotiation will be guided by the existing organizational culture and shared habits or conventions, but the time-space fluidity enabled by mobile devices allow for such new possibilities, that new expectations and routines are likely to shape unique future norms.

5.4 Reconfigured lifespace?

As indicated in the Findings Table for RQ₂, the participants in this study described mobile practices that revealed a continuum of proclivities for blurring and/or separating the domains of work and personal-leisure in their overall lifespace. However, on the whole there is an observable collapse in the distinction between these domains as work becomes embedded though mobile practices in what Mazmanian et al (2006) described as the "micro-moments" of individual's lives.

New work space is characterized not only by permeability between spheres of life but also by the elasticity of time, moving individuals towards Castells's (2000) notion of the contemporary landscape as a "space of flows" and "timeless time." (p. 406) Although there is little research on mobile practices per se, for the research that does exist, there is an observation that this collapse in the distinction between work and personal-leisure domains fragments both individual's work and personal lives (e.g., Gluesing et al., 2008; Mazmanian, Orlikowski, et al., 2006). Research reported on here did not entirely support this claim but rather showed that although it did sometimes have the effect of fracturing these domains, it equally had the effect of integrating the domains of work and personal-leisure in a way that was perceived as very satisfying. It may be that this is a result of time and our own evolution with the technology. In 1934, Lewis Mumford predicted that we might enter a time when our technologies were more attuned with our lives, when they served people in a more life-enhancing, organic way. He suggested that during the industrial era, while the mechanical elements in production were being rationalized, the human elements of production—fellowship, hope of advancement and mastery, appreciation of the entire process of work itself—were being made irrational, reduced by the mechanical subdivision of work (p. 383). The big shift that he saw coming was "instead of simplifying the organic, to make it more intelligibly mechanical, we have begun to complicate the mechanical, in order to make it more organic: therefore more effective and harmonious with our living environment" (p. 367).

Perhaps the blurring and integration of work and personal-leisure domains speaks to our moving in a direction of the sort Mumford predicted. At a minimum the findings of this study reveal an array of lifespace configurations supporting the proposition that work space enacted through mobile practices is increasingly idiosyncratic in terms of the way it is nested in the larger lifespace. In that sense the findings also stand apart from the bulk of the literature in the sociology of workplace that focus on the importance of the boundary between work and home or maintaining work-life balance (Boswell & Olsen-Buchanan, 2005; Ladner, 2008; Tietze & Musson, 2005). At the same time, the findings build on other research of the social-technical conceptions of workplace that do not reify the

familiar dualisms of work / home, work / leisure, and work / play (Gluesing, 2008; Halford, 2005; Nardi et al., 2008)

On the other hand enacting work space through mobile practices “anytime, anywhere” clearly offers individuals a dual-edged sword. On the one hand it provides individual autonomy, flexibility, and a sense of control to create a more tailored and satisfying lifestyle. In the absence of self-control, however, it also enables people to have 24/7 relations with work resulting in work-centric lives. This study indicated that some individuals preferred and embraced (at least at this point in their lives) a self-described work-centric life. However, the intensification of productivity is a powerful social discourse (particularly in the US) operating behind the backs of individuals in the overall ecology of workplace. It may be that mobile devices “up the ante” for individuals to maintain self-control in the face of this discourse. Participants revealed both overt and subtle manifestations of their struggle to maintain some sense of control, often relating to their devices as powerful Other. For example, one participant referred to her company-issued iPhone as “my leash” and another called hers “my golden handcuffs.” Other participants employed mobile practices such as texting to buffer the constant push and barrage of information to act upon. Some disengaged their mobile devices altogether to achieve this control.

In his theory of communicative action, Jurgen Habermas (Eriksen & Weigard, 2003) expressed his concern for the kind of pathologies that develop when social constructs are increasingly coordinated by an orientation to instrumental success rather than an orientation to reaching an understanding through discourse by individuals (the primary goal of communicative action). He recognized that in the modern world there were an increasing number of areas that were being dominated by such instrumental action and referred to this as the “colonization of the lifeworld.” By *lifeworld*, Habermas meant “the shared common understandings, including values, that develop through face-to-face contacts over time in various social groups, from families to communities” (Frank, 2007, p. 4). Habermas’s notion of the colonization of the lifeworld as evidenced by the increasing intrusion of work space into the larger lifeworld enabled by mobile practices offers a counterpoint to the idea of mobile practices facilitating Mumford’s notion of organic integration.

6 Conclusion

6.1 Dialectic in the mobile workplace

In exploring participants’ mobile practices and perceptions about the reconfiguration of boundaries in their lifespaces, this study reveals that individuals are having to contend with a number of conflicting dualities in their enactment of work place, something that Mazmanian et al. (2006) began to observe in 2006 with the introduction and growing use of the Blackberry in the workplace. Since that time mobile practices have become ubiquitous in the workplace, and in many ways these dichotomies have proliferated and intensified structuring work spaces that are tentative, idiosyncratic, and sometimes contentious. Whether mobile practices to enact work space will become more uniform, creating normative structures, remains to be seen. As Fuchs (2008) asserted, “Technology enables a space of possible forms of cognition and interaction; there is a non-linear and complex relationship between technological possibilities and social systems” (p. 331). At the moment, as this research study indicates, mobile practices to enact work space reflect the dialectic that is at the core of the larger intertwining of the social and technical in our contemporary society.

Giddens suggested that “the basic domain of the study of social sciences according to structuration theory is neither the experience of the individual actor nor the existence of any form of societal totality but [rather] social practices ordered across space and time” (1984, p. 2). This study represents one iteration of this theme. As we enact mobile digital practices there is an intertwining of the social and technical in our current space and flows. A variety of boundaries (e.g., temporal, spatial, and psychosocial) are blurred, challenged and re-enacted, producing a dialectic outcome. That is, on the one hand we have changed work space and flows characterized by blurred boundaries and

emergent improvisational space, both idiosyncratic and glocal in nature. On the other hand, we have reification of current structures (e.g., political, power, relational). This dialectic in outcomes produces a dialectic in our collective experience as well. On the one hand there is an experience of liberation from the work / life dichotomy: a chance to create our livespace anew with new rhythms and a sense of individual control over boundaries. On the other hand there is an experience of the colonization of our livespace by what many characterized as 24/7 work: over-connection, disorientation and intensification of work values relative to responsiveness and productivity.

6.2 Research implications

This qualitative study explored mobile *practices* in an intentionally broad context addressing a call of earlier research to move away from studies focusing on a discrete type of mobile work based on place (home), or kind of work (call center), or device (Blackberry), or frequency (telecommuting at least once a week), towards a more pluralistic notion of mobile work that is rapidly becoming a common, albeit uniquely enacted, practice among a diverse and growing segment of the population. A focus on practice is consistent with the current ecology of workplace, where digital technologies continue to converge, move to a mobile platform, and diffuse mobile work practice throughout a greater segment of the population. A limitation of the study is that the sample size was not large enough to get a sense of differences in mobile practices and sensemaking about shifting boundaries relative to variables such as gender, age, and type of work. It is also important to acknowledge that the participants represented a subset of all mobile device users (albeit a growing one) that have the autonomy in their work to abandon the 9:00 am to 5:00 pm regime and work in a variety of places at times of their own choosing.

Although this research was exploratory in nature, important practical implications are indicated by this study. One is the implication for the future design of workplace, given the shift from employer-defined work space to increasingly idiosyncratic work space enacted by individuals through mobile practices. There is no one-size-fits-all office space anymore; we are rapidly moving away from the practicality of the cubicle, and there is no viable e-cubicle yet. When individuals are untethered from the 9:00 a.m. to 5:00 p.m. brick-and-mortar space, they get very creative about how they do work: weaving it into the rest of their life commitments, making multiple trade-offs, and creating unique work spaces. How we design for this shift in workplace both technically and socially, let alone the often-contested public and private spaces where work is being relocated is significant.

A second implication of this research is the need to think about how we manage a mobile workforce. Findings imply that managers need to be able to “segregate the work and the work products from the work methods” as one participant remarked. Shifting from focusing on supervising where, when, and how individuals work to identifying, clarifying, and sometimes negotiating accountable goals and deliverables may require different kinds of management skills (e.g., project planning, coaching). On the other hand, as mobile workers disperse, managers may need to create and implement venues for them to connect and build relationships. It is also clear from this study that managers need to think about the kinds of expectations that are conveyed to employees by their own mobile practices and to be comfortable in facilitating an explicit discussion of mobile practices with employees.

A third implication of these findings concerns what may be a shift in responsibility for employee well-being. Individuals enacting work space through mobile practices have potentially greater control over achieving what for them is a satisfying integration of work into their overall livespace. However, this will require a paradigm shift for both organizations and individuals. Organizations will need to rethink paternalistic one-size-fits-all work–life balance programs and given recent research validating the link between employee health, well-being, and productivity, they will likely be motivated to do so (Harter, 2012; Harter & Agrawal, 2011). Individuals will need to take on responsibility for crafting the unique place of work in their lives, modifying mobile practices accordingly. This might require introducing the whole notion of thinking about the place of work in

one's life and behaviors that support boundaries around that intention more explicitly, perhaps as part of an individual's education *before* they enter the workforce.

A final implication that we may need to begin to address as a society is the likelihood that a shift to a more individually configurable work space will not be even. An important question in the evolving sociotechnical arrangements of workplace enabled by mobile devices is how do we avoid creating a two-tiered system of workers, where some have control over the place and time of their work and can connect it in a meaningful way to the other aspects of their lives and some have no choice in this?

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