

**CrackBerrys:
Exploring the Social Implications of Ubiquitous Wireless Email Devices**

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Changes in technology use, especially the adoption of Internet-based technologies and the proliferation of telecommunication technologies, have changed the ways that people in organizations communicate and work with one another. Wireless email devices are one of a number of mobile and networked devices that some argue may serve to redefine social dynamics by enabling new forms of interaction and collaboration (Lyytinen & Yoo, 2002; Pica & Kakihara, 2003). Such tools are emblematic of the move toward “ubiquitous computing” (Weiser, 1991), the use of which is producing an environment characterized by mobile or nomadic working, and a network of information flows and continual communication (Castells, 1996; Giddens, 1990; Green, 2001; Hassan, 2003; Hörning, Ahrens, & Gerhard, 1999; Pica & Kakihara, 2003). While a number of scholars have explored the evolving relationship between technology and society in such an “information age,” they have typically not addressed the micro-practices that individuals engage in when using wireless communication devices. As technologies become more portable and pervasive, the ability for individuals to stay connected expands into new settings and challenges taken-for-granted expectations of connectivity, responsiveness, and coordination. As a result, existing accounts do not help us understand how the environment of continual information flows is recurrently enacted through ongoing situated practices, nor do these accounts shed light on the likely consequences for individual and organizational life. That is the focus of our interest here.

Our research examines how wireless email devices — specifically the BlackBerry — are being incorporated into the daily lives of information professionals, and with what social consequences. Having acquired over four million BlackBerry users by January 2006, the manufacturer, Research in Motion (RIM) currently enjoys the largest market share of wireless email devices (around 70 percent), and its recent settlement in a lawsuit claiming patent infringements suggests uptake of the device will continue to increase.

Email is not a new communication medium, but the BlackBerry wireless email system enables users to engage with email in relatively new ways. The system automatically and continually forwards email from a corporate server to mobile devices via cell towers.¹ The speed and reliability of the wireless connection is subject to signal strength and coverage, but is reported to exceed that for cell phones. BlackBerrys thus allow relatively easy receipt of email from almost anywhere. Users need not be at work, a home office, or even in a laptop wireless

¹ While individuals can purchase wireless email devices through cell phone providers, RIM’s original business model provided dedicated BlackBerry servers to companies. All of the users in our study were provided BlackBerrys by their employer and all messages were forwarded by the firm’s dedicated internal email server.

zone. Assuming the device is on,² no time is wasted starting a computer, logging into the internet connection, or waiting for email to download. The system persistently “pushes email” to the users,³ who can view and reply to these messages (or initiate their own messages) through the use of a trackwheel and thumb-operated QWERTY keyboard.

Email in its current expression allows asynchronous, largely text-based messaging, supporting delayed responses, multiple recipients, and a record of interactions (Culnan and Markus, 1987; O'Mahony & Barley, 1999). The BlackBerry device additionally provides hand-held size, battery power, and potentially constant connectivity. Observers note that BlackBerrys are perceived to be relatively unobtrusive (they may be set to a “silent” mode) and that they enable the productive “use of dead time” in a manner that does not require the immediate verbal interaction expected with telephone conversations (Schlosser, 2002). As such, users develop ways of embedding wireless email use into the micro-moments of their lives. How this happens, why, and with what implications were the questions that motivated our research study.

Literature on Mobile Communication

BlackBerrys provide for mobile email, and while findings concerning the use of email in organizations may apply to the use of BlackBerrys by employees, it is unclear whether and how the experience of electronic messaging changes when communication becomes pocketable, mobile, and continual. Indeed, new questions about organizational dynamics are raised when expectations of temporal and spatial interaction are challenged and changed.

Some commentators have suggested that wireless email has some aspects in common with instant messaging (IM). In its current manifestation, IM is typically used as a text-based, asynchronous messaging system that allows users to send and receive (usually short) messages on a personal computer. However, work focusing on IM reveals that users perceive it as a distinct mode of communication and employ it in a variety of situations. Nardi, Whittaker & Bradner (2000) find that IM is used to support flexible, expressive communication that facilitates a connection between users that goes beyond strict information exchange. They argue that the “plausible deniability” afforded by the use of IM is a key aspect in users’ attachment to it. Their work emphasizes the “near synchronous” immediacy of IM, which also provides a buffer between interactions that allows users to negotiate availability, thus simultaneously supporting a “back stage” distancing (Goffman, 1959). Nardi et al. (2000)

² Like a cell phone it is common for a BlackBerry to be kept continuously on. Everyone in our study did so.

³ Every person in our study used a device configured to immediately receive all incoming mail at their device.

further argue that IM provides a persistent link between people that gives them a sense of connection, or what Licoppe (2004) terms “connected presence” (see also Schroeder (2005)). Others have found IM used for a wide variety of interactions including informal chat, coordination work, and complex work conversations (Isaacs, Walendowski, Whittaker, Schlano, & Kamm, 2002). Researchers have also examined whether use of IM may serve to derail work and attention as users are constantly interrupted by incoming messages (Czerwinski, Cutrell, & Horvitz, 2000; Rennecker & Godwin, 2005).

While there has been limited research into the use of cell phones within organizational settings, scholars have examined the potential for this technology to tie people to extended relations in all aspects of their everyday lives. Individuals are seen to be forever “on call” to the demands of others as accessibility “anywhere, anytime” becomes played out as availability “everywhere, all the time” (Brown, 2001; Cooper, 2001; Katz & Aakhus, 2002; Meyrowitz, 1985). Green (2001) suggests that cell phones encourage a turn toward inward surveillance. Expectations of “always-availability” may “normalize the notion that individuals *should* be available and accountable to others, visibly and transparently, at any time and place” [emphasis in original] (2001, p. 33). Cell phones are also seen to collapse distinctions between public and private spheres of life (Grant & Kiesler, 2001; Green, 2002). In a further study, Green discusses this blurring as a “kind of spatial and temporal boundary rearrangement” (Green, 2002, p. 287), finding that the use of cell phones encourages the embedding of “public” activities and responsibilities into private time and space (e.g., the home), as well as the integration of private commitments and relationships into the public sphere. She argues that this potentially fragments both “public” and “private” interactions, “collapsing each into the other” (2002, p. 289).

While BlackBerrys share the potential for mobile, constant connectivity with cell phones, the asynchronous nature of email allows some flexibility in when to respond, and potentially enables a sense of control over incoming messages and the positive experiences identified in research on autonomy and control. While individual autonomy increases individual flexibility, it also increases the permeability of boundaries between spheres of life, calling into question shared norms of accessibility regarding “on” time and “off” time (Zerubavel, 1981). The “appropriate” time for interaction is typically based on shared understandings and norms, which emerge from a history of recurrent engagement (Orlikowski & Yates, 2002). Given that activities are temporally structured through interaction with media, use of devices such as BlackBerrys may provide opportunities for renegotiating accessibility and availability, potentially shifting an organization’s “prevailing temporal agenda” (Blount &

Janicik, 2001). In the context of tightly-networked communities, choices about how to integrate BlackBerrys into everyday practice will become patterned across space and time in the form of communication routines (Gersick & Hackman, 1990). Such expectations can be tacit, unacknowledged, and perceived as matters of individual choice (Bettenhausen & Murnighan, 1985; Gersick & Hackman, 1990). In this sense, shared expectations may not necessarily be experienced as social control or conformity, particularly where group norms are believed to align with individual values (George & Jones, 1997). Furthermore, the use of BlackBerrys within occupational networks may also enhance an individual's reputation and image as a competent professional (DiMaggio & Powell, 1983).

The mobility of BlackBerrys also contributes to a form of constant connection that is less constrained by spatial limitations. Giddens (1990) has written about the possibilities for "time-space distancing" generated by information technology infrastructures, and in the use of such devices as BlackBerrys and cell phones, we see the "stretching of social relations across time and space" that he writes about. In a related vein, Castells (1996) has devoted considerable attention to reframing notions of time and space to reflect shifting conditions of the "network society." He proposes the notion of "timeless time" to signal that the temporal rhythms of networked communication stand in sharp contrast to the more familiar rhythms of biological and clock times. Castells argues that while these latter times are ordered, regular, and sequential, timeless time is compressed, desequenced, and destabilized. Multiple and randomized temporalities are present, resulting in both flexibility and fluctuation in the sequence of events. With respect to space, Castells suggests that the prior commitment to physical location and territoriality marked by the "space of places" is no longer dominant, as networked actors can interact in real time from and across widely dispersed locations. Thus, a new kind of space must be expressed to facilitate this unprecedented form of interaction, one he calls the "space of flows." While the new space of flows does not eliminate geographical places from consideration, it does change their logic and dynamics.

While there is limited research on the use of BlackBerry devices per se, the existing literature on the use and implications of electronic communication technologies, both individually and more broadly, suggests that interaction with the BlackBerry will both contribute to and create the complex social environment that frames experiences and expectations of its use. Individuals' use will be guided by their existing understandings and habits, while also helping to develop new expectations and routines, which may, in turn, become part of the normative structure that shapes future technology use for the larger community. Whether, how, and why

these recursive dynamics are enacted formed the core interest of our field study into the use and implications of BlackBerry devices within one organization.

Research Site and Methods

Research Site

Our study examined the use of BlackBerrys by information professionals in a small and prestigious private equity firm, Plymouth Investments.⁴ Operating since the mid 1980s, the firm has raised over three billion dollars in private investment, and at the time of our study in 2004, was managing its sixth investment fund of almost two billion dollars. The firm's funds have repeatedly produced favorable results, consistently performing at the top of the industry. At the time of our study, the firm employed 33 people, including 22 investment staff, 5 senior support staff,⁵ 5 assistants, and one receptionist. There are four investment staff ranks. The six *junior associates* are college graduates who are recruited after spending two years at a large consulting firm or investment bank. Working on several deals at once, doing background analysis and traveling with senior people to get exposure, junior associates do much of the preparatory analysis preparing for deals. After two years at Plymouth, they are expected to leave the firm to pursue an MBA. A small percentage will return to Plymouth after completing their degrees, and will re-enter the firm as *senior associates*. The three senior associates take a more active role in dealing with the companies in the firm's portfolio, and work for four to six years before being attaining the title of *principal*. The three principals take direct responsibility for shepherding deals, and making sure that everyone on the deal teams is informed, engaged, and doing their job. Principals wait approximately four years before a decision is made on their promotion to the rank of *partner*. The ten partners make all personnel and investment decisions, interact with the various parties at the start of deals, and sit on the boards of the companies in the firm's portfolio.

Once the partners decide to pursue an investment, the potential deal is assigned to a "deal team" of about four to six people. Typically composed of one partner, one principal, and a few junior and senior associates, communication among members of the deal team is intensive and extensive. The principal acts as the primary point-person for communication with junior and senior colleagues. The small size of the firm and continuous shuffling among

⁴ All names (company and individual) are disguised for purposes of confidentiality.

⁵ The category of senior staff includes positions such as Director of Operations and Director of Marketing.

teams creates a tight communication network. Socializing among investment staff outside the office is also common.

The investment staff is expected to be highly mobile and flexible; travel schedules often include two to four days a week on the road. The job is demanding and fast-paced, but largely autonomous, which is the norm for a successful firm in this specialized and resource-rich industry. The high-status atmosphere is reflected in the physical environment, which is well appointed and well catered.⁶ Plymouth has a strong sense of collegiality and espouses respect for individuals and a commitment to work/life balance. This does not mean that individuals actively segment time and space into work and personal spheres. Indeed, norms in the firm make it clear that such “balance” is to be achieved through integration, rather than any clear separation of activities, and resources are made available to make this easier.⁷

Like many firms in the financial industry, Plymouth Investments’ primary resource is the expertise and judgments of its investment staff. In such an environment, communication is paramount. As Gary, one of the partners, observed, “I suppose you could argue that the email traffic of the firm is an asset of the firm. Communication is our lifeblood.” Over half of the members we interviewed emphasized that Plymouth is an “email-driven” organization. People appear to engage a range of genres within their email communication, including one-on-one conversations, group “FYI” messages to all members of a deal team, team reports, firm announcements, and scheduling face-to-face meetings and conference calls.

Given the “email-driven” and “on the road” modes of working within Plymouth Investments, partners decided to introduce wireless email devices into the firm in the late 1990s. After a brief trial period, Plymouth provided its entire investment staff and senior support staff with BlackBerry devices in 1999 — just over four years before we conducted our study. Since then, each new employee is issued with a device upon joining the firm.

Research Methods

We conducted two rounds of interviews at Plymouth Investments. In the first round, we conducted 28 interviews with employees and their spouses. These interviews, lasting from 30 minutes to 2 hours, were tape-recorded and transcribed. Most of the members of the firm – 19 of the 22 investment staff and 4 out of 5 senior staff – were interviewed, and we also

⁶ The kitchen is well-stocked with drinks, snacks, and instant food, while a catered lunch is provided once a week for the entire staff.

⁷ Support staff are hired with the explicit understanding that they will assist investment staff with personal as well as professional matters, for example, dealing with service people at homes, facilitating private appointments, etc.

interviewed 5 of the 17 spouses. Table 1 provides a breakdown of position and gender of these participants.

This first round of interviews explored issues associated with the adoption and use of the BlackBerry, organizational norms and expectations regarding its use, and the work, communication, and temporal practices associated with BlackBerrys. We were interested in understanding how members of Plymouth Investments used their BlackBerrys, when and in which situations, and with what implications. We were particularly interested in exploring the social dynamics that were enacted as a consequence of members' ongoing use of BlackBerrys, and how these recursively shaped ways of thinking about and using the technology in members' work and personal lives.

The second round of interviews (with 16 of the employees who had been interviewed in the first round) were intended to deepen and complement the initial round of data collection. These interviews followed a structured protocol to review a 24–72 hour period of BlackBerry email activity, including weekend and weekday use. During these interviews (also tape-recorded and transcribed), each interviewee talked through their saved email message logs, describing each email sent and received with the BlackBerry, including participants, content, and temporal and spatial contexts.

Our analysis was exploratory and followed a grounded theory approach (Eisenhardt, 1989; Glaser & Strauss, 1967). Following multiple readings of the interview transcripts, we began to identify themes associated with adoption and use of the BlackBerry in the everyday practices of the participants. This initial analysis of the data generated a set of themes centering on the social dynamics engendered by BlackBerry use. Further analysis suggest that these social dynamics entail a number of conflicting experiences, leading to contradictory consequences for the firm, its members, and their families. We examine these below.

BlackBerry Dynamics at Plymouth Investments

Our results suggest that members of Plymouth Investments use BlackBerrys to constantly monitor the flow of information and communication on their deal teams, as well as the firm and the industry more generally. And they use these devices in multiple locations, layering its use on top of other activities (what Perry et al. (2001), drawing on Jaureguiberry, refer to as “simultaneity of use”). Table 2 depicts the ubiquity of locations and occasions where members of Plymouth report using their device.

Members experience their use of the technology as allowing them to stay “in the loop” and “on top of things,” thus reducing stress and increasing control over their work. However, such ongoing monitoring requires them to be accessible via the BlackBerry most of the time, and this experience of almost constant connectivity increases their electronic dependence, and generates compulsive routines of chronic checking, escalation of commitment, reduced time for reflection, and thus increased stress in the longer term. In addition, the “addiction” to checking and responding to email on a frequent and recurring basis evokes the “absent presence” phenomenon observed by Gergen (2002) in cell phone use. Our analysis of such multiple and conflicting experiences suggests that members of Plymouth Investments contend with a number of conflicting dualities in their everyday communication practices, and we explore each of the following, in turn, below:

- continuity and asynchronicity
- engagement and withdrawal
- autonomy and addiction

Continuity and Asynchronicity

In their everyday work, Plymouth employees have to handle the demands of a job that expects them to be highly mobile while keeping track of multiple deals. BlackBerry-based email helped these employees stay continuously connected to the flow of communications, while utilizing the asynchronicity of email to control when and how they responded to the communications. This coupling of communicative continuity with asynchronicity allowed Plymouth members to “be in touch without really being in touch,” as Tina, a senior support staff member put it. The ability to monitor the flow of email communication was seen by all members to be a primary benefit of carrying the wireless email device. All noted that using the BlackBerry allowed them to achieve a sense of persistent connection with the organization and their work. According to Chad, a principal, “I definitely feel more connected, much more connected.” Asked how often he checks his BlackBerry at home, Ned, a junior associate, did not hesitate, “constantly,” going on to describe the primary value of using a BlackBerry as “the ability to be in constant touch with what’s going on.”

The deal-team environment of Plymouth encourages the copying of numerous people on every message, thus facilitating the continuity of attention to ongoing issues. As Chad, a point-person on many deal teams, explained:

Part of our responsibility is to make sure everybody’s in the loop, OK. So this is a great tool to make sure that I know that everybody’s in the loop. And then whatever they want to do with that information is fine,

and quite often my outbound messages are just, “This is for your information; I don’t want anything. I just want you guys to all be on the same page, so there are no surprises.”

Our analysis of the email data reviewed through the second round of interviews indicates that a third of all non-spam messages received on the BlackBerrys were sent to multiple recipients. This practice of carbon copying, along with numerous news updates and business related spam, creates a perception that email is often an endless stream of messages that users simply need to “keep an eye on.” Our second round interview data also suggest that most members of the firm carry their BlackBerry close to their person at all times, including during evenings and on weekends, and that they check it regularly. On average, they view incoming messages less than an hour after they are received during “off hours.” Jeff, a junior associate notes that he is “always looking at it ... just in case something’s changed,” while Adam, another junior associate, observed,

I think it just makes it a lot easier to work because on weekends and things like that you can just check your email and you know what’s going on.

Pat, a senior associate, explained,

In some ways you get more information this way because you can stay in the flow. It’s easy for them [principals and partners] to keep you in the flow. So you don’t feel like you’re missing out on details.

Attending to the flow does not necessarily mean interacting with the flow. The second round interviews identified two types of email responders: those who responded as soon as they received an email (*constant responders*), and those who delayed their responses to some later time when a number of email messages had accumulated or they were back at their desktop or laptop computers (*batch responders*). Batch responders valued the asynchronicity of BlackBerry email, as many believed it afforded them some control over when to respond, particularly in comparison to cell phones. As Rick, a partner, noted:

I do think part of [the appeal of the BlackBerry] is because I’m in control and I can figure out whether I want to respond to it immediately or blow it off for a little while. Whereas, if you get a cell phone call, you’ve got to deal with it immediately. I think that’s probably the biggest thing [...] just probably feeling I have control.

Across the board, interviewees report that using a BlackBerry to monitor incoming messages gives them a sense of control over the continual flow of information and a sense that they are aware of what is in front of them. Some believe that this continuity of attention increases both efficiency and effectiveness. Jeff, a junior associate, notes,

I think the ability to efficiently handle communications from outside the office at all times and keep in the flow constantly is the most helpful thing. You’ll understand what’s happening back in the office, even if you’re out of the office. And you can handle it real time.

Eleanor, a senior support staff member, similarly describes this aspect of her BlackBerry use:

I’m constantly connected. But it’s OK. It gives me the comfort level of knowing everything’s taken care of. I mean I’ve never felt as efficient or on top of things or just having things at my fingertips.

Although everyone describes the opportunity to monitor messages as a key benefit of carrying a BlackBerry, the ability to “check in” on organizational life by glancing at the BlackBerry has different benefits for those at different levels of the internal hierarchy. Junior members describe the BlackBerry as a tool that enables them to be closer to the core of investment work and the discussions around deals. James, a junior associate, highlights that the BlackBerry is a tool that allows a junior person to feel closer to the action,

I think it helps [to know what is going on with a deal]. I think you keep in the flow more if you're able to keep in touch. If I'm on vacation and I see what's happening with a project, I can write back and question their thoughts. I think it makes the junior people more engaged.

Of course, such a response is not without hierarchical implications, as evident in the observations of another junior associate, Ned:

Well, it allows you to give very fast responses to senior people, which I guess, as a more junior person, you always sort of like. If you can give a partner an answer quickly, you'd rather give it to them quickly than later.

Partners experience their BlackBerry as an opportunity to maintain their continuity of attention with various projects while away from the office. The device helps them delegate responsibility as deals evolve and to respond to changing information. Rick, a partner, notes:

As a matter of fact, I think it gives me more freedom to leave work. Because I know I can always be in contact and I can always be reached. And a lot of things that I do [as a partner] are to react to things. And so the fact that I can answer the question that someone has [while I am] in a golf cart means I can be in the golf cart and I can still be playing golf.

Senior support staff who are responsible for maintaining the firm's infrastructure of IT, administrative, and operational resources indicate that the BlackBerry allows them to stay “on top of things.” Eleanor notes:

I guess it's probably a control thing. It allows me to always be in control, which gives you a sense of comfort. I mean, when you know you're in control and in contact. And there's nothing I hate more than to know that something's happened that I haven't been there to take care of. It's just part of my nature and its part of my job. I mean, my job is to make sure Plymouth's always running and running well and people have what they need and this allows me to make sure that I do that.

This sense that the device increases continuity of attention and thus effectiveness on the job was echoed by a number of other members. Rick, a partner, commented:

Well, I think the velocity of work has improved. I mean, I can be more productive with it, [and] in essence it's the reason I have it. So you can deal with things, a certain subset of what you need to deal with during gaps that you otherwise would not deal with things.

Kurt, another partner agreed:

Yes, it's a great timesaver. Yeah. It just eliminates a lot of needless telephone traffic, makes contact a lot easier. ... I think it's a big productivity [tool].

As Table 2 suggests, members of the firm do use their BlackBerry in very many different places and occasions, and many comment that it helps “fill” the in-between times, that is, times spent waiting for something else or going somewhere else. For example, Matt, a principal, spoke of the opportunity to use “downtime” to get work done:

There are times when I'm in an airport, I'm looking to kill an hour and I'm so glad I have my BlackBerry because I've got 25 emails, 25 BlackBerry emails, and I can just sit there and respond to them and kill that hour.

Gary, a partner, provided a number of examples of where he uses his BlackBerry:

It's good again because you can multi-task with it. When you're doing something else, you can do this. I've sent emails driving my car, which I shouldn't admit, but I do emails on an airplane that when it lands it dumps out. I have actually gotten emails at 35,000 feet, and there are pockets where it will receive things. When you're in meetings, I have to admit that I can be under the table emailing somebody about something.

And Lydia, the wife of one of the partners, offered an illustration of her husband's ubiquitous attention to BlackBerry:

Monday night he plays in an orchestra so and he sends me Blackberries from rehearsals. I'll be sitting at my computer and I'll be getting e-mail messages. I will type back to say "How do you play a French horn and do email."

Our data suggest that members of Plymouth use their BlackBerry devices to stay connected to their work and to monitor the ongoing flow of information that is sent via email. They see the ability to be connected to this flow as keeping them "in the loop," thus affording a continuity in their attention of ongoing issues. Many believe this makes them more efficient and effective. Others appreciate the asynchronicity of BlackBerry email, using it to choose when and how they respond to their communication. Such members batch their email responses thus exerting a certain degree of control over the time and place of their interactions.

Engagement and Withdrawal

While use of the BlackBerry at Plymouth generates a dynamic of extensive engagement with email communication, it also generates an attendant disengaging from face-to-face interactions and events occurring in physical proximity. Kurt, a partner, put it well:

But I think when you've got your BlackBerry, you're using it, you're in the BlackBerry world. You're not in the rest of the world. I know because ... if I allow myself to respond to an email, I miss a piece of the conversation. I just, it's out of mind. I don't recall what was said. And because you did that, you're embarrassed to ask somebody to repeat themselves. So you miss something.

Ned, a junior associate, observed that such disengaging on the part of senior members of the firm affected the morale of the more junior members having to present their ideas in face-to-face meetings:

It drives people nuts. Because you get partners who are on it constantly. And everybody would say, "I'm still paying attention or blah-blah-blah." But it's just, nobody likes speaking to the firm and having a bunch of people looking down, typing away.

The intense engagement in the virtual world of email communication afforded by the BlackBerry device has generated some concerns in the firm with several members believing the quality of meetings has been affected. In the words of Chad, a principal, it has become "an

issue of business etiquette.” And Robert, a partner, recalled a recent firm meeting where the issue had come up:

At some point somebody said something like, “You know, when we’re in a meeting and you’re typing in your Blackberry, it’s actually really annoying.” And the guy goes, “Really? I thought I was quiet.” And somebody else said, “When we’re having a meeting and three of you are looking at your Blackberrys during a meeting, how can we actually possibly be fully present and engaged in the meeting?”

On the other hand, Rick, a partner, saw value in being able to use a BlackBerry in meetings:

The only negative affect is you have a distraction. There’s always a distraction. This is definitely a distraction. And so you could argue that. But on the whole I think, as you have ideas you can flip them [send via a BlackBerry] to someone and say “I was just thinking this, boom” [...] I think it definitely hurts focus but creates teamwork.

Gary, another partner, similarly appreciate the opportunity to multi-task with his BlackBerry:

You can get away with more in a group meeting, where, if I lose interest in the subject because clearly there’s not a lot of mutual compatibility shall we say, my tendency to use my BlackBerry will grow. And that sends a message which isn’t all together bad, though it is still rude. I don’t want to excuse the behavior, but at least I’m consciously deciding that.

He went on to explain:

I don’t want to excuse it really, but on the other hand, it’s really very productive to be able to do two things at once. And I do think you sacrifice the quality on probably both in terms of your ability to focus a little bit, but you can do it. ... And the thing that’s probably the most negative about it is -- what’s the message you’re sending to the speaker at the meeting? ... But when you have 20 people in the room, there’s usually a lot of attention being paid to the subject matter by other people. And what I’m trying to do is kind of listen for the exchanges, while I may be dealing with something on the Blackberry, and I’ll leap in if I have a thought on what I’ve heard [...] And so it’s not 100% engagement, but it’s not zero.

Perhaps the most intense concern about the consequences of disengagement came from members’ spouses, as Carol, the wife of one of the principals noted:

It really does bug me to see him standing in the kitchen while the world is buzzing around him and he’s checking his email. It bugs me because I also feel and this is also sort of elaborating on this work separation thing, you know, I don’t like to see his work. I want him to do his work somewhere else, not only because it’s disengaging from the rest of us, but because it kind of stresses me out and makes me feel like I should be doing my work, you know. [...] And, you know, the kids know. Mark brought me -- it’s so cute -- Mark is 18 months and he comes over to me yesterday and he goes “DaDa, DaDa” and hands me his Blackberry. Meanwhile, John knows what a Blackberry is. He’ll be like, “Daddy, do you need to check your Blackberry?” You know? So, I mean, you can’t deny that it is a very tangible, visible part of our home life, and I mean the kids know about it.

Jill, another spouse observed:

You can only do so much. I mean, ... if you're thinking words and typing them, you can't really be aware of what's going on. [...] And do I get really angry about it? I suppose. There have been times where I haven't really said, but I've made clear that I am hoping he would not check emails during this brief time when I'm talking to him about [an important issue].

Keith, a partner, commented about his use of a BlackBerry at home:

I mean, [the kids] are watching Barney or something, or eating some cereal and I have this in my hand. I don’t think that’s really that disturbing to them. [Although] Jane [his wife] will occasionally point out that when I’m answering or looking at it, one of them will be saying, “Daddy, Daddy.”

The withdrawal from co-present interactions to engage in mediated communication has also been observed in the context of cellular telephone conversations. Gergen uses the term “absent presence” to describe this phenomenon. He writes (2002, p. 227):

My concern is with the growing domain of diverted or divided consciousness invited by communication technology, and most particularly the mobile telephone. One is physically present, but is absorbed by a technologically mediated world of elsewhere.

The result of such entangling of physical and virtual worlds is a blending of two different forms of social engagement, each with different norms and expectations. The one involves relations of reciprocity between actors in contexts of co-presence (what Giddens (1984) refers to as *social integration*), and the other reciprocity between actors across extended reaches of time-space (what Giddens (1984) refers to as *system integration*). As both forms reflect different logics of engagement and different norms of relating, their blending in the practice of BlackBerry use necessarily produces some tensions and conflicts, as evident in the experiences reported by members of Plymouth and their families.

Related to this blending of different forms and norms of engaging is the experience of many members that use of the BlackBerry shifts the temporal-spatial boundaries of their work. As BlackBerry users withdraw from face-to-face interactions into the virtual world of email communication, they also find it more difficult to disengage from the world of work. In jobs characterized by autonomy (as in Plymouth), use of a device such as the BlackBerry leads to a renegotiation of time/space configurations, often with more work being embedded into the private sphere rather than vice versa. As a result, users of BlackBerrys tend to become preoccupied with work concerns even in their personal lives. Robert, a partner, notes: “in terms of the duration, yeah, I think it extends your being on [the job]. And there I think it’s an issue.” At Plymouth, the responsibility for staying on top of a deal belongs to the principals. These individuals are heavy BlackBerry users, and not surprisingly experience the tension most acutely. Chad expresses his ambivalence about its consequences this way:

But, you know, at what point of your day does the workday end? This tool makes it difficult for that workday to end. I mean, there’s no doubt that my day doesn’t really come to an end until I go to bed, right? Now, does that mean I’m working all the time? No. But I’m probably more aware of what’s going on and there are some negatives that come up because this thing is around. And so [the question is], do I leave it in my briefcase or do I have it on the kitchen counter?

While principals are most likely to experience BlackBerrys as encouraging a never-ending day, others also feel this tension. At a different level of the hierarchy, Jeff, a junior associate, notes that there is an effect from constantly tuning in to work:

It may change the amount you think about work. It’s more difficult to get farther away from work when you have a BlackBerry, because even if you get an email Sunday afternoon, morning, Saturday whenever, you don’t have to do anything with it ‘till Monday. Just seeing it, you’re going to start to think about it. We’re all connected enough to our jobs and committed enough to the job that we’re going to, we’ll spend more than just that few seconds thinking about it.

For those whose BlackBerry use delays disengagement from work, stress can be the result. While many members report a decrease in short-term stress due to using a BlackBerry,

nearly half report some long term negative consequences. Chad, a principal, observes that the loss of downtime may produce increased stress over time:

You know, it clearly increases stress because it doesn't allow you any real downtime. And that's what I try to manage, because if you're looking at it, and you're opening it, and you're looking at something, it's really hard to disengage. And I think we all need downtime. I mean, I think all the studies would say, you need to recharge your batteries. And so, I think this creates a stress that gets built up. It's not really in-the-moment stress, but my guess is over time, it creates stress. You know what I mean? Because I don't have enough of a release or enough downtime or I'm not away from it. So, that's one sort of stress, which is this kind of undercurrent if you will.

Some members report that stress results from just seeing what needs to be done. Keith, a partner, observes,

You know, it increases stress because, when you pick it up and see stuff that's flown [into the inbox]...you're like, OK, jeez, I didn't know until just now that I have 10 things I either have to do or answer at some point during my weekend or evening or whatever.

Data from the use of BlackBerrys by members of Plymouth suggests that the device allows a deep engagement with what Castells' (1996) terms the "space of flows" represented by BlackBerry email. But this engagement comes at the cost of a concomitant withdrawal from the face-to-face interactions of the proximate situation. This local disengagement so as to engage virtually generates significant tensions for the quality of relationships both at work and home. It also has implications for work/personal boundaries, increasing stress and extending work concerns into almost all possible micro-moments of everyday life.

Autonomy and Addiction

Members of Plymouth enjoy considerable autonomy in their jobs. They mention this frequently and believe the BlackBerry augments that autonomy by offering flexibility in when and how they communicate. Across the hierarchy, members describe instances where having a BlackBerry affected their decision to leave the office to take care of personal matters. For example, Robert, a partner, described being able to skip out of the office when one of his children has an event at school:

For me it's actually a great thing. I think it actually helps me make choices about when to work and when to do other stuff.

Matt, a principal, finds the BlackBerry allows him the flexibility to stay connected with his wife even when he is on the road:

We'll also communicate over email, which is actually, that is one nice thing from her perspective, I think, when I'm on the road, she knows even if I'm at a meeting and she has a question to ask me about something, that she can probably track me down. And she takes advantage of that.

And senior support person Tina reports that both she and her husband see the device as helping her manage her work/life balance:

I think we both look at it as a tool to bridge my work and personal life. So it allows me to leave here if I need to leave here and still be working or still be on-call or still be available, and not feel like I need to stay

till 5:00 just because I need to be available. So, it really allows me the flexibility to be available [to the firm], yet to also be available to my family.

While use of BlackBerrys by Plymouth members appears to facilitate their flexibility on the job, it also has important paradoxical consequences. In particular, the increased autonomy comes at the cost of shifting the community's expectations of individuals' availability, thus escalating their commitment to stay connected, and generating what some have called an "addiction" to BlackBerrys. Specifically, members know that everyone at Plymouth has a BlackBerry, and while the firm does not mandate email use, it is well understood that all members check their BlackBerrys frequently, thus increasing communication and expectations of connectivity. Gary, a partner, reflects this assumption: "We all have BlackBerrys, so you know that everybody is seeing the traffic." And Jeff, a junior associate, similarly notes, "Certainly the BlackBerry makes everybody more available." Alex, a senior associate, assumes that not only are people checking, but that they are checking their BlackBerrys several times each hour:

There are not many of the people here who don't check their BlackBerry every seven or eight minutes. There aren't many people who you can email and you won't hear back right away.

The fact that Alex operates under this expectation speaks to an internalized norm to be responsive. All members report assuming that others will be available via their BlackBerrys, and most internalize an assumption that others assume as much about them. According to Rick, a partner:

On balance I respond more quickly. It shows a certain level of importance or responsiveness, but that's not bad, in an interpersonal dynamic.

Thus, even at Plymouth, where there is a healthy respect for individual autonomy, and no explicit directive that members be "on call," many take for granted that others persistently monitor their BlackBerry communication. James, a senior associate, recognizes that this "raises the level of expectation," as Pat, a senior associate, explains:

In general ...people's expectation levels have gone up. . . People presume that it's fairly easy to reach you 24/7. So I think you have a lesser degree of sensitivity just sending an email, right?

Linda, a senior support member, also speaks about her experiences of the increased expectations associated with the use of BlackBerrys:

One of the things that I've noticed more and more is that people will BlackBerry me in the evening, you know, after 8:30 in the evening. I'm pretty much settled in and people know that it [BlackBerry] sits next to me, my cup of tea is there, my knitting is in my lap, something's on television and I just take care of business. "Linda, do you think you can order this, this and this for me?" Fine. Sure.

Asked to elaborate on the source of such expectations, Linda replies: "I think they've just gotten used to it." Similarly, Matt, a principal, feels some pressure to be available to his deal team members because of expectations he helps to set:

The junior guys I was working with on the deal would email me and I think they probably would find it odd if I didn't get back to them very quickly. So I think people do begin to build expectations ... of what your response time is going to be.

Thus, while the use of the BlackBerry may enhance the autonomy of members, it may also generate expectations of availability and commitment, particularly within a small community of users. Such generalized expectations can undermine the autonomy of individuals. Gary, a partner and self-described "chronic BlackBerry user," describes what happens when he doesn't reply right away:

Well, you don't answer and you make them wonder why isn't he answering? And so being predictable all the time isn't good. But there's a new element in all this that never would have existed before these things were invented, especially when your counter-party is somebody that knows that you're looking at it a lot. The element is that there's an expectation on the part of a sender that what he's sending is being read immediately. Whereas, in the old days before BlackBerrys, if you left a voicemail for somebody or if you sent some other message, a fax, you could never be sure that it got into the hands of the recipient, or when it got in. If you have a sent message to somebody who's a chronic BlackBerry user, I think you're pretty confident that person has seen what you said.

This loss of "plausible deniability" is tied directly to the common knowledge that everyone in the firm carries a BlackBerry, and according to firm norms, is checking it frequently. As James, a senior associate, noted:

Well, I think that having a BlackBerry and being in a firm where everyone knows you have a BlackBerry and having advisors and companies where everyone knows that you have a BlackBerry, if someone sends you a message on Saturday ... unless you're off on vacation or somewhere away, it's hard to be totally disconnected and say, oh, well, I didn't hear your voicemail or I didn't see the note that you left on my desk because I wasn't in the office.

Increased expectations of availability and responsiveness escalate the engagement of members in email communication, fueling the compulsion to be connected. Almost all members we interviewed (90%), reported feeling the need to constantly check their devices for incoming emails. None were able to account for this compulsion. Matt, a principal, tried to explain it this way:

I don't know. I just do. You do. You wait. If you see an email bounce up, you have to check it. It's kind of sick.

Robert, a partner, suggested that the properties of the device affected his use,

But with the BlackBerry, it's just so easy. It's like this little piece of candy. You just take it out.

Gary, another partner, reported that his family deliberately plans vacations to locations where there is no BlackBerry coverage (such as ocean cruises). As he notes:

Yeah. And I actually don't mind that, because vacations should be a break. But if we go somewhere where there is coverage, I can't not look at it. It's just the reality. And my wife understands it just is.

Ned, a junior associate, similarly reports a compulsion to check, even late at night when he knows there is no need to respond before morning:

On a more quiet period, like right now when I'm not really intensively working on a project, it's hard for me to believe I would have gotten an email from anybody here at 11:00 at night that would have really needed a response before I went to bed. That being the case, I would always still check it just to know.

Partly out of curiosity and partly, I don't really know how to describe it, the idea of just seeing like the message flashing and not reading it, I just can't imagine why I would do that. I would always check it.

Some members specifically portray the compulsion as an "addiction," referring to their BlackBerrys as "CrackBerrys," and while this is often accompanied by laughter, it often masks a certain strain, as evident in Matt's further reflections on his use:

You're sort of constantly tied. Here's an example. I'll be working sometimes on a deal that we're in the throes of and working pretty hard. And ... I'll have my BlackBerry for some reason by my bed and my wife will wake up at three or four in the morning and I'll be checking my BlackBerry or sending [emails]. Yeah, it's that sort of addictive.

While members struggle to account for their "addiction," their spouses offer some interesting explanations. Carol, the spouse of a principal, notes the following about her husband's BlackBerry habits:

Well in some ways checking your BlackBerry is like pulling the lever of a slot machine, you know? I mean, you don't know if there's something good that's going to come from checking. Maybe there'll be an email from someone you haven't talked to in a while. Maybe there'll be a joke or maybe there'll be a good piece of business news. I mean, I think there is that sort of sense of anticipation and potential gain that you get from checking. I think that's the addictive part.

And, Lydia, the spouse of a partner, observes:

I think it's more a matter of feeling that he's indispensable. And needed. Somebody somewhere needs his opinion, or needs a conversation, or cares to engage him. [...] I think that they're addicted to the idea that someone needs them all the time. That they can be important to someone and that things can't go smoothly unless they're involved.

A consequence of the escalated commitment enacted by members of the firm, is the increased interdependence it generates. Gary, a partner, acknowledges this:

Once the audience that you interface with all the time knows that you're a crack junky, they honestly do this, if I don't respond to an email in an hour people start to wonder "What's wrong with Gary?" I mean it's that bad.

Kurt, another partner, reveals his struggles to disconnect now that everyone knows he uses a BlackBerry. He describes a double bind at work: one's desire to get away is in conflict with the expectations of the communication network:

I think the one negative piece to this is that when you do choose to get away [...] how do you tell people who do need to contact you that you're not going to be online in an efficient sort of way? ... That's the worry part of it, that once you've created an expectation that you're always reachable, do you therefore then always have to be reachable?

Even given the apparent tensions that members of Plymouth recount about their use of BlackBerrys, most perceive the benefits of using a BlackBerry as far outweighing the costs. After four years of use the overall positive reaction to the BlackBerry is striking. A significant majority of users emphasize that they "love" their BlackBerrys, although with some recognition of strain. Chad, a principal, expresses ambivalence towards his BlackBerry:

But, you know, it's a love-hate relationship. I love it because I use it all the time and I hate it because I use it all the time.

All members of Plymouth that we interviewed reported that carrying a BlackBerry offered the opportunity to monitor information flows while providing the opportunity to control how they send and receive messages. However, they also note that the experience of acting on these opportunities creates anticipation of the next such opportunity. Greg, a partner, acknowledges that "... because it's so easy to check, A, you do it, and then B, once you see it, "Oh, I've got to respond to that." Individuals appear to experience a compulsion to check incoming messages (in a kind of "just because they are there" response), leading, paradoxically, to the production of even more communication and even more messages to be checked and responded to. The inadvertent outcome of these shared enactments is a kind of compulsive perpetual communication machine.

Implications

Our study of Plymouth Investments finds that individuals use wireless email devices to sustain an almost constant connection with their organizational lives. The opportunity to monitor incoming messages enables continuity of attention and a sense of control over the pace and substance of information flow, while also providing an opportunity to deal asynchronously with the potential interruptions of incoming communication. While all Plymouth members report valuing the use of the BlackBerry to keep them connected and allowing them to stay "on top of" the large amounts of communication they receive, they seem less aware of the extent to which their constant checking and frequent responding generates additional email traffic for others to check and respond to, which in turn, generates more email, and so on, in a self-reinforcing loop. Members do not seem to understand the extent to which their chronic use of BlackBerrys recursively constructs and reinforces the very communication dynamics that they feel they need to manage through their use of BlackBerrys.

Our findings suggest that these BlackBerry communication dynamics entail at least three important dualities that have conflicting consequences for the work and lives of Plymouth members: continuity and asynchronicity; engagement and withdrawal; and autonomy and addiction. First, we found members using the BlackBerry device to maintain a continuity of attention over the issues pertinent to their deals, while also choosing to batch their responses as they utilized the asynchronicity of the email communication. Second, the chronic use of the device in multiple locations and times afforded a deep engagement with the world of BlackBerry email, but at the cost of withdrawing from local and proximate concerns. This "absent presence" facilitated the use of "dead time" and the opportunity to multi-task, but

it also generated resentment among colleagues and family members alike. Third, use of BlackBerrys enhanced members' autonomy in when and how they communicated, increasing their flexibility in negotiating the competing demands of work and family. However, it also shifted expectations of availability and responsiveness, generating increased dependence on staying connected, and a compulsion to constantly monitor the flow of email communication. The addictive nature of this recursive dynamic has made it difficult for members to disengage from work, shifting temporal-spatial boundaries, and blending local and distant logics of engagement and norms of relating.

The consequences of these dualities for individual members are contradictory. On the face of it, use of the BlackBerry has allowed members to choose when and how they communicate. They experienced this as enhancing their autonomy and flexibility, and increasing their productivity and control. However, in practice, a different dynamic was also enacted, one where peer pressure, firm norms, and professional identity encouraged members to constantly check and use their BlackBerry device. Such constant checking led to a certain compulsion (even addiction) to being in the flow, a connection that further fueled expectations and dependence. Given the emergent BlackBerry culture in the firm, with its shifted social expectations about availability and accessibility, there appeared to be no easy or accepted way to turn off the BlackBerrys. Members believed it would be unprofessional and irresponsible to not to be in touch all the time. Usage at work blends with home life. While this may have improved efficiency (and perhaps effectiveness), it has also impinged on personal and quiet time, as well as time with family and friends. It has reduced opportunities for downtime and reflection, possibly increasing stress and burnout in the long term.

The consequences for the community are similarly problematic. The firm's social norms reveal implicit expectations of availability and responsiveness that are in direct contrast to espoused values of balance, flexibility, and autonomy. By engaging with a technology that facilitates "unobtrusive" and ubiquitous access to email, members are unwittingly producing and reproducing a recursive social dynamic of constant connectivity that has contradictory consequences for the firm over time. By taking advantage of the opportunities provided by BlackBerrys, employees at Plymouth find themselves in a bind. The very tool that facilitates – on an individual level – their values of flexibility, autonomy, being effective, and in control, can subvert these values communally, when their actions enact a set of shared expectations that shifts norms and actions thus increasing communication, lengthening days, and escalating commitment.

A further consequence of this emergent social dynamic is the reconfiguring of public (work) and private (home) boundaries, a phenomenon similar to that of boundary rearrangements found by Green (2002) in her study of mobile phone users. When work concerns have become so intertwined with personal space and time, it no longer seems adequate to talk about a “blurring” of boundaries. Perhaps more appropriately, we should talk about a merging of work and personal spheres. And in such merging, we also see a renegotiation of private and public responsibilities and identities. Indeed, this points to the possible redefinition of what it means to be a competent professional at Plymouth.

The complex and contradictory relationships among individual actions, shared norms and expectations, and BlackBerry usage has yet to be explored over time. Our study was an exploratory one, dependent largely on self-reported experience through interviews and secondary email logs. These findings reflect the patterns of use within one firm, and a particular one at that – small, specialized, elite financial services firm in the USA. Nevertheless, we believe the findings offer important and suggestive insights that may be usefully explored in other contexts. Even in an organization characterized by clear values of work life-balance, where individuals throughout the hierarchy experience both autonomy and respect, a self-reinforcing cycle of BlackBerry use and compulsion emerged, frustrating firm and professional values, and creating tension, consternation, resentment, and stress. These negative ramifications, however, did not appear to have diminished use or reduced reliance on the BlackBerrys. On the contrary, use seems to have increased and amplified over the past four years. For employees at Plymouth, the positive experience of staying connected and “in the know” seems, at least for now, to mitigate the negative consequences of their BlackBerry use. Whether this would also be the case in other contexts and cultures, or for firms such as Plymouth over the long term, are important questions worth pursuing in future research.

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Table 1: First Round Interviews at Plymouth

	Junior Associate	Senior Associate	Principal	Partner	Senior Staff	Spouse	TOTAL
Male	5	1	2	8	–	1	17
Female⁸	1	2	–	–	4	4	11
TOTAL	6	3	2	8	4	5	28

Table 2: Common Occasions of BlackBerry Use by Plymouth Employees

Work	<ul style="list-style-type: none"> During the weekly investment staff meeting During the partners' meetings During lunch presentations At a client's office waiting to meet with them Walking to meetings In meetings
Travel	<ul style="list-style-type: none"> In the car driving to work On the platform waiting for train On the train In a cab going to lunch Going to a client meeting Going to the airport At the airport waiting to check-in/board On the plane Waiting to take off While in the air While touching down
Home	<ul style="list-style-type: none"> In the entrance hall In the home office In the family room watching TV In the living room while reading on the couch In the dining room while folding laundry In the kitchen serving kids breakfast While vacuuming the house In the bathroom getting ready to go to dinner In the bedroom getting dressed for work In bed
Other	<ul style="list-style-type: none"> On the golf course At a basketball game During the kids' soccer practice At the gym At orchestra rehearsals In a restaurant In the restroom In a friend's apartment Waiting in doctor's office In church

⁸ The skewed gender representation across categories accurately reflects firm composition. There are only four female investment staff members in the firm, and we interviewed three of them.