How Mobile Phones Affect the Sustainability of the Work/Life Balance of Their Users

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Abstract. This study examined the relationship between sustainability of mobile phone users and work-life balance. Twenty-seven interviews were performed on managerial level mobile phone owners over the duration of a month and half. The study extends Clark's [1] original Border theory that fails to mention how mobile phones (or indeed any other information and communication technology) influence the borders between the two domains. This study found technology has a definitive impact with separate users groups emerging from the data; border-extenders, border-adapters and border-enforcers.

Keywords: Border theory · Mobile phone usage · Mobile phone usage patterns · Work sustainability · Home-work balance · Work-home interface · Mobile phone after-hours work · After-hours work

1 Introduction

Sustainability is the ability to self-sustain while utilising resources without depleting those same resources; providing the ability to allow further sustenance and continuing sustainability [2]. Organisational sustainability is the ability of an organisational system to create balance for human, social and natural resources needs without depleting those resources. A sustainable work system on the other hand, is a work system enabling the sustainability of those in it, ensuring that workers can sustain themselves and the environment without compromising the surrounding system [3]. Therefore a work system is only sustainable when it ensures it does not deplete the resources it requires to function optimally [4] while ensuring a system and a future for it and the workers it requires.

Mobile phones have provided the ultimate tool and availability to work anywhere and anytime. However, this "digital leash" provides limited opportunities for the employee to have downtime as it is becoming more accepted that the phone and the user will always be available and therefore contactable anywhere and anytime. This therefore results in a perpetual state of work engagement. Research indicates that

mobile devices increase work-life conflict [5]. This adaptation has sometimes been framed as an "addiction" or the popular renaming of BlackBerry to CrackBerry [6–11]. Moore and Wen's study [12] found that respondents had little or no work-life balance, with business executives reporting that challenges for balancing their professional and personal life were enormous resulting in clear emerging areas of concern in relation to parenting and elderly care responsibilities [12]. Rationally, the usage of such devices leads to lengthening of work days as there is a potential constant channel for communication all day, every day [13].

Mobile phones can be utilised by the employers as a technological-tether further extending the work day culminating in prolonged connectivity of the employees. In response, German Labour Minister, Andrea Nahles, states that there is an "undeniable relationship between constant availability and the increase of mental illness" [14]. To better understand the conditions and the effects, Minster Nahles has commissioned the German Federal Institute for Occupational Safety and Health to scientifically determine the effects on the workers.

One plausible explanation as to why, traditional office workers work less than their mobile colleagues, is that in an office setting the workers' peers will inform them that it is time to go home, constraining overzealous work behaviour [15]. This is referred to as border-keepers within Border theory (Clark, [1]. Thomée et al.'s [16] study found that women who had a high rate of mobile phone calls and (SMS)ing/texting had prolonged stress and depression, while the men experienced sleep disturbances and symptoms of depression. Stress and depression were similarly found to culminate from blurring of the work-family border in Border theory [17]. Employees who work overtime in the evening are less likely to fully recover as they are using work-related effort during the time that they would usually recover and this therefore increases the effects of negative Work-Home Interference (WHI) [18]. Similarly, Van Hooff et al. [18] found a relationship between fatigue, sleep complaints and work-home interference (WHI) further indicating a lack of recovery due to the extension of the work day. Geurts et al. [19] found that the negative influences predominantly originated from the work domain, while positive influences predominantly originated from the home domain through the provision of recovery time that could counter balance the negative effects limiting further spill over, as seen by Border-crossers. This study looks at how mobile phones affect the sustainability of the work/life balance of their users using Border Theory as an explanatory lens.

1.1 Border Theory

Border theory is a relatively new theory on work/family balance. The theory explains how "border-crossers" move between the domains of home and work while maintaining satisfaction in each domain and controlling role conflict to ensure balance [1, 20]. To create the domain borders and maintain balance, members of the domain utilise proactive or enactive controls to solidify the domain borders [1]. Clark [1] defines balance as "satisfaction and good functioning at work and at home, with a minimum of role conflict". Clark [1], however, fails to define what a proactive domain mechanism

is, stating it only twice in her study and then disregarding it. This study looks specifically at these proactive controls.

Clark [1] determines that the enactive control mechanism is created psychologically by borrowing from Kurt Lewin's 'life space' idea [Rychlak, 1981 cited in 1], and used in the creation of separate psychological family and work domains. The interaction between the two domains depends on the border strength. According to Clark [1], enactment, as defined by Weick [21], is the "process in which individuals take elements given in their environments and organise them in a way that makes sense". Weick [21] utilises enactment, as a component of his Sense-making theory.

Borders. Central to border theory is that work and family are separate domains with the ability to influence the opposing domains [1]. There are three planes which borders operate upon namely; physical (e.g. the actual walls of work or home), temporal (e.g. set working time), and psychological (e.g. thinking patterns which are suitable for that domain, usually created through enactment) [1].

Domains. In the industrialization period, work and home were segmented into two domains, one for work and one for family, each with its own unique responsibilities, cultures, rules and purposes, which existed at different times and places [1]. The only shared factor was the participant who was a "member" in both spheres. It is likely therefore, that a member of each domain expects unique duties, rules, thought patterns and behaviours to be performed by its members. Clark's [1] view is that there are only two domains (home and work) to transition between. This is arguably a narrow interpretation as there are likely to be more domains, such as for friends, clubs, and societies.

Study Aim. This study aims to provide a deeper understanding of the following two research questions using Border Theory as the lens:

- RQ1: How does smartphone technology allow work sustainability after-hours?
- RQ2: What is the long term impact of being able to sustainably work after hours?

2 Methods

2.1 Sample

To better understand the complexity of after-hours usage on the user's sustainability a sample of 27 participants were interviewed, the sample consisted of 7 participants and their partners and 13 additional individuals without their partners. Participants were required to own a smart phone and be in a managerial role within their work-place.

2.2 Procedure

The participants for this study had previously consented to be contacted in a related prior study which looked at mobile online usage patterns. To recruit the largest sample possible an Amazon Kindle was offered as a prize for one random participant. The interviews took on average of half an hour to forty-five minutes of their time.

A recording device was utilised to capture the participants input, which was transcribed for further analysis.

2.3   Research Measures Used

The demographics used in the study were the following; age, race, gender, educational level, marital or partner status, partner's occupation, career position, primary income earner, number of children, age of children, working hours, Internet usage time, mobile Internet time, number of phone calls a day, number of hours and minutes on the phone per month. All of the aforementioned biographical and mobile phone use measures were collected through a self-report questionnaire. The questions asked to both the participant and the partner focused on the following areas: general usage of the mobile phone, which domain the communications occurred more frequently, the times and effects of the communication, if it provided facilitation or disruption in the domains and who regulates their usage.

2.4   Analysis

The transcripts were analysed using thematic content analysis on Atlas TI. Thematic content analysis was used to determine common themes in the text according to the areas of interest. Thematic content analysis is known for its epistemological stance and is objective or at least is objectivistic [22].

3   Results

3.1   Border-Expanders

12 of the participants were categorized as border-expanders. The gender distribution of the 12 participants in this group consisted of 9 males and 3 females. 10 of participants were in a domestic relationship or marriage the remaining 2 were single. Finally, 6 of the participants in this group were made up 3 couples, 2 heterosexual couples and 1 homosexual partnership, with the remaining 6 participants consisting of 5 individual male and 1 individual female. Border-expanders were found to be smartphone users who have the inability to delineate the home-work border, frequently allowing after-hour communications to overrun into the home domain ubiquitously thereby not keeping the domains separate. They legitimized their lack of border enforcement needed for career advancement, which is conditioned and encouraged by employers, management and colleagues (which could be considered a form of conditioning so as to blur the borders). Upon further in-depth questioning it became apparent that it seems to be an organisationally conditioned and sanctioned need to respond to all communications, which could be legitimised with a forthcoming deadline, but according to all border-expanders interviewed, all communications require an "urgent" response. When border-expanders were further interrogated they responded that this was a working conditions norm in a client-facing market. The frequent work over-flow into the home

domain, resulted in border-expanders' inability to define or redefine the home-work border, dividing the two thereby resulting in the domains being merged into one domain. Obviously over a period of time the border-expander would no longer able to re-establish the border or determine where it should exist.

A number of border-expanders interviewed legitimised their usage even when their partners complained, culminating in arguments and, in a few cases, the breakdown of the entire relationship. Primarily the leading cause of arguments and general discontent felt by the border-expander and their partner was the border-expander's general inability to delineate the home-work borders so that there was a domain space and time for the partner and family to have their needs met. It was also found that a predominant influencer of border-expanders was if they were client-facing and working in a high-stress related industry such as finance or telecommunications.

Interestingly, 83 % of the border-expanders had partners. Border-expanders extended the border in order to ensure their families financial wellbeing concurrently with their own career advancement. A counter to this of course is that most of the partners of the participants interviewed in this group, frequently fought or disagreed with their partner's usage of their phones after-hours in family time. Therefore, due to the extension of the working hours into the home domain the border-expanders sustainability becomes questionable. Finally the border-expanders do not define the two domains, which imply that the two domains meld into one, meaning redefining the border between the two would be difficult.

3.2   Border-Adapters

10 of the participants were categorized as border-adapters. The gender distribution of the 10 participants consisted of 7 males and 3 females. 7 of participants were in a domestic relationship or marriage the remaining 3 were single. Finally, 4 of the participants interviewed were made up of 2 couples, 1 heterosexual couples and 1 homosexual partnership, with the remaining 6 consisting of 4 participants individual male and 2 individual female.

Border-adapters are those users who arbitrate all incoming communications determining to accept or reject the incoming communication into the home domain from work. Border-adapters juxtapose their family and own needs against their employer's needs culminating in fluctuating domain borders which are used to adapt to the relevant needs in order to keep all groups happy. But, upon completion of the domain transition, the participant reinitiates the border to separate domains once again. The border-adapters make their decisions based on the permeability of the border between home and work which is related to who is contacting them, the higher the seniority of the initiator of the communication the more likely they were to answer, at the time of the communication.

Participants in this group used mechanisms such as refusing to install or enable email facilities on their work or personnel phones. A good example of this is noted in a participant's explanation of why he limits his accessibility as "If you're contactable all the time, people will phone you up all the time." However, the participants are quick to point out that, depending on who contacts them and the urgency of the communication,

they will respond in due course. Participant 1 when asked to define urgency and the need to answer the phone, stated "Well, I'll answer the phone and find out what the issue is and then, decide for myself, once I've heard what it is, whether I want to deal with it or not". Thereby creating a self-regulating mechanism to control who contacts them and to see if they see fit to attend to the relevant communication and create an interruption in the home domain.

The predominant difference between group two and one, is that group two determines the validity of the communications by looking at who is making the communication, when the communication is being made and the "urgency" of such, which they determine as beings important and requiring swift action. Group one; however is constantly available to communicate as and when the need arises. 70 % of the border-adapters had partners, but a noticeable difference is that the individuals in this group were not as client-facing as the border-expander group.

3.3   Border-Enforcer

5 of the participants were categorized as border-enforcers. The gender distribution of the 5 participants consisted of 3 males and 2 female, 5 of participants were in a domestic relationship. Finally, 4 of the participants interviewed were made up 2 couples, 2 heterosexual, with the remaining 1 participant being an individual male.

The border-enforcers, as with border-adapters, arbitrate all incoming communication. The major disparity between border-enforcers and border-adapters is that their domain borders are rigid and considerably less malleable than those of border-adapters. 2 of the 3 border-adapters indicated that there is time and place for each domain and emphasised the distinction of the two domains, to all involved. This is re-echoed by participant 14 "I don't believe in receiving any sorts of mail, work related on my cell phone…? For me, I would use my work laptop. Once I leave work, I do not want to be distracted by any work-related issues… There's a very clear defined segregation."

The border-enforcers' definitive border distinction was found to be related to the following; border-enforcers have a clear distinction from the beginning and insist on it or alternatively it was developed due to previous working scenarios where they previously extended the borders or allowed for border blurring. Domain delineation was developed as a coping mechanism. However, border-enforcers as with border-enforcers, will allow for the facilitation of restricted communications beyond the standard work hours into the home domain depending on the urgency but the occurrence of which is far less frequent or none at all.

3.4   Work as an Enforcer of Domain Transitions

All three groups defined by this study allow for the crossing of the border between work and home domain. However the differences come from the way in which the groups will accept all communications at all hours allowing for the merging of the domains. The border-adapters and border-enforcers will screen the communication by seniority of the communicator and the time at which they are being contacted and then

redefine the border thereafter. Border-enforcers communicate to their employees their displeasure of the blurring the domains and that if it is only acceptable if it is an emergency and feel that they have provided work the required their time and deserve their own time. The concept of urgency was used by all three groups to necessitate allowing for communications into the home domain after-hours. Urgency is the most frequent validation for blurring the borders, as it necessitates the continuity of business and career development.

In order to prevent the constant barrage of all communications users have opted to change there working scenarios in order to better control their life and lessen the effects on their lives. A good example of which is shown by Participant 7 who moved from her previous company to a new company to obtain a better position "Because I used to work at another company where you know clients thought that they could call you willy-nilly and all of that, and I used to be a very "Yes, yes, I will do it," until I burned out and got – it aggravated my depression and I did not need that. And that's when I decided that's it, you know." A frequent border-expander validation for urgency is that they are client-facing and therefor it is a requirement of the role.

4   Areas for Further Research

The flexibility of the domains will allow for work to facilitate the home domain; however this was not explored in this study. This will impact the sustainability of workers forced or conditioned to work in the home domain.

The participants of the study reported that they were less stressed in the home domain, while stress was more frequently felt in the work domain. What will happen if there is no longer a border between the two, which domain would the user use to de-stress? What would be the long-term effects of domain stress be without relief?

Some new questions emerge such as: Do mobile phone user's border-roles evolve from border-enforcer to border-adapter and finally to border-expander? Are they able to develop a better understanding of the ability to regulate their usage and the border moving from border-expander to border-enforcer?

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