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Socio-Technical Practices and Work-Home Boundaries

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Abstract
Recent advances in mobile technology have had many positive effects on the ways in which people can combine work and home life. For example, having remote access enables people to work from home, or work flexible hours that fit around caring responsibilities. They also support communication with colleagues and family members, and enable digital hobbies. However, the resulting 'always-online' culture can undermine work-home boundaries and cause stress to those who feel under pressure to respond immediately to digital notifications. This workshop will explore how a socio-technical perspective, which views boundaries as being constituted by everyday socio-technical practices, can inform the design of technologies that help maintain boundaries between work and home life.

Author Keywords
Work home boundary management; HCI; work; leisure; personal informatics; wellbeing.

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Advances in mobile and CSCW technologies have facilitated flexible working practices that give many people more choice about where and when they work. However, although these technologies can help people manage their family and work responsibilities they can also bring these different aspects of their lives into conflict. For example, devices such as laptops are often used for both business and pleasure, which can result in the 'extensification' [6] of work into non-work times and spaces [1, 2]. This blurring of the boundaries between work and personal contexts [3, 5, 14] can have negative consequences, such as stress, absenteeism, burnout and high employee turnover (4; 7,; 11; 13). Here we outline four relationships between technology and work-home boundary management (our workshop themes), that are perhaps familiar territories for HCI researchers, which illustrate the conflicting roles that technology can play:

1. Mobile technologies support flexible working

Perhaps for the first time, technology is enabling people to better balance work with non-work responsibilities. The internet is creating opportunities for people to communicate and set up work contracts, often without even meeting face to face e.g MTurk. Technologies such as Skype enable meetings to occur at times convenient to those in different time zones and without the need for travel.

2. Mobile technologies support leisure pursuits

Even for those who enjoy their work, recovery is a necessary factor in avoiding work-related strain and in feeling prepared for the next day of work [17]. In order for recovery to be successful, an individual must experience psychological detachment from work, relaxation, mastery experiences and a sense of control [16]. Research suggests active pastimes involving some mental engagement are more effective in distracting from work stresses than passive ones. Online hobbies such as taking part in citizen science projects (e.g. FoldIt) and playing digital games offer an opportunity to provide such a distraction and thereby to aid recovery from work stress.

3. Mobile technologies and work-home conflicts

Ubiquitous technologies have the potential to give rise to more demanding, faster paced work and personal lives [1]. Whilst some argue that the use of technology at work is directly causing a more demanding workplace with greater workloads and increased feelings of time pressure, [15] suggest that these negative consequences "arise from habits that develop though co-evolutionary interactions between technologies, specific design affordances of devices and software, and wider work/life and socioeconomic contexts." However our digital habits develop, they lead to work seeping into non-work times and spaces which can result in work-home conflicts [8, 12].

4. Mobile technologies facilitate reflection on work and non-work habits

Personal informatics tools provide us with the opportunity to record and reflect on data from many aspects of our lives. Location trackers enable reflection on time spent at work, on the commute, and with friends and family. They can also tell us how many emails we've sent and received (ClearContext) and how much time we've spent gaming or on social network sites (RescueTime). People often have an inaccurate perception of their habits, for example, how long they spend doing various activities and how their behaviour

compares to that of other people. The resulting inaccurate comparisons can lead to increased stress levels that can impact health and well-being. Reflecting on data about how time is spent enables people to consider whether the way in which they are currently living their lives is in accordance with their own values.

A Socio-technical Perspective

Understanding the positive and negative impacts of mobile technology on work-home boundaries is important to a range of stakeholders, including families, employers, worker organizations and policymakers. HCI would appear to be in a unique position to address this research area, given its interdisciplinary focus on the relationship between people and technologies. Public and academic debates tend to address the narrow issues of 'work-life balance' and how technologies act as a barrier or facilitator to its achievement, as outlined above. However, a socio-technical perspective [9, 10] encourages a broader reflection on how boundaries, and bounded entities (e.g. work, family, technology, parent, child, worker), come to be constituted through everyday socio-technical practices. Adopting a wider perspective, this workshop will focus on how these practices are configured, and how they could be productively reconfigured to maintain boundaries between work and home.

Summary of workshop goals

Our workshop will not only involve HCI practitioners (ranging from interaction scientists to CSCW specialists) but also sociologists who adopt a broader and often critical perspective on the role of work and technology in people's lives. From a socio-technical perspective, boundaries and norms are empirically investigated in order to explore how technology, work and family are made in everyday practices. Technology is understood less in terms of how it threatens or enhances work and home life but rather in terms of how it helps *make* 'work' and 'home' in specific ways. The nature, meaning and effects of technology are understood as being achieved through the specific uses and purposes to which it is put.

The main goal of the workshop is to consider how this perspective could inform new ways of thinking about technology design by highlighting the ways in which technologies are bound with particular values and practices. In particular we will consider the potential of different technology designs to: change the nature and meaning of work and family; generate new ways of doing work and family life; constitute new norms and values around work and family; and privilege some 'goods' over others thereby benefitting some constituencies while disadvantaging others.

Importantly, a goal of the workshop is to generate 'actionable' knowledge that will not only provide HCI researchers with insights into work-life boundaries but enable them to implement design solutions. Therefore, the workshop will also critically consider each of the four specific relationships between technology and work-home boundary management outlined above, and consider how the socio-technical perspective can inform technology design.

Summary

Maintaining work-home boundaries is important for health and well-being. Understanding how technology can undermine or maintain these boundaries is an important research issue for a wide range of stakeholders. The workshop will consider how a socio-

technical perspective, which emphasizes that socio-technical practices create boundaries, can inform the design of technologies that help maintain boundaries between work and home life.

References

[1] Chesley, N. (2010) Technology use and employee assessments of work effectiveness, workload, and pace of life. *Information, Communication & Society*, Vol 13 (4), pp485-514.

[2] Currie J. and Eveline J. (2011) E-technology and work-life balance for academics with children. *Higher Education*, Vol 62, pp533–550.

[3] Duxbury, L. and Smart, R. (2011), 'The "Myth of Separate Worlds": An Exploration of How Mobile Technology has Redefined Work-Life Balance', in S. Kaiser et al (eds) *Creating Balance?* Springer, pp269-284.

[4] Edwards, J. R., and Rothbard, N. P. (2000) Mechanisms Linking Work and Family: Clarifying the Relationship Between Work and Family Constructs. *Academy of Management Review*, 25, pp178–199.

[5] Gant, D. & Kiesler, S. (2001), Blurring the Boundaries: Cell Phones, Mobility, and the Line between Work and Personal Life, in B. Brown and N. Green, *Wireless World*, Springer, pp121-31.

[6] Jarvis J. and Pratt A. C. (2006) Bringing it all back home: The extensification and 'overflowing' of work. *Geoforum*, 37, pp331–339.

[7] Kreiner, G. E., Hollensbe, E. C., and Sheep, M. L. (2006) On the Edge of Identity: Boundary Dynamics at the Interface of Individual and Organizational Identities. *Human Relations*, 59, pp1315–1341.

[8] Mark, G., Gudith, D. and Klocke, U., (2008), The cost of interrupted work: more speed and stress, In *Proc. CHI 2008*, ACM, pp107-110

[9] Nansen, B., Arnold, M., Gibbs, M., Davis, H. (2010) Time, space and technology in the working-home: an unsettled nexus. *New Technology, Work and Employment* 25:2, pp136-153.

[10] Orlikowski, W. J. (2010) The Sociomateriality of Organisational Life: Considering Technology in Management Research. *Cambridge Journal of Economics*, 34, pp125–141.

[11] Parasuraman, S., & Greenhaus, J. H. (2002) Toward Reducing Some Critical Gaps in Work-Family Research. *Human Resource Management Review*, 12, pp299–312.

[12] Perlow, L.A. (1999), The time famine: Towards a Sociology of Work Time. *Administration Science Quarterly*, Vol 44 (1), pp57–81.

[13] Rice, R. W., Frone, M. R., & McFarlin, D. B. (1992) Work-Nonwork Conflict and the Perceived Quality of Life. *Journal of Organizational Behavior*, 13, pp155–168.

[14] Sadler, K., Robertson, T., Kan, M. and Hagen, P. (2006), Balancing Work, Life and Other Concerns: A Study of Mobile Technology Use by Australian Freelancers, In *Proc. of 4th Nordic Conference on Human-Computer Interaction*, ACM, pp413-416.

[15] Shabajee, P. & Preist, P. (2013) Digitally Assisted Life-(Im)Balance? Proceedings of 1st Workshop on Habits in HCI, HCI2013.

[16] Sonnentag, S. & Fritz, C. (2006). Endocrinological processes associated with job stress: Catecholamine and cortisol responses to acute and chronic stressors. In P. L. Perrewé, & D. C. Ganster (Eds.), Research in Occupational Stress and Well Being: Employee health, coping, and methodologies, pp. 1-60.

[17] Sonnentag, S. & Zijlstra, F. R. J. (2006). Job characteristics and off-job activities as predictors of need for recovery, well-being, and fatigue. Journal of Applied Psychology, 91, 330-350.