Editorial

The family and communication technologies

Communication technologies are increasingly being used within family settings to support and extend relationships. The functional elements of these technologies may be well documented; however, researchers and designers are just beginning to understand their impact upon family life and the broader influences they have on society.

With this in mind, we feel that the time is now right to direct attention towards the social and emotional aspects of communication technologies within the family. We need to gain a better understanding of how and why people are using and adapting communication technologies to suit their family lives and what effect technology can have on the interleaving of home, work and leisure. Questions naturally arise relating to social and moral values, a sense of connection, trust, privacy, disclosure, exclusion and status within the home. We want to focus on issues of context, purpose and benefit to see if we can build a richer, more detailed account of real technology usage and its impact upon family life. Similarly, we hope to better understand the ways families transform their communication technologies, how they configure and reappropriate the technology they use and, in doing so, often express something of themselves.

Much work, then, is needed to detail the contexts in which communication between family members takes place, to detail just how family life is constituted and routinely played out through communicative practices. Of course, the family plays an important role in how society functions; it acts as a primary source for the development of socialization skills and moral values. However, we need to acknowledge that decision making and value setting differ between family groups (Hindus, 1999). Moreover, we must recognize that families are becoming more dispersed and consequently changing the ways they communicate. The family no longer refers solely to a core group of two parents and 2.4 children. Families are diverse both in their structure and function (Bengston, 2001). Divorce, step-family relationships and multigenerational bonds are all altering familial structures. Kohli et al. (2005) note that there is frequent speculation regarding the future of the family and that this leads to assumptions of a general deterioration in family bonds. This deterioration is regularly associated with the increased physical distance between family members. The further apart family members live, the greater the negative effect on any subsequent interactions (Hank, 2007). In the last few decades the social mobility of the family has changed dramatically. We need to consider this change and understand the impact this has on family life and communication.

In general, family life could be classified as cyclic: live at home when young, migrate to other places, return home (or area) in later life. Young children mainly live at home with their parent/s or guardian until they reach an age where a decision is made to migrate to another area within their country or a foreign counterpart.

Consider the case of Amy

> Amy lived with her parents and two brothers in Kelso a small town on the Scottish borders until the age of 18. She moved to Coventry where she studied for three years graduating with a degree in law. She then moved to London to undertake a postgraduate degree and landed a job for a local solicitors based in the City. Aged 28 she met her boyfriend David who originated from Manchester. The couple decide to move to Manchester to live near David's ageing parents. They buy a house, eventually marry and have two children. Amy wants to continue to work full time and they make the decision to move to Kelso so her parents can help look after the children.

The scenario above highlights the need for researchers and developers in the area of human–computer interaction to consider family relationships across time, space and generations. Multigenerational bonds are becoming seen as increasingly important as the ageing population grows and remains healthy and active. Grandparents are part of this ageing population and often have an important role to play as caregivers, friends and guardians to their grandchildren.

To understand how current or future technologies impact upon family life we need awareness of the diversity within families and how systems can enhance communication and connection. For systems to be successful we need to document and describe the kinds of communication technologies households are using and why. We need to explore those factors that influence adoption and continued use, the impact communication technologies have upon the family's social and moral values, and provide

examples of the beneficial effects of communication technologies in supporting and increasing social and emotional interactions within the family. The articles in this special issue seek to foster a scientific understanding of how communication technologies impact upon family life. The papers discuss and describe research related to the family and communication technologies from several different perspectives.

The first article in this special issue by Tee et al. (this issue) considers how people communicate and highlights the complex nature and structure of family relationships. Consideration is given to how communication is maintained between both core and extended family members. The authors discuss the value of their work in terms of informing the future design of systems that connect extended families.

Khan and Markopoulos (this issue), in the second paper of the issue, focus on an awareness system for supporting effortless and sustained communication between family members. The authors explore the issue of acceptable awareness and the impact of constant availability. They conclude with a discussion of the value of awareness systems and the changing nature of context within family communication channels and interactions.

The next paper, by Lindley et al.'s (this issue), is a case study of a new kind of answering machine designed for family use called the "Bubbleboard," designed to make audio messages more visible and playful. An in situ field study of Bubbleboard in homes shows that, while it offered up a more "family-friendly" device, it was not appropriated in ways that the research team expected, highlighting the resilience of established family practices and the moral order of the household.

Vetere et al.'s (this issue) paper explores connectedness between grandchildren and grandparents through the concept of play. The authors use observations and probes to examine the nature of intergenerational play, highlight methodological issues and explore opportunities for technological innovation. They conclude existing knowledge is inadequate for furthering our understanding of how to design for younger-and-older users engaged in collective playfulness.

The following article by Chen and Katz (this issue) investigates patterns in the use of mobile phones between college students and their family members back at home. The author questions how the mobile phone affects students' college life both on campus and in terms of their connectedness with their families. Chen concludes that the mobile phone facilitates a continuation of family life even when the students have left home for college.

Yarosh et al. (this issue) consider the effect divorce has on children and parents worldwide. Through the use of interviews the authors document how divorced family dynamics differ from the intact family. The authors suggest current technologies do not address the issues and challenges faced by divorced families in

maintaining communications. Implications for design are described.

Olivier and Wallace (this issue) present an alternate view of family communication focusing on both the emotional lives of family members and that which is of personal significance to them. The authors use the design of digital jewellery as a window on the family as an emotional entity and escape the conventional assumptions as to how technology might support family life. Findings are discussed in terms of creating a design space that places an emphasis on the character of our emotional lives.

The final paper by Bonner (this issue) argues for a more pragmatic approach to the design of emerging and future domestic communication technologies. The author critically reviews a small number of social studies relating to the design and use of existing and emerging technologies and research activities. Conclusions are drawn in terms of the technological adoption process and the need to move to an incremental approach for emerging communication services and products.

Linda Little
Elizabeth Sillence
PaCT Lab, School of Psychology and Sports Sciences,
Northumbria University, NE1 8ST, UK
E-mail addresses: l.little@unn.ac.uk,
l.little@northumbria.ac.uk (L. Little),
elizabeth.sillence@unn.ac.uk (E. Sillence)

Abigail Sellen
Alex Taylor
Microsoft Research Centre, Cambridge, UK
E-mail addresses: asellen@microsoft.com (A. Sellen),
alex.taylor@microsoft.com (A. Taylor)

References

Bengston, V.L., 2001. Beyond the nuclear family: the increasing importance of multi-generational bonds. Journal of Marriage and the Family 63, 1–16.

Bonner, J.V.H., this issue. Adding critical sensibilities to domestic communication technologies. this issue. Exploring communication and sharing between extended families. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.09.003.

Chen, Y.-F., Katz, J.E., this issue. Extending family to school life: college students' use of the mobile phone. this issue. Exploring communication and sharing between extended families. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.09.002.

Hank, K., 2007. Proximity and contacts between older parents and their children: a European comparison. Journal of Marriage and Family 69, 157–173.

Hindus, D., 1999. The importance of homes in technology research. On-line document available at ⟨http://www.debbyhindus.com/documents/Hindus-CoBuild99.pdf⟩.

Khan, V.-J., Markopoulos, P., this issue. Busy families' awareness needs. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.09.006.

Kohli, M., Künemund, H., Lüdicke, J., 2005. Family structure, proximity and contact. In: Börsch-Supan, A., Brugiavini, A., Jürges, H., Mackenbach, J., Siegrist, J., Weber, G. (Eds.), Health, Ageing and Retirement in Europe—First Results from the Survey of Health, Ageing and Retirement in Europe. MEA, Mannheim, pp. 164–170.

Lindley, S.E., Banks, R., Harper, R., Jain, A., Regan, T., Sellen, A., Taylor, A.S., this issue. Resilience in the face of innovation: household trials with bubbleboard. Exploring communication and sharing between extended families. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.07.008.

Olivier, P., Wallace, J., this issue. Digital technologies and the emotional family. International Journal of Human–Computer Studies.

Tee, K., Brush, A.J., Inpen, K., this issue. Exploring communication and sharing between extended families. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.09.007.

Vetere, F., Davis, H., Gibbs, M., Howard, S., this issue. The magic box and collage: responding to the challenge of distributed intergenerational play. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.09.004.

Yarosh, S., Denise Chew, Y.C., Abowd, G.D., this issue. Supporting parent-child communication in divorced families. Exploring communication and sharing between Extended Families. International Journal of Human–Computer Studies, 10.1016/j.ijhcs.2008.09.005.