
Periodic family reunion and the influence of mobile technology

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Abstract

Families increasingly experience work-related periodic separation and reunion; that is persistent transitions between physically collocated and distributed interactions. Such a transitional lifestyle influences many aspects of family life; including the parent-child relationship. Current work has focused on the distributed parent-child interaction. Here we explore the life of periodically reunited families and focus on the use of current domestic technologies as they shape the parent-child interaction in such transitional family landscapes.

Keywords

Parent-child interaction, domestic communication technologies, mobile interaction, periodic reunion.

ACM Classification Keywords

H5.2. Information interfaces and presentation (e.g., HCI): User Centered Design.

General Terms

Human Factors.

Introduction

Families all around the world experience periodic physical separation and coming together (*or reunion*)

due to work-related reasons. Periodically reunited families can be drawn from many different professional backgrounds, including defence, mining, academia, business or aviation. A common characteristic of such families is the periodicity of their comings together. For example, a family where the father is employed in the defence sector may experience recurring military deployments, and these separations can threaten the family's wellbeing, in part due to the cumbersome nature of current technology [1] [2].

Current advances in domestic communication technologies have offered members of families opportunities to stay connected whilst in physical separation. Members of these family types have access to a wide range of ubiquitous communication tools that allow them to keep in touch, share experiences and enhance their connectedness with their physically separated family members (in many cases the father or grandparents) [3-8]. Even though a large body of HCI research has focused on exploring and understanding the role of technology in mediating distance, little is known about the life of periodically reunited families.

This research extends previous work on families and domestic communication technologies by focusing on periodic reunion. Our aim is to provide a rich understanding of periodically reunited family life and its mediation through current ubiquitous domestic technology. Here we describe work with four distributed families, two from the defence sector and two from academia. We interviewed two members from each family (the physically separated parent and a preteen child who was collocated with the other parent) and explored their perceptions of reunion as well as their current use of domestic communication technology.

Results underline the complexity of periodic reunion and its association with current ubiquitous domestic technologies.

Related work

Current research in HCI has explored ways of designing for families who experience frequent physical separation due to work-related reasons. In the presence of physically separated families with children, the focus of HCI researchers has been on the parent-child interaction [3, 9]. A line of research has investigated the opportunities for mediating connectedness and intimacy between physically separated parents or grandparents and their children. Earlier work has used the concepts of care and play in order to enrich the parent-child relationship whilst family members are physically separated [4,5,6].

Most recently, ubiquitous computing has offered new opportunities for children-parent (or grandparent) interaction. Children and grandparents read stories together over a distance creating a new way of sharing everyday activities, interacting and enhancing the family wellbeing. Playful family interaction has been enriched with the use of video mediated communication that engages all family members in visually mediated engagement and communication [7]. Routine interactions such as dinner or going for a family walk have been enriched with the use of virtual media spaces [8].

In regards to periodic reunion and family interaction little attention has been given by current HCI research. Modlitba et al., upon evaluating Globetoddler emphasized the importance of coming together after physical separation as depicted by the responses of

Table 1: Participant characteristics; in italics are the interviewed members of the family

	Defence_A	Defence_B	Academic_A	Academic_B
Family members	<i>Father: 42</i> <i>Mother: 38</i> <i>Child: 9, male</i>	<i>Father: 47</i> <i>Mother: 42</i> <i>Child: 12, female</i>	<i>Father: 42</i> <i>Mother: 37</i> <i>Child: 10, female</i>	<i>Father: 40</i> <i>Mother: 34</i> <i>Child: 8, male</i>
Frequency of periodic reunion per year	Once per year for the last five years	Once per year for the last eight years	Three per year for the last four years	Six per year for the last four years
Duration of separation	Six to eight months	Approx. six months	Two to three months	One month
Duration of reunion	Two to four months	Three months	One month	One month
Type of technology	Mobile phone (txt messages), email.	Mobile phone (txt messages), email	Mobile Phone, video (e.g. skype), email, SNS	Mobile phone, SNS (Facebook)
Frequency of use	Once per week	Once per week	Every two days	Every day

preteen children [6]. Children, especially younger ones, tend to be more interested in the actual moment of reunion rather than maintaining interaction whilst separated. Some researchers perceive reunion as a collocated group experience where family members share experiences and reflect on their lives whilst being together [10].

A question that remains open is associated with the lives of periodically reunited families. Indeed, there has been extensive work on how technology can aid families with children overcome the experience of being apart. Children are accustomed to using mobile phones or accessing the web to communicate with their loved ones and thus overcome the distance. But what occurs

in the lives of families who experience continuous transitions from being physically together to apart remains an area to be explored.

This modern aspect of family lifestyle challenges the design of communication technologies that support an increasingly *mobile* parent-child interaction. The motivation for our research lies in exploring the lives of work-related periodically reunited families through the lenses of the children and parents who undergo this phenomenon. By understanding the issues that periodic reunion raises for family interaction we hope to explore design spaces where ubiquitous technologies can be employed to enhance reunion.

Approach

We recruited four families with preteen children from two different professional backgrounds- defence and academia. In the defence sector, periodic reunion is omnipresent where many defence personnel with families are deployed into hostile environments for periods of time. In academia, there are many international academic staff and students who live and work in areas where their families are not domiciled. Table 1 summarizes our four families. We conducted eight interviews: two in each family. We interviewed the physically separated parent and the collocated child who shared with us their experience of reunion, what it meant to go through this cycle of coming together and being apart, as well as how they currently used available technologies.

Once the interviews were completed they were transcribed and analyzed using NVivo. We analyzed the data following a grounded theory approach.

In analysis our aim was twofold: a) to explore the context of periodic reunion as it was perceived by the physically separated parent and the collocated child and b) to investigate the influence of current domestic ubiquitous technologies over parent-child interaction.

Findings

The findings from our data analysis captured the varying perceptions of the experience of periodic reunion and the link between the use of domestic ubiquitous technologies and parent-child interaction in periodically reunited families.

Reunion as an important event versus a family routine

Reunion was perceived differently in families coming from different professional backgrounds. Defence fathers and children underlined the importance of coming physically together after a long period of separation. Both children in defence families described their eagerness to physically interact with their fathers after six months of physical separation. In contrast to that, academic families perceived reunion as a “*continuance of the physical separation*”. The coming together for children and the physically separated parents in academic families was perceived as a part of the family routine.

Experiencing reunion and ubiquitous technology use.

The most common communication technology used by all families was the mobile phone. However, different issues appeared in both defence and academic families in regards to the technology:

- The sense of “lost experiences” in defence families

The use of mobile phone in the difficult setting, where the defence parent was deployed, fostered the feeling of having experiences that could not be shared at times of reunion. Fathers might have had with them a mobile phone but rarely turned it on (due to security reasons) or when they did it was cumbersome to use due to technical reasons. This difficulty in family interaction influenced the family wellbeing as children were feeling guilty for not being able to communicate with their absent parent. Such experiences spanned from simple family activities (family rituals such as having dinner) to celebrating a child’s birthday or simply staying in touch during daily life.

- Communication overload and academic families

Both children in academic families used different types of technologies to interact with their parent during times of physical separation. Mobile phones and social network sites enriched with video communication, message and photo exchanges were frequently used. In some cases, the access to different types of communication technologies was perceived as frustrating by children, e.g. friending parents on social network sites risked the child’s privacy unless those sites supported sophisticated privacy settings. Parents, on the other hand, felt that the *communication overload* was complementing their interaction with their children as they could feel more engaged in their life and “*talk about stuff when we come together...physically I mean*” (mother, Academic_B).

Reunion as a physical and virtual experience

Reunion was also perceived as having virtual and physical modes. The coming together in the virtual space was mediated through the use of technology. For example, the child from the first academic family noted that *"we come together when we speak in skype; I can see him and we are making fun of each other and stuff"* (child, Academic_A). This interesting interpretation of reunion was also manifested in defence families. When the child and the parent were talking through a landline phone they were coming together even though physically separate.

Conclusion

Work-related periodic reunion is a common aspect of contemporary family life. Yet, it is poorly understood. Our current findings indicate a link between the experience of reunion and the use of current domestic ubiquitous technologies. In defence families, the cumbersome use of mobile technology resulted in "lost experiences", particularly as perceived by the younger members of the family. In contrast, in academic families the communication overload detracted elements of the reunion as a felt experience. This leads to new questions; questions that concern the way with which ubiquitous technologies influence the experience of virtual and physical periodic reunion.

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