Reasons behind Kenyan Family Communication Patterns

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ABSTRACT

In this paper we present results from an exploratory qualitative study on the family communication practices of family members in Kenya. We reveal that family communication focuses on economic support, well-being, life advice, and everyday coordination of activities. Lastly, we discuss new opportunities for technology design and articulate the challenges that designers will face if creating or deploying family communication technologies in Kenya.

ACM Classification Keywords

H.5.3 [Information interfaces and presentation]: Group and Organization Interfaces - Computer Supported Cooperative Work

Author Keywords

ICT4D, family communication, awareness, mobile devices

INTRODUCTION

Our work focuses on understanding the use of technology in Kenya for family communication. Within this space, we have seen studies on understanding family technology usage in developing countries. Our research builds on the existing literature on how family members living in the USA communicate with their relatives in Kenya. Specifically, we explore how Kenyans from rural, suburban, and urban settings share information within family structures even in the midst of challenges that result from continuous rural-urban migration [1]. To do this, we conducted an exploratory study involving in-depth interviews with 24 participants living in various regions of Kenya.

This study also aimed to understand the social factors that affected technology usage during family communication. This moves beyond infrastructure-related issues such as a lack of connectivity or electricity, which have already been reported (e.g., [21 - 24]). To foreshadow, our results show that communication over technology between distributed family members was primarily for coordinating economic and subsistence support for relatives, obtaining updates about family members' well-being, providing advice about life, and coordinating everyday family activities (albeit this depended on the setting). We also uncovered social practices that: created pressure for the eldest children in families to be nearly constantly available, required a brother-in-law of widowed women to take on additional communication, and led to an imbalance in terms of access to technology. The latter relates to gender issues, finances, and literacy. Together, these results illustrate the complexity of designing for family communication practices in Kenya. Rather than present design implications that suggest *how* to create family communication technology for Kenya, which may easily be speculative at best, we focus our discussion on broadening the focus of technology in Kenya and illustrate what social challenges designers will need to carefully think through when creating or deploying family communication technologies in Kenya.

GRAND 2014, May 14-16, 2014, Ottawa, ON, Canada

RELATED WORK

ICTD studies have highlighted the importance of understanding the dynamics and needs of local communities in developing countries before designing technology for them [18]. For example, Liu et al. [7] report on how rural Chinese families embraced the use of mobile phone entertainment. Rangaswamy & Sambasivan [13] documented the local practices of individuals in Bangalore, India, and reported that ownership or use of technology could either be single or collective. Sambasivan et al. [14] reported on how the roles of women in slums in India shaped their selection and use of technology through intermediated interactions where 'digitally skilled users' helped those who lack technical skills.

There also exist several studies focusing specifically on technology use in Kenya. Murphy and Priebe [10] provide an analysis of a census on the usage of cellphones in Bungoma, Kenya and describe how women often rely on borrowing a phone from someone or being gifted one. This reflects typical household hierarchies, which are dominated by men. While related to our work, this study does not explore how gender affects family communication practices. Instead, it presents a high-level overview of mobile phone access.

Research has also shown that expatriates who worked and lived in Nairobi creatively 'got around' issues of limited connectivity and power by preplanning their communications before accessing the Internet [23]. Some Kenyans have adopted social media despite infrastructural challenges. Facebook usage focuses on connecting with friends [24], perhaps more importantly, around income generation, such as finding a job [20]. Challenges with the use of Facebook included the costs of using a 'free' service (e.g., paying for connectivity), mobile phone battery power, and low bandwidth [24]. We also see the value of mobile phones for promoting trade, regional cooperation and development

within East Africa based on education levels, poverty, and fears of technology [9].

Similar to our work, Wyche et al. [21] conducted a study with Kenyan migrants living in the United States and found they had difficulties connecting with their family members in Kenya because of the technological and infrastructure limitations [21]. Mobile phones dominated communication routines and they described the use of 'beeping' [3] to notify remote family members to call them back [21]. Overall, our work builds on the related literature to focus specifically on family communication practices where we identify how and why technology is used and what social factors affect this communication.

STUDY METHODOLOGY

We conducted an interview-based study to understand: 1) how and why Kenyans used technologies to communicate with family members in rural, urban, and suburban areas, and 2) what social factors affected communication.

Participants Recruitment and Interviews

We recruited 24 people from Migori, Kisumu and Githurai (Outskirts of Nairobi) Kenya. Participants were between 19 and 59 years of age. We conducted semi-structured interviews with participants over the course of two visits. Each visit lasted between 45 and 60 minutes. During the first visit, the interviewer conducted an in-depth interview with the participants about their family and communication practices. Participants were provided with a sheet of paper and asked to draw their family communication networks. Participants were then asked a series of questions about when and how often they contacted each remote family member and what type of technology was used. A second visit was conducted after the first to clarify any unclear information. Overall, our participant selection gave insight into the family communication practices of five different tribes.

Rural participants were interviewed within their homes while urban and suburban participants were interviewed either at their workplace or homes. One suburban participant was interviewed at his business premises, the senior civil servant at his home, while the university graduates were interviewed in their relatives' homes. Participants spoke in a range of dialects and languages, which were all understood (and later translated) by the first author who had lived in our study areas in the past. Overall, our participant selection gave insight into the family communication practices of five different tribes.

Data Collection & Analysis

All interviews were audio-recorded and handwritten notes were kept. Our findings are based on 24 transcribed interviews, 69 photographs (depicting participants' homes and areas of communication) and 92 pages of field notes. We analyzed our interview transcriptions and notes using open, axial, and selective coding [17].

Our results are organized into two main sections. First, we outline the reasons participants used technology to communicate with immediate and extended family members. Second, we describe the social situations that influenced family communication routines and activities. All participant names have been anonymized.

REASONS FOR COMMUNICATION WITH TECHNOLOGY

In rural areas, family communication was focused around in-person exchanges and technology was used only occasionally to communicate with the people that one lived with. While out working in places such as the farms, most participants did not communicate with their family members unless there was an important message to discuss. Mobile phones would then be used to coordinate urgent matters.

In the suburban and urban regions, family members had more frequent opportunities for exchanges of information throughout the day through the use of technology. Across these three areas, we found that technology-based communication generally focused on four topics: *economic support, life advice, well-being*, and, sometimes, *family coordination.* We describe each next.

Economic Support

We found that family members who were considered wealthy were more likely to have communication focus around economic support. This sometimes created feelings of obligation or emotional struggles because conversations tended to overly- focus on economic support at the expense of other topics.

Life Advice, Guidance and Well being

Communication between rural and urban family members also focused on parents providing advice to children and siblings and close friends encouraging each other about the challenges of life and generally checking on their wellbeing. This was especially the case for parents of adult children who had moved away from home.

Coordinating Family Activities

For households containing multiple individuals, it was important to coordinate the daily activities of family members. Face-to-face interaction was the widely used mode of communication between such families. However, people who had specific jobs that required them to use a mobile phone for work would use mobile phones to coordinate small errands for their family members who lived in the village. In urban and suburban areas, family members used technology more often for coordinating activities.

SOCIAL SITUATIONS AND CHALLENGES

We also learned about various social situations, described next, that affected family communication routines ranging from being the eldest child, to supporting the families of deceased siblings (different than in [12]), to gender.

Eldest Children

Generally, parents were in charge of coordinating family activities. However, the dynamics of this situation changed when adult children moved away from the rural areas and migrated to suburban or urban areas. In these situations, parents would entrust the eldest children with the duty of passing information to their siblings who were also working or studying away from the rural villages.

Sometimes this created additional monetary burdens on the eldest children. If cases arose where one of the adult children was more financially well off than the eldest child, the obligation as 'information hub' moved to this child. For example, in one case, a civil servant participant who was seen to be financially well off in comparison to her eldest brother was expected to disperse information from her mother in the village to her siblings who lived in Nairobi.

Death and its Effects on Communication

We were also told about ways in which surviving relatives who worked away from home would use scarce financial resources to communicate with the families of their deceased siblings left behind in rural homes. This was a cultural obligation described by our participants.

For example, a participant named Opana who was in his early fifties was the only surviving male out of his entire family. His parents and siblings had all passed away and he lived in Githurai with his wife and six children. Opana was a low income clerical civil servant and lived on a very tight budget. He had to take out loans to meet his financial obligations and also engaged in a small tailoring business in the evening after work and during the weekends to make ends meet. Despite this, Opana was still culturally responsible to communicate with his siblings' widows to ensure the smooth running of the rural home as the surviving eldest male in his extended family.

Gender

Like Murphy and Priebe [10], we found that women often had to rely on their husbands for access to mobile phones;

For example, we found that female participants who lived in urban or suburban areas were more likely to own mobile phones on their own compared to those in the village.

Phone Sharing and Connecting through Intermediaries

Like other research [16,22], we also found that rural participants shared phones because of a lack of ownership, loss of service network, and a lack of battery power. On the other hand, urban and suburban participant did not report sharing of phones because of better infrastructure and ability to purchase additional phones. This finding is different from [16], where factory workers shared phones in urban areas mainly due to lack of cellphone ownership in urban India. In our case, Phone sharing created several interesting social situations.

DISCUSSION AND CONCLUSIONS

The goal of our study was to articulate the family communication practices of our participants with a focus on understanding when technology was used and why, and what social factors affected this usage. In this section we suggest areas that present further design opportunities which move beyond the suggestions of previous work. We also outline the social challenges that designers will need to carefully think through when creating or deploying family communication technologies in Kenya.

The Focus of Communication

Technology-based family communication largely on four main areas: providing and discussing economic support, life advice and guidance, maintaining an awareness of well-being, and, sometimes, the coordination of everyday family life. At a surface level, these results illustrate the areas where technology design for family communication in Kenya should be targeted.

Social Challenges

We also found that a variety of social situations affect how families communicated using technology. First, we found that additional pressures are placed on the eldest children in the family and the siblings of widows to connect with family members. In these situations, Kenyans were socially and culturally obligated to stay aware of the activities of additional family members and coordinate the exchange of information. This presents results that move beyond past work that shows the obligations faced by those family members who are considered to be more 'well off' financially [21] to show what additional social factors affect cultural obligations.

This brings forward the idea that new technology designs will be used differently by users depending on their social role within a family. It also suggests design opportunities based on social roles.

We also found a contrast in computer accessibility, use, and knowledge between participants in rural and urban regions. Thus, our study draws attention to a 'digital divide' within Kenya. In rural areas, a large number of participants did not have knowledge about computers. On the other hand, the working class (civil servants and business men), and college graduates and, to some extent, low income individuals living in urban areas were already using more advanced communication technologies (e.g., Facebook, Skype).

Even though the family communication routines we uncovered in our study were specifically tied to mobile phones, it is likely that existing practices (e.g., a focus on economic support) will stay consistent as new technologies are introduced and developed in Kenya. This is because they are culturally specific and reflect the ways in which Kenyans need to communicate when separated by distance. This creates a challenge where researchers and designers of technologies will need to understand how to translate the cultural practices of Kenyans to the next wave of technological advancements to continue to create technologies that are uniquely Kenyan and balance disparities in education levels, income, electricity, and connectivity.

It is also likely that the future will hold new opportunities for the design of applications in Kenya that utilize the Internet and may even mean the creation and further adoption of social networking sites and rich communication systems such as video chat. However, it is not necessarily the case that such technologies will migrate from developed countries to developing countries on the simple basis of improved

infrastructure where the use of these technologies is the same in Kenya as other developed countries. Instead, we feel that one should think carefully about the ways in which Kenyans are likely to need and use communication technologies and specifically design for such situations.

Study Limitations

We recognize that while valuable, our study results do come with their limitations. We only investigated Kenyans from five tribes (out of a potential 42) [5], mainly drawn from western Kenya. Thus, the communication practices that we found may differ for these areas. We will continue to explore this design space where we plan to prototype technologies that will provide our participants with opportunities to engage in audio, text, and, to some extent, video communication with their distributed relatives. We aim to understand how such avenues will support our participants in their communication routines.

ACKNOWLEDGMENTS

We thank NSERC and the GRAND NCE for funding this research. We also thank past reviewers for their helpful comments on revising the full version of this work that will appear in [11].

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