Involving Seniors in Ethnographic-style Work: Initial findings from a study on long-distance communication

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Abstract

As American and European populations continue to age and seniors move farther from their adult children, the ways in which seniors and their families stay in touch become increasingly important. We are seeking to understand these patterns of communication over a distance by involving seniors and their children in early ethnographic-style research as well as in concept validation studies to learn how new communication applications and services can help strengthen these important relationships as parents age.

Keywords

Elderly, Design, Grounded Theory, Wellness

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

America's population is aging as baby boomers grow older. The US Census Bureau estimates that by 2030 one in five Americans will be over the age of 65. [6] This trend is also occurring globally, with Europe aging at an even faster rate due to lower birth rates. [4] In

combination with these demographic trends is the growth of retirement destinations are expanding even through the current recession. As of 1993, 43% of American adults lived more than an hour away from their parents [9] and this number is increasing as large retirement communities in Florida, Arizona, and Nevada are attracting hundreds of thousands of seniors. As these seniors move away from their children, communication becomes less frequent. [7]

As a communications company, Motorola is interested in the issues that arise in intergenerational communication as populations age. Particularly, we are interested in the ways that seniors can feel more connected to the people that they care about while living at a distance with less in-person contact.

To explore these questions, we have completed a study focused on understanding current communication practices and needs of seniors living approximately 1,000 miles from their adult children. We plan to use findings from this study to inspire the design of new communications products and services to help these relationships stay strong despite the factors of distance.

This pattern of research, ideation, rapid prototyping, and field-testing of new concepts has been used successfully in our lab when studying other domains such as Mobile Social Presence [1], Music and Photo Use [3], and Social Television [5]. We will be using similar research and analysis methods including home tours, diary studies, semi-structured interviews, and grounded theory-based affinity analysis in our study of elder communication. Most importantly, we'll be returning to senior populations at each step to validate our hypotheses and answer our research questions.

In the remainder of this paper, we will describe our study and plans for creating and evaluating the resulting systems in everyday use with seniors and their families.

Elder Communication Study

Our initial study was designed to answer several research questions about current communication practices at a distance. We were interested in learning about the tools that are used to communicate, the barriers and challenges that arise because of distance, any tensions or obligations to communicate that are felt, the different types of communication that only occur in person, and the artifacts in the home that are used to remember the people at a distance. We believe that the answers to these questions will be critical in designing new communication systems for this population.

Because our research questions are quite broad, we used a variety of methods to uncover the answers. The study consisted of an initial in-home interview with both the senior family and their adult child's family. In this interview, we toured their home and the places where they communicate today as well as observed the artifacts they had around their home relating to their child/parent. For the next three weeks, participants logged their communication with each other, noting among other data the purpose of the communication and the medium used for communication. Finally, at the end of the three weeks, we met again with both families and reviewed the data that was collected, asking questions where ambiguities were present.

We recruited five families for this study from central Florida through an email to a large population of

senoirs with ties to Chicago and by using a professional recruiting firm. Each senior family in our study had at least one adult child living in the greater Chicagoland area (approximately 1000 miles away) and we recruited this adult child as another participant in the study.

During the study, our participants made 186 distinct communications with each other. From our interviews and voicemails from the participants, we transcribed 1,168 direct quotes onto post-it notes. We are currently performing a grounded theory-based affinity [8] to find patterns in the data that can be used to inspire design.

Initial Themes
Several themes are arising in the data as we work through our analysis. Most interesting to us are the activities that our participants engage in to re-create in-person interactions when at a distance. While at a food and wine festival, EC2-IL captured a video to send to her dad showing the festival and a bottle that she thought he'd find interesting. EC4-IL and FL used Skype video at family gatherings so that the FL participant could visit with the grandkids. EC4-IL: "We just brought the kids down there. Say hi to grandma. Grandma can see you then, because they change so quickly. And she just loved that." Participants also posted photos of loved ones in everyday places in the home to always be reminded of each other's presence.

Another interesting theme centered around objects in our participants' lives that served to remind them of their loved ones at a distance. EC3-IL had a pair of earrings that her dad had given her for her 16th birthday: "When I was taking them out. I always kind of remember that when I wear them. And that my dad

gave them to me." Both EC4 and EC5 had furniture from their parents and remembered their parents when sitting on it. EC4-IL: "Actually this whole living room reminds me of my mother because all of this furniture was hers." We are interested in exploring other types of artifacts that can promote remembrance at a distance.

Ideation
Using themes derived from direct participant quotes and actions for our inspiration, we will invent new communication devices, applications, and services that can help seniors and their adult children to better maintain their relationships. In previous studies of this type, we have identified up to 150 design ideas that could then be prioritized according to research and business needs.

Once we have selected a few ideas to move forward with, we will create rapid functional prototypes of these ideas, similar to our work in mobile presence [1]. These prototypes may be proposed solutions or probes to better answer particular research questions that may arise. The goal is to realize the basic functionality for an idea so that we can test the concept in the real lives of our participants to get early feedback before developing a complete solution. [2] We hope to recruit a different set of five families for these follow up studies from the same community.

Evaluation
In our evaluation of these concepts, we feel that it is critical to test them in everyday settings. We will do everything we can to ensure that the transition to using these new technologies is as simple as possible. Concepts will be tested for several weeks in order to

understand how they fit into our participants' lives. We believe that it's important to involve both the seniors and their children in the evaluation, just as it was for the initial study since a solution has to be viable for everyone involved. We plan to iterate rapidly and test several successive versions of concepts that show promise. This is similar to our work with Social Television where each study tested increasing levels of functionality and learnings from one round could be applied to the next. [5]

Discussion
We believe that our research demonstrates several important methods for involving seniors in the design process and grounding innovation in everyday realities. By involving both seniors and their adult children in the initial investigative research, we are learning from current practice on both sides of the relationship. This allows us to remain aware of what works today with communication over a distance and to observe breakdowns as they occur from both perspectives. By taking concepts at an early stage back into real life situations, we can quickly validate ideas by seeing how they are appropriated in real situations. This allows us to quickly learn how our systems fit into the daily lives of both seniors and their children and is important since the life of a retired person is quite different from our lives as researchers and designers.

We have learned a good deal from our participants and will be completing analysis by the time of CHI. We look forward to sharing more findings at the workshop.

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