PeerCare: Challenging the monitoring approach to care for the elderly

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The aging of the population has led to a growing interest in finding new ways of providing care for the elderly. Researchers are seeking better technological solutions, particularly improved support for aging at home. One common strategy involves monitoring of the elderly, either by medical staff or the elderly. We are pursuing a different approach: providing technology that makes it easier for the elderly to care for each other. This approach is derived from our interviews with recent widows who have created a tiny network of friends, each of whom takes responsible for checking on the others while remaining secure in the knowledge that the others will look out for them.

We are currently investigating how *communication appliances* can enhance such reciprocal care among the elderly, or 'peercare'. Our goal is to increase independence and satisfaction while increasing the time the elderly can live safely at home. Communication appliances provide private, easy-to-use peer-to-peer networks among close family and friends, allowing users to exchange text, voice, images, and even video, in a simple and secure way. We are using participatory design to design and modify communication appliances together with the elderly, and will test them in their homes.

Human Computer Interaction, Aging, Communication Appliances, Participatory Design

1. INTRODUCTION

As the population ages and families become smaller and more distributed geographically, it is critical that we find new alternatives to caring for the elderly. Ideally, such solutions should both improve the quality of life while ensuring safety and healthcare [8]. HCI research in this domain has focused either on technology that aids caregivers [5, 7, 9] or on the elderly themselves [3, 6]. In the former, the emphasis is often on providing tools for caregivers to monitor the activities of the elderly. We are more interested in the latter approach: we seek to increase communication among the elderly in order to help them stay independent as long as possible.

Our own interviews support the findings in the literature [7, 8, 9] that show many elderly prefer to stay at home as long as possible. These elderly cite independence and social connectivity with family and friends as crucial to well being [3]. Life expectancy in Australia has also been shown to be higher for people with close friends [2]. For such people, technology may provide a foundation for supporting human-to-human forms of communication that are similar to the links among traditional extended families and villages, in which people were assured that someone was looking out for them. Our emphasis is on providing technology that enhances naturally-occurring social ties, allowing people to 'age in place' as long as possible.

2. PEERCARE

We are exploring how communication appliances [4] can support social ties and mutual care among the elderly. Communication appliances are single purpose, easy to use devices that allow close relatives and friends to communicate both actively and passively. Initially developed as part of the InterLiving project to help remote family members stay in touch, we are now exploring how they can be adapted to support the elderly.

We are using a participatory design approach, including home interviews and observation, workshops, and cultural [1] and technology probes [4]. We have conducted ten interviews with independent elderly living at home, to better understand how they manage and successfully overcome health, social and care challenges in their everyday life. One group of women has developed a peer-to-peer approach to providing and receiving care. These four women are widows who moved from a rural to an urban area after their husbands died, in order to have better access

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to transport, shopping and community services. Although physically neighbors, it took some time for them to find each other; now they refer to themselves as the 'bande des quatres' (the gang of four). These women have become more than just friends; they have developed specific activities that ensure that each looks out for the others and is, in turn, looked after. This allows them to remain independent, while giving them an active social life and knowledge that someone will look after them if something happens. For example, they each call the others on the interphones at the entrances to each building before they go out. Sometimes they end up going out together, other times they just chat briefly, but they make sure that they stay in contact. They also developed a specific strategy for one woman, who recently had a stroke. She rings her neighbour's phone three times and then hangs up, just to let her know that she is awake and fit. They pointed out that this saves on the phone bill and is also very lightweight form of communication that does not require conversation unless it is desired. Their frequent interactions provide both passive and active care for each other; they look after each other.

We would like to design our technology to support this lightweight form of staying in touch as an alternative to the 'Big Brother' monitoring approach. We are now working with the above-mentioned group and others to design a new communication appliance that would work over greater distances, building upon the peer-to-peer care strategies they have already developed. We plan to develop working prototypes that they will test in their homes, to better understand the design space and requirements for this type of communication appliance. These studies will be conducted in both France and Australia, to explore cross-cultural differences and similarities. Ultimately, we hope to create a communication appliance that is effective in enhancing peercare among the elderly, in different circumstances and cultures.

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