

YouTube and Intergenerational Communication: The Case of Geriatric1927

DAVE HARLEY AND GERALDINE FITZPATRICK

Interact Lab, Department of Informatics,

University of Sussex, Brighton, BN1 9QH, UK

{d.a.harley, g.a.fitzpatrick}@sussex.ac.uk

Category: Long paper

Abstract

We present a case study of a 79 year old video blogger called ‘Geriatric1927’, and his use of the video sharing website, YouTube. Analysis of his first eight video blogs, and the subsequent text responses, reveals opportunities of this medium for intergenerational contact, reminiscence, reciprocal learning and co-creation of content, suggesting older people can be highly motivated to use computers when social contact is their aim. We conclude by noting the importance of technologies that are socially engaging and meaningful for older people and pointing to ways in which the social life of YouTube might be better promoted on its interface.

Keywords: intergenerational communication, YouTube, video blog, older people, social software.

Introduction

Support for an aging population is receiving increasing attention across various domains such as human computer interaction, ubiquitous computing, intelligent environments, medical informatics, and so on. A key driver for this increasing interest is a rapidly increasing aging population with longer life expectancies, with a concurrent shrinking tax-paying population¹. This means there will be unsustainable and un-fundable demands on the healthcare system should existing models of care be continued. Two related research areas have been receiving increasing attention here: assistive technologies to augment functional and cognitive needs; and the support of older people² in their homes, in particular to enable continued care in the home (aging in place) and enable remote family members to keep ‘an eye on’ older parents. For example, ‘smart home’ environments make use of sensing and monitoring technologies to generate information about what people are doing and respond in some appropriate way.

¹ For example, in the UK, the 50+ population is expected to grow from 33.5% in 2002 to 37% in 2012.

² UK National Statistics Online report [“UK’s National Statistics Online - Older People: Population”, 2002, <http://www.statistics.gov.uk/cci/nugget.asp?id=874>] the term ‘older people’ is assigned to those aged 50+ years.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

While the economic and healthcare imperatives that largely underpin these strands of work are indisputable, the current foci of interaction design for older people can often focus on functionalist and cognitive notions of aging, as is necessary for these types of applications.

However, the slow but steadily increasing uptake of technology by older people provides opportunities to also think about the ‘everyday’ lives of older people and supporting more holistic notions of aging. One area that older people identify for themselves as important is social connectivity, indicated by email being a commonly used application [19]. Support for social communication can be expected to confer positive psychological and health benefits, given that social isolation has been associated with poorer psychological well-being and functional health in older people [42]. However there are many other potential applications beyond email that can help support social connectivity. The video sharing internet site, YouTube, is one example.

YouTube³ was started in 2005 as a site where people can upload, view and share videos, including videoblogs, and also comment on other people’s videos either by text or by posting a video response. Videoblogs are blogs (journal style entries written to a web page) making use of video. An Advertising Age article⁴ reports that YouTube is now one of the fastest growing websites, with 12.8 million unique visitors recorded in one week in July 2006, a 75% increase on the previous week. It also reports that 12-17 year olds are the highest user age group on the site. Hence YouTube is popularly perceived to be a site for ‘younger people’.

In this paper, we focus on the lessons learnt about the potential of new and emerging social software tools such as YouTube to not only support social interaction but more specifically intergenerational communication and co-creativity for older people. We do this through the case study of a 79 year old video blogger, Peter, who uses the YouTube pseudonym of ‘Geriatric1927’⁵. Over a 4 month period, Geriatric1927 posted a total of 66 videos. His ‘channel’ on YouTube was visited 1,621,791 times and 39,222 of these visitors signed up as dedicated subscribers to his videos (at 18 March 2007). The profile and popularity gained by Geriatric1927⁶ in this ‘young people’s’ medium, and later in the popular press, provides a unique opportunity to explore how this medium might be able to support social connectivity and intergenerational communication for older people.

³ <http://en.wikipedia.org/wiki/YouTube> provides an overview of YouTube, last accessed Dec 5 2006.

⁴ http://adage.com/digital/article.php?article_id=110632, last accessed Dec 5 2006.

⁵ ‘We received permission via email from ‘Geriatric1927’ to study his video postings and the responses made to them. We have had subsequent communications via email with Peter and have received feedback from him on an earlier draft of this paper where he stated that “the way that you used me as an example was both flattering and accurate”.

⁶ As at Dec 5 2006, Wikipedia listed Geriatric1927 as one of the top 10 ‘notable YouTube celebrities’ - <http://en.wikipedia.org/wiki/YouTube>.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

We focus here on the first eight videos and responses (as will later be explained). Analysis of these videos and their responses point to pertinent issues that will be discussed under the headings of: learning of technical skills and how to be a YouTuber; personal and emotive responses; evolving community through discourse; and the co-creation of content. This case study is reported against an interesting backdrop of changes in both the demographic profile of an aging population and the associated demands this makes, and the backdrop of current technical approaches being taken to support these demands. We review these in the following section.

Related Work

The process of industrialisation has had a dramatic impact on the socio-demographics of the developed world. In the UK life expectancy for men has increased from 45.7 years in 1901 to 76.2 years in 2002 and for women from 49.6 years to 80.7 years over the same period [32]. Providing adequate health and social services for a growing elderly population has become an increasing concern in the UK [9] and has hastened a move to supporting older people to live independently in their own homes for as long as possible so easing the tax burden of residential care services. Assistive technology, in its broadest sense, is being promoted as an enabler of the above scenario in the developed world [1] and currently represents an impetus for interaction design.

In the field of ubiquitous computing there have been sincere attempts to augment health and social care support through the use of embedded systems in the home, often referred to as ‘Smart Homes’. This work is happening both through the deployment of commercially available technologies [4, 39] as well as through research projects exploring next generation use of wireless and sensor-based technologies [e.g. 34, 26, 41]. In general terms, these ubiquitous solutions are able to monitor and interpret aspects of an older person’s physical state and infer corresponding activities, reporting them back to relevant support staff who can institute appropriate interaction with the older person to check on them. Similar approaches focus on making activity-based information available via ambient displays in the homes of other family members, rather than through care-related monitoring centres, to reassure them about the state of their loved one [e.g., 8, 29, 28]. An important driver for many of these types of applications is to support care in the home for people with degenerative disorders associated with old age such as Alzheimer’s Disease or more general cognitive deficits.

Whilst these approaches may provide much needed efficiency and clinical gains for providers of care, they are only able to address the more functional aspects of an older person’s care. Whilst this is necessary, there are aspects of an older person’s experience which also need to be accounted for if we are to maintain the sense of meaning that an older person has within their life. The breakdown in traditional family structures and increased levels of geographical mobility mean that older people are now more likely to live separated from family and friends and hence be more socially isolated than ever before [27], with opportunities to share experience across generations diminishing. Such social isolation has been associated with poorer psychological well-being and functional health in older people [42]. Intelligent monitoring systems, such as those described in ‘Smart

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

Homes' work, are open to being caricatured as reinforcing social isolation and providing a form of care that can be devoid of human contact or social intimacy.

More mainstream developments in communication technologies such as the internet and mobile telephony afford greater opportunities for social contact amongst family and friends at a distance. They also have the potential to decrease the sense of social isolation felt by older people. Indeed, there is evidence of increasing uptake of these technologies amongst older people. For example, Datamonitor⁷ identifies the over 55 age group as the fastest growing on-line population in the US with 22% of people of retirement age with internet access. Similar patterns have been identified in the UK⁸, with internet and email some of the most commonly used applications by older people [19].

Despite these general trends though, it is still the majority of older people who do not make use of these technologies and there are good reasons for this. Technologies which find their way into the homes of older people, have often been designed with the work place in mind, focussing on issues of productivity and efficiency [2] which are ill-suited to the lives of many older people. Perhaps the most obvious example of this is the personal computer. Its introduction into the home is often resisted by older people who are aware of its expected mode of interaction from their work lives [37]. Other areas of technology development which are not overtly computational but concerned solely with the social aspects of life also carry obstacles for older users. Innovation in communication technology tends to focus on the younger generation who are seen as early adopters of such technologies. Applications are usually intended to support peer to peer communication amongst this age group rather than operating across generations. This perspective is reflected both in the marketing of products and in the approach to usability employed [7]. Perhaps unsurprisingly there remains a reluctance amongst the older population to engage with these technologies [37]. Current attempts at reconciling this disparity have focussed on providing access to pre-existing technologies by altering the user interfaces for mobile phones [33] and the internet [49, 25].

Many attempts at universal access have concentrated on the 'how' of using the technology rather than the 'why'. Although usability remains an important issue it is not a sufficient condition in its own right to ensure adoption and sustained use. Understanding why technology comes to be meaningful within the social context of older people's lives is necessary if we are to appreciate this.

Whilst a certain level of usability with new technology is necessary for older people, it may not be the deciding factor in terms of its adoption. There are examples of communication technologies, such as YouTube, that have not been explicitly designed to be accessible to older people [7] yet some older people persevere and make great use of them. For these individuals there appear to be

⁷ See "Targeting Seniors: Strategies to Promote Online Marketing Relationships in Healthcare", Datamonitor Report Oct 2003. Available from <http://www.nhionline.net/products/research/datamonitormr36.htm>

⁸ For example, see "Silver Surfers day targets the over 50s", The Register, 21 May 2004.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

overriding motivations which encourage a tenacity in mastering the technology. Understanding what it is that motivates such individuals is an important step towards providing technology that is relevant to older people's lives. In order to do this one must move beyond the immediate interactions that might exist between an older person and the technology and begin to consider how technology comes to be situated within the social and emotional lives of older people.

Various projects have started to explore some of these broader social and emotional issues for older people. For example, the UTOPIA project has been looking at ways of including older users in the design process and developing methodologies that can take account of such issues [10,11]. The EU interLiving project touched specifically upon inter-generational communication through message boards and video-based technologies (rather than newer sensor-based technologies) installed between the homes of four pairs of related households in both the US and Sweden [22]. In the US this was between three sets of grandparents and their grandchildren and interestingly it was two of the grandfathers who wrote the most notes. In another EU project, Presence, cultural probes were developed as an approach to understand the values, local culture and life experiences of older people, leading to a design of an interactive bench to address issues of increasing the presence of older people in their local communities [15].

Games have also been identified as an area of interest for older people who are computer/internet users [19, 23], conferring positive benefits, including social interaction and enhancement of perceptual-motor skills [47]. More recent approaches have combined distributed sensor and wireless technologies across homes to create playful applications targeted to interactions between a grandparent and grandchild, e.g., Curball [24], magic box [46] and distributed hide and seek [45].

While social connectivity and intergenerational communication have been a focus of these applications, it is largely interpreted as being within family relationships. However, there is also significant potential to connect older people with a broader social community beyond just family members through technology. The case study that we go on to describe – exploring Geriatric1927's participation in the YouTube community – provides an exemplar and insights for how this might happen using more recent social networking applications on the web. Such technologies are potentially more immediately accessible to a broader range of older people because they only require a relatively basic setup of PC, video camera and internet connection; they do not require the specialist hardware and software involved in the applications just discussed.

The Case of Geriatric1927 – Setting and Methods

The focus of this study is a 79 year old video blogger called Peter who uses the YouTube website under the pseudonym of 'Geriatric1927'. Started in February 2005, YouTube is a website (<http://www.youtube.com>) that promotes a certain form of video blogging. It allows registered users to post their own videos onto the web and to comment on others' videos either through the use of video or text

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

comments; users can also subscribe to the video posts of other 'YouTubers'. Some users post regular video diary entries using a static webcam whilst others are more experimental, filming naturalistic or scripted events, editing them and adding post production elements before posting them onto the site. YouTube has also become an alternative media outlet with individual users and mainstream media production companies posting news and promotional videos (particularly music videos) onto the site. Peter uses the YouTube service to post small video vignettes about his life and to comment on certain news items.

The registered online community of YouTube is approximately 500,000 strong, predominantly English speaking with a large influence from the United States (70% from US), plus countless others who can visit and view the videos without registration (as illustrated by the figure mentioned previously of 12.8 million unique visitors recorded in one week in July 2006). As another indicator of the population of YouTube, it is estimated that 50% of those who register on YouTube are under 20 years of age [20]. This medium is therefore dominated by the younger generation.

Over a 4 month period, Geriatric1927 posted a total of 66 videos. His 'channel' on YouTube was visited 1,621,791 times and 39,222 of these visitors signed up as dedicated subscribers to his videos (at 18 March 2007). Our attention was drawn to the case of Peter/'Geriatric1927' on the YouTube site when he started to be profiled on the YouTube home page as a highly-viewed contributor (before he gained the attention of the popular media). Because he was so much older than most of the other people using YouTube, his contributions stood out. Given the intergenerational differences in this medium, and the obvious response he was gathering on the site, we were curious to understand more about what was happening here and what we could learn that might help inform future thinking about the design of technologies to support older people and intergenerational communication.

To do this we employed a mixed qualitative/quantitative approach using video data from Peter (eight videos in total, lasting between 1-10 minutes) and text and video responses from fellow YouTube users (limited to the first 150 response to each of the eight videos), as we go on to explain.

While Peter's involvement with the YouTube website is ongoing (66 videos to date), we chose the first eight videos that he made and posted between August 5th and August 14th 2006 so that we could capture the effect of being within the YouTube community without these discussions being influenced by the impact of the broader media coverage of his postings. Peter's video postings became very popular on the YouTube website with thousands of fellow bloggers watching and commenting on his videos. This immediate popularity was soon picked up on by the international press with articles appearing in daily newspapers and television news in countries around the world including the UK, the US, Norway and Australia. Whilst these news items provide some insight into the poignancy of this kind of communication in cultural and historical terms, critiquing the value of such communication is not the aim of this study. Hence, the analysis which forms the basis of this paper is taken from the eight videos and comments that were made prior to this notoriety.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

The consequent dialogue that takes place between Peter and his fellow bloggers in the YouTube community happens in a number of ways: through ‘open’ text comments posted onto the website in response to videos; through direct ‘closed’ text messages sent to the person who posted the video; or as ‘open’ video comments posted onto the website. To manage the scope of the study since the responses continue to grow every day, we focus on text comments that were ‘open’ and limit the number of comments per video to the first 150 to capture the first tranche of responses.

We transcribed the verbal content of Peter’s videos and captured the text comments that he received. We analysed these using the constant comparative method of grounded theory [18, 17] for factors deemed to be significant in understanding an older person’s engagement with communication technology and looking for patterns in the interactions that happened between Peter and his predominantly younger audience on YouTube. Common themes were identified in the data and these were developed and re-evaluated as new evidence emerged, forming the coding scheme used below. The videos were also repeatedly viewed and analysed for non-verbal issues beyond the transcripts of the videos such as the production values of the videos. An understanding of both Peter’s experience and that of the other bloggers was developed.

Whilst this single case study approach cannot be generalised to the whole of the older population, it can be used to highlight the possibilities of this type of social software for supporting intergenerational communication. It may also point to a broader view of what should be viewed as ‘important’ when designing technology for older users, suggesting complementary opportunities for technology design beyond functionalist/cognitive approaches currently being employed in some applications.

Overview of ‘Geriatric1927’ Videos and Responses

Table 1 provides a summary overview of the first eight videos posted by ‘Geriatric1927’. For each video we list the title Peter gave it, his description of it, the tags he used, and the video length. We also provide a brief description of the content of each video and the number of views and responses it has received (as at March 18 2007).

Videos 1-4 show Peter introducing himself to the community and becoming familiar with the medium, both technically and with making comments on news items. Peter’s initial decision to become a video blogger and to post videos onto the YouTube website appears to come from an appreciation of the creativity of this generation and from a wish to engage with them in a similarly creative manner. Describing YouTube in his first video, Peter says:

“it’s a fascinating place to go to see all the wonderful videos that you young people have produced. So I thought I would have a go at doing one myself”
[Peter, Video 1]

In Peter’s second video he clarifies his intentions as being:

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

“to just blog about things that annoy me and upset me and news items that I think are pretty stupid and things like that and see if I can get some comments from people and maybe get a dialogue going with you wonderful YouTube people”[Peter, Video 2]

As part of the dialogue that he did get going with the YouTube people, Peter embarked on a multi-part narrative of his life story, seen in Videos 5-8. (We discuss this in more detail in the section “Co-creation of content”.) Telling his life story was in response to some specific questions from fellow YouTube users and continues beyond the videos we focus on here (to date he is up to his 66th video, titled ‘THAT EUREKA MOMENT’).

<Table 1>

In total to date, these first eight videos have been viewed 3,149,911 times, and received 17,856 public text comments and 230 video comments. Through analysis and coding, we categorised the first 150 text comments for each video using the categories of technical feedback, comments relating to the YouTube community, content related comments, and personal/emotive responses. These are listed in Table 2 with an example comment to illustrate each.

<Table 2>

The distribution of comments in response to each of the eight videos is depicted in Figure 1. A comment could have more than one category associated with it. We will discuss each of these in more detail in the following section.

<Figure 1>

Figure 1: Categorisation of responses (see legend in table 2) to each of the eight videos

The overall data about number and distribution of responses indicates the strength of the response Peter received from the YouTube community to his videos. In the following section, we go on to discuss a number of broad themes that become evident through analysis as reflected in the codes: learning technical skills and how to be a ‘YouTuber’; personal and emotive responses; evolving community through discourse; and co-creation of content. Collectively these help to unpack the nature of the interactions that took place and the ways in which Peter’s initial motivations played themselves out through his emergent relationship with the YouTube community.

Learning Technical Skills and How to be a ‘YouTuber’

One of the most telling points of interaction between Peter and the YouTube community was the way in which he was able to develop his technical skills through the advice and help given to him by others. These skills related to both how to produce videos as well as how to use the technical aspects of YouTube to maximum effect.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

Peter's videos show that he had a reasonable degree of technical literacy to begin with. He trained as a radar mechanic during the Second World War and later developed an understanding of mechanical engineering through running his own motorcycle shop and constructing motorcycle parts using lathes. Such experience will have given Peter a basis for learning new technical skills although it is unlikely to have prepared him directly for the skills involved in producing his own videos and uploading them to a website. Peter makes it clear though from the outset that he is open to receiving help. In describing his first video Peter says:

“as you can see, if this ever does get uploaded to YouTube, I need a LOT of help..... I hope you will bear with the sort of amateur production I have made”
[Peter, Video 1]

His confidence in his own abilities appears to be faltering at this point, both in terms of his ability to express himself through his videos and in terms of producing and uploading content onto the YouTube website. What begins as an individual effort by Peter soon develops into a collaborative endeavour through the comments he receives from his viewers. They give him feedback in a number of ways which help him to develop his video presence within YouTube. The following are examples of viewers' comments that critique the technical aspects of his video production and give him technical advice on how to improve it:

“Try putting music into the video through the program you are using, it would sound much better :)” [ZS⁹, 19, US - response to Video 1]

“you can also change the colors on Windows Movie Maker. When you are typing your text down by where it says animation or what ever to change the display of your text it should be right there. Just click that and you can change the font and then color is right under the font” [Gt, 21, US – response to Video 2]

Peter is quick to take advantage of the advice given and the changes in production qualities and techniques in subsequent videos show evidence of the results of his learning. His first video is tentative and short. After a simple title screen and a still photograph of himself taken with his webcam he starts the video proper, using a radio playing in the background to add a blues soundtrack. The sound levels are turned up so high that the music is distorted. Peter sits in front of his computer's webcam and nervously introduces himself to the YouTube community. The angle of his webcam means that his computer screen reflects back onto the lenses of his glasses. By the time of his third video his presentation is looking much more professional. He has learned how to add post production elements via his computer to give a much clearer soundtrack and multiple photographic images, adding interest for the viewer. He has adjusted the angle of his chair in relation to his webcam so that there is no glare on the camera. Title sequences become more complex and along with incorporated photographic elements they start to define a narrative.

⁹ Peter's respondents are identified within the text by pseudonyms rather than their original YouTube names.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

Some of Peter's technical expertise increases as a direct result of the feedback that he receives and he is quick to thank his viewers for their help. Comments about technical issues recede, as can be seen in Figure 1. His viewers are pleased to point out his improvements and compliment him on them:

“yay the sound is better” [En, age unspecified, US - response to Video 3]

Achieving technical competency with new technology can be motivating of itself and Peter has obviously made a point of keeping abreast of particular developments in technology. He appears to enjoy the technical process of video production on his computer and this is shown by the increasing complexity of the title sequences and the increasing quality of the accompanying soundtrack to his videos. Creativity also appears to be an intrinsic part of the process for Peter. He chooses photographs, images and music tracks that are pertinent to each story being told. Peter maintains a good balance between the challenge of integrating new elements into his videos and his existing mastery of technical skill.

The technical advice that Peter received was not just about helping develop his technical skills with video. It was also about how to be a 'YouTuber'. In the following examples, fellow YouTubers suggest to Peter how he could better exploit some of the technical mechanisms within YouTube to promote his videos and indirectly to support his social goals:

“Put names of popular tubers in your tags, you'll get more views. It's kind of cheating I guess though...” [MC, 28, Canada – response to Video 2]

“Dont worry, to get your videos noticed, post them as a responce [sic] to other peoples videos” [Fb, 26, Canada - response to Video 2]

This was useful advice since access to content through YouTube is primarily orchestrated through a ranking system. The videos are ranked in a number of ways: most recent, most viewed, most discussed, top rated (by viewers), most linked (to from other websites). Using a video to comment on a popular video therefore gives the video maker access to a larger audience. We see evidence of Peter taking up these suggestions in Video 4 where he responds to 'jerry', a popular YouTube contributor, adding his name as one of the tags.

YouTube also uses a mechanism for differentiating the status of video producers within the community and displays this as part of their profile. 'Director' status allows video makers to produce and upload videos over 10 minutes in length. This also provides viewers with some gauge of quality. Peter receives a number of comments encouraging him to apply for Director status so that he could make longer videos, giving him tips on how to succeed.

“If I were you, I'd make myself look good by exaggerating the number of hours of video you have to share. That way, you're sure to get a Director's account. :)” [BT, 39, country unstated - response to Video 5]

Peter does in fact achieve Director status very soon after his eighth video.

Personal and Emotive Responses

More interesting than the technical advice Peter received is how he is accepted and related to generally by the YouTube community. This is captured in the responses we have categorised as ‘personal/emotive’. Peter is aware of his presence as an older person in a predominantly youth oriented medium but is keen to find out what younger users think of this. One might expect that ageist stereotypes would present an obstacle to Peter’s acceptance [30] but this was not the case.

To explore the response he did receive, we further coded the ‘personal/emotive’ responses represented in Figure 1 into the following categories to show more nuanced responses:

- *Video compliments*: those that showed an appreciation of the video, i.e. that they liked or enjoyed watching it.
- *Positive emotional responses*: those which expressed overt positive emotions towards Peter rather than to the video, e.g. expressions of familiarity and affection.
- *Playful or teasing responses*: those which joked around at Peter’s expense but with an emphasis on fun.
- *Negative emotional responses*: those that directly insulted Peter or expressed overtly negative attitudes towards his videos, e.g., using swear words and other derogatory terms.
- *Age related comments*: those that explicitly mention Peter’s age.

In Figure 2, we depict the distribution of how these different kinds of personal/emotive comments changed over the first eight videos.

The reactions to Peter’s videos have remained consistently and overwhelmingly positive and complimentary, with very few negative comments. For example, of the first 150 comments received by Peter for his first video, 108 of them were positive and complimentary in some way and only 2 of them were negative. In fact, across all of the videos, ‘video compliments’ form the majority of responses. This did not go unnoticed by the viewers themselves. As one viewer pointed out:

“This is the first time i see someone's comment feedback being SO positive! ROCK ON!” [DM, age unspecified, US – response to Video 2]

“Wow, this video probably breaks all YouTube records of the highest density of pleasant comments ever seen on a video, much less one that's been featured. How respectful we all are! My faith in humanity is boosted just a skosh.)” [Pp, 22, US - response to Video 1]

<Table 3>

<Figure 2>

Figure 2: Distribution of different sub-categories of personal and emotive responses

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

While compliments about people liking his videos are consistently high throughout, ‘positive emotional responses’ to Peter himself only start to emerge in response to video 2 and, while continuing throughout, peak at video 5 when he starts telling his life story. The content of these responses show a high level of personal identification and empathy with Peter:

“I love you!” [Od, 28, Canada – response to Video 8]

“omg...i cried...i feel like such a pansy...but i don't care...you are a very wonderful person...i will look forward to more of your videos” [Md, 19, US – response to Video 5]

Given the YouTube name that Peter chose and that video was the medium, Peter’s age was transparent from the start. Early viewers were keen to comment on Peter’s age as something to be remarked upon in its own right and to acknowledge his video achievements and YouTube presence in respect of this:

“I know many 40 year olds that can't find the power switch to a computer. I think its great that you are showing such "thirst for knowledge" of exciting new tech that you could very well ignore. Keep the videos coming.” [Bk,19, US – response to Video 2]

Explicit comments about Peter’s age decreased with time as his viewers came to know him better. Peter’s fourth video, which is in response to another popular YouTuber, Jerry, makes connections with another group of viewers. This fresh introduction to a new audience initially brings more comments about his age but these also subside. Figure 2 illustrates this point.

Interestingly, as Peter starts to tell his life story in video 5, his age and being an ‘old person’ becomes less of a topic worth remarking on in its own right, as seen by the steadily decreasing age-related comments. Instead people start responding to Peter who, by virtue of his age, has a story to tell that they find engaging and they start to relate to him in a much more personal and intimate way. This relationship starts to be likened to a familial intergenerational relationship such as that which might exist between a grandfather and grandchild – age still factors here but is now embodied in the context of a relationship, either by analogy or by surrogacy, as illustrated in the following comments (coded as ‘positive emotional responses’):

“You remind me of my Grandad, who lives on the other side of the world, and is dying of cancer, I miss him so much, so your posts bring a tear to my eye. Thankyou.” [Ck, 20, UK – response to Video 5]

“I wish you were my grandpa :)” [Jx, 21, US – response to Video 3]

The reaction of Peter’s viewers to his videos does not appear to come from some sense of politeness or over accommodation in respect of Peter’s age. On the contrary it is something about the intergenerational nature of this communication which gives it a gravity and sense of mutual respect.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

“..you and your stories are a lovely breath of fresh air after all the sensationalists and emo kids. I think a lot of people wish they could have heard this kind of thing from their own grandparents.” [Ps, 23, country unspecified - response to Video 5]

“We need a voice on here that's "been around the block" a little” [Lt, 27, US – response to Video 4]

Evolving Community through Discourse

Text comments that appear in response to particular videos on YouTube are not always directed at the producer of the video but to the community as a whole. In this way the text comments can also serve as a space for grounding and contextualising public debate. Often videos and the comments they engender also become places for the community itself to evolve its own sense of who it is and what is acceptable behaviour. In Peter’s case the importance of his presence within the YouTube community becomes a matter for debate of itself. Indeed it has a role to play in defining what the nature of the YouTube community is. We see this in the discussions that take place in response to video 3.

After Peter’s third video entitled “The Vicar and the Police Questions”, we see a ‘blip’ in Figure 2 with respect to ‘positive emotional response’ where the reaction changed dramatically with proportionately more content and community related comments (see Figure 1). In this video Peter addresses a topic which could be viewed as poignant to the YouTube community overall and to his involvement with the community, namely the paranoia experienced in western societies with regards to affection expressed from an older person to a younger person. Opinion is divided amongst Peter’s viewers on this subject and the ensuing polemic that takes place about the role of older people more generally in YouTube dominates the comments and serves to bring these issues out into the open. Concerns are expressed about paedophilia and the general distrust of older men in authority. Peter’s involvement with YouTube is itself open for criticism as the debate becomes more and more heated. The resolution of conflicting opinion within the community in Peter’s favour ultimately highlights Peter’s genuine intentions with regards to YouTube and serves to seal his acceptance within the YouTube community. This point seems to represent a rite of passage for Peter into the YouTube community.

This discussion around the third video shows that Peter’s presence within the YouTube community, as an older person with the suspicions that aroused, seems to have had an impact on the community itself in terms of its own dialogue. The conflict resolution over Peter’s place in YouTube highlights issues of authenticity which are ongoing within the YouTube community.

This is contrasted by the case of ‘lonelygirl15’¹⁰. At the same time as Peter’s videos are appearing on YouTube another YouTuber, lonelygirl15, is documenting her teenage life with her boyfriend Daniel. YouTube viewers have become suspicious that lonelygirl15 is acting and that the events taking place in

¹⁰ <http://en.wikipedia.org/wiki/Lonelygirl15> outlines the saga of lonelygirl15 on YouTube, last accessed Dec 19 2006.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

her life are actually fictitious. It transpires that lonelygirl15 is in fact a creation of a budding Hollywood screenwriter and filmmaker [16].

Peter's home spun tales of everyday life for an older person in England are seen as the antithesis of this kind of deceptive mass media approach to self promotion and for some YouTube members represent what they would like YouTube to become.

"You are the kind of person this bloody thing is crying out for" [Pd, 34, UK – response to Video 4]

Peter's popularity within the YouTube community increases as it begins to be picked up by other internet sources. This begins to happen around the time of the eighth video. This is seen by Peter's viewers as a positive reflection on the community and text comments which are directed to the community as a whole become more prominent, as seen in Figure 1. Some of these are about making the community aware of Peter's growing popularity whilst others are keen to show their allegiance to Peter in a more formal way:

"i cant believe this guy made AOL News!!! Keep em comin Pete" [Pj, 24, UK - response to Video 8]

*"I joined the Fanclub of Geriatric1927.
<http://www.youtube.com/group/peterfans>" [Jm, 32, Germany - response to Video 8]*

Co-creation of content

Apart from the technical, emotive and community responses, Peter also received many responses from people wanting to engage in a dialogue with him about particular topics, either responding to the content of the videos he had made or requesting/suggesting new topic areas that they wanted to hear about from him. Thus the spoken narrative on Peter's videos emerges through an ongoing process of collaboration and co-creation with his viewers.

The title sequence for Peter's first video forewarns the viewer of "geriatric gripes and grumbles" and this appears to be an intended theme. Peter also enters accompanying tags for the first three videos which include "gripes, grumbles and bitching". However this does not materialise in what Peter actually talks about in his videos, as one of his viewers points out:

"Dear Mr. Geriatric1927: Bitching, grumbling and griping...Yay, that will be fun!!! But you really did not bitch, grumble and gripe in this intro video so, I've become a subscriber and await your next episode." [Qt, 56 ?, US - response to Video 4]

"You are very polite with your grumbles & gripes!" [Ye, 31, Canada – response to Video 3]

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

His first four videos do not have any consistent themes and instead contain varied content, ranging from general introductions and intentions, commentary on news items and commentary on YouTube itself. However, from the first video, his viewers show a keen interest in suggesting topics for him to discuss. Over the course of the first eight videos, his viewers suggest varied subjects as depicted in Figure 3. The most popular subject request was about his experiences in the second world war (33%) closely followed by people wanting to know about his opinions as an older person (20%) and his wisdom (9%). The following illustrate some of these requests:

“you are so refreshing and real. thanks for contributing to the you tube community. I would love to hear bits of your wisdom any tips on living life better or to its fullest” [Gg, 34, US - response to Video 1] [wisdom]

“tell us about what life ws like growing up during the war” [Is, 20, UK - response to Video 2] [the war]

“i look forward to hearing more of your thoughts and opinions, as i always do with older people.” [JT,100¹¹ - response to Video 4] [older people’s opinions]

<Figure 3>

Figure 3: Subjects suggested in viewer comments for Peter to discuss in his videos.

Peter does not address any of these suggestions directly but as a result of this, a narrative starts to coalesce in Video 5 around a new theme – that of recounting his life story – into which he manages to incorporate many of the subjects as he goes along. The only suggested subject which he declines is that of reading some poetry.

Peter recounts his life story through a series of videos entitled “Telling it all”. In the first 4 of these videos (videos 5-8) Peter gives a broad outline of his life by describing some of his major life events. He starts by giving a largely factual account of his youth around the beginning of the second world war. He outlines his grammar school education and his first job in a public health department. He moves on in the second part of his life story to talk about his involvement in the war from conscription as a radar mechanic through to the end of the war. Peter makes a point of not glamorising his experience of the war nor does he give a historical account. He focuses on aspects of his life which brought him enjoyment at the time, introducing elements such as his passion for motorbikes.

In the third part of his life story (video 7) he recounts the gratitude that came with the end of the war and his demobilisation. Peter becomes more relaxed with his storytelling, drifting away from the presentation of factual information and injecting humorous anecdotes into the narrative. In talking about his demobilisation he says:

¹¹ It is clear from the videos made by this YouTuber that they are in fact much younger than 100 but more likely to be in their teens.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

“When they demobilised you they kitted you out with a new set of clothes.....the silliest thing was, also a Trilby hat (laughing to himself) – well there was no way a young man was going to wear a Trilby hat !” [Peter, Video 7]

Peter explains how after the war he returned to his previous job and then moved to Leicester to study where he met his future wife. He then describes a “*big change of life*” which took place when he decided to pursue his passion in motorbikes by making it a more central focus to his life. Peter explains how he took a job in the motorbike industry because:

“it was what I’d always dreamed I’d wanted to do” [Peter - Video 7].

Later when he and his wife decided to start a family, Peter became self employed.

The fourth part of Peter’s story (video 8) describes the period of his life when he was running his own business and bringing up his family with his wife. He describes this as a stressful time establishing the security of his family but moves on to talk at length about his adopted son with whom he continues to have good contact. After a brief diversion in which Peter notices his “favourite pop song at the moment” playing on the radio, he returns to his life story. He concludes the video by talking about his happy marriage to his wife and his early retirement as a result of a liver complaint.

Peter’s skill in telling the story means that topics continue to be suggested as his viewers become more curious about the story that is unfolding. Peter is careful to point out when he is responding to viewers’ suggestions whilst he is talking in the video which gives the impression of an intimate dialogue between friends. For instance when Peter introduces his wife into the story of his life he says:

“You’ve been dying for me to tell you that haven’t you” [Peter – Video 7]

Passing his life story on to others becomes an imperative for Peter and it is this opportunity that appears to make the YouTube experience so fulfilling for Peter. During the story telling itself Peter becomes completely immersed in what he is doing, closing his eyes and appearing to ‘relive’ moments from his past, at times losing track of how long he has been talking on the video. This appears to be a profound experience for Peter.

His relationship to the technical aspects of his video making also takes on a different priority, only being important in so far as the technical aspects support Peter’s telling of his life story. As he states:

“the arty farty stuff at the front is irrelevant.....I can’t waste my time doing something else because it’s so important that I get this to you as quickly as possible” [Peter – Video 5]

It appears to be as meaningful for Peter’s viewers as it is for him. As one viewer explains:

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

“Thank you for taking your time to share with all of us your stories and interesting life experiences... For us who are younger than you, well, not even that, even if we all were the same age, it'd be just as interesting” [JC, 19, US - response to Video 5]

Discussion

Support for an aging population is an important priority in developed nations and technology is being seen as an enabler for promoting new forms of care that will help older people to safely remain in their homes for longer than they would otherwise be able to. However, we have a concern that if we put too much focus on a care based notion of aging, taking physical and cognitive deficit as a starting point for technical solutions, we can miss complementary opportunities to use the same networks and infrastructures to support other important aspects of everyday life experience. The case of Peter as ‘Geriatric1927’ points to opportunities to think more broadly about the potential of technology to support aspects of healthy aging to do with social connectedness and co-creativity.

Firstly, the social connections made by Peter point to ‘*global*’ possibilities beyond familial and local connections. Social isolation is a growing problem amongst the aging populations of the developed world, with concurrent health risks [42]. Many solutions that do attempt to address this through technology have focused on connections with family members [8, 29] or those that exist within an older person’s local geographical community [35]. At a time in Peter’s life when his mobility is reducing, his engagement with YouTube has allowed him to enter a new social world bringing him into contact with a community of people across the globe. He has made contact with people in countries from China to Sweden and Canada to Spain. Beyond the obvious shared interest of video blogging, Peter has shared a dialogue with like-minded individuals interested in motorbikes, the blues and the hypocrisy of politicians, becoming part of virtual ‘communities of interest’ [6].

Secondly, the very nature of this medium as a young people’s medium, as evidenced by the dominant age groups on the site, set this up not just as global social connections but more importantly as *intergenerational connections*. Interestingly, while the dominant ages on YouTube are 12-17 year olds, the dominant age groups we see responding to and interacting with Peter tend to be a little older, late teens, twenties and early thirties; the age of Peter’s viewers in our sample ranged from 14 to 56 years of age with a mean age of 26.7 years. Intergenerational theorists would argue that Erickson’s life stages [12, 13] can help to explain their interest [31]. For teenagers, contact with Peter can bring an increase in self esteem which fits the focus with self image present at this age. For those in their 20’s (early adulthood) issues of social intimacy versus isolation are paramount. Social isolation remains a concern for Peter but he is able to highlight the importance of establishing committed relationships early in life. For Peter’s viewers who are in the middle of their adult life (late 20’s to 50) the issue is about moving beyond selfish motives and developing a social conscience. Engaging with Peter allows an appreciation of his point of view as a member of a marginalised group, namely older people.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

It appears that one of the main hooks for Peter's continuing engagement with this global intergenerational community has been the *telling of his life story*. For Peter, this is an opportunity afforded by YouTube that might not have arisen in the mundane concerns of everyday family life. For his audience, this is a personal lived history that they clearly respond to as previously discussed.

The process of *reminiscence* and life review that Peter employs in his story telling is something that is encouraged by his viewers. Life review such as this has been identified as a major developmental activity associated with aging [5] and underpins much of the reminiscence work that currently takes place with older people in care settings [3, 21]. The importance of story telling and reminiscence amongst older people is already recognised for its positive effect on well being particularly for those with dementia [48]. However what we see with Peter's example is reminiscence occurring 'naturally' within the context of emerging interpersonal relationships and engagement with an interested community of people, and not as a result of therapeutic intervention. Far from being an activity directed *at* an individual it is a form of interaction that emerges *within* the intergenerational context, through a process of co-creation.

Erikson [12, 13] defines eight life stages as characterising a full life span. Each stage is concerned with resolving conflicts particular to that point in life, experienced as crises. The eighth stage, that of old age (50s and beyond), is concerned with the question of whether or not earlier life goals have been satisfied or resolved. Acceptance of the decisions one has made in one's life leads to them being integrated into one's ongoing sense of self. Difficulty in reconciling them may lead to a sense of despair as death comes closer. This 'final consolidation' is not passive but continues as a process of learning.

We suggest that Peter's telling of his life story is part of him working through his personal life's dilemmas and attempting to resolve them in his own mind. YouTube offers Peter a social context in which to do this reflection and to question what his life might mean to others. In particular, it provides Peter with an opportunity to interact with the younger generation in a safe and mutually supportive way. Hence, the dialogue that takes place between Peter and his viewers on YouTube highlights the relevance of an intergenerational context for this kind of interaction. This is not a selfish pursuit but one which is oriented towards and shared with the younger generation. Peter's reorientation towards the younger generation has a cultural and spiritual dimension to it which goes beyond that of self interest. This altruistic turn in later life has been described as gerotranscendence [43, 44].

What this analysis highlights are those aspects of technology use which can make it 'meaningful' to older users. It is not the functionality of YouTube that inspires Peter to tell his life story but the social context that it appears within. The intergenerational nature of this context is highly influential, directing and informing the co-creation of the narrative. The commonality of human experience across ages and cultures that shows itself in the accompanying dialogue reminds us of a wider sense of kinship which transcends mere self interest. The appreciation of Peter's stories by his viewers also suggests that they see the relevance of the life stages of others in relation to their own life stage. The co-

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

creation of narrative, developed through Peter's videos, speaks of an affinity between different generations and a process of reciprocal learning.

Peter is also the recipient of *reciprocal learning* within this intergenerational context when he receives advice about technical issues and reflections on his life story; his viewers' enjoy the passing on of wisdom from a lifetime of experience. The intergenerational contact available through YouTube provides Peter with the opportunity to learn more about the technology that he is using. This highlights how social involvement and technological proficiency are interrelated [14]. This is supported by other studies in which grandchildren have been shown to be a significant source of learning for grandparents when it comes to information technology [38]. The segregation of generations and the social isolation experienced by older people reduces their exposure to new communication technologies and hence their opportunities to learn about them. YouTube provides opportunities for re-connection and learning from younger people other than just grandchildren.

Peter's engagement with the YouTube community therefore influences his mastery of the underlying technology. The incentive of social contact within the community represents a strong motivation for him to master the technology in the first place. Ultimately his access to the community provides the means with which to resolve technological issues through the sharing of knowledge.

The presence of an older person in an online community also seems to have had a *positive influence on the community* as a whole. Despite initial concerns from within the community about how this influence might play itself out, Peter's presence added a level of respectability and gravity to the proceedings on YouTube. This is in part due to the way in which Peter conducts himself online but is also an aspect of his 'unique' perspective as an older person in a young person's medium.

Video blogging appears to provide good means of supporting this intergenerational communication. *Video as a medium* portrays age in a transparent manner with sufficient communicative detail to allow the expression of deeply felt emotions and to resolve the kinds of ambiguities which might appear in similar text based dialogue. The linear nature of video is well suited to a narrative, a feature which was shown to be particularly pertinent to the intergenerational context. The process of life review which Peter embarks upon in his video blog is a natural and spontaneous part of his interaction with his YouTube viewers. This suggests that younger users of technology are also appreciative of intergenerational contact and that it can provide a meaningful engagement with technology not just for older users but for all users.

Implications for HCI and design for older people

Our analysis joins Peter at a point when he is already engaged in video blogging. Some prior aspects of this endeavour are invisible to our analysis but remain pertinent to our understanding of his participation in YouTube. Peter had to establish some basic technical skills before he could post his first video. With regards to hardware, he will have had to connect up his personal computer,

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

establish a broadband internet connection, install a webcam and a microphone. In software terms he will have had to learn how to navigate an operating system, use an internet browser, capture video from his webcam and edit the video. Finally he will have had to navigate his way around the YouTube website, creating an account for himself before uploading his first video. These are not trivial technical skills and it is not clear from the videos how Peter was able to do this. Peter's journey to YouTube will have certainly been helped or hindered by usability issues encountered along the way but the only shared point of reference that we have to comment on is the YouTube website.

The YouTube user interface has not been explicitly designed to cater for older users even though there is clearly a mix of age groups wishing to communicate there. It would be possible to redesign this interface to accommodate its use by a range of different age groups and indeed this approach towards 'universal access' is well documented [40, 36]. However focussing solely on the accessibility of the interface would underplay the social potential that YouTube has to offer in terms of resolving ongoing issues of technology use. Hence we focus here on a discussion of broader HCI implications.

Peter's experiences reveal to us the deeply social nature of his engagement with the technology and focussing on issues of social relevance allows us to broaden our notion of what access to technology is about for older people. Implicit in Peter's initial attraction to YouTube was his awareness of personal computers as social tools. His tenacity in learning about the technology would appear to rest upon this premise. However, beyond Peter's case, there is evidence that the social benefits of computer use do not appear to be well understood by the older population [37]. This is something which could be promoted through educational initiatives and made clearer on the home page of YouTube itself.

Interestingly YouTube itself hides the social aspects of its existence behind its persona of an alternative broadcast media source. The YouTube slogan is "Broadcast Yourself" and the home page directs the user with headings such as "Channels" and "Featured Videos" implying similarities with a one-way televisual experience. The videos themselves are presented on the home page as self contained media elements using snapshots from the videos themselves. The corresponding dialogue that is present in comments and video responses remains hidden from view. Only when one views a particular video does the social life of YouTube become apparent.

A more immediate expression of the social reality that is YouTube would help older users to make sense of and engage with the site. This could be done by focussing on the people who have made the videos rather than just the content. Including elements of the personal dialogues on the home page would also give a more intimate flavour. In addition YouTube provides limited support and encouragement for novice video makers who might visit the website. The help pages accessible from the home page are in the form of short text questions and answers. Strangely there has been no attempt to incorporate this kind of support into the same video format. There is a case for formalising the notion of community support for newcomers within YouTube by providing a separate community group for them on the website. Existing YouTubers could then act as

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

guides to new users within this space, providing the ‘help’ videos currently lacking on the site.

If we take a broader view of older people’s engagement with computer technology, we can see then that the critical issues are knowing that the site exists as a social space in the first place, then having the basic set of skills to engage with the site and post a video. Once ‘on’ however, we can see that the social contact available from the very early stages of use provides opportunities to resolve technical issues. It also transforms the experience of using computers into something which is socially meaningful and relevant to older people’s lives. The use of asynchronous video chat, augmented with text messaging, can allow inexperienced users to gain access to social support and a greater knowledgebase in order to do this. Providing this kind of contact independently of any operating system, would give older users the opportunity to work through technical issues which would otherwise block their progress. Computer hardware configurations for older users could incorporate this functionality as standard by integrating webcams and microphones.

Conclusions

In this paper we have presented a case study analysis of the interactions of an older YouTube video blogger, Peter, known as Geriatric1927. By studying the first eight videos he produced and the subsequent responses and interactions that took place (albeit limited to the first 150 responses) we have been able to highlight the potential value of a medium such as YouTube for social interaction, intergenerational communication, reciprocal learning and co-creation. This is an emerging social software medium offering new opportunities for user-generated content that, as we saw, is just as well suited to the telling of life stories and creating intergenerational connections as its more popular use as an alternative outlet for media entertainment among young people.

Video blogging provided good support for maintaining the intergenerational communication in this study. It would be interesting to further explore the reasons why video in particular is able to do this and the ways in which these intergenerational relationships develop through this medium over time. Taking a longitudinal perspective we could follow Peter’s ongoing video presence beyond the limits of this present study, exploring how individual relationships establish themselves and develop. Analysis of the finer detail of the video and audio elements would help to explain the significance of this kind of narrative in respect of intergenerational communication.

We conclude with some more general reflections on the potential of technology for older people. Aging is not merely a process of inevitable physical and cognitive decline to the person who is aging and perhaps needing care, but also one of ongoing need for meaningful social interactions and for intimate reflection on the meaning of one’s life in relation to others. Representations of an older person living in a Smart Home, if focussed only on care and functional and/or cognitive aspects, could reduce their living presence to sensor-detectable traits and inferred ‘activities of daily living’. Their social relationships can be ignored through a lack of observable measures: the very meaning of their well-being risk

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

being defined by the technology. In order to develop technologies that will empower older people, there are opportunities to complement more care-led approaches with consideration of the whole depth of their experience, acknowledging their full potential as family and community members.

We suggest that another appropriate motivation for design for older people, apart from care, is providing access to opportunities for intergenerational communication as one avenue for social interaction. The story of Peter's success has a lot to tell us about what can motivate older people to engage with new technologies even when accessibility may be an issue. Older people want to do 'real things' with technology, things that have social, cultural and spiritual significance to them. Whilst simplification of an interface may allow easier initial use, it is those aspects of a technology which make it relevant and meaningful to an older person's life that will ensure ongoing use and engagement. The inherent technical challenges and the need to learn new skills are more readily accepted when there is a clear social benefit to doing so. Being older does not preclude the opportunity to learn about new technology but social isolation does.

Acknowledgements

This work was funded by the UK EPSRC through the Equator IRC Project (EPSRC GR/N15986/01). Many thanks to the reviewers for their helpful comments and to Peter (Geriatric1927) for allowing us to analyse his videos and the comments relating to them.

References

1. Audit Commission (2004) Independence and Well-Being 4 Assistive Technology. (Audit Commission Report) Audit Commission, London, UK.
2. Barkhuus, L., Rode, J. and Bell, G. (2006) Entertainment Media at Home – Looking at the Social Aspects. Workshop at CHI 2006, Montreal, 22. April 2006.
3. Bornat, J. (2001) Reminiscence and oral history: parallel universes or shared endeavour? *Ageing and Society*, 21:219-241
4. Bowes, A., McColgin, G. (2005) Smart Technology at Home: 'users' and 'carers' perspectives: interim report. University of Stirling. [Available <http://topics.developmentgateway.org/evaluation/rc/ItemDetail.do~1038028>] Accessed 13/4/06
5. Butler, R. (1963) The life review: an interpretation of reminiscence in the aged. *Psychiatry*, 26:65-76.
6. Carotenuto, L., Etienne, W., Fontaine, M., Friedman, J., Newberg, H., Muller, M., Simpson, M., Slusher, J. and Stevenson, K. (1999) CommunitySpace: Toward flexible support for voluntary knowledge communities. Proceedings of Workshop "Changing Places", April, 1999 at Queen Mary & Westfield College, University of London, London, UK [Available from [http://domino.watson.ibm.com/cambridge/research.nsf/0/0e8c8166a02d5338852568f800634af1/\\$FILE/communityspace.PDF](http://domino.watson.ibm.com/cambridge/research.nsf/0/0e8c8166a02d5338852568f800634af1/$FILE/communityspace.PDF)]

- Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).
7. Coleman, R. (2001) Living longer: the new context for design. Design Council, London [Available from <http://www.education.edean.org/pdf/Intro033.pdf>]
 8. Consolvo, S., Roessler, P. and Shelton, B. (2004) The CareNet Display: Lessons Learned from an In Home Evaluation of an Ambient Display. Proceedings of 6th International Conference of Ubiquitous Computing (UbiComp 2004). Nottingham, England, September 7-10, 2004, pp 1-17.
 9. Department of Health (2006), White Paper 30th January 2006. Our health, our care, our say: a new direction for community services. Department of Health, London, UK [Available from <http://www.dh.gov.uk/assetRoot/04/12/74/59/04127459.pdf>]
 10. Dickinson, A., Goodman, J., Syme, A., Eisma, R., Tiwari, L., Mival, O. and Newell, A.(2003). Domesticating Technology: In-home requirements gathering with frail older people. 10th International Conference on Human – Computer Interaction HCI (22-27 June, Crete, Greece 2003) (ed. C. Stephanidis) 4, pp.827-831
 11. Eisma, R., Dickinson, A., Goodman, J., Syme, A., Tiwari L. and Newell, A. (2004) Early User Involvement in the Development of Information Technology-Related Products for Older People, in *Universal Access in the Information Society* 3(2):131-140.
 12. Erikson, E. H. (1963) *Childhood and Society*. New York: Norton
 13. Erikson, E. H., Erikson, J. M. and Kivnick, H. Q. (1986) *Vital involvement in old age*. New York: Norton
 14. Fitzpatrick, G., and Stringer, M., (2007) Exploring technology influences between home, work and school: implications for managing ubiquitous technologies in the home. To appear HOIT 2007, Chennai, Aug 2007.
 15. Gaver, B., Dunne, T., and Pacenti, E. 1999. Design: Cultural probes. *Interactions* 6(1):21-29.
 16. Glaister, D. (2006) Cult blog a fake, admit 'lonelygirl' creators. *The Guardian*. [Available from: <http://technology.guardian.co.uk/news/story/0,,1868499,00.html>] Published 9/9/2006. Accessed 15/11/2006
 17. Glaser, B.G. (2001) *The grounded theory perspective: conceptualization contrasted with description*. Mill Valley, California: Sociology Press.
 18. Glaser, B. G. and Strauss, A. L. (1967) *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine de Gruyter.
 19. Goodman, J., Syme, A. and Eisma, R. (2003) Older Adults' Use of Computers: A Survey. Proceedings of HCI 2003, Volume 2, pp. 25–28., Bath, UK, Sep 2003.
 20. Gomes, L. (2006) Will All of Us Get Our Fifteen Minutes on a YouTube Video? *Wall Street Journal*. [Available from: http://online.wsj.com/public/article/SB1156892981680489045wWyrSwyn6RfVfz9NwLk774VUWc_20070829.html?mod=rss_free] Published 30/8/2006. Accessed 7/11/2006.
 21. Gowans, G., Campbell, J., Alm, N., Astell, A., Ellis, M. and Dye, R. (2004) Designing a multimedia conversation aid for reminiscence intervention in dementia care environments. Proceedings of CHI 2004, pp. 825-836. ACM Press.
 22. Hutchinson, H., Mackay, W., Westerlund, B., Bederson, B., Druin, A., Plaisant, C., Beaudoin-Lafon, M., Conversy, S., Evans, H., Hansen, H.,

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

- Roussel, N., Eiderback, B., Lundquist, S., Sundblad, Y., (2003) Technology probes: inspiring design for and with families. Proceedings of CHI2003, pp. 17-24. ACM Press.
23. Jimison, H., Pavel, M., McKanna, J. and Pavel, J. (2004) Unobtrusive monitoring of computer interactions to detect cognitive status in elders. *IEEE Trans on Information Technology in Biomedicine*, 8(3), pp. 248-252.
 24. Kern, D., Stringer, M., Fitzpatrick, G. and Schmidt, A. (2006) Curball - a prototype tangible game for inter-generational play. Proceedings of Workshop on Tangible Interaction in Collaborative Environments (TICE 2006), IEEE Press, Manchester, UK, June 2006.
 25. Kurniawan, S. and Zaphiris, P. (2005) Designing for individuals with memory and cognitive disabilities: Research-derived web design guidelines for older people. Proceedings of the 7th international ACM SIGACCESS conference on Computers and accessibility Assets '05
 26. Lo, B. Wang, J. and Yang, G. (2005) From Imaging Networks to Behaviour Profiling: Ubiquitous Sensing for Managed Homecare of The Elderly. Proceedings of the 3rd International Conference on Pervasive Computing (PERVASIVE 2005), pp. 101-105, Munich, Germany, May 8-13, 2005.
 27. McCarthy, H. and Thomas, G. (2004) Home Alone. Demos, London.
 28. Mynatt, E., Essa, I. and Rogers, W. (2000) Increasing the Opportunities for Aging in Place. Proceedings of ACM Conference on Universal Usability, pp. 65-71. ACM Press.
 29. Mynatt, E., Rowan, J., Craighill, S. and Jacobs, A. (2001) Digital family portraits: Providing peace of mind for extended family members. Proceedings of CHI2001, pp. 333-340. ACM Press.
 30. Nelson, T. D. (2005) Ageism: prejudice against our feared future self . *Journal of Social Issues*, Summer 2005 61(2), pp 207-215.
 31. Newman, S. and Smith, T. B. (1997) Developmental Theories as the Basis for Intergenerational Programs. In *Intergenerational Programs. Past Present and Future*. pp3-19. S. Newman, C. R. Ward, T.B. Smith, J.M. Wilson, J. M. McCrea, with G. Calhoun and E. Kingson (eds). Washington: Taylor and Francis
 32. Office for National Statistics. Social Trends 31 [Available from <http://www.statistics.gov.uk/CCI/nscl.asp?ID=7528&RT=128&PG=1>]. Accessed 23rd May 2006.
 33. Plos, O. and Buisine, S. (2006) Universal design for mobile phones: a case study. CHI'06 extended abstracts on Human Factors in computing Systems. Montreal, Quebec, Canada.
 34. Perry, M., Dowdall, A., Lines, L. and Hones, K. (2004) Multimodal and Ubiquitous Systems: Supporting Independent-Living Older Users. In *IEEE Transactions on Information Technology in Biomedicine*, 8(3), Sept 2004, pp. 258-270.
 35. Reed, D. J. (2003). Fun on the phone. The situated experience of recreational telephone conferences. In M. Blythe, A. Monk, K. Overbeeke, & P. Wright (Eds.), *Funology. From Usability to Enjoyment*. pp. 67-80. London: Kluwer.

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

36. Savidis, A. and Stephanidis, C. (2006) Inclusive development: software engineering requirements for universally accessible interactions. *Interacting with Computers*, 18:71-116
37. Selwyn, N., Gorard, S., Furlong, J. and Madden, L. (2003) The information aged: Older adults' use of information and communications technology in everyday life. *Ageing and Society*, 23, 2003, pp. 561-582.
38. Selwyn, N. (2005) The social processes of learning to use computers. *Soc. Sci. Comput. Rev.* 23(1):122-135.
39. Stefanov, D., Z. Bien and W. Bang (2004). The smart house for older persons and persons with physical disabilities: Structure, technology arrangements, and perspectives. *IEEE Transactions on Neural Systems and Rehabilitation Engineering* 12(2):228-50.
40. Stephanidis, C. (Ed.) (2001) *User Interfaces for All: Concepts, Methods and Tools*. Lawrence Erlbaum Associates: New York.
41. Tapia, E.M., Intille, S. and Larson, K. (2004) Activity recognition in the home setting using simple and ubiquitous sensors. *Proceedings of Pervasive 2004*, Linz, Austria, April 18-23, 2004, vol. LNCS 3001, pp. 158-175 A. Ferscha and F. Mattern, Eds. Springer-Verlag, Berlin.
42. Thompson, M.G. and Heller, K. (1990) Facets of support related to well-being: quantitative social isolation and perceived family support in a sample of elderly women. *Psychology and Aging*, 5(4):535-44.
43. Tornstam, L. (1989), Gero-transcendence; A Meta-theoretical Reformulation of the Disengagement Theory, *Aging: Clinical and Experimental Research*, 1(1):55-63.
44. Tornstam, L. (1996), Gerotranscendence - a theory about maturing into old age. *Journal of Aging and Identity*, 1:37-50.
45. Vetere, F., Nolan, M. and Raman, R. A. (2006) Distributed Hide-and-Seek. *Proceedings of OzCHI2006*.
46. Vetere, F., Davis, H., Gibbs, M., Francis, P., and Howard, S. (2006) A Magic Box for Understanding Intergenerational Play. *Proceedings of CHI 2006 (Work-in-Progress)*, Montreal, Canada (24-27 April), pp.1475-1480.
47. Whitcomb, G. R. (1990). *Computer Games for the Elderly*. *Proceedings of the Conference on Computers and the quality of life*, Washington, D.C., United States pp 112 – 115.
48. Woods, B., Spector, A., Jones, C., Orrell, M. and Davies, S.(2005) Reminiscence therapy for dementia. In *Cochrane Database of Systematic Reviews 2005*, Issue 2. Art. No.: CD001120. DOI: 10.1002/14651858.CD001120.pub2.
49. Yousef, M. (2001) Assessment of metaphor efficacy in user interfaces for the elderly: a tentative model for enhancing accessibility. *Proceedings of the 2001 EC/NSF workshop on Universal accessibility of ubiquitous computing: providing for the elderly*, Alcaccer do Sal, Portugal, pp120-124.

Table 1: Summary of first eight videos: title, content description and responses.

Details of Video	Brief Description of Content	Responses (as at 18 Mar 2007)
1. Title: first try Description: My	Explains his fascination with YouTube and introduces himself;	Views: 2,397,688




Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

<p>first attempt at video Tags: grumbling bitching griping blogging Video Length: 02:07</p>	<p>Sets out his intention to ‘bitch and grumble’ about life; Asks YouTubers to encourage another video maker to come back</p>	<p>Text Comments: 11043 Video Comments:153</p>
<p>2. Title: second try Description: Introductory video Tags: blogs news gripes grumbles discussion Video Length: 01:17</p>	<p>Explains how ‘people’ seem unable to find his first video; Has identified the problem being with the tags that he used. Has introduced different tags with this video; Restates his intentions to blog about news items that annoy him</p>	<p>Views: 184,997 Text Comments: 721 Video Comments:4</p>
<p>3. Title: The vicar and the police questions Description: A vicar taken in for questioning about an alleged assault on a young girl Tags: blogs news grumbles China Russia police Video Length: 05:01</p>	<p>Starts with a long title sequence with cloud photos; Talks about a news item on the radio which annoyed him and uses this to highlight the paranoia of paedophilia present in this country and different attitudes that exist in other countries</p>	<p>Views: 158,472 Text Comments: 1080 Video Comments:5</p>
<p>4. Title: Re: Who are you....Who, Who...Who, Who Description: censor the unsavoury comments and remove and ban members who submit them. Don’t stifle the creativity of the young but protect them from abuse of this sort Tags: You Tube youtube jerry video response Video Length: 05:34</p>	<p>Takes the opportunity to respond to another video blogger (the same one he mentions in his first video) who has had a bad experience with offensive comments in relation to a video made by his son; Explains who he is and outlines his position with regards to ‘bad behaviour’ on YouTube.</p>	<p>Views: 148,561 Text Comments: 1082 Video Comments: 4</p>
<p>5. Title: Telling it all part 1 Description: My life Tags: blogs blues</p>	<p>First part of his life story; Overwhelmed by the number of responses he had received so far Peter is keen to say thank you and becomes emotional;</p>	<p>Views: 243,007 Text Comments: 2153 Video Comments:</p>

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).

life motorcycles education Video Length: 05:52	Sets the scene of his youth, describing background and answering questions received from other YouTubers; Explains his early life during WW2 outlines his experience of school education.	24
6. Title: Telling it all part 2 Description: A very quick trip to my conscription into the Armed Forces Tags: people blog war china blues motorcycles Video Length: 06:38	Talks about his early working life in a Public Health Department; Moves on to his experience of the war as a conscripted radar mechanic; Introduces his life long passion for motorcycles.	Views: 160,600 Text Comments: 1213 Video Comments: 16
7. Title: Telling it all Part 3 Description: A change of direction Tags: people blog china motorcycles war Video Length: 08:50	Continues his tales of the war, travelling around Britain as a radar mechanic; Demobilisation and going back to college in Leicester after the war; Meeting his wife; More about his love of motorcycling; Changing career to run his own motorcycle shop.	Views: 148,825 Text Comments: 1019 Video Comments: 11
8. Title: Telling it all Part 4 Description: Self employed, marriage and children Tags: people blogs Video Length: 09:46	Tells about his self employment at the motorcycle shop; His marriage and the arrival of his children; Fostered another child; Starting another business selling bike accessories; Suffering from liver disease, retiring early.	Views: 77,647 Text Comments: 529 Video Comments: 8

Table 2: Coding scheme for comments made in response to videos

Legend	Comment Category	Example Comment
	Technical Feedback	<i>“you can also change the colors on Windows Movie Maker.”</i> Gt, 21, US – response to Video 2
	Comments Relating to The YouTube Community	<i>“I’m gonna Email the Owner of YouTube and see if we can get him a “Director’s Account”.</i> KPW, 34 - response to Video 8
	Content Related Comments	<i>“Thank you for sharing you experiences! That camp sounds like it was hell.”</i> Sl, 18

Harley, D. and Fitzpatrick, G. (in press) YouTube and Intergenerational Communication: The case of Geriatric1927. To appear *Universal Access in the Information Society* (special issue HCI and older people).







		- response to Video 6
	Personal/Emotive Responses	"great video...your so cool" Fr, 18, country unstated - response to Video 6

Table 3: Coding scheme for personal and emotive comments made in response to videos

Legend	Comment Category
	Negative Emotional Responses
	Playful or Teasing Responses
	Video Compliments
	Positive Emotional Responses
	Age Related Comments