

# Beyond YouTube: Sharing Personal Digital Stories on a Community Display

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## ABSTRACT

Video-sharing sites such as YouTube and Vimeo have been used to share videos that describe difficult life experiences, and provide a forum for people living with adversity to express themselves and connect with others. This may not benefit those who require support in building local connections, however, as audiences are unknown and may not be supportive of content. In this paper we present findings from a project that investigated how creating and sharing digital stories in local community settings could help build a sense of connection for those who are housebound and unable to participate in community activities. This paper outlines two interlinked studies. Study One describes an analysis of online videos shared by housebound people. This informed Study Two, which involved creating digital stories with participants, and developing an interactive display to share the stories at a local community event. This paper contributes insights into the opportunities and challenges of using a community display for sharing personal digital stories.

## Author Keywords

Housebound people; Community display; Digital stories; YouTube

## ACM Classification Keywords

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

## INTRODUCTION

Creating and sharing stories about personal experiences can be a powerful way for people living with adversity to build connections with others who have experienced similar difficulties. Even before user-created content proliferated on the internet, digital storytelling was widely used to support people living in difficult circumstances to express themselves. These stories were often used to build community connections or advocate for socio-political issues (see Edmonds et al., 2014; Gubrium et al., 2014; Vivienne, 2014). Now there are numerous forms of digital stories shared on the Internet,

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OzCHI '15, December 07 - 10 2015, Melbourne, VIC, Australia  
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DOI: <http://dx.doi.org/10.1145/2838739.2838771>

including personal videos that people post to video-sharing sites such as YouTube.

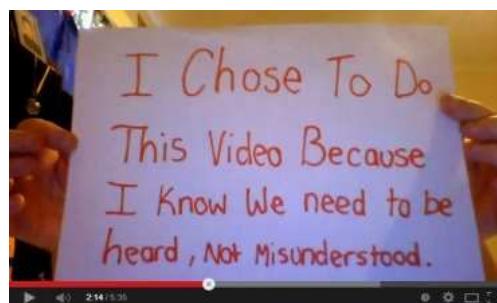


Figure 1. The use of handwritten signs in a YouTube video

Online video-sharing (Figure 1) can provide social opportunities for people who want to share their personal experiences (see, for example, Harley & Fitzpatrick, 2009; Lie et al., 2013). However, the audience for online video-sharing sites is global, dispersed, and unknown. For people who have limited opportunities for face-to-face interactions – such as people who are housebound – online video-sharing and social networking sites such as Facebook may not translate to the personal support and social interactions that they require (e.g. see Newman et al, 2011). Sharing videos online might foster a sense of connection to society, but it is unlikely to create a sense of belonging within the local community, which is known to be important for social inclusion (Stewart et al, 2014). In this paper, we explore what happens when personal digital stories are shared in local community settings via an interactive display. In the past, community displays have rarely been used to share the sort of highly personal user-created content that can be found on sites like YouTube. In addition, the use of community displays to promote the inclusion and participation of people who are often excluded from local community life has not been explored.

Below, we describe two studies that aimed to explore how creating and sharing digital stories could promote social inclusion for people who are housebound. In Study One, we analysed the content of online videos created by people who identified themselves as being housebound, highlighting the complexity of the housebound experience. We identified a range of reasons for people being housebound, including age, physical mobility and mental health issues and some common features found in online videos posted by housebound people. These findings informed the processes and structure of Study Two, which involved creating personal videos (hereafter called ‘digital stories’) with three housebound people, and

sharing the digital stories on an interactive display at a local community event. We consider how sharing digital stories in community settings extends the social opportunities provided by online video sharing but introduces new challenges. These challenges need to be carefully considered in work that involves designing technologies for social inclusion in community settings.

## BACKGROUND

### The Housebound Experience

Caring responsibilities, mental health issues, age, disability and mobility constraints can confine people to their homes, leaving them with few opportunities to participate in face-to-face interactions, or contribute more broadly to their community. Digital technologies offer enormous possibilities for enriching the social worlds of people who are housebound. The internet can bring the outside world into the homes of housebound people, enabling them to *access* information, but digital technologies also provide opportunities for housebound people to *create and share* content. In this project, we are focusing on identifying ways to support the latter and, particularly, to enable housebound people to share their experiences with empathetic audiences in the local community. We define “housebound” as occurring when people are unable to easily leave their home without help or only able to go out occasionally. Some people may be housebound for long periods of time (e.g., months or years) and some for short periods only (e.g., weeks).

Regardless of the length of time or the reasons for being confined to the home, being housebound can leave people at risk of social exclusion. Day-to-day local interactions – such as communicating with neighbours, visiting the local shops, or participating in community groups – play an important role in ensuring people feel a sense of belonging and connection within their local community (Buffel et al., 2013; Stewart et al., 2014). People who are housebound, however, have limited opportunities to engage in these regular social interactions. Social exclusion is associated with having insufficient access to economic and social support and resources (e.g., Bonner, 2006). It also refers to being unable to effectively participate in, and contribute to, the “cultural systems” of our society (Cappo, 2002). This can be achieved through the use of technology for creating and sharing digital content, thereby enabling housebound people to contribute to the cultural life of their local community.

### Creating and Sharing Personal Digital Stories

It has long been acknowledged that creating personal narratives can be of therapeutic benefit to people who have experienced trauma or who are living in difficult circumstances (e.g., Pennebaker & Seagal, 1999). Keeping a written personal account of one’s life experiences – for example, through journal-writing – is known to provide benefit, but researchers also recognise the unique properties that visual communication provides, particularly for sharing stories or experiences that might be difficult to express through words alone (Gubrium et al., 2014). Recognising the power of the visual, and building on the increasing availability of digital technologies to support visual communication, the digital

storytelling movement began in the mid 1990’s (Edmonds et al., 2014). This approach involves small group workshops where amateur storytellers learn to use technology to create short narratives, using digital photographs and video footage and (usually) a voice-over from the storyteller. Digital stories have been used in many projects where the aim is to empower and give voice to marginalised people and to build connections through the power of shared experiences (e.g., Clarke et al., 2013; Gubrium et al., 2014; Vivienne, 2014).

A modern-day form of the digital story can be found in the many personal and confessional-style videos that are now shared online. There is a subculture of YouTube video bloggers (or “vloggers”) who share visual diaries of their experiences living with cancer or chronic illness, such as HIV or diabetes. Liu et al.’s (2013) research examined how these health vloggers share personal videos on YouTube that chronicle their illness trajectories and provide an outlet for connecting with others who are experiencing similar difficulties. Their research, which involved analysing YouTube videos posted by health vloggers, found that vloggers used techniques to express specific messages to viewers, and explicitly sought interaction with viewers.

### Community Displays

There has been great interest within the HCI community in the use of public displays for sharing local community content (e.g., Carroll and Rosson, 2013; Wouters et al., 2014). Displays have been used in a small village to share photographs and videos that showcase local history and events (Taylor et al., 2007), and as a window display populated with user-created content that passers-by could respond to (Wouters et al., 2013). These studies have focused on noticeboard styles of communication. There has been limited research exploring the design and use of technologies for sharing highly personal stories in community settings, and the impact this might have on community engagement for marginalized or invisible members of a community, such as those who are housebound.

In the remainder of this paper we describe two studies: first, an analysis of the housebound experience found in existing online video sharing sites and, second, the creation and deployment of a display used to share three digital stories, co-created with housebound people. The motivation for this second study is to explore how sharing digital stories on a community display can change the way housebound people feel about their local community and their role in it, with a view to identifying new opportunities for digital technologies to promote social inclusion for housebound people.

## STUDY ONE

In Study One, we examined online videos that had been shared by people who described themselves as housebound. There is now a body of work which seeks to ‘understand life online’.<sup>1</sup> However this research does not

<sup>1</sup> See for example the Oxford Internet Institute <http://www.oiii.ox.ac.uk/>

specifically focus on internet use by housebound people. Analysing online videos gave us insights into how and why people defined themselves as housebound, and how video communication is being used to share the experience of being housebound.

### Methods

We examined the videos of people who identified themselves or their experiences as being housebound on the video-sharing sites YouTube and Vimeo, using the search term ‘housebound’ (July, 2014). We found large numbers of online videos that explored personal experiences of chronic illness such as agoraphobia and anxiety which confine people to their home. While some of these are included in our analysis our *prima facie* is with the experience of being housebound, rather than living with chronic illness. Within YouTube there were 7,260 results: too many to view. Of these only 225 had housebound within the title or the blurb. 186 of these videos were excluded as they were movie trailers, music videos, fictional student movies or religious sermons. In Vimeo 80 videos were identified; of these 61 were excluded, leaving 58 videos for analysis in total (Table 1). Many video-sharers posted multiple videos over a period of time, but we were only concerned with videos where the central topic was the housebound experience. The videos were viewed and assigned to broad categories representing reasons given for being housebound, using thematic analysis techniques. Some videos did not state why the person was housebound, the reasoning was unclear or obscure, or there are a number of reasons cited. These have been classified as undisclosed or miscellaneous.

### Reasons for Being Housebound

Nearly one quarter of the videos we analysed describe physical health conditions that confined people to the home. These include chronic and serious illnesses such as auto-immune diseases and cancer. Others describe being housebound while recovering from injury, in particular injuries to the back or feet that affect mobility (see Figure 2). These stories include explanations about how the vlogger became ill or injured, current treatment options, pending recovery, and hopes for the future. While some videos contain photographic evidence of injuries or sickness, others are more abstract and allude to illness within the written description, rather than the video itself.

	Videos	%
Physical Health	12	21%
Mental Health	8	14%
Home-based activities	4	7%
External	9	15%
Misc	9	15%
Undisclosed	16	28%
Total	58	100%

**Table 1. Reasons for being housebound (online videos 2014)**

A range of mental health issues are alluded to in the videos, including social anxiety and agoraphobia. These accounts typically talk about personal struggles with illness, time spent housebound, and different treatment options. In some videos, the vlogger talks directly into the camera, in a confessional format. Other vloggers use visual aids such as hand-written signs or PowerPoint presentations to tell their story (see Figure 1). These are useful techniques for vloggers suffering from social anxiety who may not want to appear on camera.

Home-based activities can be both a reason for being housebound and something which housebound people engage in to fill the time. ‘Housebound with a remedial needle’ tells the story of a quilt-maker who is under self-imposed exile while she completes a quilt before an exhibition deadline. She details the work, complains of sore hands, and discusses quilting techniques with her audience. This vlogger is a serial poster and has a dedicated following (959 views), with many positive comments on her video (27 replies). Housebound people use hobbies and craft as a means of expressing or capturing both the negative and the positive aspects of their experience. ‘Housebound and up-programming my computer – dull, dull, dull’ showcases a man’s hobby working on his computer (Figure 2). Videos showcasing craft are also used as a means of capturing and sharing positive aspects of the storyteller’s lived experiences (e.g. finding beauty in their surroundings).

Some vloggers are housebound due to external conditions such as extreme weather (e.g., snow storms, fire, or flood). One vlogger was housebound due to civil unrest in her city. She sent a plea for help: ‘Can’t leave my house, going slowly insane. Send help... Dr. Who please’.



**Figure 2. Housebound due to injury (left), showcasing hobbies (centre), and beauty found in the home and garden (right)**

### **Common Features in Housebound Videos**

These online videos describe a range of situations, with the vloggers using various techniques to describe their experiences. There are, however, some common features that characterize the videos we examined.

**Expression and constraints.** Housebound vloggers are constrained by, and find expression in the housebound setting - that is, by the objects, people or animals within the home and immediate surrounds. These objects and characters are often the subject of the story, and help to embody the story. While vloggers may mention people outside the home, and unknown to the audience, they do not typically supplement the videos with visual representations of these people, such as photos or other memorabilia from within the home.

**Highly personal.** The stories of housebound people are often highly personal. Vloggers bring us into their home environment and show us very personal spaces such as their bedrooms. They introduce us to their closest family members including children and pets, and talk of very sensitive life events including abuse, bullying, drug-taking, pain, and family difficulties. They may include intimate details of their daily lives such as sleeping and eating. There is a strong emphasis on the personal and mundane aspects of everyday life.

**Invisible housebound people.** There remain groups of housebound people who are ‘invisible’ online. Our sample did not find any videos from the bedridden, hoarders and those housebound due to age. This raises questions about potential barriers to people sharing their stories, such as stigma, physical incapacity, and technology access.

**Technology limitations.** Housebound vloggers may be constrained by technology primarily used for domestic purposes (e.g., tablets, smart phones, video cameras). Although generally created using domestic technologies, the videos included in this analysis embodied a sense of creativity, which could be seen in the way vloggers employed a variety of visual techniques to tell their stories.

**Audience engagement.** The audience for housebound vlogs is often unstated or unclear. Most vloggers do not say for whom they created the video. It is possible that special occasions such as birthday parties are shared online for absent family or friends, or for future viewing. Some serial posters, such as the quilt-maker have a dedicated audience and receive positive commentary on their videos. However most of the videos cited here, while viewed many times, did not have any commentary. For example, ‘housebound and comatose’ had 43 views, 0 comments (posted Dec 2013, viewed June 2015). While some vloggers asked for help, often in a humorous way, most did not. This suggests that the purposes for sharing housebound experiences are more nebulous than those offered by health-related vlogs.

### **Discussion – Study One**

The following considerations arise from our analysis of housebound digital stories in Study One and inform our work in Study Two, which aims to explore how digital

storytelling can be used to foster a sense of connection for housebound people within their local community. Firstly, we need to allow for storytelling that centers on meaningful objects, spaces, and people in the home. By doing this, we will explore opportunities to celebrate the activities that housebound people are engaged in or to represent their experiences of freedom within the home.

Secondly, we need to consider how to engage the audience in responding to the digital stories. One lesson we can draw is that housebound people are not living with one condition, such as a particular illness, that unifies them. Therefore they may not experience the social benefits afforded to health vloggers and others who create personal videos and share them online for a global audience. Following from this, Study Two involves sharing digital stories with a more defined audience in a local setting where we aimed to encourage audience engagement by sharing the stories on an interactive display in a community venue and encouraging audience members to write comments in response to the stories.

Thirdly, the stories created should be representative of participants’ personal experiences. The online videos examined in Study One often included highly personal content. However, sharing personal content in public settings is problematic. We should work closely with housebound people and community groups to mitigate the risks of sharing personal material in public.

Finally, housebound people are both physically present but socially isolated within their own communities. Therefore stories could focus on the local community to encourage a greater sense of connection with audience members, who may then be able to suggest informal support services, community clubs or interests which might be beneficial.

### **STUDY TWO**

Our analysis in Study One revealed that video sharing can give voice to people who do not normally have opportunities to share their experiences. However, unlike health vloggers living with serious illness, the housebound experience is diverse and largely unsupported (e.g. we could not find any online forums specifically for housebound people) and online video sharing sites do not currently provide housebound people with empathetic audience engagement. The social benefits of online video sharing, then, may not be fully realized for this population. Study Two aims to examine whether housebound people may feel a sense of social inclusion by sharing their stories with empathetic local audiences, and receiving moderated audience feedback from members of their local community.

### **Methods**

In Study Two, we used digital storytelling techniques to co-create short videos with housebound people. These were shared via a public display at a local community event. The study received approval from the university’s ethics committee. It involved four phases: 1) Creating an interactive community display; 2) Creating digital stories with housebound participants; 3) Sharing the stories on the display at a community event; and 4) Sharing

audience responses with the storytellers. The particular methods and findings for each phase are described further below.

### **Developing an Interactive Community Display**

In order to share personal digital stories in local community settings, we developed a prototype interactive display that could be easily deployed in any community facility (such as a library, school, or neighbourhood house). We use the term “community display” to emphasise that it was designed to be used in public venues although we realise our deployment of the display may deviate from other community displays that have been placed in public settings over a long period of time (e.g., Taylor et al., 2007). To ensure it was flexible enough to be used in various venues, the display was designed to be a highly scalable, portable, and economical web-based model. One of the key design requirements was that it would facilitate audience engagement. We envisaged housing the display at a venue such as a library, over a length of time, so that local community members could select and view the stories at their leisure. We wanted to ensure that audience members could write responses to the stories – similar to leaving a comment on a YouTube video. The resulting system includes the following technical features: a site to allow administrators to upload and monitor content, a means for audience members to control the display, and facilities for recording, storing, and sharing audience responses.

#### *Administration module*

The display content is stored on a server and uploaded via a simple administration web interface. In this project, the administrators are members of the research team, but in future uses of this system, administrators could conceivably be members of a community organisation. As it is expected that administrators would generally have basic IT skills, the administration module was designed to be simple and intuitive. Using the administration website, administrators can upload or remove digital stories and review and approve audience comments (which, once approved, will appear on the display).

#### *Controlling the display*

In its static form (i.e., when no stories are playing) the display shows a thumbnail of each story, along with a brief title (Figure 3). Using their own smart phone or tablet device, audience members can scan the QR code on the display, which turns their mobile device into a remote control. They can then scroll through the stories on their mobile device, which shows the thumbnail and a brief description of the story. Audience members select a story on the mobile device, but it plays on the large display screen. When a story is selected, a remote control appears on the mobile interface so the user can stop, pause, or fast-forward/rewind the story. The system has been designed so that multiple users can interact with the display at the same time. If more than one person tries to select a story to play while another user is already controlling the system, their selection will be placed in a queue and a message appears on their mobile device explaining this. This feature was added to ensure the display could be used in a crowded community venue. However, as we explain later, we were only able to



**Figure 3. The display screen in its “static” form**

deploy the display at one community event in this study, where there was no issue with multiple users trying to control the display at the same time.

#### *Responding to stories*

In addition to using their mobile phone or tablet as a remote control, audience members can write a short message in response to individual stories. When the story finishes playing, a dialogue box appears on the mobile device, inviting audience members to provide a comment. For research purposes, this dialogue box asks users to provide basic demographic information. The messages are sent to the server where they are reviewed and approved by researchers. Because of concerns about showing inappropriate messages in public, we had to include this moderation step in the system design. Once approved, the messages will appear at the bottom of the relevant story the next time it plays (similar to a Twitter feed appearing at the bottom of a television program). The messages are communicated to the storytellers during follow-up interviews. In this way, we hoped to create a sense of connection between the storytellers and their audience.

#### **Creating Digital Stories**

We created digital stories with three people who are predominantly housebound and live in a suburb of Melbourne that has a mixed demographic, including young families, older adults, low and middle-income households, and multicultural communities. The project was conducted in collaboration with an organisation that provides health services to disadvantaged people living in the area. Our storytellers were recruited through support workers (occupational therapists) who identified housebound clients they believed would benefit from the project. We discussed the project carefully with nominated clients; the three participants described below gave full consent to share their digital stories in public.

While some housebound people may be computer literate, many others are not. This was the case with two of our three participants. Therefore, while we envisaged our participants creating the stories themselves, they preferred to tell their stories, with some support from researchers, in a video-recorded conversational format. We found that building rapport between participant and researcher was vital. Participants relished the opportunity to tell their stories to researchers, but did not have a sense of potential local audiences, and how audience members might respond to the stories. Given this, it was very important that researchers engaged with participants to carefully craft the content of the stories to protect storytellers from the possibility of stigma or negative responses.

This was a multi-faceted project and a great deal of time was spent building the collaboration; recruiting participants (who were often unavailable due to illness); creating, reviewing and editing the digital stories; and finally building, refining, testing and deploying the display. For practical reasons we were therefore limited in how many stories we could create. The stories were participant-focused, and included reference to and images of pets, artefacts, and domestic spaces (e.g. kitchens, gardens). The stories were edited by the research team with input from participants to ensure they reflected the themes most important to participants. We therefore played a role in shaping content by crafting themes, adding music, and editing content sensitively to protect storytellers from negative reviews. While it is beyond the scope of the current paper to reflect on our role and discuss the impact this had on the final stories, we acknowledge that we played a pivotal role in crafting the stories. We have previously discussed the challenges of creating personal stories with housebound people and will review the issue of ‘voice’ in co-created content in future work (Davis and Waycott, 2015).

The digital stories were reviewed and approved by participants before being shown in public. Each story is 6-7 minutes long and includes audio, video, and thematic titles. The participants’ names used here are pseudonyms.

#### *Brian’s story*

In his digital story, Brian describes his difficult upbringing and ruminates on his lack of family connections (“the family tree starts right here!”). Brian recounts his experiences as a young man in the 1980s, when he joined the army, worked as a security guard, and lived “every man’s dream” as a member of a male dance group that performed around the country (which he described as being “like a rock star”). He described winning trophies as a sportsman and generally living an active carefree life as a young man. This contrasts starkly with Brian’s current life. Some years ago he was diagnosed with a serious illness and he can no longer work or play sport, which has affected his social life enormously. Brian does not have access to new technology or social media and has no family or friends to support him. He is predominately confined to his bed and uses a large stick to operate the heater and open or close the window. Most of his time is spent watching television or drawing. When out on his scooter he has difficulty accessing local shops due to narrow doorways. Brian has lived in 40-50 different suburbs and says that he does not have a connection to one particular place.

#### *Wendy’s story*

Wendy, a grandmother in her 70’s who has lived in the family home with her husband for over 50 years, reflects on how she maintains connection to family and friends who have mostly moved away from the area. Wendy does not take part in community activities or events. She reports that there is nothing worse than going to the local shopping centre alone. In recent years she has had breast cancer and depression. Her husband has limited physical mobility and they seldom leave the home. In her story, Wendy describes using her iPad to keep in touch with her

family via Facebook, and expresses her wish that family and friends lived closer, saying how wonderful it was living in the area when the children were growing up. Wendy describes how she finds solace in gardening, sewing, listening to the radio, and her beloved dog.

#### *Fiona’s story*

Fiona’s story describes her career as a nurse, a nanny caring for young children, and a children’s entertainer, when she played the character of a fairy at children’s birthday parties. Fiona is now unable to work, and has no access to technology, apart from a basic mobile phone. A year ago she was given a mobility scooter which enables her to leave the home. In her story Fiona describes the freedom this machine (which she calls the ‘fairy express’) has given her. Fiona is visible when out in the community as she has lavishly decorated her electric scooter with flowers and flags. She said she is known within the local community as ‘the flower lady’, a title she embraces.

### **Showing the Stories at a Community Event**

Given the highly personal nature of the digital stories, it was important to carefully target audience venues to ensure the stories received empathetic responses. We installed the display at the Open Day of our collaborating organisation. This annual event is normally attended by many clients and local residents; it included an Annual General Meeting, a variety of exhibits and activities, and lunch for attendees.

#### *Display set up*

We used a large Samsung TV screen to project the display from a laptop. The display was set up in an alcove in the main entrance area, with seating for 8 people; additional people could stand and watch over a low wall. We displayed signage notifying people about the digital stories. Two iPads were available to use as remote controls to select, start, pause, and stop the stories, and for creating messages in response to individual stories.

#### *Audience engagement and response*

While Brian and Wendy’s stories were ready to be shown, Fiona’s story was delayed due to her illness and completed after the Open Day took place. However her story forms part of this analysis as she took part in the digital storytelling process, and viewed the other participant’s stories. Both Brian and Wendy attended the event and saw one screening of their story. Both found this viewing difficult but rewarding. Wendy was unwell on the day, but had to respond to audience members who recognized her. Brian was self-conscious about his physical appearance, but was still pleased to see his story shown. The stories were shown several times each and attracted an audience of approximately 30 people in total. Audience members were primarily middle-aged to older adults, came from a variety of backgrounds, and included general members of the public, other clients of the service and staff and board members from the organization. At the end of each story screening we offered audience members the opportunity to write a message on the iPad. Nine messages were recorded on the iPad (Figure 4); these were reviewed by researchers and added to the display, to appear when the stories were next shown.

Some audience members did not want to write a message using the iPad, preferring to discuss their reflections with the researchers instead. We assume this is because they were unfamiliar with the iPad and because face-to-face conversation was more natural in this setting. We noted these conversations to share with the participants at a later date. The audience was particularly moved by Brian's description of his childhood and limited family connections. One man aged in his 90s responded with his own reflections on what family means to him, saying that he relies on his children a lot now and gets emotional when he thinks of them. He was affected by Brian's sense of not having a family tree. Another man thought the digital story must have been recorded some time ago, saying "he's living in a better house now, isn't he?" He was surprised that someone would need to use a stick to control the heater, and thought funding should provide better accommodation. Brian's story provoked him to reminisce about his own experiences of a difficult childhood. Wendy's story did not evoke such strong responses, although women empathized with her.

#### **Brian's story:**

"He should patent the stick!"

"A courageous brave character, very powerful story. Thank you."

"Life must be hard with disabilities. It must be so difficult with no family."

"You just feel you want to embrace him. He is coping so well. A beautiful, courageous man"

"He's had a hard run, this bloke"

"He is an amazing man to cope with such handicap, and showing the world he can manage and survive"

#### **Wendy's story:**

"Brought tears to my eyes, and a lump in my throat, but a good feeling what life is all about!"

"One of the most inspiring people I know!"

"A wonderful woman who has given so much love"

**Figure 4. Audience responses: Written comments on iPad**

#### **Sharing Audience Responses with Storytellers**

Audience responses were relayed back to participants during follow-up interviews. Participants were moved by the comments. Brian in particular said that the audience responses would keep him going 'for a week'. Participants requested that we play their stories to wider audiences, although Wendy stressed she would not like it posted to YouTube. The communication between storytellers and audience was not immediate; participants could not see the responses in real-time. In future work we hope to find more sophisticated ways of creating a connection between storytellers and their audience. However, it was important that audience responses were moderated to ensure only those that were appropriate and

respectful were shared. All the messages we reviewed were suitable and were approved.

#### **DISCUSSION**

This research has brought to light the complexities of using digital stories to foster connection between housebound people and strangers, through global online sites such as YouTube and through a local community event using our community display prototype.

#### **Complexity of the Housebound Experience**

Our analysis of YouTube/Vimeo videos (in study one) and time spent with our three housebound participants (Study Two) highlighted a myriad of reasons for being housebound, many of which are unstated or unclear. Some housebound people are living with serious physical and/or mental health issues which make it difficult for them to engage with others in their local community. Some are primary carers for others who are themselves housebound. Serious weather events, rural isolation and a lack of transport may be factors in becoming housebound. While some people may *choose* to be housebound, preferring the comfort and safety of home for long periods of time, others could benefit from social connection with their local communities. In this paper we have explored how technologies can be used to facilitate this connection. Given the complexities of the housebound experience, however, a one-size-fits-all approach may not be appropriate, making it difficult to identify the most suitable technology solution.

#### **Shared Sense of Experience**

One important and unexpected aspect of the research was that each storyteller enjoyed seeing the other stories. There was a shared sense of relief that they were not alone in their experiences. All mentioned difficulties accessing local areas and said how lonely it was visiting the local shopping centre alone. This shared sense of connection despite differences in ages and backgrounds highlights opportunities for housebound people to connect with each other, share experiences, and develop strategies for support. One potential avenue for further research, then, is to find ways to use technology to facilitate connections between people who are predominantly housebound. As previous research has shown, online video sharing (Liu et al., 2013) and community forums (Maloney-Krichmar & Preece, 2005) can provide a sense of connection for people experiencing specific illnesses. Our research suggests that people who are housebound for various reasons may need to be facilitated and supported in building these connections. Further work with larger numbers of housebound people could examine how to measure this sense of connection, and investigate whether it can be sustained using technology.

#### **The Limitations of Digital Storytelling Techniques**

The aim of this research was to explore whether a sense of connection could be made between housebound people and their local community, using digital stories and an interactive display. However, traditional digital storytelling techniques (where storytellers are responsible for crafting their own stories with support from a facilitator) are difficult for housebound people who may

have physical, cognitive or other issues that limit their ability to use technology for this purpose. Low-level technical solutions might help, otherwise the capturing or crafting of digital stories with housebound people could be supported by family members, local community members, volunteers or service providers.

### Possibilities Afforded by New Technologies

Our respondents had little access to, and limited opportunities for using social-networking technologies. They rebuffed YouTube and other global online forums, viewing them as impersonal and potentially threatening. Both Brian and Fiona did not have internet services, and had basic mobile phones provided by community services for safety reasons only. While Wendy had an iPad and used social media and email, her connections were limited to family members and close friends. All participants would welcome a greater sense of connection to their local community. However, this should be mediated by local community representatives.

For some, community connection could be facilitated through low-tech, traditional means of contact such as community health workers travelling with laptops, showing digital stories to other housebound people, and encouraging connections via befriending services, letter writing or newsletters. Some local initiatives that could be mediated by technology include volunteering, befriending services, or casserole clubs where local community members share meals with elderly, disabled or housebound people (see Lester et al., 2012; Raymond et al., 2013). These initiatives can be facilitated by online sites that match volunteers with housebound people. For housebound people with access to technology, connection could be leveraged through a local online forum via a community health organisation. This outcome was welcomed by our collaborating organisation. These initiatives should allow a greater sense of presence for housebound people in their own community.

### Sharing Personal Stories in a Community Venue

In both studies, the stories housebound people created and shared were highly personal. This created challenges for choosing an appropriate community venue with which to share stories with the general public in Study Two. We had intended to situate our community display in a public venue (e.g., local library) over a length of time. However, after consultation with the community health organisation we agreed that discrete showings at their Open Day would be more suitable, this enabled us to facilitate technology use, have some control over the audience membership and ensure the stories were treated with respect and empathy. The display worked well and the stories were well received, but some audience members wanted to share their responses with us verbally, rather than write comments on the iPads. This meant that we mediated audience responses to the stories, possibly limiting the connection between the storytellers and the audience. If we had been able to deploy the display in a more "natural" community setting but with anticipated empathetic audiences (such as seniors or health-support groups), over a length of time and without the presence of the researchers, we may have observed different

responses from the audience. In future work we hope to test this, and will focus on creating stories with housebound people that explore less-personal topics, such as memories of their local community.

### Connection Between Storytellers and Audiences.

While our prototype was well received, the limitations of recording written messages on an iPad have been noted. The prototype could be modified to include verbal and/or visual in-situ vignettes. These easily recorded responses to stories might enable a greater sense of connection. This would allow audience members an opportunity to share their own experiences and suggest opportunities to engage further, whether through home-visits (e.g. community befriending schemes) or supported local community groups or events. A sense of reciprocity between audience member and storyteller may arise in that both parties can view and listen to other individual community members' experiences. Follow-up conversations and activities could be facilitated by community service workers. These may include community-supported events or programs where people come to the home (such as befriending services), or initiatives which support the housebound person to attend activities outside the home (e.g. volunteer-driven buses).

### CONCLUSIONS

This research has shown that the audience for housebound people posting to video-sharing sites can be dispersed and unknown, which may not benefit those who require support in building local connections. We have looked 'beyond YouTube' to investigate the social opportunities for housebound people of sharing digital stories in a local community setting. This paper contributes insights into the benefits and challenges of using a community display for sharing personal digital stories. We argue that technology designed to assist housebound people should be easy to use, flexible, encourage empathetic audience responses, and would benefit from mediation by local community services.

### ACKNOWLEDGEMENTS

We thank our three digital storytellers, Darebin Community Health, and our colleagues Fran Edmonds, Deborah Warr and Gretel Taylor who contributed to this project. We also thank Niels Wouters for helpful comments on an earlier draft of this paper. This project was supported by a grant from Melbourne Networked Society Institute.

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