



The Fictions, Facts and Future of Older People and Technology

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About the Author

Simon has been researching the interactions of people, culture, technology and business for over a decade. His academic research career began with a cultural study of the satellite TV revolution in India. He then created a company to apply anthropology to commercial, social and policy challenges.

Since joining Intel in 2005, Simon has led research on ageing in Europe. He designed and conducted Intel's pioneering Global Ageing Experience study and has conducted extensive research on transportation and mobility for older people. His team's work has led to a number of innovative concepts, prototypes and business ideas. Most recently his work has focused on the intersection of telecare, domiciliary care and residential housing models for older people in Europe. He is an Intel lead at the Technology Research for Independent Living Centre (TRIL), a multi-year academic-industry collaboration in Ireland.

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Introduction

There is a growing recognition that in a world suffused by technology which enables and augments nearly all aspects of our lives, the care and support of older people can be enhanced through technology. Of course the extent to which technology is *the* 'answer' is debatable. While very few would argue that technology alone can solve the challenges associated with ageing, and some would point to the risks of isolation inherent in new technologies, many people see huge potential for technology as an enabler for independent living and social inclusion. This piece assumes that the opportunities afforded by technologies are greater than the risks they pose.

At the same time, a gap exists between our aspirations for technology and the reality of what is currently being achieved. This think piece explores that gap, outlining why it exists and how we might start to close it. I take issue with the often simple and unproblematic ways in which we talk about the relationship between older people and technology. At the heart of my argument is the language we use to describe, and therefore construct older people as users of technology. I suggest that having created the figure of the older technophobe or incompetent user with a narrow set of 'needs' to be met it is all too easy to create uninspiring, one dimensional technologies. Instead, I argue, we need to think less about ourselves as designers for 'them' who are already 'old' and more about designing for ourselves, and society, as we age.

What we know and how we say it

The way we talk about older people and technology is where the problem starts: words do more than describe the world, they also create it. If we focus on how we, and others, talk about older people and technology we can see the image of the user that has been created and the attendant assumptions. How often have we heard or read a statement like this:

"Many older people are technophobic, unfamiliar with computers or somewhat reticent about learning to use them". (Dewsbury et al)

More often than not we speak on behalf of older people, asserting an ability to understand their perspectives. Speaking for them takes a couple of forms, namely the sweeping generalisation or the personal anecdote. Both can be used to press home positive or negative views about older people's use and attitudes towards technology.

Personal anecdotes such as:

"My Mum's a real whizz with the Red Button...", or

"There's no way we could deliver that service over a TV or ask people to use a remote control to do that....I mean, my Mum can't even switch on the TV with her remote"

are very common and very powerful. Being based entirely on knowledge that no one else is capable of verifying, or falsifying, 'Mum' can be used to press home any point of view. Mum stands in for a world of generalised other Mums. 'My Mum' becomes all other Mums of the same age. And yet anecdotes are difficult to resist – something demonstrated by the fact that this piece closes with one – so perhaps it is important to recognise when we're using them in all encompassing, argument clinching ways rather than in an illustrative fashion?

Easier to dismiss, because they lack a mooring in the evidence derived from a 'real' person, but common nonetheless, are sweeping generalisations.

"Old people don't want a keyboard. Most of them never spent their life in front of computer and anyway, they can't use a mouse".

"Older people love them because they are easy to read. You can change the text size. They're simple to operate..."¹

Sweeping generalisations by their very nature mask differences of opinion and experience, and in that way close down discussions. They do not allow for the existence of difference. Generalisations paint over the messy realities of everyday life.

For many in the technology industry it has become accepted that if we are to design technologies that address people's needs, and fit into their lives, we need to start with an in-depth understanding of their lives. In many areas of modern life 'the user' is now a common point of reference: as Tony Blair suggested in a 2001 speech, public services have to be "redesigned around the needs of the user; the patients, the passenger, the victims of crime"². It is now orthodoxy that user needs, user experience and user motivations are central to the design and delivery of technology and services. But, as Redström³ contends, "people, not users, inhabit the world. A 'user' is something that designers create".

What is a user and how might the language of the 'user' influence the technologies we create? The key problem with the idea of user is that it limits possibilities: 'users' have specific needs which are met by specific technologies. Users are "simply organisms that use things, living conduits for requirements for products"⁴ – they don't have messy lives, hopes, fears and aspirations. Designing for users is like designing with the law of averages and I would argue that very few people see themselves truly reflected in the profile of an average user. If our view of the user is one-dimensional is it possible for our inventions to be anything other than that themselves?

The idea of the user has grown in popularity at a time when, in contemporary gerontology, there has been increasing recognition that we should understand ageing not just in terms of disability, dependency and disadvantage but also as a

1 Accessed at <http://blog.latenitefilms.com/2009/06/22/mac-hardware-predictions-death-to-the-mouse/>

2 Cited in C. Burns et al. 2006. Red Paper 02: Transformation Design. London: Design Council.

3 Redström, J 2006. Re:definitions of use, in *Design Studies* 29(4), 410-423

4 Bezaitis, M. 2009. Practice, Products and the Future of Ethnographic Work, in Proceedings of EPIC 2009, pp. 157-168

project of identity, experience and meaning. Indeed, as two leading commentators argue: “it is increasingly meaningless to consider ‘age’ as conferring some common social identity or to treat ‘older people’ as a distinct social group acting out of shared concerns and common interests”⁵.

This leaves us with a something of a problem. On the one hand, the language we use to talk about older people and technology – because it is simply ageist, promotes stereotypes or underplays difference by talking about ‘users’ - underplays the considerable diversity in interest, ability and experiences they have with technology. And yet on the other hand our understanding of the diversity of the ageing experience points towards an increasingly heterogeneous population. It would seem as if our thinking about technology for older people and our understandings of older people’s experiences of ageing need to catch up with each other.

We say old, they say ‘not yet!’

Many of the individuals that we conducted research with during the course of the Global Ageing Experience study have highlighted to us how steep the challenge will be to develop technologies that support people as they age and that they are happy to adopt and start using. Take, for example, Penny, aged 92, who lives in County Cork, Ireland. She has a television upstairs in her house, which is not plugged in. “That is for when I get old,” she tells us. “When I have to spend more time in bed.” Penny doesn’t think of herself as old. Of the hundreds of individuals we have met in the course of that research, very few were willing to admit to being “old”.

Penny, and older people like her therefore represent a moving target. Penny is willing to recognise that she is moving along a continuum from young to old, but is not alone in refusing to situate herself in the category of old. ‘Old’ for Penny, and for a great majority of our informants is ‘other people’ and lies in the future. The perfectly natural tendency for people to regard others, but not themselves, as old has an important repercussion. Namely, for those that are not yet inclined to think of themselves as old, technologies designed with older people specifically in mind – such as telecare alarms – might not be adopted because they are for a point in the future when ‘I’m old’. People’s sense of where they are in the life course restrains their adoption., This presents a tremendous challenge in terms of thinking about any kind of intervention, technological or otherwise. If we wait until people recognize a need, we are likely to be too late. On the other hand, if we develop technologies that explicitly call out, or draw attention to fading abilities or infirmity, these technologies risk being rejected by people who regard themselves as still healthy and able.

However, it is necessary to overlay people’s own subjective sense of age, with their chronological age and the likely impact this will have on their experience with technologies of different types over the lifecourse. We are living in a period of rapid technological change where personal computers, the internet and mobile phones have become part and parcel of everyday working and home life in the course of little more than a decade. It would be unwise to assume that the technology attitudes and

5 C.Gilliard and P Higgs, 2008. *Cultures of Ageing: Self Citizen and the Body*. London: Prentice Hall.

practices of a teenager are the same as those of a thirtysomething. By the same token people in their mid eighties are unlikely to have the same level of exposure to, or interest in these technologies as people in their mid sixties.. And yet much of the way we not only talk about, but measure, technology and older people puts both these types of individuals into the same category, namely – ‘elderly’ or ‘older people’. Our tendency to think in cohorts, whilst a useful tool, has its dangers: it glosses over differences in age, perception, experience and can encourage ‘sweeping generalisations’. If we are to think in terms of cohorts we must be mindful that they represent fluid categories moving through time, with their constituents changing as time progresses.

Being mindful of these limitations, but also aware that an evidence base is required in order to understand how people now are using technology lets us examine some recent data to paint a simple landscape of use.

Landscapes of Technology Use

Given the inherent heterogeneity of older people it is frustrating that any attempt to deepen our appreciation of their technology use is stymied by the way that most surveys either break older adults in 55+ or 65+ age segments. Narrower age segments would create more visibility into the variation in ownership and use. However, a useful picture emerges from recent surveys, even if the sample sizes are small.

Stagnant Growth in Internet Use.

According to the Ofcom Adult Media Literacy Survey 2009, 1 in 4 adults in the UK do not use the internet at home or anywhere else, but four in ten aged 55-64 (39%) and six in ten aged 65 or over (61%) do not use the internet at home or elsewhere. Usage levels for older adults are increasing but at a slow rate; figures from the Office of National Statistics do show increased use by over 65s in the last five years, but the recent Oxford Internet Survey (2009) suggests that while use of the internet has continued to grow for those in the 25-54 age range, no such growth is evident in the 55 plus group.

Social Uses?

The 2009 Ofcom research suggests that one in ten internet users aged 55 and over (8%) have a social networking site profile but that they are less likely than adults as a whole to say they use the internet for contact with older people (46% vs. 58%). Yet other figures suggest a huge increase in the popularity of social networking sites such as Facebook amongst older adults. A Nielsen research report in March 2009 noted that Facebook had added almost twice as many 50-64 year olds visitors (+13.6 million) as it had under 18 year old visitors (+7.3 million). Examining Facebook's own advertising reach figures for over 64 year olds between November 2008 and October 2009 a massive spike in usage is illustrated: the percentage increase over this period in the USA being 1230%, in UK 390% and Italy 1600%. Yet it is worth remembering that this meteoric growth is from a very low base. However, there is also evidence that social networking sites aimed specifically at older people are faring less well –with some US sites shifting to a more age inclusive strategy, suggesting that sites or services devoted just to older people are not always attractive.

	Users in 2008	% of 65+ population	Users in 2009	% of 65+ population	% increase 2008-09
UK	83,060	0.85	407,620	4.1	390
USA	221,000	0.57	2,949,700	7.5	1234
France	15,800	0.15	145,780	1.4	822
Spain	6,260	0.08	68,460	0.9	993
Italy	6,940	0.05	118,820	1.0	1612
Germany	4,700	0.02	44,908	0.3	855
Ireland	2,500	0.5	13,560	2.7	442

Figure 1: The growth in the use of Facebook by those aged 64 year and older between November 2008 and October 2009. Sources – Facebook advertising reach figures and CIA World Yearbook.

Just calls?

In 2005, nearly half of all people over 65 owned a mobile phone (Ofcom) and most of those (82%) claim to make one or more calls per week, but just one quarter (24%) say they send any texts. Comparing the average use of mobile phones by older adults with the wider population is also instructive: adults over 65 with a mobile phone make five calls per week, and send two text messages, compared to 20 calls and 28 text messages for the UK as a whole. Three in ten owners of mobile phones over the age of 65 say they can send a text message with confidence (Ofcom 2005: Media Literacy Audit - Report on media literacy amongst older people).

Screen Media

The Ofcom report (2009) notes that TV is the medium most missed (when unavailable) by all age groups, and older people are no exception to that. Indeed in comparison to all UK adults, older people watch more TV. Half of those aged 65 and over say they can use Teletext/Ceefax, and can set up a recording on the VCR (2005 Older Adults). Furthermore, nearly half of those surveyed aged 65 and over have digital TV (44%).

A Clear Picture?

The picture that emerges is mixed and often unclear – evidence about the increasing uptake and use of technology jostles with figures that suggest continued feelings of bewilderment and exclusion from complex technologies that are conceived with other ‘users’ in mind. Enthusiasm and excited is tinged by fear: *“Stories about unwanted gifts of technology from unopened DVD players to intrusive mobile phones to house alarm systems with stressful and forgettable codes frequently made an appearance during interviews. Others described suspicions about the security of online banking*

*systems as well as worries over identity theft through public availability of personal information on websites such as Facebook...and the ease of making foolish or expensive mistakes when shopping or booking travel online.*⁶

This review of technology usage has focused on consumer technologies. These are widely available and, with some limited exceptions, rarely produced with older people in mind as the specific user community. One of the criticisms levelled by older people, as well as their advocates, is that technologies designed for a mass market are not sufficiently sensitive to the needs, competences and perspectives of older people.

However, many technologies are designed with older people more firmly in mind, namely assistive technologies, which include telecare and telehealth devices. There are technologies that seek to *predict* an incident, e.g. a fall; to *prevent* (raise an alarm or take remedial actions – e.g., switch on hallway lights for a night time wanderer); *connect* – e.g., link older people or patients to distant health or care professionals; *inform* – e.g., provide timely or relevant information to the older person and significant others; and *alert* – e.g., let others know of incidents and accidents.

We seem to be presented with a scenario in which on one hand consumer technologies are developed with a wide audience in mind but they often fail to excite or invite use by older people. On the other, there are assistive technologies whose intended uses are typically much more limited. Their usability should rank much higher but often they appear to assume a rather one-dimensional 'users' with a clear set of needs. Resultantly, despite their utility, one concern is that assistive technologies can stigmatise their users. Their design, often for entirely sensible reasons, can often focus on function over form. The result is devices that are strongly suggestive of decline, disability and dependency. As I suggested above, many people like to consider themselves still young and able, not old and unable. In that context they find many assistive technology off-putting and are often prone to wait until after the fact (a fall or other critical life event) to adopt a device or support.

On the flip side, consumer technologies are usually designed to support 'experiences' and stress empowerment and enablement, and do not focus what one *cannot* do. Here then is the challenge: how can we start designing and delivering technology that really supports the variety of ageing experiences and that resonates with people across the age range in later life.

Where next?

Our processes of listening, co-designing and delivering technologies will need to continue to improve if we are to close the gap between the technology we currently produce and that which really hits the spot for different groups of older people. Here are some suggestions for kick starting a debate about this process of improvement.

⁶ Wherton, J and Prendergast D. 2009. The Building Bridges Project: involving older adults in the design of a communication technology to support peer-to-peer social engagement, in *Proceedings of USAB 2009* conference.

Mind our Language: Our language about older people and technology not only provides a window into some of our own ageist assumptions, it also creates misplaced understandings about the range of attitudes and abilities that older people have with various technologies. One place to start is to encourage politicians, policy makers and commentators to avoid using words like old or elderly, which imply that age is a condition or a destination, and instead talk of ageing and older.

Beyond Cohort Thinking: In an era of increasing longevity we talk about cohorts of older people as extending either between 55 or 65 and 100 plus years and often assume a homogeneity of interests and abilities across this vast age range that would not be tolerated for other cohorts. We need to recognise the pitfalls of 'cohort thinking'. One way to address this issue is to encourage organisations such as Ofcom and ONS to segment the over 55 population more finely. This is important with respect to technology and media usage and attitudes, but is more broadly applicable. It will allow us to learn more about the variations in experience and attitudes over the late life course. The result will be to ensure that demographers, policy makers, designers, technologists and services providers think about older people less as a homogenous group of 'users' and more as a highly varied population.

Us as we Age: If we were to think about ourselves designing for "us as we age" rather than for those who are apparently already old what difference would this make to our approach? I suspect it would encourage us to think more about what sort of technologies we would actually want for ourselves: we would likely think more about the look and the feel, the materials used, the tactility, and the desirability of the technologies we produced. If we adopted the idea of designing for "us as we age" this might force us to think about the imperceptibility of the ageing process and those watershed moments when we suddenly feel more vulnerable, frail or old. In turn we would likely create platforms that grow or extend with us as our needs change over time.

Designing for us, not for 'them': What if we were to think more about ourselves as users rather than as designers for other people? I would argue that thinking of 'us as we age', rather than 'them that are already old', is more likely to encourage us to think about the huge variations within and across populations because the "them" who are 'old' are not a homogenous group with a few basic needs as we currently seem to imply, but the 'us' who are slowly ageing day by day. Younger sections of society like to think of ourselves as people with lives, lifestyles, aspirations and multiple needs deserving of sophisticated (and desirable) technologies. If we thought more about us as we age, rather than made assumptions about others who are already old, we might produce really relevant, usable and desirable technologies.

Standards and Guidelines: We should not underestimate the extent to which there are clear and specific requirements in terms of function and design in technologies for older people. Cognitive and physical declines make inroads into our abilities to use technologies as we age. Adherence to accessibility standards such as WCAG for websites is therefore important but widely disregarded. More should be done to publicise the scope of forthcoming legislation relevant to accessibility and equality – especially in design and industry settings where awareness levels may be low. Equally, we should encourage age-friendly accreditation schemes such as Age UK's new AgeOK kitemark scheme which recognises excellence in design for all. Such

schemes simultaneously raise awareness of the issue of accessibility and usability in design, and improve the experience of everyone with technology. An initiative led by a body such as the UK Design Council, which has experience in demonstrating the business logic in design thinking, could help the UK lead the way in the design of technologies for the world's ageing populations.

Designed and delivered with Soul: For technology to be usable, useful and desirable it has to have 'soul'. We need to strive to make technology that connects people to their own aspirations, their own projects of self development, self esteem, experience and identity. People, of whatever age, are multi-dimensional and technology needs to support multi-dimensional lives and experiences. Many technologies designed for use by ageing populations are conceived with a 'someone else pays' business model in mind in which technology is prescribed to people based on need. Does this result in less desirable technology? We need to start a debate about what such technologies would look like, from a design and usability perspective, if the market model was different. Would telecare or assistive technologies devices or services bought in regular high street shops be more desirable or usable?

If nothing else, modern gerontology (and our own intuition and experiences) tells us that ageing is a process – a journey not a destination - and represents a very varied set of experiences for what is a highly heterogeneous group. However, there remains a gap between what we know about ageing and the technologies we are creating to make it a comfortable, fruitful, safe and independent time of life.

To put soul, vitality and opportunity into our technologies for ageing populations we need to talk differently about the old, ageing and ourselves. We need to find ways of continuing to include older people in the process of design and delivery, ensuring their voice encourages us to look at them not as figures from a foreign land, but as us in a few years time. We know that technology has a great potential to liberate, connect, engage, educate and entertain us as we age. We will need to change our game if we're truly to capitalise on that opportunity.

Given that one argument of this piece is to ensure that we give voice to older people, it seems fitting to end with an email I received from a colleague which he had been sent by his excited mother-in-law. It does, of course, fit into the category of personal anecdote but is not being used to clinch an argument for or against one set of attitudes or another about technology. Rather I use it as a reminder that whatever our own experience, or the statistics lead us to believe, we should keep an open mind about older people and technology.

>>From: "XXXXXXXXXX" <XXXXXXXX@mindspring.com>
>>To: "XXXXXXXXXX"

>>Date: July 06, 2009 07:58:08 AM PDT
>>Subject: FYI
>>

>>Every older person should have an IPHONE.

>>I haven't even set everything, but so far, I have used it to set my med alarms, call AAA, find the phone number of the nearest gas station, check my bank balance, get my med list from Kaiser, read and send email, go to Face book. I haven't tried to barbecue ribs on it yet, but I'm pretty sure that is an option.

>>I haven't set the voice command stuff or the alarm that could be used in case of trouble.

>>

It is extremely easy to use, even with my shaky, achy fingers. It's the best investment I ever made!



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