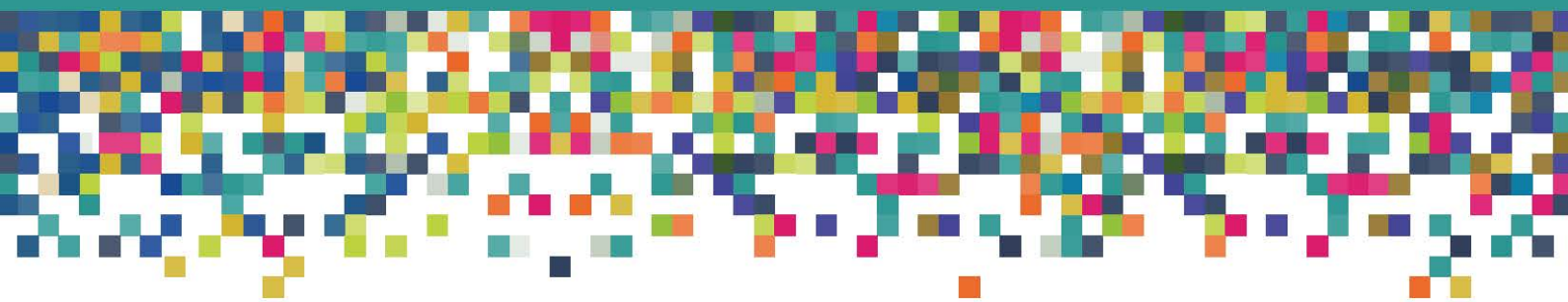
LSE Media and Communications

Media@LSE Working Paper Series

Editor: Bart Cammaerts



Changing Digital Life in the New Old Age

Leslie Haddon

Changing Digital Life in the New Old Age

LESLIE HADDON[1]

[1] Leslie Haddon (L.G.Haddon@lse.ac.uk) is a visiting fellow and part-time lecturer in the Department of Media and Communications at the LSE. His diverse research over the course of more than 30 years has focused on the social shaping and consumption of ICTs, especially using the domestication framework.

Published by Media@LSE, London School of Economics and Political Science ("LSE"), Houghton Street, London WC2A 2AE. The LSE is a School of the University of London. It is a Charity and is incorporated in England as a company limited by guarantee under the Companies Act (Reg number 70527).

ISSN: 1474-1938/1946

Other papers of the series can be found at:
https://www.lse.ac.uk/media-and-communications/research/working-paper-series

ABSTRACT

Recent years have seen the dramatic increase in the digital engagement of older people who had previously been portrayed as being on the wrong side of the digital divide. This paper examines the various types of explanation of why this is happening, including the general changes in the experience of being older, captured in the 'successful ageing' narrative, generational claims about the values Babyboomers bring to older age and life course analysis. But how do any such broader changes translate into new digital practices? Another type of explanation may lie in changes in this cohort's past technological experiences, but which experiences are important? And the influence of the past must be set against the circumstances of the present: how do new digital and social options and constraints influence their specific digital choices at this point in time? This working paper introduces these different processes, and elaborates on relevant issues and questions to be addressed.

1 INTRODUCTION

There is a puzzle. For many years the ageing and technology literature has portrayed older people as technologically conservative, with limited technological horizons, less capable of embracing the new but also less interested in it. This has led to concerns in the digital divide debates that this age group is amongst those in danger of being socially excluded (as noted by Selwyn, 2004a). However, various official statistics and academic studies, outlined below, have shown that their digital participation is now increasing significantly, more so for younger older people in their 60s and 70s. Why is this this development occurring now? What are the dynamics and mechanisms at work?

The aim of this paper is to investigate different types of explanation for this greater technological participation. The first, the 'successful ageing' narrative, involves claims about broader changes in the experience of older age. The generational change literature seeks to explain these changes by the fact that the Babyboomer cohort has reached this age stage, while the life course literature addresses reasons for variation with this group. Another type of explanation focuses on the past technological experiences of this generation. Finally, there is the influence of the changing circumstances in which these current older people find themselves, including the technological landscape, compared to past cohorts of older people.

2 TECHNOLOGY AND OLDER PEOPLE

In the literature on age and technology, while some writers are enthusiastic about the potential for assistive technologies another strand of writing has focused on the 'barriers' to older people engaging with existing ICTs (reviewed in Blaschke, Freddolinoand and Mullen, 2009) . This includes age related physical difficulties (vision, dexterity, memory) and the problematic design of technology for this age group (small screens, usability issues). But this literature also covers attitudinal barriers. One longstanding argument is that older people see less value in digital technologies in general or the internet in particular. It has often been claimed that there is a psychological effect that comes with ageing that makes older people more disinclined to engage with new technologies leading to a form of voluntary self-exclusion (these arguments are summarised in Gilleard and Higgs, 2008). Hence, various writers have characterised older people as being more sceptical of the digital world or, even more negatively, that they exhibit technological anxiety or even technophobia (Charness and Boot, 2009; Nikou, 2015; Nimrod, 2016).

In addition, there is a separate digital divide[2] literature looking at who is socially excluded from the digital world. Writers in this tradition are interested in a range of factors such as class, race and gender but there are also specific studies of older age in relation to different technologies (Yu, Ellison, McCammon and Langa, 2016; Choudrie, Pheeraphuttranghkoon and Davari, 2018), exploring the influence of particular factors, like lack of interest (Helsper, 2009). This approach is also sometimes framed in terms of barriers.

One problem in both of these literatures is is that they sometimes combine all people over a certain age (e.g. Charness, N. and Boot, W.R. (2009), which does do not do justice specifically to any differences between older and younger older people (Friemel, 2016; Hargittai and Dobransky, 2017). In addition, what these approaches often share is a focus on issues related to being older as an age-stage: at this point in life people have common experience. And, with exceptions, some of this work implies that this is a fixed experience: in 10 years' time the next cohort of older people will have similar experiences simply by virtue of being older people. While not denying there may be some age-stage effects, this approach is also being challenged empirically, as older people's digital experience is actually in the process of changing.

3 EVIDENCE OF CHANGING DIGITAL ENGAGEMENT

In the US, Pew have been conducting surveys of internet use for decades and have over the past few years been impressed by the growth in the adoption of a range of technologies by older people generally (Anderson and Perrin, 2017[3]). In fact, Pew specifically document use by those aged 65-69, and those aged 70-74, and in so doing charts the use of a large proportion of the earlier Babyboomer cohort – the relevance of which will become clearer in a later section. Looking at the 65-69 group, 95% have mobile phones (59% smartphones), 82% use the internet, 61% have broadband at home; 41% have tablets and 47% use social media. The figures for 70-74 year olds are lower, but, depending on the technology, sometimes only a few percentage points less. Since Pew conduct yearly surveys, the most striking aspect is how much technology adoption and use has increased specifically among younger older people in recent years and, again depending on the technology, this group is now sometimes only 10-15% lower than the average for the population as a whole. Other writers concur that where a gap exists, especially between younger older people's technology use and younger age groups, that gap has decreased (Hunsaker and Hargitta, 2018).

[2] Various writers have pointed out how the metaphor 'digital divide' is problematic with inaccurate characterisations of the binary nature of digital experiences (have/have not), changing and multiple divides and assumptions about the need for engagement in the online world (Gunkel, 2003; Selwyn, 20004b). However, it is still the most widely used term to describe this literature.

[3] This is the most recent Pew report specifically on age.

This same pattern of 'catch up' is found in the UK: among 65-74 year olds, 90% now have mobile phones, 65% have computers, 54% have tablets (Ofcom Adults' Media Literacy Tracker, 2017).

The next sections explore various frameworks that could help to make sense older people's greater digital engagement, including ones that initially take the focus off technologies to consider the wider context of changes in the experience of becoming older more generally. The first of these involves claims about successful ageing.

4 SUCCESSFUL AGEING

Whereas for a long time old age was seen as a potentially problematic time of life framed in the language of caring, dependency and needs, it is now more common to find discussions of active, healthy and productive ageing, perhaps best captured in the term 'successful ageing' (Gilleard, 2017). Originating in the US, this discourse has spread to policy debates in Europe over the last 20 years (Loos, et al., 2017), and has been taken up by advocacy groups acting on behalf of older people (e.g. Age UK, 2019; Hall, et al., 2019). This in part reflects the fact that old age is no longer associated with destitution, as poverty and social exclusion among this age group declines (Gillard and Higgs, 2017). But there is a more positive, upbeat element to this 'success' narrative, with older people collectively being economically better off, healthier, working longer, etc. than previous generations at that stage in life, which has led to a 'reconstruction of later life' (Biggs, et al., 2006, p.240) with new expectations and assumptions about their opportunities.

In essence, and backed up by empirical evidence, the successful ageing approach points to new ways in how older age is lived. But, as captured in the 'reconstruction' quote above, this may reflect change in expectations of how older people can (and maybe should) live their lives, views that are not confined to older people themselves. Older age is a social construction, just like the social construction of childhood (James and Prout, 1997), the narrative of successful ageing is a discourse in its own right, promoted in policy circles, encouraged by advocacy groups and reflected in representations of older people (Aroldi and Colombo, 2016; Loos et al, 2017; Loos and Ivan, 2018). In part, that discourse may in itself be contributing to how older age is lived out.

However, it is still necessary to specify how some of the above changes in ageing generally have had a bearing on the changing pattens of ICT use - to identify the mechanisms connecting non-technological and technological trends. One obvious candidate might be that increased wealth among current older people means more of this generation of older people can afford more technology and related services. Another possibility, if many of this cohort are working longer than older people did in the past (Biggs, et al., 2007), is that those remaining in the

workforce are still engaging with technology, including new technological practice, because of their job. Or it might be that expectations about productive ageing leads this cohort to both maintain old and engage in new interests, and in the course of these activities continue to interact with the digital world. Does a more generally active lifestyle compared to previous generations at this age stage simply create more reasons (and more pressures) to make use of new digital options in order to achieve everyday goals such as participating in neighbourhood networks or sharing grandchildren pictures? Or is different technological behaviour simply part of the successful ageing mindset – as (some) older people's evaluation of various aspects of their lives are changing, does that process involve a different attitude to the digital world as well?

One problem with the successful ageing approach is that while it points to a variety of changes in older people's lives it does not in itself explain why they are occurring. To explore one possible driver of change we turn to another framework: generational analysis.

5 GENERATIONAL CHANGE

The core idea of generational analysis, originating with Mannheim's (1923), is that people born at a particular period of time (and place) might share some similar cultural experiences. Like some others had done in the 19th century, Mannheim focused in particular on youth as a formative period, where experiences at this younger age stage could influence future social and political outlooks throughout life. More recent generation analysis has often focused on (differences between) generations in the post-war period: *Baby Boomers*, born in 1940s-1960s, *Generation X* (born 1960s-1980s) and then *Millennials* (born 1980s to early 2000s). And the approach has more recently been adopted in media studies to consider how generation affects audiences' perception of media and how media affect people's sense of generational identity (Siibak, et al., 2014).

First, it needs to be noted that there are some practical challenges to implementing generational analysis (Gilleard, and Higgs, 2005; Haddon, 2017). For example, there is the problem of deciding where to draw the boundaries marking when particular generations start and end. And once those boundaries are defined, people born at the start and end dates will probably have much in common with previous and subsequent cohorts respectively (Corstan, 1999). In addition, making too simplistic claims about the importance of generational influence can underestimate the differences within generations and the similarities between them. Lastly, generational experiences vary cross-culturally.

Allowing for such caveats, the last 25 years have seen a revival of interest in generational influences generally (Aroldi, 2011). This literature tends to draw attention to shared attitudes, values and orientations (Corsten, 1999), and although much of that writing has focused on the

more recent, youthful generations, like millennials, there is one strand of work in this tradition that has concentrated on an earlier generation that has now reached older age. These researchers attribute the general change in the experience of older age to the fact that the Babyboomer cohort[4] has arrived at this age-stage in life. Gilleard and Higgs (2008) argue that generation was (and still is) a vanguard, setting an orientation for future cohorts – i.e. here is a major generational break, as Babyboomers are very different from previous cohorts, but less different from subsequent ones Some, like the above authors, have stressed that after they had passed through a rebellious youth, rejecting all things old, this is a generation that has sought to maintain its youthfulness – aided by its engagement with post World War Two consumer culture. A contemporary example would be bands from the 1960s and 1970s that are still performing when their members are now in their 60s and 70s. Another example is 'body work' or 'body maintenance' as an ongoing project, efforts to maintain a youthful appearance in older age. Certainly, one recent study noted the importance for some of going to the gym, and keeping a smart appearance, in contrast to their own parents who dressed more in a way that made them look old (Woodspring, 2018). The emphasis in the latter study is that the Babyboomers in in their earlier life never felt so constrained by existing norms in terms of how to live their lives, and this perspective has carried over into how they now live older age. This is why the Babyboomers, along with some people from subsequent cohorts who have bought into this orientation, have been characterised as an age-denying, age-defying generation (Gilleard, 2017).

Although the emphasis has still been on values and attitudes carried over from their formative years, advocates of this analysis appreciate that generational experiences also reflect the contexts through which this cohort lived after their formative years, their earlier health, wealth, and educational opportunities. For example, Higgs, et al. (2009) note that the Babyboomers are in general a wealthier generation of older people, despite inequalities within this cohort. Whereas old age used to be associated with poverty in the UK, by 2005 the income of the retired population was similar to the income of the working population. In addition, these writers observe how the Babyboomers had grown up in relative affluence during the rise of Post-War consumer culture and thus bring certain approaches to consumption in later life. For example, the proportion of money spent on leisure by those retired is very similar to those working and when broken down that reflects, in particular, the influence of the young older group (ibid).

In sum, generational analysis points to a particular driver behind any general changes in older people's approach to living later life. But it also emphasises a difference between younger and

[4] Strictly speaking cohort refers simply to a demographic group of the same age while the term generation captures the same shared historical experiences. However, in this paper both terms are used.

older older people: it is not all older people are behaving differently, but specifically younger older people are introducing this change because of their generational background.

As with successful ageing, that still leaves the question of how generally different approaches to older age actually translate into different digital behaviour: how might some of the attitudes and values associated with this generation have a bearing on digital engagement? For example, for some in this cohort does any rejection on becoming old and wanting to stay youthful include demonstrating, even if only for one's self-identity, a desire not to be 'left behind' by technological change, proving that one can still 'keep up'? Is it in part a rejection of assumptions and stereotypes about older people's incapacity to cope with technological change? More specifically, is their engagement with consumer culture leading them to use certain technologies when researching consumption decisions? From the Babyboomer literature, these might be some of the areas where we need to probe in order to add to our understanding of changes in this generation's digital engagement at this life stage.

The merit of generational analysis is that it provides a specific explanation for current change in the behaviour of (some) older people. But at the same time this approach has a strong emphasis on what is shared, what is common to a cohort, rather than pointing to intra-generational variation[5]. There is another tradition of research that shares with generational analysis a sensitivity to the influence of past experiences on current circumstances, but at the same time addresses such differences: life course analysis.

6 LIFE COURSE ANALYSIS

Although its origins can be found in the late 1960s and early 1970s (Elder, 1994), life course analysis has been adopted more widely over the last 20 years (Ferraro and Schafer, 2017). While this research is not uniquely focused on understanding the experiences of older people, the approach is established in the field of gerontology, especially in the domains of health and wealth in later life. Like generational analysis, it considers the influence of the broader social conditions in which people lived their earlier lives, but not just their formative years. Examples include general economic circumstances[6], the long-term growth of mass media and public education (Elder, 1994), the expansion of the welfare state and the gendered nature of the labour market in different periods (Corna, 2013), and the degree of income inequality in the labour market at various points in time (Crystal, Shea, and Reyes, 2017).

However, life course analysis not only focuses on shared historical experiences but also on the differences in people's life trajectories, for example, on how variation in health experiences at

[5] Gilleard and Higgs (2005) introduce this variation through their separate discussion of (changes in the experience of) class in older age.

[6] For example, growing up in the Great Depression.

an earlier stage in life can be reflected or even exacerbated in later life (Corna, 2013). To an extent life trajectories are based on agency, as people choose to go down different paths. But these trajectories also reflect social processes, such as the structuring of opportunities in society (Dannefer, 2003) For example, certain social origins, in terms of class, can lead people some to more opportunities and advancement in life compared to others. In fact, one key concept often used within this field is that that of 'cumulative advantage and disadvantage' (CAD), showing that variation in one's background experiences can be amplified over time and give rise to greater inequalities at a later stage in life (Orand, 1996; Dannefer, 2003)[7].

One the one hand, some of the examples of life course analysis draw attention to a potentially wider range of historical circumstances or social contexts that may be influential, beyond those captured in the Babyboomer analysis. And this approach looks beyond the emphasis on values and orientations so prevalent in the Babyoomer example. But there is also a strong emphasis on the origins of and process lying behind variation within generations, and, of interest here differences among older people, including the Babyboomer generation.

In general, the life course approach has not been used to reflect on technology use or, of particular interest here, to explain how different aspects of the past relate to the current generation of older people's new digital behaviour. But if one looks at studies of income, there has been research on how the level of income inequality in the labour market at an early stage in working life had a bearing on the wealth of cohorts later in life (Crystal et al., 2017). Meanwhile, life course analysis has looked at how differences in health condition earlier in life related to variation in health amongst older people (Corna, 2013). The equivalent approach would be to ask how past technological experiences have a bearing on the current digital behaviour of older people, both in terms of similarities and differences within this cohort.

7 PAST TECHNOLOGICAL EXPERIENCES

The influence of past technological experiences is captured in the observation that

> it is not so much that older adults have started using technologies, but that long time users of digital media have grown up into older age (Quan-Haase et al., 2018, p.1208).

Within the gerontechnology literature, the strand discussing 'technological generations' has provided suggestions about why previous cohorts of older people had difficulties using certain digital technologies. The basic premise is that technological evolution is discontinuous – there are certain groups of technologies at a certain point in history that are similar in some respects but different from the next set of technologies that are developed. Technology

[7] A related concept is cumulative inequality (CI) (Ferraro, and Shippee, 2009).

generations[8] are the cohorts of people who experience these different batches of technology in their early lives. More specifically, this literature has focused on the interface of different types of technology, producing the following typology (Lim, 2010): the mechanical era covering products before 1930, the electro-mechanical era, products between 1930-60, and the digital software era, products after 1960. The argument is that older people (in the past) had not experienced digital interfaces when they were younger and so found them to be difficult to use in later life.

But we may need to take a broader view of what counts as pst technological experiences. In a UK study, participants dated the major move to office computerisation to the late 80s and early 90s (Buse, 2010). Although some of these interviewees had at the time been anxious about the change, at that stage in life many had coped, usage became 'embodied' and automatic through practice. In other words, although the technology did not appear in their 'formative' years as younger adults, and they sometimes reported that it had been a struggle to learn how to use the new technology, many had managed to do so by the time of reaching retirement. Moreover, it was not just the arrival of a new devices like computer technology per se that was a challenge but so too were later incremental ongoing technical developments (e.g. problems with using the mouse when that interface first appeared, then difficulties using touchpad interface on laptops and dealing with upgrades to new operating systems). These examples suggest that while the technology generation argument many have some merit, the encounter with 'new' technology may be more complex, more nuanced.

Buse's UK study was conducted in 2007-8. Although it included some 50 and 60 year old participants, many were over 70s at that time (in their mid-80s or older now) and so they really belong to the generation before the Babyboomers. In other words, while we could look for equivalent sentiments to those in the Buse research any study of Babyboomers' 'technobiographies'[9], is likely to show the latter had greater familiarity with the digital world when they were (somewhat) younger, which may help to understand the digital competence of some[10] of this cohort now.

[8] Given that the rest of the literature looking at generational analysis has prioritised broader life experiences, there have been objections to defining a generation of people solely by the technology they encounter at an earlier life stage (Gilleard, (2017).

[9] This is the sense of technobiographies noted by Buse, 2010. She cites the terms as originating from Henwood, Kennedy and Miller,2001, but, as clarified in Kennedy, 2003, the term originally referred to people's evaluations of their own and other people's digital practices.

[10] There will certainly be variation in the technologies used in different types of work and different types of workplace – the office automation noted by Buse introduced digital technologies to that workforce, but not all jobs involved this particular transition.

This study also indicates how it is important to look beyond what people did with technology, their usage, to also ask more broadly about their encounter with technology. For example, we have Buse's question about how her participants coped with new technologies in their early lives, what the changes meant to them. And further questions might ask about how they approached new technologies: for instance, to what extent did they have an interest in and spend time experimenting with them? In general, it is useful to know how much they embraced technologies in the past since such questions can cast light on their digital activities now.

One other body of literature that may be relevant to such questions is media ecology, one of whose key questions is about how the media environment, the range of media that form a backdrop to people's lives, structure their perceptions and understanding of the world (Scholari, 2012). Some of that interest in how media structure people's very way of thinking (Gumpert and Cathcart, 1985) is beyond the scope of this paper. But that approach has been used to at least ask the question of how the media ecology of one's formative years, in a study Swedish children born in the 60s, influenced media consumption habits when they were older (Björkin, 2015).

Finally, there is the question of whether adapting to technological change was compulsory, thinking of the Buse study and the pressures to adopt new technological practices at work. In the case of technologies experienced outside of the workplace, there are also some pressures to adopt new technological options. In contrast to both of the above sections that emphasise the influence of past biography, the final section examines how do the new demands, options, pressures and constraints of the present can also influence the current nature of younger older people's interaction with the digital world.

8 NEW TECHNOLOGICAL AND SOCIAL LANDSCAPES

The Babyboomers may arrive at this age-stage with some shared (and some different) experiences, but they then also have to engage with a changed technological world as well as an ever-changing wider social context compared to previous generations of younger older people. How much does the new world in which they find themselves lead this generation engage differently with technology compared to previous cohorts of younger older people?

The first point is that the digital landscape has itself altered so much that younger older people have both technological options and pressures to engage with services are very different from that experienced by previous cohorts at that age-stage. This is a world sometimes characterised as 'digital by default'. Sometimes going online to achieve a goal has been made more attractive: e.g. cheaper, quicker or offering more choice than using non-digital alternatives. Or there are simply new offerings such as hotel and restaurant reviews that in principle might have

interested previous generations of young older people, but simply did not exist 20 years ago. Not all change is voluntary: people of all ages are sometimes pressed to use digital resources in order to achieve goals. For example, increasingly in recent years there is sometimes no alternative but to go online (Age UK, 2018), or else that is by far the easier option, as in applying for a senior citizen travel pass, paying road tolls, as in the use of the Dartford Tunnel or the London Congestion charge), or if paper bills (e.g. from utilities) are scrapped and only electronic versions are available. Finally, there is the social pressure to use technology, as when family and friends use videochat such as Skype or increasing communicate by SNS such as Facebook. In other words, to what extent does the current generation of younger older people use technology more compared to previous cohorts for the same reasons as the rest of the population uses more digital options.

Second, there are broader social developments such as changes in leisure possibilities, be that the affordability of longer distance travel or more short breaks, or trends in terms of eating out. All of these can mean that may people, including older people, adjust their behaviour compared to the past and in the course of doing so may make use of new digital services such as researching leisure choices online and then booking them. And to take the recent example from era of Covid restrictions, various lockdowns favoured the growth of online shopping, through companies such as Amazon, and the greater use of cashless payments. One might suspect that this increased for older groups for the same reasons that it increased for younger ones – i.e. the closing down of other options.

To check the influence of contemporary circumstances on technological choices, a domestication analysis might be the most appropriate choices as it seeks to make sense of why and how people adopt ICTs in their life (or do not do so, or do so in a limited fashion) (Silverstone, Hirsch and Morley, 1992; Haddon, 2011). This is an approach that is sensitive to the social contexts in which people live, and while that can include the past experiences noted above (Haddon, 2017), it also covers such elements as the choices people had open to them when trying to live their daily lives, the pressures to follow some paths rather than others and the influence (including encouragement and support) of others such as family and peers.

9 CONCLUSION

This paper arose in reaction to some of the claims made in the ageing and technology and digital divide literatures that older people's more restricted use of ICTs was associated with attitudes arising from reaching this point in their lives. While some arguments about problems arising from bodily changes may be valid (more so for older older people), this would not explain current trends in (especially younger) older people's current digital engagement. An explanation of the dynamics at work is needed. The successful ageing narrative, which is

influential as a social construction in its own right, points to changes in the lifestyle of older people more generally. Various elements were explored to see how and why such changes may lead specifically to new technological choices, but one problem with this while framework is that it does not explain why being older is changing. Generational analysis does this, pointing to the ageing of a particular cohort, the Babyboomers, and the different values and attitudes they bring to older age. Once again, there are still questions about how this translates into different use of ICTs compared to previous generations. If they generational analysis stresses what might be common in this cohort, life course analysis can help to explain the different technological choices we find within a generation, as well as pointing to other historical influences beyond the formative years. In contrast to the emphasis on ageing in general, one can ask about how encounters with ICTs in the past may have a bearing on why this cohort's approach to the digital world is changing now. While that approach originally focused on familiarity with different interfaces, wider questions can be asked about the nature of those past technological experiences. Finally, a different approach to looking to current older people's past for an explanation of change, is to look at new social circumstances in which they live, both in terms of the technological landscape and more general social developments. (Younger) older people's approach to and use of technology may have changed from that of past cohorts partly because the world is a different place.

REFERENCES

Age UK (2018) Everything is online nowadays, May, London. https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_may18_everything_is_online_nowadays.pdf

Age UK (2019) Later life in the United Kingdom, April, London. https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/later_life_uk_factsheet.pdf

Anderson, M. and Perrin, A. (2017) Tech adoption climbs amongst older adults, Report, Pew research Center, May 17th, https://www.pewresearch.org/internet/2017/05/17/tech-adoption-climbs-among-older-adults/

Aroldi, P. (2011) Generational belonging between media audiences and ICT users, pp. 51–67 in Colombo, F. and Fortunati, L. (eds), *Broadband Society and Generational Changes*, Frankfurt am Main: Peter Lang.

Aroldi, P. and Colombo, F. (2016) The elderly, IT and the public discourse. Representations of exclusion and inclusion, pp.176-185 in Zhou, J. and Salvendy, G. (eds) *Human aspects of IT for the aged population. Healthy and active aging, ITAP 2016, Part II, LNCS 9755*, Dodrecht: Springer.

Biggs, S., Phillipson, C. Money, A. and Leach, R. (2006) The age-shift: Observations on social policy, ageism and the dynamics of the adult life course, *Journal of Social Work Practice* 20(3): 239-50.

Biggs, S., Phillipson, C., Leach, R. and Money, A. (2007) Baby boomers and adult ageing: Issues for social and public policy, *Quality in Ageing* 3(8): 32-40.

Björkin, M. (2015) Reconstructing past media ecologies: The 1960s generation in Sweden, *European Journal of Communication* 30(1): 50–63.

Blaschke, C., Freddolino, P. and Mullen, E. (2009) Ageing and technology: A review of the literature, *British Journal of Social Work* 39(4): 641-56.

Buse, C. (2010) E-scaping the ageing body? Computer technologies and embodiment in later life, *Ageing & Society* 30(6): 987-1009.

Charness, N. and Boot, W.R. (2009) Aging and information technology use potential and barriers, *Current Directions in Psychological Science* 18(5): 253-258.

Choudrie, J., Pheeraphuttranghkoon, S. and Davari, S. (2018) The digital divide and older adult population adoption, use and diffusion of mobile phones: A quantitative study. *Information Systems Frontiers*, 1-23

Corna, L. (2013) A life course perspective on socioeconomic inequalities in health: A critical review of conceptual frameworks, *Advances in Life Course Research* 18(2): 150-9.

Corsten, M. (1999) The time of generations, *Time & Society* 8(2): 249-72.

Crystal, S., Shea, D. and Reyes, A. (2017) Cumulative advantage, cumulative disadvantage, and evolving patterns of late-life inequality, *Gerontologist* 57(5): 910-20

Dannefer, D. (2003) Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory, *Journals of Gerontology Series B-Psychological Sciences and Social Sciences* 58(6): S327-S337.

Elder, G. (1994) Time, human agency, and social change - Perspectives on the life-course, *Social Psychology Quarterly* 57(1): 4-15.

Ferraro, K. and Schafer, M. (2017). Visions of the life course: Risks, resources, and vulnerability, *Research in Human Development* 14(1): 88-93.

Ferraro, K. and Shippee, T. (2009) Aging and cumulative inequality: How does inequality get under the skin? *Gerontologist* 49(3): 333-43

Friemel, T. (2016) The digital divide has grown old: Determinants of a digital divide among seniors, *New media & society* 18(2): 313-31.

Gilleard, C. (2017) The place of age in the digital revolution, pp.11-22 in Taipale, S., Wilska, T.-A., and Gilleard, C. (eds.) *Digital technologies and generational identity: ICT usage across the life course*. Abingdon: Routledge.

Gilleard, C. and Higgs, P. (2005) *Contexts of ageing: Class, cohort and community*. Cambridge: Polity Press.

Gilleard, C. and Higgs, P. (2008) Internet use and the digital divide in the English longitudinal study of ageing, *European Journal of Ageing* 5(3): 233-39.

Gilleard, C. and Higgs, P. (2017) Ageing, corporality and social divisions in later life, *Ageing and Society* 37(8): 1681-702.

Gumpert, G. and Cathcart, R. (1985) Media grammars, generations, and media gaps, *Critical Studies in Media Communication* 2(1): 23-35.

Gunkel, D. (2003) Second thoughts: Toward a critique of the digital divide, *New Media and Society* 5(4): 499-522.

Haddon, (2011) Domestication analysis, objects of study, and the centrality of technologies in everyday life, *Canadian Journal of Communication* 36(2): 311-23.

Haddon, L. (2017) Generational analysis of people's experience of ICTs, pp. 37-51 in Taipale, S., Wilska, T.-A., and Gilleard, C. (eds) *Digital technologies and generational identity: ICT usage across the life course*, Abingdon: Routledge.

Hall, S., Rennick, K and Willais, R. (2019) *The perennials: The future of ageing*, Ipsos Mori, London.

Hargittai, E. and Dobransky, K. (2017) Old dogs, new clicks: Digital inequality in skills and uses among older adults, *Canadian Journal of Communication* 42(2): 195-212.

Henwood, F., Kennedy, H. and Miller, N. (eds) 2001. *Cyborg lives? Women's technobiographies*, York: Raw Nerve Books.

Helsper, E. (2009) The ageing internet: digital choice and exclusion among the elderly. *Working With Older People* 13(4): 28-33.

Higgs, P. , Hyde, M., Gilleard, C. J., Victor, C. R., Wiggins, R. and Jones, I. (2009) From passive to active consumers? Later life consumption in the UK from 1968-2005. *The Sociological Review* 57(1): 102-24.

Hunsaker, A. and Hargitta, E. (2018) A review of internet use among older adults, *New Media & Society*, 20(10): 3937 –3954.

James, A. and Prout, A. (eds) (1997) *Constructing and reconstructing childhood: Contemporary issues in the sociological study of children*, London: Falmer Press.

Kennedy, H. (2003) Technobiography: Research lives, online and of off, *Biography* 26(1): 120-39.

Lim, C. (2010) Designing inclusive ICT products for older users: taking into account the technology generation effect, *Journal of Engineering Design* 21(2–3): 189–206.

Loos, E. and Ivan, L. (2018) Visual ageism in the media, pp.163-176 in Ayalon, L. and Tesch-Roemer, C. (eds.) *Contemporary aspects on ageism*, Berlin: Springer Verlag.

Loos, E., Ivan, L., Fernández-Ardèvol, M., Sourbati, M., Ekström, M., Wilińska, M, Carlo, S. and Schiau, I. (2017) Ageing well? A cross-country analysis of the way older people are visually represented on websites of organizations for older people, *Journal of Comparative research in Anthropology and Sociology* 8(2): 63-83.

Nikou, S. (2015) Mobile technology and forgotten consumers: The young-elderly, *International Journal of Consumer* 39(4): 294-304.

Nimrod, G. (2016) The hierarchy of mobile phone incorporation among older users, *Mobile Media & Communication* 4(2): 149–168.

Ofcom Adults' Media Literacy Tracker (2017) A1/ A2, London.

Orand, A. (1996) The precious and the precocious: Understanding cumulative disadvantage and cumulative advantage over the life course, *Gerontologist* 36(2): 230-238.

Quan-Haase, A., Williams, C., Kicevski, M., Elueze, I., and Wellman, B. (2018) Dividing the grey divide: Deconstructing myths about older adults' online activities, skills, and attitudes. *American Behavioral Scientist* 62(9): 1207–1228.

Scolari, C. A. (2012) Media ecology: Exploring the metaphor to expand the theory, *Communication Theory* 22(2): 204-25.

Selwyn, N. (2004a) The information aged: A qualitative study of older adults' use of information and communications technology, *Journal of Aging Studies* 18(4): 369-84.

Selwyn, N. (2004b) Reconsidering political and popular understandings of the digital divide', *New Media and Society* 6(3): 341-62.

Siibak, A., Vittadini, N. and Nimrod, G. (2014) Generations as media audiences: An introduction, *Participations: Journal of Audience & Reception Studies* 11(2): 100-7.

Silverstone, R., Hirsch, E. and Morley, D. (1992) Information and communication technologies and the moral economy of the household', pp.15-31 in Silverstone, R. and Hirsch, E. (eds) Consuming technologies, London: Routledge.

Woodspring, N. (2018) *Babyboomers: Time and ageing bodies*, Bristol: Policy Press.

Yu, R. P., Ellison, N. B., McCammon, R. J., and Langa, K. M. (2016) Mapping the two levels of digital divide: Internet access and social network site adoption among older adults in the USA, *Information, Communication & Society* 19(10): 1445-64.

Media@LSE Working Paper Series:

- Presents high quality research and writing (including research in-progress) to a wide audience of academics, policy-makers and commercial/media organisations.
- Sets the agenda in the broad field of media and communication studies.
- Stimulates and informs debate and policy.

All papers will be published electronically as PDF files, subject to review and approval by the Editors and will be given an ISSN. An advantage of the series is a quick turnaround between submission and publication. Authors retain copyright, and publication here does not preclude the subsequent development of the paper for publication elsewhere.

The Editor of the series is Bart Cammaerts. The editorial board is made up of other LSE academics and friends of Media@LSE with a wide range of interests in information and communication technologies, the media and communications from a variety of disciplinary perspectives (including economics, geography, law, politics, sociology, politics and information systems, cultural, gender and development studies).

Notes for contributors:

Contributors are encouraged to submit papers that address the social, political, economic and cultural context of the media and communication, including their forms, institutions, audiences and experiences, and their global, national, regional and local development. Papers addressing any of the themes mentioned below are welcome, but other themes related to media and communication are also acceptable:

Communication and Difference	Mediation and Resistance
Globalisation and Comparative Studies	Media and Identity
Innovation, Governance and Policy	Media and New Media Literacies
Democracy, Politics and Journalism Ethics	The Cultural Economy

Contributions are welcomed from academics and PhD students. In the Autumn Term we also invite selected Master's students from the preceding year to submit their dissertations which will be hosted in a separate part of this site as 'dissertations' rather than as Working Papers. Contributors should bear in mind when they are preparing their paper that it will be read online.

Papers should conform to the following format:

6,000-10,000 words, 150-200 word abstract, papers should be prepared as a Word file, Graphs, pictures and tables should be included as appropriate in the same file as the paper, The paper should be sent by email to Bart Cammaerts (b.cammaerts@lse.ac.uk), the editor of the Media@LSE Working Paper Series

ISSN: 1474-1938/1946