Nudge or Compel?

Can behavioural economics tackle the digital exclusion of older people?

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In the UK there are still 7.63 million adults (15%) who have never used the internet (ONS, 2012)[1]. Yet digital exclusion risks that many people will not be able to play an active part in local society or civil activities[2]. These offline groups are more likely to be the more vulnerable members of society, those who are older, who have disabilities or those lower down the socio-economic spectrum.

Despite many attempts to widen access to the internet among older people and other excluded groups over the last 15 years, progress has been slow. For many years, the private sector has made it more difficult to purchase certain products and services without internet access. Over recent years, the public sector has increasingly sought to deliver more services exclusively online. This move to a 'Digital by Default' agenda risks leaving some of the most vulnerable people in society without support and heavily excluded from the online world. Yet whilst the internet has become more important, publicly funded formal and informal learning has declined.

This report examines the three main reasons why people in general, and older people more particularly, don't use the internet, but concentrates explicitly on the comparatively poorly studied area of behavioural choice (whether someone sees a potential benefit in being an internet user).

Analysing data from the *English Longitudinal Study of Ageing* (ELSA), this report highlights a number of behavioural traits which accompany internet usage, particularly amongst older people.

- There was a strong association between the measure of internet use and organisation, group and club membership. Conversely there was also a strong relationship between internet use and 'NOT being a member of any organisation, club or society'.
- People who reported using the internet tended to report feeling more in control of various aspects of their lives.
- People who didn't own a computer were more likely to feel that they were unable to learn a new skill, while conversely people who did own a computer were more likely to agree that they could.
- People who reported not using the internet were more likely to say that they 'often' felt isolated from others. Conversely, people who said they did use the internet were more likely to respond that they 'hardly ever or never' felt isolated. The same pattern was found for loneliness.

This report goes on to explore the potential of behavioural economics in tackling digital exclusion and examine whether behavioural economics might be used as an intervention to encourage use of the internet among older people. We then make a series of policy recommendations using 'nudge' tactics to achieve greater digital inclusion for older people.

[1] ONS (2012) *Internet Access Quarterly Update, 2012 Q3*. Office for National Statistics, London. England.
[2] Kneale, D (2011) *Can localism work for older people in urban environments. Perspective from the British Social Attitudes Survey*. ILC-UK, London. England. Available at: http://www.ilcuk.org.uk/images/uploads/publication-pdfs/pdf_pdf_176.pdf

Summary of recommendations

- The technology sector must place more emphasis on co-design. The involvement and engagement of older people in the design of the services which they might want to use is vital. Government and the private sector must find ways of supporting the co-design of new online services which meet the desires of older people currently not online.
- To overcome the impact of regret aversion[3], service providers should offer the opportunity for people to 'go back to paper' if they are unsatisfied with their digital experience.
- To reduce the risk of loss aversion[4], organisations such as local authorities or the Post Office should provide internet access in branches to assist customers in carrying out tasks online with assistance from staff.
- Service providers may be able to attract older customers by finding ways of discounted installation and connection deals, and initial periods of free internet access. Customers may be more likely to be more willing to agree to longer-term contracts in exchange for discounted or free initial access.
- Companies advertising technology and opportunities to learn technology, must do so using imagery of both older and younger people.
- Older people who are online should be encouraged to talk through their experiences with their peers.
- Government and the private sector should support local digital champions to make the case at a community level for the use of new technology.
- If Government and the private sector is to seek financial savings from making services available exclusively online, they must either invest more in adult learning or find ways of incentivising others to invest.
- Where government wants to encourage people to buy certain products or services (for example, a pension or annuity), they should find ways of using technology to direct people to a selection of online providers which may meet their needs.
- Policy makers and service providers should increasingly look to finding ways of getting people online without them actually realising they are using a computer. This could help to offset any computer related anxiety.

[3] The key concepts of behavioural economics are described from page 39 onwards.
[4] Ibid

Introduction

During the last decade the impact of the internet and networked technologies in general has been felt across business, home and community life. Our society is one in which people shop, communicate, socialise and gather education and other information resources online, and in highly social ways.

Information and communication technology – in particular the internet – has become ever more ubiquitous throughout society. It is central to our economic, cultural and political lives, and used as a mechanism for the delivery of public services, personal communication, and as a vast source of information and entertainment.

At the same time, critical policy changes are altering the landscape of product and service provision. The Government is pursuing a restructuring in public services according to Big Society guiding principles: a dis-intermediated system that removes middle management, that develops the value and 'currency' around volunteering, and that facilitates localised action by removing bureaucracy. The context of an economic crisis and cuts in public spending add an additional change dimension.

However, in the UK there are still 7.63 million adults (15%) who have never used the internet (ONS, 2012)[5]. Research by ILC-UK (Kneale, 2011) has highlighted that digital exclusion risks that many people won't be able to influence the Big Society or play an active part in the localism agenda[6].

These offline groups are more likely to be those who are older, who have disabilities or those lower down the socio-economic spectrum. Older people are currently the least frequent users of the internet among all age groups. Evidence suggests that the explanation for this is a mixture of any one or all of three reasons: access to technology, level of IT skills and behavioural choice[7]. This report touches on all of these reasons but concentrates on the last of these – behavioural choice, to examine how behavioural economics (particularly choice architecture) might be used as an intervention to encourage use of the internet, particularly among older people.

According to recent research findings, almost all adults aged 16-24 (99 per cent) had used the internet at some point, while less than a third (29 per cent) of people aged over 75 had ever used the internet. This difference gives rise to the notion of the digital divide, between those who enjoy access to the internet and those who are excluded (ONS, 2012)[8].

About this report

This report is in six sections. Section one begins with an introduction to the social policy context for internet use and digital exclusion. It considers the various attempts that have been made to highlight the key factors underpinning digital exclusion, and what might be done to widen internet access. It also considers the policy landscape in which digital inclusion lies. Section two describes internet use patterns in more detail, highlighting the profile of people

[5] Ibid
[6] Ibid
[7] DCLG (2008) *Delivering Digital Inclusion. An action plan for consultation*. Communities and Local Government Publications. Wetherby, England.
[8] Ibid

who don’t use the internet, and what factors, if any, are preventing them from doing so. Section three uses data from the *English Longitudinal Survey of Ageing* to attempt to draw out these factors in more detail. Section four introduces the concepts of behavioural economics and ‘nudging’, and explores how this has been used in social policy making, while section five considers whether behavioural economics might represent a promising approach in tackling digital exclusion. The final section brings all of this together with a conclusion and recommendations.

Tackling digital exclusion

Over the past 15 years there have been many attempts to widen access to the internet among older people and other excluded groups. These include ongoing upgrades of Britain's technological infrastructure, leading to increasing internet capacity throughout the country. There are initiatives to counter the financial barriers to inclusion, by providing subsidised equipment or free internet access, in people's homes or in public places. The state, voluntary sector and private sector has also supported the provision of training in ICT skills over a number of years.

There have essentially been three main phases of tackling digital exclusion in the UK. Phase one began in the early 2000s with the New Labour administration entering government, seeing digital exclusion as a part of the wider social exclusion agenda. It began formally with the introduction of the 2008 action plan *Delivering Digital Inclusion*[9]. While phase two a year or so later, was a continuation of this approach (by seeking to incorporate digital exclusion into the wider agenda on economic modernisation); it concentrated on the roll-out of high-speed broadband connections at its heart. The final phase is again similar to previous initiatives but is represented by the current Government's agenda focusing almost exclusively on high-speed broadband with lower levels of public investment - digital inclusion has therefore gradually been redefined in public policy as access to the highest quality internet products, with an emphasis on geographical spread rather than universal inclusion. These three phases are outlined in detail below.

Digital exclusion as social exclusion

The Department for Communities and Local Government (DCLG) published an action plan for digital inclusion in 2008, titled *Delivering Digital Inclusion*[10]. The plan clearly articulated digital exclusion as an aspect of social exclusion, but also digital inclusion as a path to greater social inclusion. Perhaps understandably in this context, the focus of the plan centres around accessibility, in line with the general emphasis on community infrastructure as a remedy for social exclusion. It recognises that older people are the main excluded group, and emphasises that going online can help to deter social isolation, and more generally that technological advancements can enable independent living. The plan does, however, recognise that motivation is a factor alongside access, and argues that

'without a clear picture of the benefits, or a clear and simple presentation of the benefits to them, many excluded people are not motivated to invest time and effort in the exploration and mastery of digital technologies'

(DCLG, 2008, p. 28)

The plan's proposal for a charter on digital inclusion appears not to have been taken forward on a UK-wide or England-wide basis, although the plan did lead to the creation of Race Online 2012[11] and *Digital Champions*[12], in part to address issues around motivation. The plan championed

[9] Ibid
[10] Ibid
[11] Now *Go ON UK*: http://www.go-on-uk.org/
[12] http://champions.go-on.co.uk/

schemes such as *Myguide*[13], designed to address accessibility issues, which have now been largely discontinued.

Availability and affordability

The publication of *Digital Britain*[14] in 2009 saw digital inclusion, generally speaking, come under the remit of the Department for Business, Innovation and Skills (BIS) and the Department for Culture, Media and Sport (DCMS). In August 2009, responsibility for legislation fell to HM Treasury suggesting that digital inclusion had been redefined as a largely economic issue, and the objective of policy became focused on rolling out high-speed broadband in order to boost UK productivity. *Digital Britain*[15] did recognise that many people are digitally excluded, and as such proposed the Universal Service Commitment and Next Generation Access Fund (funded by a levy on landline telephone connections) to ensure 100 per cent access to the internet throughout the UK. Neither measure has been implemented.

In acknowledging digital exclusion, the report identified availability and affordability of an internet connection as the key concerns – subsidised broadband rollout was designed to address these directly. Capability and relevance was also identified; as such, *Digital Britain*[16] conflated the issues of skills development and motivation. No initiatives were proposed in either regard, although the work of Race Online 2012 was referred to as a solution. The status of key excluded groups, such as older people, was effectively marginalised and digital inclusion didn't feature as a key priority in the current Government's ageing strategy refresh published in the same year.

New Government, new direction

After taking office in 2010, the coalition Government continued the trend, evident under the previous Government, towards a narrowing of objectives on information technology and digital inclusion. The current Government, through DCMS (with the support of BIS), is focusing now therefore on delivering high-speed broadband. Insofar as digital inclusion remains as a priority, it is treated as a problem primarily of access, and little attention is paid within relevant policy documents to the different types of excluded groups. Furthermore, *Britain's Superfast Broadband Future*[17] abandons the UK Government's universal ambitions, at least in the short term, and promises instead to ensure that 90 per cent of homes and businesses have access to high-speed broadband by 2015.

The characterisation so far of the orientation of recent public policy on digital inclusion is somewhat misleading in that it omits the work of the Race Online 2012. However, it is possible to see that the focus in this regard has followed a similar path to public policy in general: from an original focus on digital exclusion in the context of social exclusion, Race Online 2012's *Manifesto for a Networked Nation*[18] (2010) placed greater emphasis on the economic benefits of widening

[13] Now *Go ON UK*: http://www.go-on-uk.org/
[14] DCMS and BIS (2009) *Digital Britain*. Final report. Department for Culture, Media and Sport and Department for Business, Innovation and Skills. London, England.
[15] Ibid
[16] Ibid
[17] http://www.culture.gov.uk/images/publications/10-1320-britains-superfast-broadband-future.pdf
[18] http://raceonline2012.org/sites/default/files/resources/manifesto_for_a_networked_nation_-_race_online_2012.pdf

internet access. More recently, Race Online 2012 has promoted the digital by default agenda for public services information.

Race Online 2012's central agenda, however, remains digital inclusion of excluded groups – digital by default can be conceived as a way of compelling people who choose to be digitally excluded to get online, as well as a cost-saving exercise. While the remit of Race Online 2012 has been criticised for focusing too much on accessibility issues (Helsper, 2011)[19], the manifesto places behavioural issues at the heart of its strategy. It recognises – unlike the various Department for Communities and Local Government (DCLG), BIS and DCMS strategies – that a lack of motivation is the main reason that the digitally excluded remain offline (although it does not describe what is behind this apparent lack of motivation, it does acknowledge that low-income groups may be excluded on the grounds principally of affordability). The manifesto notes that, even among the older digitally excluded, only a third report they are offline due to a lack of skills. It therefore recommends raising awareness of the benefits of the internet as one of the key priorities. Referring to the nudge agenda, the manifesto also talks about the need to incentivise digital inclusion

'Industry should develop reward packages — for example, discounted devices or broadband packages, or online retail vouchers — for people who complete basic web skills training, and government should partner with industry to extend rewards to those using online public services for the first time'

(Race Online 2012, p. 51)

'We should embed rewards for passing on basic web skills into existing community volunteering programmes — for example Girl Guide and Scout badges, Duke of Edinburgh awards and in the new proposals for civic service'

(Race Online 2012, p. 51)

Race Online 2012 is also the first initiative which has produced a manifesto specifically for the older digitally excluded. The manifesto repeats calls for rewards for going online, and develops ways to reduce the financial cost of going online for many older people. It focuses mainly, however, on access issues – arguing that public services should be accessible by default for those not online alongside digital by default. Race Online 2012's strategy in this regard goes beyond simply providing some form of internet access for older people. The organisation is concerned with providing the right kind of access, using new technology to make the online world more user-friendly for the older digitally excluded and utilising the community infrastructure already frequented by older people as hubs for internet access.

Despite emphasising the need, however, to communicate the benefits of the internet, beyond an emphasis on design issues, Race Online 2012's strategy suggests little support for the related possibility that the content, as well as design, of the internet is an explanation for older people's lack of motivation. It should be remembered, of course, that Race Online 2012 has few resources of its own to implement their agenda for digital inclusion, particularly when it comes to utilising insights from behavioural economics and psychology. It is dependent on partnerships with private and third sector organisations to deliver practical initiatives, and its role within government is to advise and facilitate.

[19] Helsper, E. J. (2011). The Social Dynamics of Information and Communication Technology. *Information, Communication & Society*, 14 (2), 295-297.

Other initiatives

There have been a range of other initiatives, orchestrated by the private or third sector, that are relevant here. Often local authorities will be involved in digital inclusion initiatives within their jurisdiction, independently of (but complementary to) national public policy frameworks. The discussion here is far from comprehensive, but rather gives an indication of the kind of strategies that have been employed in practice to encourage older people to become regular internet users.

One of the main government-funded initiatives is *UK Online Centres*[20], which works with local authorities and community groups to establish local points of internet access, as well as pass on basic skills. Third sector organisation is also in receipt of central government funding, and focuses in particular on enabling young people to pass on web skills to older people. *Digital Unite*[21] works with the National Institute of Adult Continuing Education to enable internet access to older people.

The BBC runs various digital inclusion programmes, often offering support to *Digital Unite* for this purpose. For instance, the BBC is actively involved in the *Give an Hour campaign*[22], providing resources so that internet-savvy people can help the digitally excluded to get online, although this initiative is not aimed primarily to older people.

Charities such as Age UK regularly set up internet trial sessions for older people, or establish internet access in places that might be most resonant for older people, such as hospitals (Milward, 2003[23]). Age UK also now runs the *Myfriends Online Week*[24]. Across over 400 locations, with over 180 partner organisations, older people are encouraged to help their friends make use of new social media technologies, with the aim of addressing isolation among older people.

Internet Rangers[25] is an annual award presented by British Telecom which aims to encourage and enable young people to share their digital skills with older generations. Durrington High School in Worthing, Sussex won the 2012 title of BT Internet Ranger School of the Year, by providing a drop-in service for local people to help them develop their IT skills. The school won the cash prize of £4,000 for its intergenerational 'Silver Surfer project', which was designed by the pupils themselves - attendance at the classes has doubled since the project started.

However it would be impossible to chronicle every instance of local activity around digital inclusion (Race Online 2012, for instance, has more than 1000 partner organisations working in this area). What is clear is that it is digital exclusion is becoming recognised as part of a wider social exclusion which needs to be addressed.

Trying to narrow the digital divide

If we do want to encourage, nudge or even compel people online, we probably need to go further than simply providing opportunities to learn. Progress in getting older people online has been very slow, with just a few extra percent of older people doing so each year. Yet as we

[20] http://www.ukonlinecentres.com/
[21] http://digitalunite.com/
[22] http://raceonline2012.org/giveanhour
[23] Millward, P. (2003) *The "grey digital divide": perception, exclusion and barriers of access to the Internet for older people*. First Monday (online), 8 (7). http://www.firstmonday.org/issues/issue8_7/millward/index.html
[24] http://www.ageuk.org.uk/work-and-learning/technology-and-internet/events/myfriends-online-week/
[25] http://www.btplc.com/Responsiblebusiness/Supportingourcommunities/Digitalinclusion/Majorprogrammes/BTInternetRangers/index.htm

highlight below, there has been a gradual move towards compulsion and increasing numbers of services are made available exclusively online.

Gradual compulsion

For many years, the private sector has made it more difficult to purchase with certain products and services without internet access. The process of buying flights is easier and often cheaper online. Tickets for concerts and special events frequently sell out online in minutes, giving people without internet access a limited chance of accessing popular events (tickets for the London 2012 Olympics were for sale exclusively online and to one particular credit card supplier, for example). The introduction of online supermarket shopping effectively ended the market for telephone grocery shopping. Additionally, the purchase of many services, such as insurance, can be cheaper online partly as a result of the impact of price comparison websites.

Digital by default … not just a buzz phrase

Alongside this trend, the public sector has also sought to deliver more services exclusively online (or made the alternatives difficult to access). We have seen a growth in online democratic participation (the 'Number 10 e-petitions website[26], for example) and, with potential for cost savings, this could expand further within the public sector.

Perhaps most controversially, the current Government's 'universal credit'[27] will seek to fully embrace the digital agenda. This move has been criticised by the Local Government Association who argued that the current Government risked cutting 'millions of people off in a rush to meet benefit reform targets'[28].

These developments have been coming for a number of years. In December 2009, Martha Lane Fox, the Government's Champion for Digital Inclusion argued that there was a case for compelling people to use online services

'By switching services, like what we have done with analogue TV, there is a real opportunity to carry people on [to the internet],' says Lane Fox. 'I think that shutting down services would be the best way of carrying through the most amount of people, as long as it is carried through with training,'[29]

Martha Lane Fox admitted ministers that were not supportive and online fora were critical of the idea.[30]

But over two years on, it is clear that compulsion exists. And it's reach is likely to extend. Since 2009, government has continued to invest in the development of exclusively online services. The December 2009 report *Putting the Frontline First*[31] outlined how the current Government expected to save money by streamlining back-office processes, saving £400m in three years. The direction was clear: 'We will accelerate plans to drive more rapid transition to online and personalised services' (p. 24) perhaps hinting at a link between the personalisation agenda

[26] http://epetitions.direct.gov.uk/
[27] http://www.dwp.gov.uk/policy/welfare-reform/universal-credit/
[28] http://www.publicservice.co.uk/news_story.asp?id=20054
[29] http://www.pcpro.co.uk/news/353833/martha-lane-fox-government-should-force-people-online
[30] http://www.pcpro.co.uk/news/353833/martha-lane-fox-government-should-force-people-online
[31] http://www.communities.gov.uk/documents/localgovernment/pdf/1487350.pdf

and going online. Government departments were tasked to write strategies that show how transactions for each service will 'move online as rapidly as possible, with a view to targeting near 100% by 2014' (DCLG, 2010, p. 24).

In 2010, Martha Lane Fox was commissioned by Cabinet Office minister Frances Maude to undertake a strategic review of *DirectGov* which resulted in her report *Directgov 2010 and beyond: Revolution not Evolution*. Again, the tone and direction was clear; in an open letter to the Minister Fox wrote:

'the acid test for *Directgov* is whether it can empower, and make life simpler for, citizens and at the same time allow government to turn other things of'[32]

Compulsion is set to become more prominent as a result of the digital by default agenda. Launching the Government's Civil Service Reform Plan Francis Maude said

'We need to embrace new ways of delivering services … We need to be digital by default. Services that could be delivered online should be delivered only online … Digital by default will become a reality, not just a buzz phrase'[33].

Yet the move towards compulsion has happened with limited debate.

'Digital Switchover'. An exercise in compulsion

Digital terrestrial television was only launched in the UK in November 1998, but the public policy response was rapid. The following year, the then Culture Secretary announced an intention to deliver switchover between 2006 and 2010. 'Digital Switchover' was formally announced in 2005 and by 2012, Government had delivered a hugely ambitious and successful programme which resulted in the end of analogue television services in the UK. Support was given to older and disabled people through the help scheme which provided easy-to-use digital equipment; home delivery and installation; and twelve months' aftercare and a free helpline for eligible beneficiaries.

Reduction in learning opportunities for adults

Alongside the gradual compulsion, we have seen opportunities for publicly funded informal learning for adults decline. Public funding for education has prioritised learning for younger people and yet the budget for informal adult learning has been squeezed. Over the next two to three years there will be real term cuts to all education services. By 2014/15 the education budget will be reduce by 13% - however these are disproportionate. Public spending on schools will be reduced by 1 per cent, compared to 20 per cent reductions required by Further Education and sixth-form colleges, and 40% to Higher Education institutions.

[32] http://www.alejandrobarros.com/media/.../directgov-2010-and-beyond.pdf
[33] http://www.publicservice.co.uk/news_story.asp?id=20061

Adult education in England is unusually within the responsibility of the. Department for Business Innovation and Skills covers a range of policy areas - innovation, science, business sectors and law, economics and statistics, employment matters, trade and export as well as adult, further and higher education[34].

Whilst expenditure on education has increased over recent decades, the vast majority of public expenditure on post-compulsory education was spent on higher education, and a significant proportion to learners under the age of 25. It is against this backdrop that any further education and training for people who are digitally excluded because of a lack of skills needs to take place.

[34] http://www.infonet-ae.eu/en/adult-education-in-estonia-1105

Internet access across the lifecourse

The proportion of people connected to the internet at home has continued to rise steadily for a number of years now. In 2011, 19 million households in Great Britain had an internet connection. This represented 77 per cent of households, up from 73 per cent in 2010 (ONS, 2011)[35]. Ipsos MORI now puts the level of current internet users at 81 per cent (Ipsos Media CT, 2012)[36], but this also includes an estimate of those who also access the internet from public sources.

However internet use is not proportionately spread among the general population. Despite the growth in household internet connections over recent years, there were still 5.7 million households without an internet connection. Data consistently shows that internet use decreases with age, with older people currently the least frequent users of the internet. Ofcom estimated, for example, that in 2008 63 per cent of people over 65 live in a household without internet access (50 per cent of those aged 65-74, and 77 per cent of those aged 75 and over) (Ofcom, 2008)[37].

The Department of Communities and Local Government (2008)[38] identified three key factors as the reasons for non-use of the internet: access to technology (for example, whether someone can afford either a computer or an internet connection; disabilities and usability of interfaces); level of IT skills (how confident someone feels using a computer or getting online) and behavioural choice (whether someone sees a potential benefit in being an internet user).

Age is a significant factor in relation to non-use of the internet. But it is interesting to observe that age does not equally explain why people stop using the internet. Figure 1 below highlights this through showing that similar proportions of ex-internet users occur among adults of all ages.

[35] ONS (2011) Internet Access – Households and individuals, 2011. Statistical Bulletin. Office for National Statistics. London, England.
[36] Ipsos Media CT (2012) Tech Tracker+ Social Networking module. Quarterly Release: Q1 2012. Ipsos Mori. London, England. Available at http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/media-lit-2010/ml_adults08.pdf
[37] Ofcom (2008) Media Literacy Audit. Report on UK adults' media literacy. Ofcom. London, England.
[38] Ibid

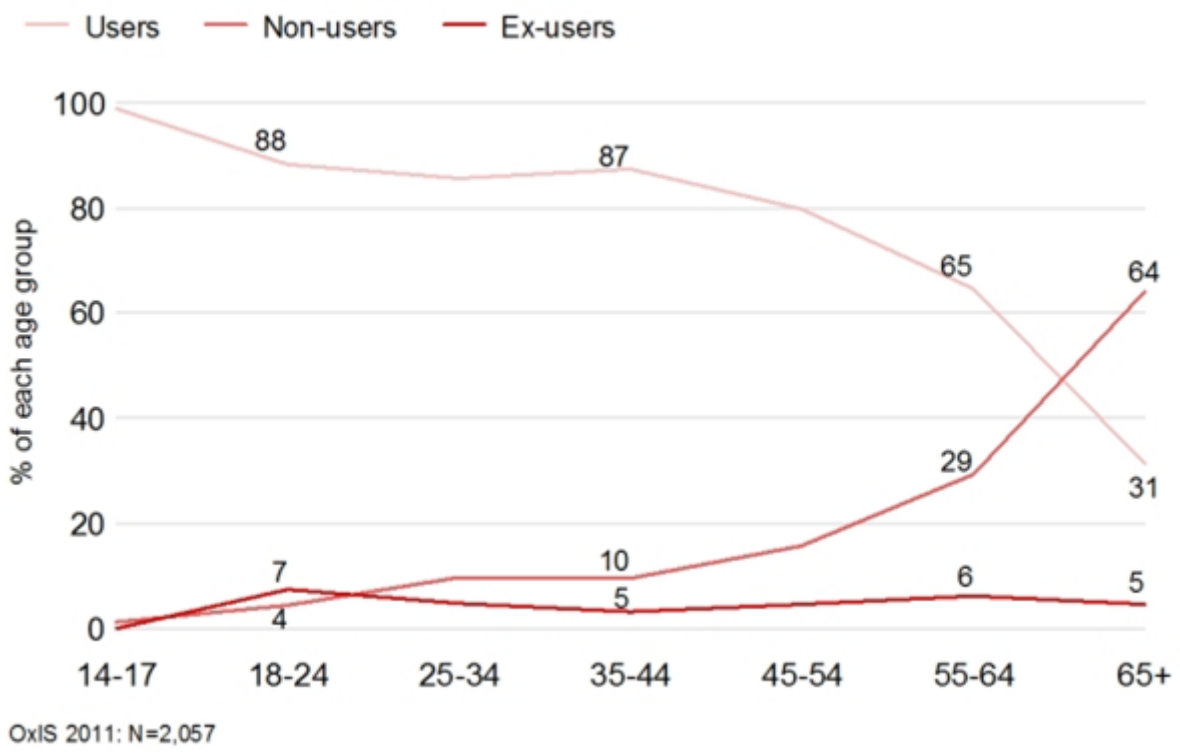

Figure 1. Users, Non-Users and Ex-users of the internet by age[39]

This current report now examines the non-use factors highlighted above (access, skills and behaviour). It is important to state however that it is difficult to prove the relative impact of any of the individual factors. There is a blurring,between a number of the reasons given for not using the internet and many digital exclusion services attempt to pull together projects which address both motivation and skills for example. However, it should be borne in mind that all research which aims to uncover the reasons for non-use of the internet is based on self-reported data. It mmay not be the case that what people say is the barrier to going online, is actually the biggest factor.

Accessibility

Issues around accessibility to information technology are usually seen as the 'first-order' digital divide (material factors related to digital exclusion). Not all people have computers (or other devices) and internet connections that would enable them to go online, and some have much more advanced versions of the necessary technology than others. In *The Consumer Experience,* Ofcom suggested that affordability was the main reason for involuntary exclusion from any kind of information technology or communication market (Ofcom, 2011)[40]. There is also a consistent association between deprivation and internet use (it is not possible to say however whether there is a cause and effect relationship). Those who are most socially deprived are most likely to lack access to the internet; three out of four of those described as socially excluded lack internet engagement (ICM, 2008), or are over-represented among otherwise vulnerable groups. More recently ONS (2012)[41] found that people who had never used the internet were over-represented in the lowest pay bands (under £400 per week and lower).

[39] http://microsites.oii.ox.ac.uk/oxis/blog/2012/non-users-and-ex-users-gender-and-age
[40] Ofcom (2011) *The Consumer Experience 2011*. Ofcom. London, England. Available at: http://stakeholders.ofcom.org.uk/binaries/research/consumer-experience/tce-11/research_report_of511a.pdf
[41] Ibid

In 2008 ICMResearch for the DCLG[42] profiled those people who are digitally excluded. These were people who didn't have access to the internet at home or elsewhere. They found that these non-internet users were more likely to be older (50 per cent were over 65; and 58 per cent were retired); female (58 per cent); single or widowed (55 per cent); and from social classes D and E (49 per cent). More recently similar results were also found by Ofcom (2011). The majority of the non-users in their study of UK Adult Media Literacy study were more likely to be aged 65 and over (46 per cent compared to 7 per cent aged under 65), from D or E households (46 per cent non-users, 21 per cent of users) and female (57 per cent non-users, 50 per cent of internet users). In the ICMResearch (2008)[43] study 35 per cent had qualifications higher than secondary school standards, and just under a fifth were in full-time employment (both lower than the national averages for those categories).

Similar results have been found in the United States. Zickuhr and Smith (2012)[44] found that people over 65 were significantly less likely to use the internet than people from any other age group. They also found that educational attainment was also a strong predictor of non-use: 43 per cent of people without a high school diploma use the internet compared to 71 per cent of people who had graduated from high school, and 94 per cent of college graduates. Household income was also a strong predictor of internet use – with nearly two thirds (62 per cent) of people living in households in the lowest income bracket (less than $30,000 per year) responding that they used the internet, compared with 90 per cent of people earning at least $50,000-74,999 and 97 per cent of those earning more than $75,000.

Cost can clearly have an effect on those excluded from internet use and pensioners are over represented among socially excluded and lower income groups (ICM, 2008)[45]. What is also apparent is that people are more likely to become engaged with the internet when they can afford it, as involuntary non-ownership decreases in line with costs. It has been calculated that the continued reduction in costs could reduce the proportion of those digitally excluded from around 30 per cent as it stands to 21 per cent in 2025 (FreshMinds, 2008)[46].

However what this illustrates is that while cost of internet access (such as purchasing a computer and paying for the monthly subscription charges) clearly plays a role in the level of internet use it is not perhaps the principal barrier. Reducing costs or making the internet readily available can only go so far in making an impact on digital exclusion. In the 2007 ONS Omnibus survey Internet Access module, for example, it was only a barrier to 16 per cent of those questioned about why they didn't use the internet more often. More recently ONS have reported that 19 per cent indicated that equipment costs were a prohibitive reason for non-internet use (ONS, 2011)[47]. They report that other factors appear to play a greater role in digital exclusion. Twenty one per cent of non-internet users stated that 'lack of skills' prevented them from getting the internet, however, the large majority (half of those) without a household internet connection said they didn't have one

[42] FreshMinds (2008) *Understanding Digital Exclusion.* Research Report. Department for Communities and Local Government. Communities and Local Government Publications. Wetherby, England.
[43] Ibid
[44] Zickuhr, K. and Smith, A (2012) *Digital differences*. Pew Research Center's Internet & American Life Project. Washington D.C. United States. Available at: http://pewinternet.org/Reports/2012/Digital-differences.aspx
[45] Ibid
[46] FreshMinds (2008) *Understanding Digital Exclusion Research Report*. Department for Communities and Local Government. Communities and Local Government Publications. Wetherby, England.
[47] Ibid

because they ‘don’t need the internet’ (ONS, 2011)[48]. The next two sections now explore these other two factors now in more detail.

Skills and ability

Differences in skill levels are usually seen as the ‘second-order’ digital divide (factors associated with digital exclusion and training and knowledge). As already highlighted ONS (2011)[49] found that around a fifth of non-internet users felt their ‘lack of skills’ to be a key reason why they didn’t have access to the internet in their own home, but further to this one in five people in the UK reported that they felt unable to open a word-processing document; while a further 20 per cent reported that they lacked the skills to open an email; and 19 per cent reported that they would be unable to detect a computer virus (ONS, 2011)[50].

While tangible IT skills such as using computers and software packages are issues connected to level of IT skills, other abilities related to experience and confidence might also act as barriers to inclusion. Recognising potential viruses, valid websites and detecting fraud and internet extortion require experience and skills. Twenty per cent of people reported a lack of confidence in being able to report a potential internet fraud (ONS, 2011)[51].

There is also an apparent skills gap that comes with age and social class and internet use. Older people and people in C2, D and E social classes are also more likely to report reluctance in making payments with their credit cards over the internet. Younger adults are also more likely to report their skills as good or excellent (86 per cent) compared to retirees (40 per cent). While people who had retired also reported that they were more likely to ask for help from family or friends when using the internet, compared to any other group (Ofcom, 2011)[52].

However while older people tend to have lower operational skills, in relation to the internet, they don’t have lower strategic and information-processing skills. Crucially, the former can be easily taught, and will inevitably increase with exposure (Van Deursen & Van Dijk, 2011[53]). Research by Demos, furthermore, shows that all age groups find digital technology complex. This may be a problem for digital inclusion initiatives, but not one particular to the older excluded (Hannon & Bradwell, 2007[54]). Even if a lack of relevant skills can be used to contribute towards an explanation of digital exclusion, it is not clear that this is an explanation in-itself, independent of other factors. Greater exposure to the internet is the main contributor to higher skill levels (Morris, 2007[55]).

While issues around skills and ability stand as a potential barrier to internet use there is also a need to consider how behaviour and attitudes might contribute to this lack of skills, or perhaps more importantly, perceived lack of skills.

[48] Ibid
[49] Ibid
[50] Ibid
[51] Ibid
[52] Ibid
[53] Van Deursen A.J.A.M., and Van Dijk J.A.G.M (2011) Internet skills and the digital divide, *New Media and Society*, vol.13, no.6, pp. 893-911
[54] Hannon C. and Bradwell P. (2007) *Web I’m 64: Ageing, the internet and digital inclusion*, Demos. London, England
[55] Morris, A. (2007) “E-literacy and the grey digital divide: a review with recommendations” Journal of information literacy, 2 (3), http://jil.lboro.ac.uk/ojs/index.php/JIL/article/view/RA-V1-I3-2007-2

Behaviour and attitudes

While accessibility and skills have a part to play in digital exclusion what is apparent is that the disproportionally under-researched topic of behaviour and attitudes seem to play just as great, if not a greater role. There appears to be a proportion of people who don't understand or accept the benefits of being online and older people are over-represented in this group.

Randall (2010)[56] found digital exclusion more likely to be a voluntary phenomenon, with reasons for not having access to the internet at home more likely to be behavioural or attitudinal. Randall (2010)[57] found that 39 per cent of those without internet access at home reported that they didn't need the internet, and a further 20 per cent said they didn't want it. While FreshMinds (2008)[58] also found that nearly two fifths of non-users failed to see the need or benefit of using the internet or felt that it wasn't for them; older people and those on low incomes were more likely to hold this view - these groups were less likely to use the internet even when they did have access at home.

For some it is apparent that non-use of the internet is a behavioural choice. Data from the ONS Omnibus survey (2007)[59] seemed to support this suggestion with the most important reason given for people not using the internet more often was 'time' (49 per cent). Selwyn et al (2005)[60] found that a combination of choice, interest and disposition were most likely to be reasons for non-use than any other. More recently, data from the Ofcom Technology tracker from 2011[61] found that there was also a level of concern about using the internet among adults over 65, with nearly two thirds (63 per cent) agreeing that people who buy things online put their privacy at risk. While recent research conducted on behalf of BT, Age Concern, and Help the Aged (Berry, 2011[62]) found that the main barrier to computer and internet use is a 'lack of understanding of, and confidence in, how it works' (Berry, 2011[63]). Although it isn't possible to establish cause and effect there appears to be an association between certain behavioural attitudes and non-use of the internet.

Research by the Pew Internet Project in the United States (Smith, 2010)[64] has shown that among current non-internet users, almost half (48 per cent) said that the main reason they didn't go online was because they didn't think the internet is relevant to them - often saying they don't want to use the internet and don't need to use it to get the information they want or speak to the people they need to. Just over one in five (21 per cent) cited cost as a contributing factor in their non-use, and a similar number mentioned usability (such as not knowing how to go online or being physically unable to). Only six per cent reported that a lack of access or availability was the main reason they didn't go online.

However one of the problems with getting to the root causes of, and motivations for non-internet use through self-reporting of direct survey questions is the reliability of self-report data more generally. There could be potential, when asking someone why they don't use the

[56] Randall, C (2010) *E-Society: Social Trends 41 (Office for National Statistics, London, England.*
[57] Ibid
[58] Ibid
[59] Office for National Statistics (2011) National Statistics Omnibus Survey. Available from: http://www.statistics.gov.uk/statbase/Source.asp?vlnk=657
[60] Selywn, N et al (2003) 'The information aged: older adults' use of information and communications technology in everyday life', *School of Social Sciences, University of Cardiff, Working Paper Series*, paper 36.
[61] Ibid
[62] Berry, C (2011) *Can older drivers be nudged? How the public and private sectors can influence older drivers' self-regulation*'. RAC Foundation. London, England.
[63] http://pewinternet.org/Reports/2012/Digital-differences/Overview.aspx

internet, for them to respond in a way to cover their perceived lack of skills. For issues of this nature 'before and after experiments', while still subject to bias, might be considered more reliable in understanding the role of behaviour in non-internet use.

Jung et al (2010)[65] investigated why some older people on lower incomes choose to enrol in free training and start to use computers and the internet while others choose not to. They found that psychological variables (computer anxiety, computer self-efficacy, and ageing anxiety) were much stronger predictors of older people's enrolment and subsequent use of the internet than age, income, experience of using computers, or feelings of social support. This was even the case for people who had not used the internet before compared to those that had. People with lower levels of ageing anxiety and computer anxiety (but no experience of the internet) were more likely to enrol that those who had experience but had higher levels of anxiety. This suggests that psychological factors play an important role in internet use, even when experience is factored in. The results were so strong that increasing the level of ageing anxiety decreased a person's likelihood of enrolment by 290 per cent. while increasing the level of computer anxiety decreased the odds for older people's enrolment by 259 per cent. Further to this, Jung et al (2010)[66] also found that education and gender were also significant factors in non-enrolment or continued use. These two factors prove to be major determinants of attitude patterns. This is vital when it comes to shaping potential behaviours to encourage people online (Donat, Brandtweiner & Kerschbaum, 2009[67]).

The interaction of barriers to non-internet use

Taken together these results suggest that while access and skills play a role in non-use of the internet the role of behaviour, beliefs and attitudes are also important; create the desire for using the internet and people will look for new and creative ways to get themselves online.

Non-use of the internet is clearly a complex phenomenon. The reason as to why people in general and older people in particular are over-represented among the digitally excluded is not straightforward. It has been suggested that a potential reason for this is that different types of non-user have different reasons for not using the internet. In general, younger people are more likely than others to cite cost as their reason for not using the internet, while older people and those who don't want to use the internet are more likely to mention reasons relating to lack of need or not knowing how to use a computer (Myant, 2011[68]). Eynon and Helsper (2010)[69] found that for people who don't use the internet, choice and exclusion are both important. They conclude by stating that non-users of the internet are not heterogeneous group.

What is central to this report is that given the proportion of those without internet access reporting a lack of interest in or need for the internet, psychological and attitudinal factors are clearly vital to understanding digital exclusion (Race Online, 2012[70]; Selwyn et al, 2005[71]).

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[65] Jung, Y, Peng, W; Moran, M; Jin, S-A A; McLaughlin, M; Cody, M; Jordan-Marsh, M; Albright, J; Silverstein, M (2010) Low-Income Minority Seniors' Enrolment in a Cybercafé: Psychological Barriers to Crossing the Digital Divide. *Educational Gerontology*, 36 (3) 193-212
[66] Ibid
[67] Donat, E., Brandtweiner, R. und Kerschabum, J. (2009): Attitudes and the Digital Divide: Attitude Measurement as Instrument to Predict Internet Usage. *Informing Science: the International Journal of an Emerging Transdiscipline,* Vol. 12, pp.37-56
[68] Myant, K (2011) *Digital Participation in Scotland: A Review of the Evidence*. Research Findings No. 8. Cultural Analytical Team. Scottish Government. Edinburgh, Scotland.
[69] Eynon, R, and Helsper, E (2010) Adults Learning Online: Digital Choice and/or Digital Exclusion? *New Media & Society* vol. 13 no. 4 534-551
[70] Ibid

To test this working hypothesis further, secondary sources of data were sought, where measures of internet use were available to compare against behavioural variables. This would offer the chance of assessing whether there was an interaction between these factors. The next section explores this interaction in more detail.

The interaction between Internet use and behavioural traits

Using The English Longitudinal Survey of Ageing (ELSA), we sought to explore whether there might be an association between internet use and certain behaviour and attitudes. We were also keen to explore the interrelationship between internet use and sociability.

From Wave 4 of the ELSA we explored the questions pertaining to internet use and a range of social attitudes. This contained the most recent data with questions relating to internet use and a range of social and behavioural variables which could be used as proxy measures to test the hypothesized relationship of whether attitudes might play a role in an individual's internet use (see Appendix A for Methodological approach to secondary analysis).

Results

Internet use and group membership

There was a strong association between the measure of internet use and organisation, group and club membership. People who reported using the internet were statistically significantly more likely to be members of a: political party, trade union or environmental group; tenants group; resident group; neighbourhood watch; charitable association; education, arts or music group or evening class; social club; and other organisation, club or society, (all $p=<.000$). In contrast, there was no statistically significant association between internet use and membership of either a church or other religious group; or sports clubs, gym, or exercise class. Conversely there was a strong relationship between internet use and 'NOT being a member of any (leisure, sports or non-political) organisation, club or society' ($p=<.000$); people who were members of these organisations were less likely to report internet use.

Internet use and measures of control

There was a mixed relationship between the measure of internet use and measures of perceived control that individuals reported feeling. However people who reported using the internet tended to report feeling more in control of various aspects of their lives. This is illustrated in table 1 below.

	Uses the internet		
	Yes	No	Total
Strongly agree	551 (39.6%)	840 (60.4%)	1391
Moderately agree	1515 (51.6%)	1420 (48.4%)	2935
Slightly agree	1545 (59.4%)	1058 (40.6%)	2603
Slightly disagree	636 (68.2%)	296 (31.8%)	932

Moderately disagree	593 (77.3%)	174 (22.7%)	767
Strongly disagree	268 (71.8%)	105 (28.2%)	373

Chi-Sq= 422.074, df = 5, P=<0.000

Table 1. Feels what happens in life is often determined by factors beyond control

Table 1 shows that there was a significant association between internet use and perceived control in one's life, (*p=<000*). People who did not use the internet were more likely to agree with the statement, 'I feel that what happens in life is often determined by factors beyond my control', while people who did say they used the internet were more likely to disagree with the statement.

In contrast there was no association between the measure of internet use and control in the home (*p=0.142)*. This is illustrated below in Table 2.

	Uses the internet		
	Yes	No	Total
Strongly agree	2014 (56.8%)	1530 (43.2%)	3544
Moderately agree	2347 (57.0%)	1771 (43.0%)	4118
Slightly agree	493 (53.8%)	424 (46.2%)	917
Slightly disagree	155 (58.3%)	111 (41.7%)	266
Moderately disagree	71 (55.0%)	58 (45.0%)	129
Strongly disagree	45 (45.9%)	53 (54.1%)	98

Chi-Sq= 8.276, df = 5, P=0.142

Table 2. At home, feels has control over what happens in most situations

Table 2 shows that people who reported using the internet were generally more likely than those not, to agree and disagree with the statement, 'At home, I feel that I have control over what happens in most situations'. As a result no statistically significant relationship was apparent.

There was however, a significant association between frequency of control and internet use. This is illustrated in table 3 below.

	Uses the internet		
	Yes	No	Total
Often	190 (32.3%)	398 (67.7 %)	588
Sometimes	1345 (49.0%)	1401 (51.0%)	2746

Not often	2481 (64.5%)	1368 (35.5%)	3849
Never	1108 (59.2%)	765 (40.8%)	1873

Chi-Sq= 307.811, df = 3, P=<0.000

Table 3. How often feels what happens to them is out of their control

Table 3 shows that people who said that they did not use the internet were more likely to report feeling that things that happened to them were out of their control 'often' or 'sometimes' (*p=<.000*). While people who said they did use the internet were more likely to respond by saying that things which happened to them were out of their control, 'not often' or 'never'.

To further test the locus of control of people reporting using the internet against those not, tests for association were also carried between internet use and whether respondents felt able to stop smoking and whether they were drivers[72]. In both cases no significant associations were found between any groups.

Finally no significant relationship was found between people who reported using the internet or not, and whether they agreed with the statement, 'I feel I have the opportunity to develop new skills'. However a significant association was apparent when the latter group were divided into either: 'strongly agree', 'agree', 'disagree', or 'strongly disagree'. People who reported not using the internet were more likely to strongly disagree, and less likely to strongly agree that they felt they had the opportunity to learn a new skill.

To examine whether this relationship might be affected by computer ownership people who reported not using the internet were separated into whether they owned a computer or not, and a Chi-squared test of association was carried out. A significant relationship was found (*p=<.000*). People who did not own a computer were more likely to feel that they were unable to learn a new skill, while conversely people who did own a computer were more likely to agree that they could. So people who had a computer and were using the internet were most likely to report that they were able to learn a new skill. Further research could usefully examine whether there were any variations among people with computers who didn't use them and how large this group are for example.

Internet use and anxiety

There was a weak association between the measure of internet use and anxiety, (p=.045). This is shown below in table 4.

	Uses the internet		
	Yes	No	Total
Experiences anxiety	194 (44.5%)	242 (55.5%)	436

[72] These two measure were chosen as proxy measures of how far individuals might feel they are in control in other areas of their life.

Doesn't experience anxiety	216 (62.6%)	129 (37.4%)	345

Chi-Sq= 4.008, df = 1, P=0.045

Table 4. Respondent reports anxiety

Table 4 shows that people who report experiencing anxiety are less likely to report using the internet, while of those people who said they didn't experience anxiety, the majority are more likely to use the internet than not. It should be noted that the samples for this question represent quite a drop from the overall sample size – this could be reflective of the relatively undefined nature of the question and asking questions about anxiety more generally.

Internet use and loneliness and isolation

There was a strong association between the measure of internet use and measures of loneliness (table 5) (*p=<.000)* and isolation (table 6) (*p=<.000*). This is shown below in tables 5 and 6.

	Uses the internet		
	Yes	No	Total
Hardly ever or never	3764 (60.2%)	2489 (39.8%)	6253
Some of the time	1091(51.3%)	1037 (48.7%)	2128
Often	272 (37.4%)	456 (62.6%)	728

Chi-Sq= 166.556, df = 2, P=<0.000

Table 5. How often respondent feels lonely

Table 5 (above) shows that people who reported not using the internet were more likely to say that they 'often' felt lonely. Conversely, people who said they did use the internet were more likely to respond that they 'hardly ever or never' felt lonely. A strikingly similar pattern was found for feelings of isolation, illustrated below in table 6.

	Uses the internet		
	Yes	No	Total
Hardly ever or never	3683 (59.5%)	2503 (40.5%)	6186
Some of the time	1242 (52.6%)	1118 (47.4%)	2360
Often	198 (37.4%)	331 (62.6%)	529

Chi-Sq= 115.871, df = 2, P=<0.000

Table 6. How often respondent feels isolated from others

Table 6 (above) shows that people who reported not using the internet were more likely to say that they ‘often’ felt isolated from others. Conversely, people who said they did use the internet were more likely to respond that they ‘hardly ever or never’ felt isolated from others. The proportions were very similar to those reported for loneliness.

Internet use and qualifications and income

There was a strong association between the measure of internet use and whether respondents reported having any qualifications ($p=<0.000$). People who reported using the internet were more likely to report having qualifications. Predictably there was a similarly strong relationship between the measure of internet use and household income ($p=<0.000$). However this is just as likely to be a reflection of the level of qualifications respondents held, in that people with the highest educational qualifications tend to earn more. To test this, a Pearson Correlation was carried out between qualifications and income. This was found to be significant ($p=0.01$).

Predictors of internet use and non-internet use

Univariate regression did not identify any individual factors (‘Is not a member of an organisation’, ‘level of control’, ‘anxiety’, ‘qualifications’, ‘income’) as independent factors for predicting internet use. This is perhaps surprising given the level of significant differences cited above and further work could usefully explore this in more detail.

Discussion

There were some strong relationships which support the working hypotheses that people who did not report using the internet from this wave of the ELSA survey showed different behavioural qualities to people who did. It was hypothesized that these potential behavioural characteristics might somehow predict ‘limiting beliefs’ which might prevent individuals from using the internet, and potentially getting online.

The most apparent association, and that predicted a priori, was that people who did not report using the internet would be more likely to perceive some things beyond their control, and to hold particularly extreme beliefs about their ability to learn new skills.

An association was found between people who reported not using the internet and a perceived lack of control in certain aspects of respondents’ lives. Non-users were no less likely to report being in control in the home, but when this locus of control was broadened out to encompass the rest of their lives it was apparent that they felt less sure: they reported a generalised lack of control and lacking control more frequently than people who did report using the internet.

There were no associations between people who reported using the internet and those not in terms of driving and stopping smoking. This suggests that neither group felt any more or less in control in other aspects of their lives which require some level of autonomous behaviour. However these might be considered comparatively familiar behaviours which they have become more common over the course of their lives. Use of the internet is something new by comparison.

When respondents were asked if they felt they had the opportunity to develop new skills, there was no significant association by internet usage. However when the extreme views (such as people responding either ‘strongly agree’ or disagree’) were taken into consideration there was. As such, perhaps people who reported not using the internet were more likely to hold more intransigent views about their skills and have firmer limiting beliefs about their opportunity to learn new skills.

There might also be a relationship between computer ownership and respondents perceptions of their ability to learn a new skill. People who said they did not own a computer were more likely to feel that they were unable to learn a new skill, while conversely people who did report owning a computer were more likely to agree that they could. This potentially reinforces previous research which suggests that with exposure to computers and the internet, people’s limiting beliefs about internet use can dissipate. This might also be strengthened by the fact that people who did not use the internet were more likely to report feeling anxious. Further research might usefully consider the characteristics of those with a computer in the home but don’t use the internet. This group might be a focus of future interventions

There were also behavioural dissimilarities between people who reported using the internet and those not in terms of group and organisation membership. Internet users were more likely to be members of a range of groups, suggesting more sociability. This might also be strengthened by the fact that those not reporting that they didn’t use the internet were more likely to report feeling lonely and isolated.

Overall this draws a profile of these respondents which suggest that people who said they used the internet were more likely to be sociable and confident by comparison, which might enhance their ability to meet the challenges of everyday life. Conversely people less likely to report using the internet were more likely to feel anxious, alone and isolated, and less likely to feel able to learn new skills.

It should be borne in mind throughout this analysis that these are associations and not cause and effect relationships. As such it is not possible to conclusively state which one leads to another - such as whether the internet leads to this behaviour or whether it is a cause of it. The regression analysis suggested that there was no significant relationship between the input variables and the dependent variable (internet use). This suggests that while some associations did exist, nothing adequately predicted internet or non-internet use. This fits in with the existing literature on this subject which illustrates that non-internet use is a subtle phenomenon. What is more likely is that non-internet use could be part of a range of behaviours.

Finally, it is very important to remember that all of the variables used to test the working hypotheses were proxy measures and not designed specifically for this study. As a result all results are potentially subject to a lack of construct validity. However the data presented here are used simply as support for the hypotheses and not verification of it. What is apparent, is that with the information available, these data suggest that these associations are worthy of closer scrutiny, and experiments specifically designed to measure them.

In conclusion, there appears to be enough evidence to merit further investigation of behavioural factors and their role in non-internet use, particularly among older people (all respondents on the ELSA survey are over 50) - as such there seems to be potential for future interventions and schemes concentrating on changing behaviour and behavioural assumptions in widening digital participation. One such potential approach is covered in the next section.

‘NUDGING’ - Behavioural economics and choice architecture

The concept of Nudge was developed by Thaler and Sunstein (2008)[73] and is based on the field of behavioural theory which suggests that individuals’ actions and decisions don’t result simply from a rational overview of external circumstances. Instead they are equally likely to be based on systems of habitual behaviour based on learned traits and biases. Thaler and Sunstein suggest that their work has implications for the development of social policy. They provide examples of actions and latterly policies which, rather than exhorting individuals to change their behaviour, work with the grain of behavioural systems to unconsciously move, or nudge, people towards more rational outcomes.

As policy makers have become more aware of how individuals decisions can be affected by these biases, the work of Thaler and Sunstein (2008)[74] has gradually become part of the toolkit of policy-makers and organisations. They argue that, contrary to the assumptions of orthodox economics, people may not act rationally to advance their self-interest on every occasion. They suggest that it is impossible for everyone to understand everything that is going on in their environment, particularly, all of the choices available to them, and the implications of those choices. As a result people tend to rely on habitual behaviour to carry out everyday tasks. The implications for social policy making are evident: most apparently, there are non-rational behavioural traits, and decision triggers that appear to be common to large numbers of people – suggesting that public policy might be able to utilise these traits to achieve behavioural change on a larger scale. A consideration of how, and whether, it can be used to support older people to get online is therefore extremely timely.

Key concepts of behavioural economics

Status quo bias

People tend to be conservative in their personal decision-making, even where there is little or no evidence that the status quo benefits them more than some alternative. This trait is actually the product of various elements, such as loss aversion (people would rather not lose an existing resource or asset, than gain a new one), regret aversion (people would rather not choose to change something in their life, for fear of regretting their choice), choice overload (even where the necessity of change is recognised, an array of alternative options makes enacting change difficult), and ego (people prefer to engage in activities they believe they are good at). People favour the status quo due to familiarity, but also by default because altering existing behaviour may involve complex and risky decisions, and involves significant effort.

Hyperbolic discounting

People tend to over-value the present and under-value the future – they perceive the value of a certain good to be lower when it is only available in the future (for instance, most people would

[73] Thaler, R & Sunstein, C (2008) *Nudge: Improving Decisions About Health, Wealth and Happiness*. Yale University Press.
[74] Ibid

rather be given £100 today than £110 next week). More generally, people are unable to imagine the future in detail, and therefore assume that the time and effort it requires to take certain actions will be less scarce in the future. Hyperbolic discounting gives rise to the tendency – evident in both individual and collective decision-making – to value short-term gains over longer-term benefits.

Anchoring and availability heuristic

Anchoring means that people tend to decide things in accordance with things they already know or have experienced. Prior knowledge or experience minimises the effort involved in acquiring new information or skills, and assuages individuals' confidence in dealing with a given problem. Problematically, however, the issue at stake may not be directly related to existing knowledge or experiences, meaning people make sub-optimal decisions in favour of familiarity. Similarly, the availability heuristic leads to people over-estimating the importance of things for which they can think of relevant examples, even if they have not themselves experienced these examples. For instance, most people believe, incorrectly, that murder is more common than suicide – because murders, understandably, receive far greater levels of media coverage.

Social norms

People are influenced by the behaviour of others. This can range from a narrow 'herd mentality' or 'crowd-think' wherein people assume there is 'safety in numbers', to less conscious influences such as tradition and cultural expectations. Social norms usually operate informally and implicitly; they both shape and are shaped by normal, everyday interactions. However, trusted institutions may be said to formally embody certain social norms, therefore enhancing their legitimacy as a guide to normal and acceptable behaviour.

Choice architecture

Individual decisions are also influenced by the way that people are presented with choices. Alterations to choice architecture are those most often referred to as nudges. Among the key features of choice architecture are messengers (decisions we make will be influenced by the people or institutions that provide certain options), salience (we are more attracted to options that seem relevant to our current lives), and priming and framing (we are influenced by sub-conscious cues such as smell, images, the urge to fill an empty space, whether something is presented as good news or bad news, etc.).

What is apparent is that most initiatives to encourage older people online have exclusively focused on providing access and enabling skills development. While many initiatives are influenced by behavioural insights - older people for example, tend to respond more positively to peer-based learning, as it demonstrates the resonance of the skills being passed on) it is important that providers don't place a disproportionate level of attention paid to issues of non-use around skills and access compared to behaviour. Given that motivational reasons seem to play a strong contributory role in why older people are not online, local initiatives and public policy frameworks should ensure that they are targeted at tackling behavioural issues of digital exclusion.

Mindspace

The most complete statement of the government's behavioural agenda is a report published jointly by the Cabinet Office and the Institute for Government titled *Mindspace: Influencing Behaviour through Public Policy* (Dolan et al, 2010a[75]; 2010b[76]). The report is intended to provide a practical guide to policy-makers for using the techniques of behavioural economics. However these principals have not been applied to the concept of bringing people online. As the previous chapter highlighted, there is enough evidence to suggest that schemes or initiatives aimed at digital inclusion might be effective if they tackle the behavioural issues of non-internet users. The concepts highlighted in *Mindspace* might provide a framework with which to do this. The report is intended to provide a practical guide to policy-makers. As such, *Mindspace* outlines the four E's of public policy nudges:

Enable

Start from where people are: that is, consider the structures in their life that lead them to behave in certain ways. If you want X to do Y, first Y must be a viable choice within X's life.

Encourage

Nudging is not only about providing choice. For example, incentives can be used to encourage some choices over others, and decisions can be framed to narrow the choices available.

Engage

Involve target groups in decisions about interventions designed to alter their behaviour. This is a form of influencing behaviour largely absent from *Nudge* and the surrounding discourse; Dolan et al make the case, however, that a deliberative process is more likely to lead to successful outcomes.

Exemplify

The actions of public authorities must be consistent with the behavioural outcomes they hope to produce throughout society.

The next section aims to consider how non-internet use and behavioural economics might converge.

[75] Dolan, P, Hallsworth, M, Halpern, D, King, D, Vlaev, A (2010a). *Mindspace: Influencing Behaviour Through Public Policy.* London: Cabinet Office/Institute for Government.
[76] Dolan, P, Hallsworth, M, Halpern, D, King, D, Vlaev, A (2010b). *Mindspace: Influencing Behaviour Through Public Policy – The Practical Guide*, London: Cabinet Office/Institute for Government.

The role of behavioural economics in tackling digital exclusion

What this report is suggesting is that, for the most part, more people could use the internet more often if they were motivated enough to do so, or could be convinced enough to be motivated. There is evidence that older people, for example, are more likely to go online if the internet is resonant to their lives. For example, studies on skills development demonstrate that older people are more likely to use the internet if they engage in peer-based learning (e.g. Blat et al, 2011[77]).

Viewing digital exclusion as a system of behaviour

However psychological and attitudinal factors form part of a system of habitual behaviour which plays its role in preventing this. Digital exclusion has not been extensively studied in this regard. The attractiveness of the internet for younger people is bound up with the fact that, for most of their lives, it has been part of their everyday functions. This is not the case for older people (e.g. Loader & Keeble, 2004[78]; Selwyn et al, 2005[79]), voluntary exclusion is therefore likely to continue unless this impression can be countered.

Various studies show that older people use the internet for instrumental rather than social or entertainment purposes (Blat et al, 2011[80]; Choudrie et al, 2010[81]; Hannon & Bradwell[82], 2007[83]; Mason & Pereira, 2011[84]; Selwyn et al, 2005[85]). This means, principally, pursuing interests by finding information on things to do, and increasingly, online shopping.

Status quo bias

It is clear how digital inclusion may be affected by the status quo bias, given that for many older people the internet has never formed a significant part of their day-to-day functions and interactions. The mass of information available on the internet may buttress this fear of change. Not knowing which online sources to trust may be a form of anxiety brought on by choice overload (evidence already presented has shown a relationship between computer related anxiety and non-internet use). While there are likely only limited circumstances in which going online prohibits returning to offline functions such as switching to online bills for example, nevertheless getting online initially may involve various expenses which would become irretrievable.

[77] Blat, J et al (2011) 'Cross-cultural aspects of ICT use by older people: preliminary results of a four-country ethnographical study', in *Proceedings of iHCI2011: the Fifth Irish Human Computer Interaction Conference, 8-9 September 2011, Cork Institute of Technology*.
[78] Loader, B.D & Keeble, L (2004) *Challenging the Digital Divide: A Literature Review of Community Informatics Initiatives* (Joseph Rowntree Foundation)
[79] Ibid
[80] Ibid
[81] Choudrie, J et al (2010) 'Evaluating the digital divide: the silver surfer's perspective' in *Electronic Government*, vol. 7(2)
[82] Ibid
[83] Mason, D & Pereira, N (2011) 'A model of the internet information-seeking behaviour of older New Zealanders', in *Proceedings of the Pacific Asia Conference on Information Systems, 7-11 July 2011*
[84] Ibid

Hyperbolic discounting

People may be complacent about the extent to which connecting to the internet is necessary, preferring to maintain existing ways of finding information and interacting under the belief that these mechanisms will always be available and commonly used. Even if people recognise the importance of the internet, they may not consider the long-term benefits to outweigh the short-term effort of getting online and learning about how to use the internet effectively.

Anchoring and availability heuristic

If older people have experience of performing certain tasks by offline mechanisms, they may assume that these means remain the most effective way of achieving certain objectives, or at least the most effective way for them. While understandable, it is also necessary to recognise that the mechanisms used in the past may not be as readily available once more and more of the everyday functions of society develop an online presence. Furthermore, even if not online themselves, it is possible that older people are more likely to have heard about negative online experiences than positive experiences, such as internet fraud, or websites that are not user-friendly.

Social norms

Given that most of their peers are offline, it is perhaps perfectly understandable that older people don't consider using the internet a social norm. Where they recognise widespread internet use, they may associate this with younger generations exclusively. The online world is in crucial respects part of popular culture for many people. For older people, however, it is important to consider how the internet is represented in other forms of cultural influence, to which older people are more likely to be exposed.

Choice architecture

It is difficult to associate older people's digital behaviour with the various elements of choice architecture directly. The most important element, however, is undoubtedly salience. Going online will not seem like a worthwhile activity unless older people recognise web content that is relevant or useful to their lives, or related to their interests. In terms of messengers, it is probably fair to say that representations of the online world tend to be targeted at young people and designed with young people in mind. Although there are certain products and websites aimed at older people, the impression created is that these features are the exception rather than the norm.

Targeting who to be nudged

Hannon and Bradwell (2007)[86] have categorised older people in relation to their internet and non-internet use; it incorporates psychological and attitudinal tendencies. This is useful to help better understand the potential strategies which might be successful in nudging these groups online.

[86] Ibid

1. ‘Digital trail-blazer’: this group is adventurous about trying new things online – and almost evangelical in their enthusiasm.
2. ‘Cautious toe-dippers’: this group has tentatively embraced the internet for basic tasks, but is wary of complex content, and of deviating from trusted brands.
3. ‘Non-line outsiders’: this group is not fundamentally averse to using the internet, but is hampered by fear and uncertainty.
4. ‘Hi-tech-sceptic’: this group is cynical about technology, and resents pressure to get connected.

The ‘Digital trail-blazers’ and ‘Cautious toe-dippers’ are already online. They may be most important, however, in helping other groups become connected to the internet, while the ‘Non-line outsiders’ and the ‘Hi-tech-sceptics’ are clearly the most important when it comes to targeting social policy to nudge people online.

It is likely that the experience of the ‘Non-line outsiders’ group will be most valuable to other groups, even though their skills are less advanced, because excluded individuals may be able to recognise some of their own attitudes in this group. More of this group might most likely be encouraged to go online if they are targeted using the right messages and messengers: they need to see more of their peers using, and benefiting from, the internet. In order to further develop their use of the internet, this group could be encouraged to contribute more to the design of web content, representing in-itself a deeper form of digital inclusion, but also assisting in the inclusion of excluded groups.

Less directly, however, ‘Hi-tech-sceptics’ could be vital to establishing sound intergenerational relations in the online world, which will be important to shaping the content of the internet in an online society. This group would be the hardest to reach – they may be protective of existing ways of doing things. A bias in favour of the status quo is also associated social norms. They favour established ways of doing things because the actions of their peers and the orientation of societal structures suggest this is the appropriate way of doing things. However as a result, this group might respond more positively to a heavier form of nudging, more resembling compulsion as an indication that societal norms have changed. But they will be slow to pick up skills, even if they connect to the internet.

The ‘Non-line outsiders’ and ‘Hi-tech sceptics’ are not online because the internet is not seen as salient to their lives; more thought needs to be given, therefore, to web content. It is not simply a nudge, however, but more comprehensively transforming the choice architecture within which nudges operate.

Where older people might be most ready to be nudged

This chapter now goes onto consider the areas where older people might be most susceptible to nudging onto the internet. To do this it is helpful to understand where those already online are already using the internet.

The Oxford Internet Survey has some information about what different groups use the internet for and what they do online. For the purposes of this report these potential online behaviours have been grouped into three headings: social interactions; consumer behaviour; and information

seeking. Issues have then been raised underneath these headings intended to be areas where the behaviour of non-internet use might be most open to influence.

Social interactions

While older people are more likely to carry out their social interactions away from the internet when they are using it for social interactions they are most likely to use the internet for emailing; making contact with family and friends further away; and making contact with people who share their interests. Conversely they are less likely to use social networking sites, post blogs, own a website, and arrange to meet people offline[87].

Just over one in five (21 per cent) internet users made telephone or video calls online in 2011. This activity is one which is not dominated by a specific age group, with older age groups showing similar patterns of use to the younger age groups. Of those aged 65 and over, 17 per cent used this technology, compared to 22 per cent of those under 24 (ONS, 2011)[88].

Holladay and Seipke (2007) [89] found that grandparents believed e-mail is a useful communication tool and used it more frequently than face-to-face communication when they were geographically separated from their grandchildren. Grandparents who used e-mail frequently were satisfied with the relational quality with their grandchildren even without extensive face-to-face interaction. Based on the results, Holladay and Seipke (2007)[90] suggest that e-mailing provides 'an important sense of connectedness to the other' (p. 292). If recruitment messages highlight communicating benefits of internet use as 'keen keepers' (Holladay & Seipke, 2007, p. 291[91]), grandparents may show more interest in enrolling in computer classes.

Consumer behaviour and information seeking

When they are online older people are mostly likely to use the internet to look for all types of information. These are more likely to be matters related to health. However older people are also likely to use the internet to compare products and make travel reservations and least likely to invest in stocks; order groceries; and sell items online. According to ONS in 2011[92], those aged 65 and over were the only age group not to report clothing and sporting goods as the most popular online purchase. Instead, people over 65 were more likely to purchase 'other travel arrangements' (which includes flights, car hire and other transport tickets), followed by 'holiday accommodation'. Shopping on the internet is advertised as convenient for younger users so why not potentially market to older non-users too? This could be more pertinent if mobility or shopping access opportunities are factored in.

It is of course right that government uses all of the levers it has available to achieve digital inclusion. But rather than implementing policies such as eliminating offline forms of communicating between citizens and public services, a less intrusive form of behavioural change would involve

[87] There is evidence, however, that older people are increasingly interested in social networking. And those that are online see emailing family and friends as one of the most important features of the internet (see Race Online 2012 for example). This may be explained by the fact that email is a more instrumental form of communication than that enabled by social networking websites.
[88] Ibid
[89] Holladay, S. J., & Seipke, H. L. (2007). Communication between grandparents and grandchildren in geographically separated relationships. *Communication Studies*, 58(3), 281–297
[90] Ibid
[91] Ibid
[92] Ibid

using information about public services to alter the incentive structure for using the internet in this regards. Of course, in many cases it is already more expensive and arduous to acquire information and make enquiries offline. This could be more effectively communicated. While new charges for offline mechanisms should not be introduced for this reason alone, it is more reasonable that the availability of offline mechanisms is reduced so that the comparative effort required favours online mechanisms.

Online mechanisms for interacting with certain institutions are often discounted. This is an appropriate element on incentive structure designed to get people online. However behavioural economics tells us that individuals tend to be more averse to losses than they are attracted to gains. As such, these measures could be re-articulated as a surcharge on offline mechanisms rather than a discount for online mechanisms, demonstrating that offline mechanisms lead to a cost above the normal price. Crucially, such charges must not be significant. Older customers are among the most vulnerable and should not be charged significantly more for staying offline. The nudge is found not in the relative costs, but the way the costs are communicated. The prospect of any loss, however small, will lead to behavioural change for many people.

Such measures would of course be most relevant not to public services but rather to the provision of utilities such as fuel supplies and telephone connections. The government has existing powers in these sectors to regulate how private companies interact and communicate with their customers, and these should be utilised for the sake of digital inclusion as far as possible.

In order for people to use the internet they must first be motivated to do so. If they see the benefits, for example: learning how they can better keep and maintain contact with friends and family; find information about health or healthcare providers; or find information to reduce the cost of their energy supply, they might be more likely use it, and value the service enough to make provisions to use it in their everyday lives.

Using the concepts of behavioural economics: starting where people are

Older people's understandable aversion to change is one of the main reasons that *Mindspace* argues that behavioural change interventions must 'start from where people are'. The lesson is that digital inclusion interventions need to be integrated into patterns of existing behaviour that don't ordinarily include the internet. Policy-makers and practitioners should therefore look for ways to include online elements into activities undertaken on a daily basis, or organisations interacted frequently.

A good example of this might be the Post Office who could usefully provide internet access in branches to assist customers in carrying out tasks online with assistance from staff. This could help to offset computer related anxiety. The same could be done in local council offices with residents being assisted to use internet portals to pay rents and council tax for example, and then being given further incentives to continue this away from the offices. At the same time local authorities could seek to promote websites that offer a portal to local amenities and services, located in both the public and private sectors, for older people. By getting people to use computers without them realising they are doing so could help to reinforce existing behavioural norms.

The behavioural trait of hyperbolic discounting suggests that older people might be unwilling to make the initial investments involved in getting online without being convinced of the value of the

internet to their lives. Service providers may be able to attract older customers by discounted installation and connection deals, and initial periods of free internet access. Once online, people are more likely to stay online. Moreover, precisely because of the tendency to discount the future, customers are likely to be more willing to agree to longer-term contracts in exchange for discounted or free initial access.

The range of internet service providers, and the variety of deals available, may mean that choice overload leads to digital exclusion for older people. One way of countering this might be for local authorities to select, via competitive tender, a small number of providers (or limited range of deals) to promote to all citizens. Older people may be more willing to trust their local authority, even at the expense of searching for themselves for the best possible deals. This might be even more applicable managed through care homes where local authorities fund a large number of places.

Given the vast range of information sources and applications available online, the internet itself may represent a form of choice overload for older people not used to using the internet for most of their lives. Responses to this so far have focused on increasing older people's skills in using the internet. But if the very nature of the internet is a cause of digital exclusion for older people, it may be equally desirable for the range of content available online to be tailored for this group of people. It is of course neither desirable nor feasible to restrict the internet for the older digitally excluded. However, stakeholders could work together to establish a straightforward guide to particular forms of web content, narrowing down the range of alternatives that older people need to become familiar with in order to make meaningful use of the internet. This could also be accessible as a website itself, serving as both a guide and portal to certain applications.

Furthermore, the guide or portal could be developed in conjunction with older people themselves: the experience of the older digitally included could be utilised, more generally, to help the older digitally excluded. Many older people are capable and enthusiastic internet users, and therefore may not be able to appreciate the nature of digital exclusion for their peers. But many digitally included older people have become regular internet users having overcome reservations and capability limitations. Their experience should be marshalled to assist their peers in order to shape the content of the internet, as well as to generate access.

There is a great deal of research around co-design and participant design in internet use: 'We Are What We Do'[93] for example, have acted upon this in developing 'Internet Buttons' designed to help inexperienced users of the internet[94].

Lessons for public policy

There are several lessons here for public policy on older people and digital exclusion.

Firstly, older people should not be expected to radically transform their way of life to become digitally included. Going online must be made relevant and manageable within, and complementary to, existing patterns of behaviour.

Secondly, and related to this, existing forms of web content and means of going online should not be taken as given. Older people themselves should be asked to contribute to the activities which policy-makers are attempting to include them in. Nudges should not be considered something

[93] http://wearewhatwedo.org/
[94] http://wearewhatwedo.org/press-releases/we-are-what-we-do-cre%C2%ADates-inter%C2%ADnet-but%C2%ADtons-a-new-tool-that-makes-using-the-inter%C2%ADnet-super-easy-for-new-or-ner%C2%ADvous-users/

done to the recipients of public policy; policy-makers need to learn more about how older people behave, and why, before they can influence this behaviour.

The instruction to go digital by default, thirdly, should not be taken to mean simply that public services should become solely accessible online, as this would exacerbate digital exclusion, at least in the short-term. Rather, policy-makers should look to exemplify digital inclusion by ensuring that the web content they are responsible for, as well as the initiatives they undertake to get older people online, is designed in accordance with the behavioural traits exhibited by older people.

CONCLUSION: Nudge or compel?

Public policy in the area of digital exclusion has tended to focus on the issue of access (including the affordability of the internet) and skills development. The former has been the target of many national and local initiatives, but the previous Government's plans to subside broadband connection in order to attain universal access have been abandoned. While these are clearly important issues, especially where digital exclusion is considered part of the wider social exclusion agenda, this has tended to overlook the role played by behaviour and choice - that many people have consciously chosen not to become regular internet users.

Current policy has therefore been targeted mainly at non-users of the internet to educate about the benefits of use, seeking to change the behaviour of non-users by opening up their potential access and broadening their skills. This is important but alongside this (after seeing the role of behaviour and choice in non-use) policy makers need to consider aiming initiatives at changing and influencing the choices of non-users if they wish to encourage more people online. With behavioural variables playing such a key role it is important to pay increased attention to internet inclusion policies that focus on demystifying the process of internet use, emphasising an individualised pace of instruction geared to beginners, and communicating benefits of internet use of particular interest to women (e.g. Holladay & Seipke, 2007[95]).

Changing minds, changing behaviour

Getting online clearly involves behavioural change, whether in the form of establishing an internet connection in the home, undergoing training to enable internet use, or simply making greater use of an existing internet connection. This report has considered the potential for utilising the nudge agenda in tackling digital exclusion.

Insights from behavioural economics and psychology can help to provide an understanding of digital exclusion as a result of specific systems of behaviour. There has, perhaps understandably, been limited research in this area: research on behavioural change has tended to focus on financial issues such as debt and saving, health behaviour, or climate change, and it is in these areas that the nudge agenda has had greatest impact on policy and practice.

Virtually all public policies aim to change behaviour to some extent: the nudge agenda isn't any different in this regard. However, it is innovative in that it seeks to base policy on an understanding of the traits that make people behave as they do. Of course, understanding behaviour does not necessitate public policy initiatives in the form of nudges. Forms of compulsion, or educational programmes, may be the most appropriate response to the patterns of behaviour identified. The concept of nudge upholds, however, that in general initiatives that seek to utilise existing behavioural traits will be most effective (or cost-effective).

The distinction between public policy interventions in the form of nudges, compulsion and education should not be exaggerated. The most appropriate response to a given problem may be education but nudges can help to encourage people to take up educational programmes, and more generally understanding behaviour can help to improve the effectiveness of education.

[95] Ibid

A small number of studies have considered the relative merits of nudges and education. For example, de Meza et al (2008)[96] have considered this in relation to influencing financial behaviour, on behalf of the Financial Services Authority, arguing that:

'financial capability involves knowledge and skills, but attempts to improve these [through education] *may not lead to better outcomes. What people choose to know and what they do with their knowledge may primarily depend on their intrinsic psychological attributes ... if poor financial capability is mainly a matter of psychology, the information-based approach of the National Strategy for Financial Capability is likely to have only a modest effect in improving outcomes'*

(de Meza et al., 2008; p. 2[97]).

As such, several behavioural traits, such as procrastination, loss aversion, and status quo bias undermine the effectiveness of education. De Meza, et al (2008)[98] also details the 'curse of knowledge' whereby information provision can simply lead to people drawing incorrect inferences, focus on unimportant data, or become over-optimistic about their own capacities. The report concludes, crucially, that education should not focus on providing information, but rather on training in decision-making.

Similarly, McKenna (2010)[99] found educational interventions in road safety education largely ineffective. He argues, for instance, that education schemes are poorly designed and poorly targeted. Schemes are often not extensive enough to have lasting effects. Changing behaviour may rely on prolonged exposure to new practices, not simply the provision of information. McKenna also suggests that improving driving skills and road awareness may increase people's ability to undertake risky manoeuvres. McKenna (2010)[100] also argues that if people are given the impression that, say, speeding is a huge problem, it may help to create a social norm that a large majority of people regularly breach speeding limits, so it is more socially acceptable to break the law in this way. While critical of some aspects of road safety education, however, using the example of speeding, that education on speeding has helped to legitimise the introduction of a speed camera enforcement programme. In this way, education actually operates as a nudge, to encourage people to abide by new interventions based on compulsion. This suggests that the relationship between nudging, compulsion and education might not necessarily be straightforward.

Non-internet use as a right

Educational interventions related to digital exclusion are unlikely to have the kind of negative consequences identified by McKenna (2010)[101]. However, for some older non-users increased exposure to the internet might serve to increase apprehension about going online.

Educational interventions might usefully incorporate nudging into the design of initiatives, however the distinction between nudges and compulsion is slightly more pronounced. The latter inevitably

[96] de Meza, D, Irlenbusch, B, Reyniers, D (2008) *Financial Capability: A Behavioural Economics Perspective*. Consumer Research 69. Financial Services Authority. London. England.
[97] Ibid
[98] Ibid
[99] McKenna, F (2010) *Education in Road Safety: Are We Getting it Right?* RAC Foundation. London, England.
[100] Ibid
[101] Ibid

involves curtailing individual choice, while nudges encourage people to co-operate in changing their behaviour with all conscious choices still open to them. However, even if elements of compulsion are introduced to public policy on digital inclusion, nudges can be used to ensure that the activities that target groups are being compelled to do are more amenable to meaningful engagement.

Ultimately this is an issue of choice and the availability of choice. Nudging is about influencing decisions by the way that choices are presented. The important issue though is that people are still presented with a full range of options: while compulsion is about the removal of choice. Non-use of the internet, however inconvenient for some, and however much it is felt that the non-user might be missing out, is a right and a choice. Removing someone's rights and freedoms simply to get them to use the internet, because someone else feels that it will improve their quality of life is unethical.

This report has explored the potential for using the concepts of behavioural economics to further tackle digital exclusion, and in doing so has found enough evidence to suggest promise in this approach. However the emerging digital by default agenda within public services offers an alternative, more compulsion-based approach to digital exclusion. It is understandable that some have criticised the digital by default approach. In terms of older non-internet users many will have been locked into certain patterns of behaviour for longer than most people, and compulsion in this form risks increasing vulnerability among an already financially and socially vulnerable group.

Recommendations

Addressing the status quo bias

The behavioural trait of status quo bias suggests that people tend to be conservative in their personal decision-making, even where there is little or no evidence that the status quo benefits them more than some alternative.

Regret Aversion

- To overcome the impact of regret aversion, service providers should offer the opportunity for people to 'go back to paper' if they are unsatisfied with their digital experience.

Loss Aversion

- To reduce the risk of loss aversion, the Post Office should provide internet access in branches to assist customers in carrying out tasks online with assistance from staff.
- Policy makers and services providers should better promote the benefits of online over offline services. Within local council offices, residents could be assisted to use internet portals to pay rents and council tax. At the same time local authorities could seek to promote websites that offer a portal to local amenities and services, located in both the public and private sectors, for older people.
- Policy makers and service providers should increasingly look at finding ways of getting to use computers and the internet in their day to day lives – this could contribute towards offsetting computer related anxiety.

Choice Overload

- Smart, clear and accessible search engines, should find ways of helping limit the choice of individuals according to their preferences, location and interests.
- Where government wants to encourage people to buy certain products or services such as pension or annuities for example, they should find ways of using technology to direct people to a selection of online providers which may meet their needs.
- Older people may be more willing to trust their local authority, even at the expense of searching for themselves for the best possible deals. Many already provide 'trusted local company' guides. Local authorities should select, via competitive tender, a small number of providers of different products and services to promote online to citizens.
- The developers of websites and search engines should be usable and accessible and designed in a way to minimise choice overload narrowing down the range of alternatives that older people need to become familiar with in order to make meaningful use of the internet.
- Many older people are capable and enthusiastic internet users, and therefore may not be able to appreciate the nature of digital exclusion for their peers. But many digitally included older

people have become regular internet users having overcome reservations and capability limitations. Their experience should be marshalled to assist their peers in order to shape the content of the internet, as well as to generate access.

Ego

- Service providers should take care to not scare people off engaging with the internet. Language should be accessible and mainstream.

Addressing hyperbolic discounting

The behavioural trait of hyperbolic discounting suggests that older people might be unwilling to make the initial investments involved in getting online without being convinced of the value of the internet to their lives.

- Service providers may be able to attract older customers by finding ways of discounted installation and connection deals, and initial periods of free internet access. Once online, older people are likely to stay online. Moreover, precisely because of the tendency to discount the future, customers are likely to be more willing to agree to longer-term contracts in exchange for discounted or free initial access.

Hyperbolic discounting appears to impact upon Government and the private sector as well as individuals. Government and the private sector could benefit significantly (tomorrow) from having more people online.

- If Government and the private sector is to seek financial savings from making services available exclusively online, they must either invest more in adult learning or find ways of incentivising others to invest.

Addressing anchoring and availability heuristic

Anchoring means that people tend to decide things in accordance with things they already know or have experienced. If older people have experience of performing certain tasks by offline mechanisms, they may assume that these means remain the most effective way of achieving certain objectives, or at least the most effective way for them.

- Service providers must promote online services as quicker, faster and delivering a better quality of service than offline alternatives. They must also live up to their commitments they promote. The best way of moving the anchor facing non-users is for them to experience quality and efficiency from an online experience.

Social norms

Given that most of their peers are offline, it is perhaps perfectly understandable that older people don’t consider using the internet a social norm. For older people, however, it is important to

consider how the internet is represented in other forms of cultural influence, to which older people are more likely to be exposed.

- Companies advertising technology and opportunities to learn technology must do so using imagery of both older and younger people.
- Older people who are online should be encouraged to talk through their experiences with their peers.
- Government and the private sector should support local digital champions to make the case at a community level for the use of new technology.

Choice architecture

It is difficult to associate older people's digital behaviour with the various elements of choice architecture directly. The most important element, however, is undoubtedly salience. Going online will not seem like a worthwhile activity unless older people recognise web content that is relevant or useful to their lives, or related to their interests.

- Much more emphasis needs to be placed on co-design. The involvement and engagement of older people in the design of the services which they might want to use is vital. Government and the private sector must find ways of supporting the co-design of new online services which meet the desires of older people currently not online.
- Representations of the online world should be more representative of all age groups, not just younger people.

Appendix A: Methodological approach to secondary analysis

Method

Instruments

Wave 4 of the English Longitudinal Survey of Ageing (ELSA) with questions pertaining to internet use and a range of social attitudes was used. This contained the most recent data with questions relating to internet use and a range of social and behavioural variables which could be used as proxy measures to test the hypothesized relationship.

Measures

The measure of internet use was:

- Respondent uses the internet and/or email

While proxy measures of behaviour and attitudes were the following questions relating to loneliness, control, isolation and anxiety:

- At home, feels has control over what happens in most situations
- Feels what happens in life is often determined by factors beyond his/her control
- How often respondent feels isolated from others
- How often respondent feels lonely
- How often feels what happens to them is out of their control
- Respondent reports feeling anxiety

The following questions were used as proxy measures of sociability, where respondent is, or is not a member of:

- a political party, trade union or environmental groups
- tenants groups, resident groups, neighbourhood watch
- a church or other religious group
- charitable associations
- education, arts or music groups or evening classes
- social clubs
- sports clubs, gyms, exercise classes
- other organisations, club or societies
- any organisations, clubs or societies

Post hoc tests using proxy measurements of computer use, driving, smoking, and opportunities to learn a new skill were also used.

Questions relating to household income and whether the respondent reported any qualifications were also used as proxy measures of instrumental variables.

Tests

Pearsons Chi-squared was used to test associations in categorical variables among the groups for the 16 indicators of behaviour, attitudes and sociability. Levene's T-test was used to test differences between continuous variables.

Regression analysis

Logistic regression was also used to test the strength of relationships between internet use and a range of categorical variables.

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