

**Online @ home in retirement:**

**Situating computer and Internet use within bodies, spaces  
and biographies**

**Christina Eira Buse**

**Submitted for the degree of PhD**

**University of York**

**Sociology Department**

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## **Abstract**

This thesis examines how retirees make use of the Internet and computer technologies at home, as well examining the relation of these newer technologies to older Information and Communication Technologies (ICTs) in this sphere. It begins by reviewing previous research on older adults and Internet use, and highlighting gaps in this literature, including a lack of research on Internet use in everyday contexts, particularly the home, and a failure to situate experiences of Internet use in later life within experiences throughout the life-course. The importance of contextualising Internet use within 'real' bodies and spaces is emphasised. Secondary data analysis was then used to examine wider patterns of Internet use among older people, and the relation Internet use in later life to living situation, lifestyle and demographic variables. Following this, the main methodology of the study involved gathering data using multiple qualitative interviews and time-use diaries, which were conducted with retirees in 17 UK households. The central argument drawn from this data is that computer and Internet use in later life need to be contextualised within the 'embodied technobiographies' of individuals and cohorts. This contributes a unique perspective to discussions of age divisions, illustrating that they cannot simply be understood as the result of material and physiological changes in 'old age', but as the outcome of struggles applying embodied technological competencies acquired over a lifetime to new technologies. It also has practical implications for policy makers, and illustrates the importance of practical methods of learning computing, and the importance of relating new technologies to earlier competencies and biographical interests. These findings, and the novel concept of 'embodied technobiographies' developed in this thesis, also have broader implications for developing sociological theories of embodiment, technology, gender, ageing, generations and social change.

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## **Author's Declaration**

I declare that this thesis is the product of my own original work, which was developed between October 2006 and October 2009. Apart from work whose authors are clearly referenced, to the best of my knowledge this thesis contains no material written or published by another person.

None of the material in this thesis has been submitted in support of an application for another degree or qualification at this or any other university.

An earlier version of the findings chapter; *'When you retire, everything becomes enjoyment': ICT use and the work/leisure boundary in retirement*, is shortly due for publication in the journal 'New Media and Society'. An earlier version of the chapter *'It's like pianos, you need to keep practising': Embodiment, biographies and technology use*, has been accepted for publication in the journal 'Ageing and Society'. Full details of these forthcoming publications are given in the bibliography.

Signature \_\_\_\_\_

## **Chapter one**

### **Introduction: A study of ‘new technology’ and ‘older people’?**

“The stereotype of ageing duffers befuddled by new technology is not new. In 1993, Toby Young wrote in the Guardian: "Why is it that no one over 30 can operate a video recorder? My mother can manage the household budget ... but she is totally baffled by the VCR." How stupid Young must have felt when he turned 30 and found that he could still operate a VCR.”

(Jeffries 2007, para. 4)

As illustrated by the above quotation, the disjuncture between ‘older people’ and ‘new technologies’ is a common stereotype, which is often a source of humour in popular media. For instance, British comedian Peter Kay frequently uses stories about his grandmother’s difficulty with new technology in his stand-up routine, such as describing how she tried to change channels with her glasses case (Brabazon 2008a)! Similarly in the well-loved British sitcom ‘Gavin and Stacey,’ the character of ‘Uncle Bryn’ is fascinated by new technologies, but always seems to get things wrong. Discourses presenting older people as being odds with new technology are not only present in popular media though, but also emerge in academic and policy discussions of ‘new technologies’ like the Internet (Ostlund 2005). Nonetheless, there are real concerns that as the Internet pervades various aspects of society in the ‘Information Age’, the exclusion of older people from online access will inhibit their ability to participate fully in society (Jaeger 2005, Selwyn 2004). While such concerns are valid, a number of questions remain unanswered, and the reasons and meanings of such divisions are unclear. In this thesis, it is argued that there is a need to go beyond statistical digital divisions, to understand how they are experienced and constructed in everyday contexts, and examine the everyday practices of those older people who are online. Furthermore, as the above quotation illustrates, once the concepts of ‘older people’ and ‘new technologies’ are unpacked, it is apparent that each of these concepts are complex, relative, and subject to change over time. Therefore a thesis about ‘older people and Internet use’ later became an examination of how the everyday use of computers and the Internet at home during later life is situated within ‘embodied technobiographies’, and the shared technological experiences of generations.

The idea for this PhD research emerged as part of the White Rose ‘Older People and Social Inclusion Network’, and was originally entitled; *‘Silver-surfers: Older people in the information age’*. The objectives of the project were to examine how older people are using the Internet, what it is being used for, benefits and drawbacks, and consequences of Internet use for well-being and social inclusion. However, I was given considerable freedom to develop this research in my chosen direction. After reviewing the literature in this field, which will be discussed in greater detail in chapter two, I saw that while sociological research in this area had increased, and addressed issues such as reasons for use and non-use, and consequences for well-being, there was a comparative lack of research on older people’s use of the Internet in everyday life (Selwyn 2004). It is increasingly recognised that the use of the Internet cannot be understood as separate from the real-life spaces and bodies in which it is located (Holloway and Valentine 2003). However, there was little research locating older people’s use of the Internet within everyday spaces, particularly the home, which is where the majority of Internet use takes place (National Statistics Online 2006). Therefore this thesis sought to address the question of how the Internet and computers are used within domestic space during later life, and how use of these technologies relates to the meanings, relationships, temporalities and spatialities in this setting. It also aimed to find out whether experiences of technology use in this space are gendered, something which has lacked prior qualitative exploration among older age groups. This thesis also sought to understand the ‘embodied’ nature of everyday experiences of using these technologies. In order to develop an in-depth, contextual understanding of technology use in this space, data was gathered using a ‘quasi-ethnographic’ qualitative methodology, incorporating multiple home-based interviews and time-use diaries.

As well as seeking to address such gaps in literature, the particular direction this research took is also located within my background and research interests. Gender and feminist theory and research are long standing interests. My undergraduate sociology dissertation was entitled; *“Clergwomen in the Church of England: Doing Gender in a Sacred Space”* and explored issues around ‘doing gender’ in a ‘sacredly masculine’ role. Following this, my Msc dissertation examined the use of pro-anorexia websites, drawing on post-structuralist feminist theories. Embodiment is also one of my research interests, which is reflected in this MSc dissertation, and also in my undergraduate and postgraduate studies. The application of critical and feminist perspectives to understanding later life was also

something which developed while undertaking the MSc module 'Gender, Time and Change', which explored feminist perspectives on ageing and temporality. Therefore in beginning this PhD I approached it with an interest in gender issues around ageing, technology use and the home, and set out to explore whether technology use in this space was gendered. However, while gender is important to this thesis, albeit in a complex manner, the importance of biographies has emerged as being of greater significance to understanding technology use (and gender relations) than current negotiations and conflict in domestic space.

This biographical dimension started off as one of the sub-questions of the main study, and was not initially the central issue. This research aimed to understand how experiences of technology use in the home were situated within biographical experiences of using computers in the work place and other contexts. In keeping with domestication research, it sought to explore the biographies of these objects as they were integrated into the home (Silverstone et al 1992). However, it became apparent during the research that use of computers and other information and communication technologies (ICTs) in the home during later life was situated within biographical experiences of technology use throughout the life-course. Therefore biographical experiences were explored in greater depth as the study went on. I found that the practices, values, temporal and spatial location of ICTs, were situated within these biographical experiences. This thesis has also found that these biographies of technology use are 'embodied', and that the acquisition of technological skills throughout a life-time is an embodied process. The importance of locating technology use in later life within the 'embodied technobiographies' of individuals and cohorts, is the central argument of this thesis, which will be set out throughout subsequent chapters.

### **Technology use in social context**

While this thesis has adopted a micro-perspective for exploring everyday practices of technology use in the home, and throughout the life-course, the location of this research within broader social changes is also recognised. Various sociologists have described processes of change occurring in society, and the transition to a new era (e.g. Giddens 1992, 1994, Beck 1994, Urry 2004). There is some disagreement over the best way to understand this transition, and whether the current period should be known as 'postmodernity', 'reflexive modernity' (Beck et al 1994) or 'liquid modernity' (Bauman

2000). Although there are differences in the theorisations of this period, there are commonalities. It is generally characterised as involving globalization, the breakdown of traditional structures and identities, and increased uncertainty and awareness of global risks (Bauman 2000, Giddens 1992, 1994, Beck 1994). In short, it is a time of increased opportunity alongside increased uncertainty (Giddens and Hutton 2000).

These changes have implications for understanding home and family life, ageing, gender, time and space; all central themes in this thesis. Contemporary society is described as involving increased fluidity in relationships and social location (Bauman 2004), with traditions around the family, gender and sexuality no longer representing a stable source of identity (Beck et al 1994, Giddens 1994). As a result, individuals have to reflexively construct their own identities and biographies, and decisions and identities are increasingly individualized (Beck 1994, Giddens 1992). The implications of this are that choices around career, paid work, and family are no longer determined by fixed gender norms (Wajcman and Martin 2002). There is argued to be greater fluidity and flexibility in family life, and a move away from normative and rigid expectations of the 'proper' family (Silva 2004: 193). There is also increased uncertainty and demand for flexibility in the labour force, both in terms of flexible hours and temporary labour, and the ability to retrain and adapt to changes, including technological change (Bauman 2004, Castells 2000, 2001). In terms of the relation of these changes to experiences of ageing, it is argued that the life-stages are becoming more individualized and diverse (Gilleard and Higgs 2005). Therefore what it means to be 'old' in contemporary society is also changing, which will be discussed in greater detail in chapter two.

While not determining such changes, technologies like the Internet facilitate many of them, and the proliferation of these technologies is often seen as a defining feature of contemporary society (Slevin 2000). Indeed Castells (2001: 10) argues that the 'Information Age' or 'Network Society' is not defined by the "critical role of knowledge and information", but by the new technological paradigm involving new ICTs and genetic engineering. Of particular interest in this thesis are changes in the way time and space are experienced and organised in relation to new ICTs (Lee and Liebenau 2000: 44).

Technologies like the Internet facilitate increasing globalisation, and the compression of time and space, enabling instant communication with individuals in distant locations (Green 2002, Urry 2004). This space-time compression contributes to the feeling of time 'speeding up' in contemporary society (Green 2002), as does the increasingly fast pace of

change (Wajcman 2008). This new form of temporality is described as 'timeless time' (Castells 2000), while the co-ordination of activities without the need for geographical proximity is termed the 'space of flows' (Castells 2001:14). As well as involving the compression of time, 'timeless time' involves the 'de-sequencing' of time, blurring past, present and future, and disrupting linearity (Castells 2001:13-14). The Internet is felt to blur temporal boundaries, and provide greater flexibility (Green 2002, Lee and Liebaneau 2000), enabling work to be carried out from home, and non-work to be conducted in the work place.

However, discussion of these societal changes has often lacked support from empirical evidence (Webb 2004). As a result, it is argued that theories of large-scale social changes often overestimate the impact of such changes in day to day life, while research shows stability and continuity in areas such as family life, as well as fluidity and change (Silva 2004). Furthermore, while studies illustrate increasing reflexivity in social identities, they also demonstrate the continuing importance of traditional identities based around gender, class and community (e.g. Savage 2000, Skeggs 1997, 2002, Wajcman & Martin 2002, Webb 2004). It is therefore argued that such theoretical discussions need to be located within an examination of their implications for everyday lives and practices (Silva 2004). This is something which will be addressed in this thesis, in conducting a micro-analysis of everyday practices, temporalities, and spatialities in relation to ICT use in the home. However, by examining the biographies of respondents, this study also explores lived experiences of the technological and social changes in the 20<sup>th</sup> century that have been documented by sociologists. In doing so, it addresses how "the personal, the embodied everyday life is implicated in (and implicates) wider phenomena" (Silva 2004: 182). The tension between change and continuity in such experiences is something which will be returned to throughout this thesis.

### **Structure of the thesis**

The central arguments of this thesis will now be set out in the following order. The next two chapters review the relevant literature, and identify gaps in previous understandings of this area. Chapter two will critically evaluate previous research on computer and Internet use among older age groups, and will lay out the theoretical framework for this study. It will be argued that while research on everyday experiences of Internet use among older age groups is increasing, it needs to address the location of these experiences within everyday



spaces, and the temporalities, spatialities and relationships in these spaces. In addition, it will also be argued that there is a need for research on Internet use in later life to incorporate more complex ideas of ageing, to qualitatively address heterogeneity *within* older people, and to unpack differences between ageing and generation/cohort effects. It will be argued that research in this area can be developed through connection to sociological literatures on ageing, gender, everyday life, time and space, and embodiment. In the light of these issues, this chapter argues for an approach which brings together biographical and everyday life perspectives, to understanding the use of technologies in later life.

Following this, *chapter three* examines the context of the home in greater detail, and discusses previous literature on the home and technology use. However, it will be argued that there is a lack of research on the use of computer and Internet technologies in this space among older age groups. It is relevant to explore domestic Internet and computer use among this group though, as relations around the home and technology use change throughout the life-course. Building on previous research on younger age groups, and using the 'domestication framework', this chapter outlines key research questions which will be explored in this thesis.

Drawing on the issues identified in chapters two and three, chapter four presents a preliminary quantitative data analysis exploring patterns of Internet use among older adults. It explores the relation of Internet use to broader aspects of everyday life, including leisure and lifestyle activities, perceptions of ageing, and living situation. It also attempts to unpack the reasons for differences within older people, such as those based around gender. Findings indicate that caring is a significant constraint on the likelihood of using the Internet, and also suggest that caring activities may help explain gender differences within older people. They also demonstrate significant associations between Internet use and life-styles/leisure activities, as well as living situation, although there were not clear differences between Internet users and non-users in perceptions of 'old age'. While this quantitative analysis was useful in identifying important factors which relate to Internet use in later life, in order to understand the meanings of these issues in greater depth, it is argued that they need to be explored qualitatively.

In the light of this, chapter five discusses the qualitative methodology that forms the main method of data gathering in this thesis. It discusses the theoretical/epistemological and

practical reasons for the choice of qualitative methodology, and the choice of sampling methods and research design. In seeking to address biographical experiences of technology use throughout the life-course, and everyday use of these technologies within the home, this chapter draws on biographical and ethnographic research strategies. It is argued that a multi-method design incorporating interviews, time-use diaries and 'quasi-ethnographic' methods is most appropriate for addressing the research questions of this study. This chapter also reflexively explores the processes of negotiating access, interviewing, and analysing data, and reflects on relations between researcher and participants.

The chapters following this present the findings of the qualitative analysis, which are organised into six thematically based chapters. The first of these, chapter six, examines the 'technobiographies' of participants, and changing experiences of technology use throughout their life-courses. It also explores the narratives of technological change that emerged during interview discussions. In describing technological change over their lifetimes, this led to a sense of the passage of time and changing age identities (Hockey and James 2003). When discussing new technologies like the Internet, participants often placed them at odds with their identities as 'older people', and reconstructed binaries between young/old. However, this chapter illustrates how such divisions are not static, but reflect cohort differences in the technologies experienced during the formative period.

Participants described themselves as 'growing up' with the radio in the same way that young people today have grown up with the Internet, and it therefore remained an important technology throughout their lives. It is therefore argued that age divisions in Internet use reflect cohort differences in biographical experiences with technologies, rather than simply the circumstances of 'old age'.

Building on these arguments, chapter seven explores the embodied dimensions of 'technobiographies' and the interconnections between ageing, biography and generation. It demonstrates how changes in technology use over time prompt changes in embodiment, which are experienced differently by different cohorts. In contrast to early constructions of Internet use as disembodied, as with other 'body techniques', the acquisition of computing skills involves incorporating practical knowledge which can only be 'learned by doing' (Crossley 2007). Changes in the ageing body over time are also explored, in relation to the intersection of the lived body with broader cultural discourses. This chapter provides new insights into literatures on embodiment, ageing and technology use, which are discussed.

While previous chapters focused on biographical experiences of technology use, the following three chapters explore current experiences of use within the home. However, they also demonstrate how these practices, values, and experiences of technology use in later life are situated within biographical experiences throughout the life-course, particularly formative experiences. Chapter eight focuses on the transition to retirement and negotiation of the work/leisure boundary, and explores the relation of technology use to these boundaries. In contrast to studies of young people, computer technologies were often seen as work rather than leisure, which reflects the fact that many participants initially encountered them in a work context. While in a sense, it could be argued that computers blurred traditional boundaries between work and leisure by bringing the meanings of work into domestic space, participants re-constructed their own temporal and spatial boundaries in relation to technology use. These boundaries related to earlier experiences of technology use, and the strong 'work ethic' found among older generations. Although perceptions of technologies as work/leisure were not clearly gendered, there were gender differences in the construction of work/leisure boundaries in retirement, which reflected gendered biographies.

Following on from this, chapter nine examines the context of the home in more depth, and addresses other spatial meanings and relationships which shape technology use in this sphere. It is argued that the home is not static but changes throughout the life-course, and that the 'domestication' of technologies is an ongoing process, which continues as household needs and dynamics change (Ward 2006). This includes changes in the spatial location of technologies, and changing relations around technology use in the home. However, there were also continuities in the organisation of space and technology use, and the radio which was used during participants' formative years, was most highly integrated into household spaces and activities. In contrast, as a newer technology the computer remained not fully trusted or domesticated, and was often kept in a 'separate space' out of the way. Gender relations around technology were more complex than may have been expected from earlier research (e.g. Wheelock 1992), and varied between different households. Competition for and control of technologies did not appear traditionally gendered as may be expected either. However, traditional gender divisions emerged in the meanings of technologies and skills. This highlights the tension between change and continuity in the gender-technology relation.

While chapter nine focused on spatial relations, chapter ten explores how ICT use relates to everyday routines and experiences of time in retirement. It also critically assesses the association of the Internet and computer technologies with increased speed and temporal flexibility (Green 2002). Rather than 'effecting' temporality in predictable ways, the use of computers and the Internet was situated within multiple and intersecting temporalities in retirement. Furthermore, these technologies were not always 'instantaneous' and time-saving, but could 'take-up' or 'waste' time. Although it was felt the Internet could be used 'anytime', time use diaries revealed more patterned times of use. While the Internet was often on a daily basis, it was less integrated into embodied routines than older technologies like the radio, which was often on 'throughout the day'. There were also gendered constraints on time to use technologies, and as found in chapter four, caring and domestic chores constrained women's time to go online. This illustrates the importance of bringing together theories on broader changes in temporality, with analysis of everyday experiences of time and technology use (Green 2002, Wajcman 2008).

As well as being situated within the temporalities and spatialities of the home, chapter eleven examines ways in which Internet use may extend and trouble these temporal and spatial boundaries. One of the key uses of the Internet in this study was for maintaining social networks with family and friends, both abroad and spread across the country. It also enabled the extension of relationships temporally, through use of the Internet to get in touch again with old friends using 'Friends Reunited', to organise reunions with friends and family, or explore family history online. This chapter supports arguments that rather than leading to a decline in offline sociability, online and offline spaces are highly interconnected (Valentine and Skelton 2008:481, Wellman et al 2002). It further illustrates how the Internet was used to revive 'dormant' relationships. The ability of the Internet to transcend temporal and spatial boundaries was not always perceived positively though, and could be experienced as demanding, and as bringing new risks into the home. Practices of online social networking again reflected generational patterns, and were situated within biographical experiences and practices of communication and technology use.

These findings chapters will be followed by a discussion chapter, which draws together the central themes of the study, and their implications for policy debates and sociological theory and research. Here the central argument of this thesis will again be reiterated: that Internet and computer use in later life need be understood in the context of 'embodied technobiographies', including both personal biographical experiences of technology use

throughout the life-course, and shared experiences with members of the same historical cohort or generation. In terms of the implications of this for understandings of the relation between 'older people' and Internet use, it will be argued that age divisions reflect different cohort experiences, rather than simply physiological or social changes in old age. Furthermore, these findings suggest that the relation between Internet use and old age is a changing relation that will shift as younger cohorts enter retirement, bringing different technological experiences within them. The argument that such biographical experiences and cohort differences are 'embodied', lends particularly unique insights into understandings of technology use in later life, and broader sociological literatures on technology and embodiment, which will be drawn out in this chapter. These findings also have practical implications for engaging older Internet users, and designing more suitable technologies, which will be discussed. Following this, the final concluding chapter sums up the key findings and arguments made in this thesis, and discusses possibilities and directions for future research. It highlights how this study has captured the unique experiences of a particular cohort(s), but also stresses the broader implications of these findings, and the relevance of the concept 'embodied technobiographies' for sociological literatures in various areas.

## **Chapter two**

### **Technology use in context: Extending current research on Internet use in later life**

This chapter reviews previous research on Internet and computer use among older adults. It will begin by giving a general overview of key developments in this field, before going on to explore particular studies in detail, in relation to key areas of interest. It will be argued that over the last decade, research in this area has greatly expanded, examining possible reasons for a lack of engagement with computer technologies among this group, and the practices and experiences of older Internet users. However, there are several limitations and areas in need of further research. Many of these limitations centre on the need to develop more complex ideas of ageing, by qualitatively addressing heterogeneity within older people, situating understandings of ageing and 'old age' within their broader social context, and unpacking differences between ageing/period/cohort/generation. It also argued that while research has increasingly examined the everyday experiences of older Internet users, these need to be contextualised within everyday times, spaces and interactions, and within changing experiences of technology use throughout the life-course. In seeking to address these gaps, this chapter draws on broader sociological literatures concerning ageing and the life-course, biography, gender, everyday life, time, space and technology. It then sets out the theoretical framework of this study, arguing for a biographical and everyday life approach to understanding old age and technology, and the relations between them.

#### **Previous research on Internet and computer use in later life**

We will begin with a general overview of existing research on older people and the use of computers and the Internet. Discussions in this area have often centred on the age-related digital divide, and the exclusion of older age groups from the use of these technologies (McMillan et al 2009). Age has been described as the biggest divide between users and non-users (Oxford Internet Institute 2003), and during 2007 only 31% of British retirees had access to the Internet, compared with 81% of people of working age, and 97% of students (Dutton and Helsper 2007). This age division has emerged in surveys of Internet access across various countries, including Canada (McDaniel 2002), the United States (Fox 2004, 2005a, 2005b, 2006), and Australia (Brabazon 2008a). Older people are over-

represented in the 'truly disconnected group', and there are a large number of older people who have never used the Internet (Fox 2005b, 2006, Dutton et al 2005, National Statistics Online 2005). However, they are slightly more likely to use a computer, and the PEW Internet project in 2004 found that out of those over 65 years old, 29% had used a computer at least occasionally, compared with only 22% going online (Fox 2004). Levels of Internet use among older adults are also considerably lower than their use of mobile phones (Fox 2006, National Statistics Online 2005, Selwyn et al 2003). Discussion of these divisions are often framed in the context of the 'Information Age' (e.g. Jaeger 2005, Selwyn et al 2003, Selwyn 2004) in which information has replaced manufacturing as central to the economy, and new Information and Communication Technologies (ICTS) are transforming various aspects of society (Holloway and Valentine 2003). With an increasing number of services and amenities going online, it is feared that those without access to the Internet will become increasingly marginalized from various areas of social life (Jaeger 2005). Government policies and literature on this topic have therefore focused on the importance of getting groups such as older people to engage with computer technologies, and the benefits of their use (Selwyn et al 2003).

In the light of these issues, research has sought to investigate why older groups are not using the Internet, and how usage among this age group may be increased. Much research has been conducted in the disciplinary field of 'human-computer interaction' or 'human factors' research, and has often focused on declining sensory/perceptual, motor, and cognitive functions, as barriers to using these technologies in later life (e.g. Jastrzembski et al 2005, Fezzani et al 2008, see Czaja and Lee 2008 and Xie 2003 for reviews). Other barriers identified include the poor design or usability of computer technologies, and lack of prior experience. As a result, researchers in this area have sought to apply these findings to designing computer hardware and software that is easier to use (e.g. Dickinson et al 2005), and able to accommodate decline in physical and mental capabilities in later life (e.g. Casali 1992 cited in Czaja and Lee 2008). Other research in this area has evaluated the effectiveness of different methods of training for older age groups, and found that while older age groups may take longer to acquire new technological competencies, their skills improve most effectively with 'hands on' training (see Czaja and Lee 2008 for review). Such research adds to our understanding of differences between younger and older age groups (Xie 2003), and also has practical benefits. However, it has been critiqued for various reasons. Firstly, it has been argued that such research and literature generally

portrays older people as a 'homogenous group' and focuses on disability and decline (Ostlund 2002, 2005). There are exceptions though, and more recent work has challenged the association of old age with decline (e.g. Reed 2009), as well as addressing heterogeneity within older people (e.g. Newell and Gregor 2000 cited in Eisma et al 2004). There have also been attempts to incorporate the views and input of older people into the design process (e.g. Eisma et al 2004). Nevertheless, the artificial laboratory environment of such studies has little resemblance to the 'real-life' social environment in which these technologies are encountered, and therefore is limited in terms of understanding their everyday usage (Xie 2003).

In seeking to understand 'digital divides', it is argued that we need to address the views of non-users themselves, and their reasons and motivations (Selwyn 2004, Wyatt et al 2005). The Oxford Internet Survey in 2007 provides some information about this, examining reasons for use and non-use of the Internet by life-stage. It found that the most common reasons for non-use among all life-stages included; not knowing how to use a computer or the Internet, not having a computer, and computers and the Internet being difficult to use (Dutton and Helsper 2007). However, retirees were more likely to say they didn't use the Internet because it was 'not for people their age', 'not useful', or 'not interesting'. This provides useful information about reasons for non-adoption of computers and the Internet; however, it is difficult to explore these reasons in detail using quantitative survey methodology (Xie 2005). There is now an increasing amount of qualitative and quantitative research on older Internet users, which has explored their motivations for use and non-use. Such research has often found that contrary to the emphasis on the benefits of the Internet for older people in much policy literature, many older people do not feel that the Internet is relevant to their daily lives, and are not interested in using it (Dickinson and Hill 2007, Selwyn 2004, Richardson et al 2005). This is in contrast to the portrayal of older age groups as 'digitally disadvantaged', and highlights how for many the decision not to use these technologies may reflect agency or choice (Wyatt et al 2005). Another reason for not using computers and the Internet that has emerged in a number of studies is feeling 'too old' (e.g. Dickinson and Hill 2007, Selwyn et al 2003, Selwyn 2004, Turner et al 2007). Other reasons for non-use include costs, lack of access, lack of time, fear of using computer and Internet technologies, mistrust of online transactions, and physiological or health limitations (Dickinson and Hill 2007, Gatto and Tak 2008, Richardson et al 2005, Selwyn et al 2003, Turner et al 2007). Lack of experience with using computers in the



workplace has also emerged as important factor, although Selwyn (2004) found that many who had used computers in work later gave up after retirement. On the other hand, factors which motivated taking up computer and Internet use in later life included; 'connectedness' to friends and family (Richardson et al 2005), 'keeping up to date', and desire to use computers in relation to a particular activity or hobby (Dickinson and Hill 2007, Selwyn 2004).

While it is important to examine reasons for non-use of computer technologies, it is argued that we need to go beyond depictions of older people as 'have nots', to examining the practices of those who do use the Internet and computers (McMillan et al 2009). Although the proportion of older computer users is small, it has increased rapidly in recent years (Brabazon 2008a). Furthermore, digital divisions do not only involve access, but also divisions in the "extent of use, knowledge of search strategies, quality of technical connections and social support, ability to evaluate the quality of information, and diversity of uses" (DiMaggio et al 2001:310). Therefore it is important to examine practices of use as well as levels of access. While being less likely to go online, recent research in the UK by Ofcom (Allen 2007) has found that retirees who do use the Internet spend more time online than any other age group, spending a total of 42 hours every month online, compared to only 25 hours a month among teenagers. Survey data shows that the most popular use of the Internet among older age groups is email (Fox 2004), while the main use of the computer is for word processing (Selwyn et al 2003). While retirees are just as likely to use email as younger age groups, they are less likely to use instant messaging, chat-rooms or to write a blog (Dutton and Helsper 2007). In analyses of survey data it also emerged that older people were less likely to use the Internet to search for information about a hobby than younger age groups, surf it for fun, or download music (Fox 2004). On the other hand, the use of the internet to explore an interest in family history is higher among older age groups (Fox 2004, 2005a).

However, while providing useful information on general patterns of Internet usage among older age groups, quantitative data is limited for how much it can tell use about the meanings or context of these practices (Xie 2005). A growing number of studies have qualitatively explored experiences of these practices, and their location within older people's everyday lives. Some have focused on particular practices such as email, and illustrated its importance in maintaining intergenerational relationships with distant family members (e.g. Blit-Cohen and Litwin 2002, Climo 2001), although email was not always

embraced as the best method of communication (Dickinson and Hill 2007). Although the use of online forums and chat-rooms is not a frequent practice among older age groups, studies have also examined online interactions in these sites, and highlighted their value in adding to existing sources of social support (e.g. Lin et al 2004, Kanayama 2003, Xie 2005). Research has also explored the use of the Internet for health information among older age groups, and found that while it can be empowering for older patients to have access to this information, there was often mistrust of online sources (McMillan et al 2009). Other qualitative research has examined more general everyday experiences of Internet use among this age group (e.g. Hilt and Lipshultz 2004, Hill et al 2008, Saunders 2004, Richardson et al 2005, Selwyn 2004). Such research demonstrates the importance of family members in the process acquiring and learning to use computers (e.g. Saunders 2004, Selwyn 2004), and the difficulties of learning computing where such support is not available (Richardson et al 2005). It also illustrates the importance of going beyond thinking of computers and the Internet in purely positive terms, revealing ambivalence towards these technologies among many older people (Selwyn 2004), as well as feelings of anxiety and lack of confidence (Richardson et al 2005). In addition, it shows the importance of going beyond individualistic explanations for the adoption or non-adoption of computers among older adults, and demonstrates the role of contextual or situational factors and relationships in shaping such decisions and experiences (Richardson et al 2005).

These studies provide considerable information on the everyday practices and meanings of Internet use among older age groups. However, a number of issues remain in need of further exploration. With some notable exceptions (e.g. Richardson et al 2005, Riggs 2004), the majority of studies have not qualitatively explored how differences between older people in terms of gender, class and cohort shape practices and experiences of Internet use. Furthermore, while research has increasingly contextualised the practices of older computer users within everyday life, the everyday spaces, times and interactions within which technology use is embedded are often neglected. The location of the experiences of older computer users within biographical experiences of technology throughout the life-course has also been under researched. Theoretical approaches to ageing and technology are also often underdeveloped, which can limit analyses. These issues will now be unpacked, and suggestions for developing these areas will be made,

drawing on sociological research on gender, everyday life, ageing, biography and technology.

### **Heterogeneity within ‘older people’: examining intersections with age**

We begin by addressing the issue of differences or heterogeneity within the category of ‘older people’, which is complicated by intersections with class, age, and ethnicity (Riggs 2004). Survey data has found that Internet use among older adults is stratified by income, with those from high-income backgrounds being more likely to go online (Selwyn 2003, Fox 2004). In Britain, older men are more likely to use the Internet than older women (Selwyn et al 2003, National Statistics Online 2005), although this gender gap has closed among older Internet users in America (Brabazon 2008a). Additionally, Internet use is lower among Americans with a chronic illness or disability (Fox 2006), although health seems a less significant factor when examining older people’s Internet use alone (Selwyn 2003). Within the category of ‘older people’, Internet use is also stratified by age, with much higher levels of Internet use among people in their 60’s than those over the age of 70 (Dutton et al 2005, Selwyn et al 2003). However, while studies have examined such differences among older Internet users quantitatively, and research and design literature increasingly recognises ‘heterogeneity’ within older people (e.g. Czaja and Lee 2008) there is a need to go beyond examining such differences as a variable, to understanding how and why they are produced (Kennedy et al 2003). It is argued to be particularly important to address gender, due to the gendered nature of experiences of ageing (Xie 2003). As women are traditionally less likely to have been employed in the labour force, and are also likely to live longer, they are more likely experience poverty in old age (Vincent 2003, 2006). The greater emphasis on physical appearance for women, and the placement of ageing bodies at odds with norms of attractive femininity, also makes growing older a more difficult experience for many women (Twigg 2004, Woodward 1991).

In addition, gender is also highly significant in shaping experiences of technology use, and it is argued that research on computer and Internet use in later life needs to be connected to critical literature on the gender-technology relation (Richardson et al 2005). Such literature has highlighted the exclusion of women from the design of technology, and the gendered meanings of technologies and skills, through which women are constructed as being less technologically competent (Wajcman 2000). While ICTs such as computers, the Internet, and video recorders are regarded as ‘high technology’, domestic appliances and the skills

many women employ in using them are seen as non-technological (Cockburn and Omrod 1993). As a result, early theorists viewed technology as both a result of the patriarchal oppression of women, and as reproducing this oppression (Gill and Grint 1995). However, the notion of patriarchy in both studies of technology and broader feminist literatures has been widely critiqued, for denying women's agency and presenting them as 'victims', and ignoring differences between women and within men (Bryson 1999, hooks 1984, Nicholson 1990). In relation to postmodern and poststructuralist theories, there has been a shift in sociological theory from notions of power as something possessed by an individual or group and used to dominate others, to Foucauldian accounts of power as dispersed and operating productively as well coercively (Hekman 1999, Omrod 1995). This is reflected in the re-conceptualization of gender as something which is 'done' or performatively constituted in interactions (West and Zimmerman 1987, Butler 1990). Nevertheless, while there is not space go into these debates fully here, it must be noted many feminist theorists have rejected post-structuralist or post-modernist approaches, and they have been critiqued for making it difficult to retain a political focus, and awareness of the continuation of material constraints and inequalities (see hooks 1984, Raisborough 2002, Scraton 1994, Spelman 1988). In the light of this, feminist researchers in the field of technology studies such as Omrod (1995) and Silva (2000) have sought to incorporate attention to fluidity and diversity in relations with technology, while retaining an awareness of ways in which normative gender discourses and hierarchical relations may be stabilised as well as challenged or resisted.

Shifts in feminist theory have also highlighted the importance of addressing intersections of gender with dimensions of identity such as class, ethnicity and sexuality, although intersections with age are often comparatively neglected (Riggs 2004). This is particularly the case in the field of technology use, and while studies of older people have often ignored gender, research on gender and technology has generally neglected older age groups. Nevertheless, a couple of studies have begun to qualitatively address the intersections between ageing, gender, and technology. For instance, Riggs (2004) explored these relations in the context of the work place, through examining discussions in online message boards, conducting online and offline interviews with older workers, and analysing depictions of ageing and technology in the media. Her research illustrated how age, gender, and class intersect in shaping experiences of using these technologies. For instance, while all members of older cohorts experienced dramatic changes involved in the

computerisation of the workplace, women's experience of computers was more likely to be gained in clerical positions, while men who used computers were more often employed in managerial or professional occupations. However, while these women had less control over the implementation of computers in the work force, they had the advantage of having previous typing skills which helped when learning computers. Class and ethnicity also shaped relations around computing in later life, as those in blue collar jobs had less access to computers and the Internet in work. Working class and black women were more likely to be financially disadvantaged in later life, and therefore often learned computing as part of returning to work.

Other research by Richardson et al (2005) interviewed male and female computer users about their experiences, and noted a greater level of technophobia among older women, while men were more likely to portray themselves as competent computer users. They also found that women were more likely to feel guilty about time spent using the Internet or computer, due to it taking away from time spent on domestic activities. This reflects previous research on women and leisure (e.g. Green et al 1990), and television viewing (Morley 1992, 2000), in which women described feeling guilty about taking time for leisure, due to domestic division of labour in the home. Research on Internet use has also found that women are more likely to feel guilty about time spent online (Haddon 1999), and that caring activities reduce Internet use (Blackburn et al 2005). Although such research has focused on younger age groups, research on older women and leisure illustrates how they still take primary responsibility for domestic and caring activities in retirement (Askham 1995, Bernard et al 1995, Thompson et al 1991). As a result, these activities therefore remain a constraint on women's leisure time (Mason 1988). However, whether lower rates of Internet use among older women are shaped by the constraints of domestic activities on Internet use remains relatively unexamined. In order to better understand the nature of gender divisions there is need to further explore the context and interactions in which they take place, in home as well as work settings.

### **Contextualising computer use within everyday life: 'real' times, spaces and bodies**

Part of understanding digital divisions between older and younger age groups, and within older people themselves, involves examining their micro-construction within everyday settings (Lim and Tan 2003). While qualitative research on the everyday experiences of older Internet and computer users is increasing, there is little research situating it within

everyday times, spaces and interactions. The failure to locate use of computer and Internet technologies within everyday contexts is not just problematic in studies of older age groups, but has been an issue in general studies of Internet use. Early research on the Internet tended to focus on 'cyberspace' and online interactions as disembodied, and separate from 'real' spaces and bodies (Holloway and Valentine 2003, Miller and Slater 2000). However, there is growing recognition that in order to understand the implications of the Internet, and move beyond utopian or apocalyptic discourses, there is a need to examine the use of this technology within everyday life (Haythornthwaite and Wellman 2002), and the material, temporal and economic constraints within which it is located (Argyle and Shields 1996, Holloway and Valentine 2003).

Developing such an understanding would benefit from connection to broader sociological literatures on everyday life, time, and space. The sociology of everyday life is defined by Bennett and Watson (2002) as "...an area of inquiry in which the study of forms of social behaviour and social interaction that take place within everyday social settings, and the analysis of more general social processes and relationships, meet and intermesh" (p ix). Although the sociology of everyday life incorporates varying sociological traditions including ethnomethodology, interactionism, phenomenology, it is unified by a focus on 'ordinariness' and the micro or local aspects of social life involved in everyday interactions (Alder et al 1980, Bennett 2002). As such, it works as critique of macro perspectives in sociology, and over-deterministic accounts of the effects of social structures (Alder et al 1980). However, as indicted in Bennett and Watson's definition, this approach also highlights the interconnection of the micro and macro, and the reciprocal relation between local interactions and broader structures or power relations (Hemmings et al 2002).

In examining interactions in local settings, space is a central aspect of the sociology of everyday life (Hemming et al 2002). The home has been described as particularly important site (Felski 1999-2000); however, there are multiple spaces involved in the everyday, including work, home, and public leisure spaces. Space is more than simply a neutral backdrop for everyday interactions though (Hemmings et al 2002) but is inherently social, and shaped by social relations, as well as shaping these relations (Zieleniec 2007). Space is also imbued with cultural meanings, which shape interactions in these settings, including the representational meanings of advertisers and designers, and everyday lived experiences or understandings of space (Hemmings et al 2002). Social relations such as gender are therefore spatialised, in terms of power and exclusions, and the interrelations

between symbolic constructions of gender and of space (Massey 1994, Duncan 1996). For instance, the gendered division of labour is also a spatial division, in terms of the division between public/private, work/leisure, home/work spaces which developed during industrialisation (Valentine 2001). Age divisions in society are also spatialized (Laws 1997), illustrated by the marginalization of older people from public spaces and increased time spent in domestic space, as well as specifically age-segregated spaces such as retirement homes and communities.

It is argued that an examination of space cannot be separated from time (Massey 1994), which is also a central component of the study of everyday life (Felski 1999-2000). Researchers have highlighted the 'social' nature of time, as something which shapes the organisation of social life, and is understood through social meanings and measurements, which vary across history and cultures (Urry 2000). However, the distinction between 'social' and 'natural' time has been critiqued, and it is argued that our meanings and interpretations of time cannot be separated from 'natural sources' (Adam 1990). In examining everyday life, the temporalities of routines and repetition have been emphasised as vital to the structuring of daily activities, although time is generally 'taken for granted' and rarely made explicit (Adam 1990, 1995). In modern industrialised societies, clock time is the dominant temporality which structures our everyday lives, and the timetabling of work and leisure activities, travel, and education (Urry 2000). Prior to industrialization, work was argued to be 'task orientated' and based on the duration of tasks, rather than being timed by the clock (Thompson 1969). However, the reduction of modern temporality simply to the times of clocks and calendars has been critiqued, and it is argued that these are still intertwined with a multiplicity of other intersecting temporalities, including the 'natural times' of the body and environment (Adam 1995).

Theories of time, space and everyday life have also been applied to understanding technology use, and there is a growing body of research examining the role of technologies within everyday life (Haddon 2004). Early studies have focused on the integration of the television, telephone, and home computer into daily life in the home and other spaces (e.g. Ang 1992, Morley 1992, Murdock et al 1992). In theorising these relations, Silverstone (1994) stresses the role of television in the organisation of everyday life, and the maintenance of ontological security. Ontological security is defined as "...the confidence that most human beings have in the continuity of their self identity and in the constancy of

the surrounding social and material environments of action” (Silverstone 1994: 5 citing Giddens 1990:92). This sense of trust and continuity is maintained through the familiarity of daily routines, repetition, and rituals. Silverstone argues that the broadcast schedules of television have a central role in maintaining and structuring these daily routines, and television has become a ‘taken for granted’ part of our everyday lives and activities. While this work was written some time ago, and television may now be less significant in shaping the routines of families (Silva 2002), it is argued to be particularly important for those outside of employment such as housewives and retirees (Haddon and Silverstone 1996, Haddon 1999). Such research illustrates how technologies such the television and radio have become embedded into the ‘ordinariness’ of everyday lives and contexts (Bennett 2002). Whether the Internet similarly has become part of everyday lives, routines, and spaces is still open to investigation though. Authors have begun to emphasise the importance of addressing the ‘real life’ spaces in which Internet use takes place and the meanings relationships in these settings (e.g. Holloway and Valentine 2003, Miller and Slater 2000). Studies have explored the integration of computers and the Internet into spaces such as the school (Holloway and Valentine 2003), home (e.g. Livingstone 2002, Frolich et al 2003, Ward 2006), and workplace (e.g. Lupton and Noble 2002). However, research has mainly focused on workers, young families, or teenagers.

There appears to be relatively little research on older people’s Internet and computer use in everyday contexts, although there a few exceptions. For instance, as we have seen, Riggs (2004) explored how interactions of the workplace shaped the gendered nature of Internet use in later life, and examined experiences of the integration of computers into this sphere. Richardson et al’s (2005) research points to the constraints of the domestic context, however, they did not examine the context of the home in detail, rather this was something that emerged in general interview discussions about the problematic aspects of Internet use. There are only a couple of studies which have explored how Internet and computer use among older age groups are situated within the home context. One of these was conducted by Lim and Tan (2005), and explored the use of the Internet within extended family homes in Singapore. They found that although older people had access to the Internet in these households, they often did not use it due to a lack of interest and knowledge, and became dependent on the use of younger family members. However, this research was based in Singapore, and further research would be needed in order to address whether such findings would apply elsewhere. It was also conducted some time ago, given the rapid changes in



Internet and computer technology, and the increasing number of older people going online. Furthermore, this study did not examine situations in which older people lived alone or with a spouse. Gender relations around technology use in the home were also not addressed in this study, and neither Lim and Tan (2003) or Riggs (2004) explored the temporal and spatial dimensions of computer use. However, case study research by Brabazon (2008a) has begun to explore these issues, examining her parents' computer use in their home in Australia. This study again illustrates how broader digital divides may be constructed in everyday context, and she found that while her mother had access to the Internet in their household, she did not use it due fear and lack of confidence, as well as lack of motivation. This exclusion is argued to reflect the gendering of technology and relations around space in the home, in which the computer was located separately in a room which represented her father's personal 'masculine' space, which he described as 'his shed'. However, while highlighting interesting gender relations, this is only an example of one retired couple, and further research is needed to examine these relations on a broader scale. Future studies of older people's Internet use need to take into account its location within everyday spaces, interactions, and temporalities, as well as the negotiations within these contexts shaped by age, gender and class.

### **Embodiment and Internet use in later life**

In examining everyday life, the body or embodiment is a central part of these experiences, as Nettleton and Watson (1998:1) argue 'every aspect of our lives is embodied.' Part of contextualising Internet and use within everyday life therefore involves examining the embodied dimensions of these everyday experiences. In examining the body in everyday life, I have drawn on literature from an 'embodied sociology', which is distinguished from the 'sociology of the body' by its focus on the lived experiences of the body, and the embodied basis of social action (Williams and Bendelow 1998). This perspective challenges the view that the mind can be separated from the body, as our consciousness and 'point of view on the world' are grounded in our embodiment (Crossley 2007:82). Our everyday activities are therefore rooted in our embodiment, although we are not always conscious of it (Nettleton and Watson 1998). These phenomenological perspectives on embodiment as a basis for our perceptions have recently been brought to examining interactions with computer technologies. Theorists of 'tangible' or 'embodied' computing such as Dourish (2001) have critiqued the predominance of Cartesian-dualism and

outdated theories of 'abstract cognition' in computer science. In seeking to design better computers, he has argued that computing should be understood as form of 'embodied interaction', which is 'embedded in everyday settings' (Dourish 2001: 19).

Such an approach is in contrast to the view that older people may be able to escape the constraints of an ageing body through online interactions (Featherstone 1995). To an extent, there is some evidence to support the idea that the Internet can be used to escape embodied aspects of identity. For instance children in Holloway and Valentine's (2003) study pretended to be older or more attractive when interacting online, and disabled people have found that the Internet enables them to avoid the basis of initial judgements on the appearance of their disability (Seymour and Lupton 2004). However, the fact that ill-health or disability deters older people from going online (Blit-Cohen and Litwin 2004, Selwyn 2004, Saunders 2004), illustrates the relevance of embodied constraints, rather than an escape from the body. Furthermore, looking up health information is a highly popular activity among American older adults (Fox 2004). Studies have also shown that discussion of the body or embodied identities is important part of older people's interactions in online communities, rather than being disguised (Lin et al 2004, Kanayama 2003). Therefore it seems that as with other age groups, online practices are shaped by offline 'embodied' experiences, interests and identities (Holloway and Valentine 2003). Research has yet to examine older people's experiences of embodiment and Internet use, and it would be interesting to investigate such issues further. This could involve addressing questions such as how offline lived experiences of embodiment in later life shape online experiences, or further exploration of the presentation of embodied appearances and identities in online interactions.

### **Theorising ageing and 'old age'**

Another area which has often been neglected in previous research on older Internet users is the development of theoretical approaches to ageing and old age, and connection to broader literatures on these topics. Nonetheless, previous research indicates the relevance of ideas about old age in shaping engagement or disengagement with computers and the Internet among older age groups. We have seen how 'feeling too old' frequently emerged as a key reason for not using the Internet, and Selwyn (2004) also found that 'preparing for difficulties in old age' was an important reason for going online. Other qualitative research suggests the importance of concepts of age to older adults' practices of Internet use. For

instance, Blit-Cohen (2004) found that older people who used the Internet had more positive attitudes toward ageing and the ability of older people to use technology, while research by Lin et al (2004) found that older people's constructions of identity in online communities drew on both positive and negative views of ageing. However, these studies fail to locate such attitudes within a broader social context, or within current cultural images of ageing, although there are exceptions such as Richardson et al (2005) who have begun to address such issues. This leaves the questions of where these ideas of ageing come from, and why different older adults hold particular attitudes toward ageing and technology. Furthermore, in many studies, the categories of 'older people' and 'the elderly' are often used unproblematically, which reproduces concepts of chronological age as a 'natural' or objective fact (Laz 1998). Although there are several exceptions (e.g. Jaeger 2005, Reed 2009, Riggs 2004), there is a need for more research on older Internet and computer users to critically examine and unpack concepts of 'old age' and 'ageing'.

In the light of these issues, we will now briefly examine sociological concepts of ageing and 'old age', and the broader social context of these concepts. In contrast to views of chronological ageing as merely an 'objective' fact or natural process, anthropological, social constructionist, and life-course approaches have highlighted how meanings of ageing and age categories vary across cultural and historical context (Blaikie 1999, Laz 1998). These theories have demonstrated how concepts of the life-course have altered in relation to socio-cultural change, with the fixed life-course stages of 'childhood', 'adolescence', 'adulthood' and 'old age' only becoming clearly defined with Western modernization in the 19<sup>th</sup> century (Hockey and James 2003). The modern categorisation of 'old age' in Britain as persons over 60 or 65 developed in relation the administration of pensions, and the emergence of a fixed age for retirement (Vincent 2003). Prior to this, old age was not defined chronologically, but based on the ability to work and remain independent. This structural definition of old age in relation to retirement is also related to particular cultural images, which have generally been negative (Kaufman 1986). Such images have associated old age with frailty, dependency, and physical and mental decline (Arber 1991, Featherstone and Hepworth 1993). In the light of such images it seems unsurprising that older people are seen as incapable of learning new technology, or that many see the Internet as unsuitable for people their age (Richardson et al 2005). Furthermore, computer technology and the information society have been constructed in

terms of youthfulness, modern values and speed, rendering them as the territory of youth rather than older people (Jaeger 2005).

However, it is argued that the socio-cultural changes in contemporary society which were discussed in the introduction, are leading to increased fluidity and fragmentation in life-course stages (Gilleard and Higgs 2005), and also changes in images of ageing (Featherstone and Hepworth 1991, 1993). In terms of 'old age', the increase in both early retirement, and in people returning to work or study after the retirement age, is blurring traditional life-course divisions of education/work/retirement (Blaikie 1999). Furthermore, consumer culture offers new possibilities for maintaining a youthful appearance and lifestyle, and as an important consumer group, older people are increasingly being targeted by advertisements presenting images of 'positive ageing' (Featherstone and Hepworth 1993). It is argued that retirement has been redefined as a period of leisure and consumption rather than decline and dependency. However, these new concepts of old age may also combine or draw on negative images of ageing. For instance, government encouragement of older people to be involved in active lifestyles could be construed as a reaction to the view of 'older people as a burden', and a way to reduce their dependency, and increase their contribution as consumers (Richardson et al 2005). Older negative images therefore necessarily co-exist, as it is in an effort to avoid such images of ageing that people strive to maintain a youthful appearance and lifestyle (Featherstone 1995, Hockney and James 2003). Constructions around age and computer use can be seen in the light of these co-existing discourses, for instance, the construction of 'older people as a problem' pervades much the government incentives to get older people online, and computer use can be seen as another way to reduce this burden (Richardson et al 2005). We have seen how much computer design and other literature in this area has drawn on negative depictions of older people in terms of mental and physical decline, loneliness, and dependency (Jaeger 2005, Ostlund 2002). Such intersecting discourses may also shape the practices and attitudes of older people themselves, and Richardson et al (2005), found that many people in their study drew across both discourses of 'active ageing' and 'the discourse of decline' in their accounts, although in complex and contradictory ways. While other studies have looked at images of ageing and technology in the accounts of designers and researchers (Ostlund 2002, Jaeger 2005) and the media (Riggs 2004), there is a need for more research examining the connection of these views to the experiences of older Internet users.

Such approaches highlight how ageing and 'old age' are socio-cultural phenomenon. However, in examining these structural constraints there is a danger of denying agency, and presenting age as 'over determined' (Laz 1998). As well as focusing on these 'macro' structures, it is argued that we need to examine the construction and negotiation of age categories in everyday 'micro' settings and interactions (Blaikie 1999, Lin et al 2004). Such an approach is also particularly appropriate for examining everyday experiences of technology use, and their location in everyday spaces. It is argued that meanings and experiences of age are situational, and vary depending on the particular context. This is illustrated by studies examining how meanings of old age are constructed during interactions in everyday settings such as retirement homes (e.g. Hazan 1994), travel agents (Ylanne-McEwen 1999), and exercise classes (Paulson 2005). Studies have also examined the construction of age in conversations in interview or focus group situations (e.g. Coupland et al 1991), as well as naturalistic settings. However, these everyday interactions also draw on broader cultural discourses around 'old age' (Paulson 2005, and Ylanne-McEwen 1999). Laz (1998) argues that like gender, age can similarly be understood as a 'doing', and something which is accomplished in ongoing interactions. He argues that such an approach brings together micro and macro positions, in examining how structural factors and constrain and enable everyday interactions, and how broader meanings around age are drawn on, reconstructed and challenged. Therefore, in examining everyday interactions around Internet use, it is important to retain awareness of the broader discourses around ageing and technology within which they are located.

### **Untangling age/period/cohort: a biographical approach**

We have seen how it is important to develop more complex understandings of ageing and 'old age' within research on technology use, and the importance of locating these concepts within socio-cultural context. Another issue that has been problematic in theorising the relation between older age groups and technology, and general research on later life, involves the difficulty of disentangling the effects of age from those of cohort or generation. While research has identified clear differences between retirees and younger age groups in the use of computers and the Internet, it is unclear whether they are the result of the specific material circumstances or physical changes experienced in old age, or the result of the different technological experiences and values of different cohorts. Such issues are fundamental to understanding the relation between older people and computer and the Internet use. If this relation is merely a generational effect based on a lack of

experience with computer technologies among the current cohorts of retirees, as younger generations enter retirement the age division will disappear (Xie 2003). Based on Internet use statistics in America, Fox (2004, 2006) argues that the ageing of the 'baby boomer generation' has already caused a big increase in Internet use among the 50-64 age group over the past six years, and is predicted cause a big future increase in the 65+ age group (Fox 2006). She also found that practices of Internet use among 'baby boomers' were more similar to that of younger age groups (Fox 2004). However, others are cautious about interpreting age divisions as the effect of generations. For instance, Selwyn (2004) found that while using computer technologies in work, many older people still gave up using them after retirement. It has been suggested that if the age gap is the result of the social and material conditions of retirement, if these conditions continue, so will the age divide (Xie 2003). However, despite the salience of this issue, there has been little research unpacking the tensions between age and generation among older Internet users.

In order to address this, it is first necessary to briefly examine concepts of 'generation' and 'cohort'. Both these concepts are often used interchangeably, in referring to a group of people born in the same period and subject to shared historical experiences (Edmunds and Turner 2002, Hareven 1994, Pilcher 1994). The meanings of the concept of 'generation' are somewhat diverse however, and it has been used to refer to kinship relations within the family, as well as to birth cohorts (Edmunds and Turner 2002). Furthermore, when used in relation to the shared experiences of birth cohorts, the concept of generation is also often associated with a shared generational consciousness or identity (Hardy and Waite 1997). This conception of generation draws on the work of Mannheim (1952), who argued that a generation in terms of shared location can be distinguished from a 'generation as actuality', which only exists "only where a concrete bond is created between members of a generation" (Mannheim 1952:303). However, what exactly this generational consciousness involves, and how it can be measured is somewhat unclear (Pilcher 1994) and therefore the concept of cohort is often seen as more easily applicable in research (Hardy and Waite 1997). Mannheim's theory of generations also presents the argument that 'formative experiences' acquired early on in life are particularly significant in shaping experiences and values of a generation, and their later experiences 'receive their meaning from this original set' (Mannheim 1952:298). This argument has been supported by research on various areas, including political attitudes (Alwin 1997).

The insights of this approach have also been applied to an emerging body of theory and research on 'media generations' (Bolin and Westlund 2009) or 'technology generations' (Sackmann and Weymann 1994 cited in Rama et al 2001). Such approaches argue that different generations or cohorts have shared experiences of using particular technologies in their youth or 'formative period', which then influence patterns of technology use throughout their lives (Bolin and Westlund 2009). Volkmer (2006 cited in Bolin and Westlund 2009) applied this approach to examining differences in media preferences and memories of news events. She found that the 'radio generation' (1924-1929) referred mainly to news stories from print media and the radio, the 'TV generation' (1954-1959) drew on mixed media representations, while the 'Internet generation' (1979-1984) drew on an international media environment, and rarely discussed print media. Research by Bolin and Westlund (2009) examined whether there were cohort differences in patterns of mobile use, and whether they remained consistent over time. They used survey data to examine patterns of use longitudinally, and found little differences in voice calling, but consistent generational patterns in text messages and sending images. However, the time span of their data was limited to a five year period.

Experimental research by Rama et al (2001) similarly investigated whether differences in using current electronic devices are the result of ageing or generational differences. They examined performances in using software-style interfaces, and found an age rather than generational effect in terms of task duration. However, in terms of the number of errors, they found a generational effect, in that participants born after 1960 (the software generation) made less mistakes than those born prior to 1960 (the electro-mechanical generation), which they argued is due to their formative experiences of using software style interfaces. This approach has not been specifically applied to understanding the experiences of older computers users though. However, while not applying the concept of 'media generations', Gilleard and Higgs (2008) have attempted to untangle the effects of ageing on levels of Internet use in UK survey data, from those of generation or cohort. They found that health and frailty variables did not explain the age/cohort effect, although age/cohort effects disappeared once the use of ICTs and participation in cultural activities were controlled for. They argue that this suggests a generational difference in engagement with consumer culture, rather than the effects of ageing. Their analysis was carried out through cross-sectional analysis though, and they argue that longitudinal research would be needed to further explore these issues, and determine whether the age related digital divide

will disappear among future generations of retirees. This research was again quantitative, and it is argued there is need for qualitative research to complement existing quantitative studies (Bolin and Westlund 2009), and explore how generational differences may relate to attitudes, values, and experiences of technology use

In seeking to qualitatively address the relations between generational experiences and age, it has been argued that a biographical approach can be used to examine these issues retrospectively (Jamieson 2002). Biographical approaches are important in challenging depictions of old age' or 'later life' as static categories, and situating them within experiences of change throughout the life-course (Blaikie 1999, Hockey and James 2003). A number of authors have used a biographical perspective in order to address personal experiences and meanings of growing older, and experiences of change and continuity throughout the life-course (e.g. Kaufman 1986). However, this biographical dimension has generally been neglected in previous studies of computer and Internet use in later life, which have failed to situate these experiences within technology use throughout the life-course (Jaeger 2005). There are some exceptions though, and quantitative research by Mollenkopf and Kasper (2005) has found that biographical experience with older technologies was an important predictor of Internet use in later life. However, there is a lack of research examining such issues qualitatively. Although research by Selwyn (2004) examined biographies of computer use in terms of when they were first used, and work experiences, he does not go back to examine experiences with earlier technologies throughout the life-course. Haddon and Silverstone's (1996) research does examine such experiences, however, their study took place before the Internet was introduced into homes, and at a stage where few participants had a computer. Nevertheless, their research does provide a framework which can be employed in examining the biographical experiences of older Internet users.

### **Theorising technology**

In addition to a lack of critical attention to concepts of 'old age', studies of Internet and computer use in later life often fail to critically address concepts of technology, and the technology-society relation. With the exception of research such as that by Tatnall and Lepa (2003), and some brief discussion by Selwyn (2004), the majority of empirical researchers in this area have not made their theoretical approach toward technology explicit. This is in contrast to the vast amount of research and theory on the relation



between technology and gender. As a result, technologically deterministic views are often implicit in policy, design, and academic literature in this area (Selwyn 2004, Xie 2003). Technological determinism is the view that technology is a “force coming from outside society which then impacted upon it” (Prout 2001: 201). In this view, technology is seen as having inherent properties, and effecting society in predictable ways (Holloway and Valentine 2003). There has been much discussion of the ‘social impact’ or ‘effects’ of technological change on older people (e.g. Friedberg 2003, Firth and Mellor 2007, Riggs 2004), in relation to issues such as their exclusion from computer technologies, and the potential benefits of using them. However, there is little discussion of the ways this group of users may shape these technologies (Xie 2003). Literature is often underpinned by the assumption that use of computer and Internet technologies is ‘inherently useful and desirable’ for all members of society, including older people (Selwyn 2004: 281). Groups such as older people who have failed to adopt these technologies are often presented as deficient, and the solution is seen to be adapting them to fit these technologies through training schemes, increased access, and other initiatives (Selwyn 2004, Richardson et al 2005).

Approaches such as the ‘Social Construction of Technology’ (SCOT) may be useful here, in countering technologically deterministic views. This perspective presents technologies as inherently social, and shaped by the interests of designers and users (Wajcman 2000). Drawing on this thesis, Selwyn (2004) argues that computer technologies are shaped by their social context, and the absence of older people from the design of computer technologies may underpin their lack of suitability for this age group (Riggs 2004). He suggests that instead of adapting older people to fit with these technologies, we should seek to adapt these technologies to fit with the needs of older people. While computer design research has often sought to adapt computer technologies to better suit older people, as discussed above, it has often focused on compensating for deterioration in motor and cognitive abilities in later life (Czaja and Lee 2008). However, Selwyn’s (2004) research shows that the adoption or non-adoption of Internet and computer technologies among this age group is not due to their inherent properties, but their fit (or lack of fit) into the lives of many older people. Another concept from the SCOT approach which may be helpful in moving beyond deterministic views of technology, and highlighting the importance of the user, is that of ‘interpretive flexibility’. Interpretive flexibility refers to the various ways people understand and use technologies, which may differ from their intended design

(Cockburn and Omrod 1993, Wajcman 2000). Therefore these technologies cannot be seen as having predictable effects.

However, while SCOT approaches highlight how technologies are socially shaped, it is argued that they still separate the technical and the social, and are socially deterministic (Tatnall and Lepa 2003). In contrast, theorists who have adopted an Actor Network Theory (ANT) approach critique both social and technological determinism, and view the relation between the social and technical as mutually constitutive and influencing (Prout 1996). They challenge binaries between social/technical, social/natural, human/non-human, science/technology, subject/object (Law 1999, Singleton and Michael 1993). Such views have been useful in examining the mutual constitution of gender identities and technologies (Wajcman 2000). They could also be applied to understanding the way 'old age' identities and technologies are constructed in relation to one another, although ANT has yet to be used to examine such relations. Actor Network Theory is argued to fit with processual views of gender- and also age- as constituted in interactions, and as relational (Cockburn 1991) as power in ANT is theorised as emerging in interactions, rather than as determining them (Singleton 1995). In theories of gender and technology, this approach to power has been useful in avoiding pre-empting fixed outcomes, and accounting for flexibility, diversity and complexity in relations (Gill and Grint 1995).

Nevertheless, while drawing on such insights, ANT does not form the main theoretical approach to technology in my research, due to a number of limitations. One major critique of ANT is the problem of accounting for power and political interests within this framework. The presentation of all entities in a network as equal has difficulty accounting for historical inequalities and relations which pre-exist particular interactions (Singleton 1995). It is argued that if interests such as gender are significant they will emerge interactions, however, without deliberately seeking to analyse such relations it may that they simply go unnoticed (Gill and Grint 1995). These difficulties reflect those in feminist theory discussed earlier, in dealing with diversity and difference between women, while retaining a political focus and accounting for structural inequality (e.g. bell hooks 1984, Scraton 1994, Spelman 1988). Similarly, with age, while theories of the postmodern life-course have argued that there is increasing fluidity and flexibility, we have seen how structural and material inequalities still co-exist (Blaikie 1999, Vincent 2006). The literature discussed above also illustrates how discourses and material relations around gender and technology, and age and technology, pre-exist and may shape interactions.

Without accounting for these pre-existing relations, there is a risk of returning to individualistic explanations, which ignore the broader socio-cultural context within which relations of ageing and technology are located. This thesis aims to examine relations around gender, age and technology, while not pre-empting the outcomes, and to take into account structural and material divisions as well as symbolic and interactional ones.

Another criticism of ANT is that it has focused on networks involving designers of technology, and in doing so has often excluded women from its analysis (Gill and Grint 1995, Wajcman 2000). Such a focus would similarly exclude older age groups, who have tended to be marginalized from the design of computer technologies. This difficulty may be overcome though, by widening networks to include users, and people in lower paid jobs, which has been the approach taken in feminist studies such as Singleton and Michael's (1993) research on cervical screening. Research by Tatnall and Lepa (2003) has also applied such an approach to exploring the adoption and non-adoption of Internet technologies among older age groups, and the enrolment of other entities into their interpersonal networks. The study illustrated how such an approach may be useful in illustrating how these technologies were re-configured in unpredictable ways, as participants adapted computers and the Internet to fit with specific purposes such as a hobby, or writing to grandchildren. However, in seeking to understand the location of computer and Internet technologies within everyday interactions, spaces, and biographies, I would argue that this ANT is not the best approach, as such elements are not really addressed within this theory. Furthermore, while recognising mutual relationships between technologies and older computer users, I am primarily interested in the social aspects of these relations, which are downplayed in ANT approaches (Singleton 1995).

In seeking to understand technology use within everyday spaces, times and interactions, the theoretical framework which best fits this approach is that of 'domestication'. Domestication is the process of integrating technologies into the home or other settings, and involves transforming alien and frightening objects into part of these spaces (Ward 2006). Building on SCOT and 'Social Shaping of Technology' approaches, the domestication framework moves away from deterministic accounts of the 'effects' of technology, and instead examines what users do with them once in the home (Ward 2006). However, the domestication framework is more specifically focused on context of their use (Haddon 2006), and the relation of these technologies to temporalities and spatialities in these settings. Similarly, while the 'Uses and Gratifications' approach examines the

meanings users bring to technology, domestication research is more focused on the social relationships within which technologies are located, and less on internal processes (Haddon 2004). The domestication framework explores negotiations, tensions and conflicts around technologies, as they are integrated- or rejected- as part of domestic space.

Domestication approaches have also been brought together with literature on the life-course (Haddon 2004), and are able to account for the ongoing process of domesticating technologies over time (Ward 2006). Although the domestication framework does not primarily focus on biographical relations with technology, as noted earlier, research by Haddon and Silverstone (1996) has taken a biographical approach to exploring older people's experiences of domesticating different technologies during their lives, although their research was carried out too early to properly incorporate experiences of computer and certainly Internet technologies. There is little research or theory which has focused on biographical relations with technology, although a recent volume edited by Henwood et al (2001) has examined women's 'technobiographies'. The term 'technobiographies' refers to "...life-history narratives that treated relations with technology as a central feature" (Henwood et al 2001:13). This book incorporated women's biographical accounts of using particular technologies, and examined how intersections between gender and other dimensions of identity such as ethnicity and class shaped these relations. Such an approach is also useful in overcoming divisions between structure and agency, and examining how personal experiences relate to broader structural change. It could also be usefully applied to moving beyond examining experiences of computer and Internet use during later life in isolation, and highlighting how such issues are situated within experiences of technology use over the life-course.

## **Summary**

This chapter has reviewed previous research on Internet and computer use among older age groups. We have seen how the age-related digital division has been the main focus for research and discussion in this area. However, it has been argued that there is a need to go beyond simply looking at this division in terms of access, and examining practices of Internet use among older people who are online. Furthermore it is argued that such divisions and practices cannot be understood without examining how they are constructed and experienced in everyday life. While there are a growing number of studies examining older people's everyday experiences of Internet use, this review has noted several areas for

further development. These include the need for further qualitative examination of the intersections between age and other dimensions of identity, particularly gender. It has also highlighted the importance of locating these experiences within everyday time-spaces, interactions and bodies, and the lack of previous research exploring such issues. Furthermore, the chapter has stressed the need for more complex approaches to age and technology. In seeking to add to existing literature, it has outlined approach to examining ageing and technology as situated within everyday lives and spaces, and within biographies of technology use. The location of technologies within everyday spaces will be explored in greater detail in following chapter, which examines previous literature on the home, and technology use in this space.

## **Chapter three**

### **Domesticating the Internet: The home, technology, gender and age**

The previous chapter has stressed the importance of understanding Internet and computer use within everyday lives and contexts, and the lack of research examining older people's use of these technologies in local settings. This chapter will now expand on these issues, focusing on the context of the home. It will be argued that as most Internet usage by older people and other generations takes place within the home, it is particularly important to understand Internet use within this site. The chapter will go on to discuss the meanings of the home and their relation to gender and age, and the implications of these meanings and relationships for understanding technology use in this setting. Following this, current literature on technology use in the home will be examined. While literature on Internet use in the home has neglected older age groups, it will be argued that research on younger age groups and ICT use may be helpful for understanding how use of these technologies is situated in the home, and suggesting avenues for further research among retirees.

Although the location of Internet use is fluid, and it may be accessed at various sites (Schroder et al 2003), the most common place to access the Internet is at home. In 2006, 85% of Internet users accessed it at home, followed by 46% in work, with very little access taking place in an Internet café (8%) or public library (10%) (National Statistics Online 2006). This is also particularly true when examining older Internet users alone, as most do not have access at work. In Selwyn et al's (2003) research, 64 out of 79 older Internet users accessed it at home, compared with 14 accessing the Internet in work, and 7 in libraries.

The home is also a key site for understanding everyday life (Bennett 2002), and experiences of old age and retirement, as will be discussed in more detail below. Yet despite the relevance of the home as a location, we have seen in the previous chapter how there is little research on older people's use of the Internet and computers in this setting. Therefore in the light of both the neglect of the home in previous research, and its salience to contextualising the everyday experiences of older Internet users, this thesis will focus on the home as the location for computer and Internet use in later life. As argued in the previous chapter, space is not simply a backdrop for activities, but is intertwined with social relations such as those around gender and age, in terms of both physical spatial divisions and design, and symbolic meanings. Therefore, in order to understand how older

people use the Internet and computers within the home, it is necessary to first understand the meanings of 'home', to which we will now turn.

### **Meanings of 'home'**

The term 'home' is difficult to define, as it is a complex and 'multi-scalar' concept (Blunt and Dowling 2005). Home may not simply refer to the place in which people live, but a 'state of being' which can be associated with a house, a town or even a country (Mallet 2004, Livingstone 2002). For the purpose of this thesis though, I will use the term 'home' to refer to the domestic living space that people inhabit. The home as a living space not only includes the physical or spatial aspects of the house, but also the social interactions and relations of the household (Mallet 2004, Bhatti 2006). It is argued that the home is not something which simply 'is', but rather it is continually constructed through the daily routines and activities of household members (Bhatti 2006: 321). In terms of the symbolic meanings of the home, in Western culture the 'ideal home' is constructed as a place of refuge, privacy, security and comfort (Chapman and Hockey 1999, Livingstone 1992, Morley 2000). As discussed earlier, such constructions emerged during industrialization, in relation to the increasing separation 'public' and 'private' spheres (Mallet 2004). Prior to this paid work often took place in the home, and there were not clear cut divisions between home/work, public/private (Dart 2006).

However, this idealistic view of the home has often been critiqued, and it has frequently been pointed out that there is a 'darker side' to relations within the home (Mallet 2004, Morley 2000). Such critiques have particularly come from materialist feminists, who have argued that the home is a site of the patriarchal oppression of women (Valentine 2001). This includes domestic violence and abuse, which are concealed by the construction of the home in terms of privacy (Mallet 2004, Morley 2000). As discussed earlier, the home is also central to the spatial division of labour and the exclusion of women from the public sphere (Massey 1994). Whereas the home is constructed as a refuge from the world of work for men, and a site of leisure, this is not the case for many women (Livingstone 1992, Morley 1992, Chapman and Hockey 1999). However, as argued earlier in relation to other aspects of feminist theory, such perspectives have been critiqued for being over-deterministic and denying women's agency, and ignoring diversity between women and within families (Valentine 2001). For instance, black feminists have highlighted how the home has been important as a place of refuge from, and resistance to, racist oppression

(Carby 1997). Furthermore, for working class women the division between home and work always has been less clear cut, and the home has frequently been utilised for paid labour (Silva 2002). Gender relations in the home are also changing, with an increased number of women entering the work force (Valentine 2001), and an increase in the amount of domestic labour men undertake (Pink 2004). Nevertheless, women continue to take primary responsibility for domestic labour in the home (Chapman and Hockey 1999, Morley 2000). Silva's (2002, 2004) research on families, technologies, and routines highlights the tension between increasing diversity and fluidity in family life, alongside the continuation of more traditional patterns. She argues that while there are still gendered constraints on time and activities in the home, men and women cannot be homogenised in terms of power, and gender relations around time and activities in the home are constructed and negotiated in interactions rather than being predetermined (Silva 2002). Similarly, in examining relations around housework and domestic objects, Pink (2004) has argued that gender should be regarded as being performatively constituted in interactions, in ways which may resist or reproduce traditional gender divisions.

Critical perspectives on the home have also highlighted the complexity of the public/private division, and the problem of seeing the home as a separate 'private' space. As Blunt and Dowling (2006:27) argue, the home is a 'porous and open space', and is constructed in relation to wider social relations, such as those around the family, economy, neighbourhood, and modernity. This includes the connection of the home to the economy as a site of consumption, as the collection of various objects brings the meanings of the public sphere into domestic space (Valentine 2001). The collection of such objects is an important part of the process of 'home-making' (Blunt and Dowling 2006: 23), and is also used to construe taste and identities, such as those around class, gender and sexuality (Valentine 2001). Divisions between public and private are also complicated by the fact that different spaces in the home have different meanings, and therefore the home has therefore never been an 'exclusively private' space (Mallet 2004:72). Spaces such as the kitchen and bedroom are generally construed as private spaces, with the living room and dining room representing public spaces (Valentine 2001). Meanings of space in the home are not static though, but change in relation to broader shifts in social relationships, such as including those around employment, leisure, community, privacy, gender relations and family life (Chapman and Hockey 1999). Housing design during the 19<sup>th</sup> century reflected a clear cut division between public/private spaces, with public rooms located at the front of



the home, and private rooms at the back (Madigan and Munro 1999). This division was also gendered, with public rooms constructed as 'male' spaces, and private spaces such as the kitchen associated with women and servants. However, such divisions have now become less clear, with 'open plan' kitchen/diners, reflecting both the economic need for 'space efficient' housing, and changing assumptions about gender and family life. Boundaries between public and private spaces in the home are also negotiated between family members, and as Johnson and Valentine (1996) have discussed, family members may have difficulty creating privacy and private spaces for themselves within the home. This has emerged in their research on young people and sexuality, and also in studies of women and leisure (e.g. Deem 1986).

The fluidity in meanings and experiences of the home not only relates to broader social changes, but also the changes individuals experience throughout their life-course (Hockey and James 2003). Along with gender, age or life-stage are central to shaping perceptions of the home (Mallet 2004). For instance, children are often restricted from certain adult spaces in the home, and also from the use of space at certain times (Chapman and Hockey 1999, Hockey and James 2003, Livingstone 2002). Growing older is characterised by increasing access to time and space within the home and moving out is seen as marking the transition to adulthood (Hockey and James 2003). In later life, conceptions and experiences of the home change again, as retirement leads to more time being spent at home (Mason 1988, Deem 1988), and older people become increasingly associated with this space (Bhatti 2006). The home often becomes important in later life as a site for memories and ties to the past (Valentine 2001), which relates to the objects which have been collected and displayed in it. While extra time spent in the home can involve new leisure pursuits (Mason 1988), the relationship between later life and the home may become more problematic with the onset of the Fourth Age (Bhatti 2006). This period is associated with increased illness and disability (Featherstone and Hepworth 1991, 1993, Featherstone 1995, Hockey and James 2003), which can limit activities and use of space at home (Percival 2002). In some cases, difficulties in old age can result in the employment of home care, which impinges on the sense of privacy associated with the home (Martin-Matthews 2007). However, this is often preferable to the alternative, involving the exclusion of older people from their own home, and movement into a residential or 'old person's home' (Chapman and Hockey 1999, Martin-Matthews 2007). In this context, housework and maintenance of the home become increasingly important to keeping a sense

of independence and control, and demonstrating the ability to manage in their own home (Percival 2002). Therefore while age is central to understanding perceptions of home, home is also highly relevant for understanding experiences and constructions of age categories, including later life. This raises important questions regarding how these age-related meanings of the home may shape the use of computers and the Internet in this space.

It must first be noted however, that the intersection of age with gender complicates experiences of retirement, leisure, and the home. For women who have spent their time looking after home and family rather than in the workplace, retirement is a less clearly defined stage (Skucha and Bernard 2000). To these women, retirement does not involve much increase in the time they spend at home, but their husbands' retirement involves a big change which can be hard to adjust to (Mason 1988, Haddon and Silverstone 1996). Some women report that the increased presence of their husband interferes with their daily routines, and makes them more conscious of how they spend their time (Mason 1988, Skucha and Bernard 2000). As discussed earlier, women continue to take responsibility for the majority of domestic labour in retirement (Askham 1995, Bernard et al 1995, Thompson et al 1991, Skucha and Bernard 2000), which complicates the association of retirement and time spent at home with leisure (Mason 1988). However, despite the continuing domestic division in retirement, as argued with younger age groups, it is important to address diversity and change within retired households. Nevertheless, as suggested earlier, such gendered relations may be crucial to understanding the construction of divisions in Internet use *among* older people, although they remain to be fully addressed. Drawing on studies of younger age groups and other ICTs, the following section will now explore role of age and gender in shaping technology use in the home.

### **The home and technology use**

The above paragraphs have explored constructions of the home, and examined how gender and age shape perceptions of this setting. In this context, the question of how the meanings, time-spaces, interactions and relationships in the home relate to technology use will now be examined. The public/private boundary is particularly important to understanding relations between technology use and the home. Like other consumer objects, bringing ICTs into the home connects it to the public sphere of the economy (Silverstone 1994). However, unlike other objects, ICTs are also media, which complicates their relation to the

boundaries of the home (Silverstone et al 1992). For instance, by enabling access to public information and events, television and radio broadcasts connect the home to the public sphere, while communications technologies enable interactions with others in distant locations. In addition, computers and the Internet facilitate the continuation of work from home, further blurring divisions between work/home, public/private (Blunt and Dowling 2006). Once in the home, the process of transforming technologies from 'alienating' or 'meaningless' commodities into a 'desirable part of the home' is termed domestication (Ward 2006: 151). This concept was discussed briefly in chapter two, and will now be elaborated on more detail. Examining the process of domestication involves following the biographies or 'careers' of objects as they enter into households (Silverstone et al 1992), and the struggles and negotiations with users as they are incorporated (or rejected) into this setting (Ward 2006). Silverstone et al (1992) identify four key stages involved in domestication; 1. Appropriation, 2. Objectification, 3. Incorporation, 4. Conversion. Appropriation refers to the initial purchase of a technology, and subsequent ownership by households or individual household members. It also involves the renegotiation of the meanings of technologies as they are brought into the private space of the home, and shaped by the values, attitudes and biographies of household members. Objectification refers to the spatial elements of domesticating technologies, including the way they are situated and displayed in the home, and changes in the way space is organised or divided (Lehtonen 2003). Incorporation refers to the temporal elements of technology use, including their incorporation into temporal routines, while conversion refers to the relation of the home to the outside world, including discussion of technologies with others outside the home, or their use to convey tastes or status to others (Silverstone et al 1992). However, it has been argued that rather than these representing distinct stages, they overlap in the domestication process (Holloway and Valentine 2003, Ward 2006).

This framework will now be used to organise and discuss previous research on ICT use and the home. As discussed earlier, there have been various studies on the use of television (e.g. Morley 1986, Ang 1992, Gauntlett and Hill 1999), personal computers (e.g. Wheelock 1992), and more general use of ICTs in the home (e.g. Livingstone 1992, 2000). There are also an increasing number of studies situating the Internet within the home context (e.g. Bakardjieva 2005, Frolich et al 2003, Holloway and Valentine 2003). In examining the findings of such research, it appears that the initial process of appropriating or purchasing technologies is shaped by gender and age related divisions. For instance,

early research by Wheelock (1992) examining the adoption of micro computers in family households found that home computers were most often bought for children, particularly sons, or for the whole family. In a few cases fathers had bought an additional machine specifically for themselves, although they found no cases in which the mothers had. Such relations were shaped the biographies of household members, as few of the women in the sample had experience of computing in a work context. This research was conducted some time ago though, and it might be expected that the gender dimensions of home computer ownership and purchase would have changed. However, more recent research on young people's ICT use by Livingstone (2002) and Holloway and Valentine (2003) found that boys were more likely to have their own computer in their bedroom. As Livingstone (2002) points out, this may reflect gender differences in the placement of computers rather than ownership. Nevertheless, spatial location and ownership are intertwined, particularly in studies of young people, who are unlikely to have purchased a computer themselves, but own the computer in the sense of 'possessing' it, which is marked by its spatial location in *their* bedroom (Holloway and Valentine 2003:103). Such gendered patterns do not always emerge in research though, and Bakardjieva (2005) found that in a number of households women took the lead role in the adoption and use of the Internet, often in relation to their work use of these technologies. Appropriation does not only relate to the initial purchase of technologies though, but also to the additional purchase of software, programme choice, and subscription to particular telecommunications services (Silverstone et al 1992). Previous research on television viewing by Morley (1986) also found gender differences in programme choice, in which men preferred 'factual' programmes such as news and documentaries, while women had a higher preference for fictional programmes, including soaps and romantic films. Although more recent research has found complex gender patterns in viewing choices, there are still clear gender differences with regard to higher levels of watching sport among men, and a greater preference for soaps among women (Gaunlett and Hill 1999).

In relation to the stage of 'objectification', we have seen how space is involved in ownership of technologies. There are various other aspects of spatiality in the home which relate to technology use, and the decision of where to place technologies is shaped by the existing meanings of different spaces (Ward 2006). For example, many people place the television at the centre of the living room, which is a public or leisure space, and 'family time' spent together may be organised around television viewing (Gaunlett and Hill 1999,

Morley 2000). On the other hand, research on the computer and families has found that parents prefer to have it in a private 'office' space or dedicated room, as the living room is too noisy (Frolich et al2003). This may reflect a key difference found between the Internet and technologies such as the television, in that it is generally used alone (Haddon and Silverstone 1996). However, research by Holloway and Valentine (2003) and Bakardjieva (2005) found that some families chose to locate the computer in a 'shared space' such as the living room, so that it could be used for shared activities, as part of spending time together as a family. Another reason why some parents wished to keep the computer in a shared space is so that they can monitor children's usage, in terms of time spent on the computer and the content looked up on the Internet (Holloway and Valentine 2003, Bakardjieva 2005). This is often in conflict with teenagers' desire to have the computer in the privacy of their bedroom, which is important for autonomy of usage (Holloway and Valentine 2003) and for constructing the bedroom as a personal space (Livingstone 2002). The choice of this location is therefore subject to negotiations between the interests of different family members. Negotiations around the location of computers are also gendered, and research has found that women who do not use the computer in their household often want it to be kept out of public or shared spaces (Hirsch 1998 cited in Morley 2000, Holloway and Valentine 2003). Again this reflects broader gender relations discussed in chapter two, and a gendered fear or lack of confidence with computer technologies, as well as concerns regarding computers disrupting family life (Holloway and Valentine 2003:106-107). As discussed by Bakardjieva (2005), the computer and other technologies may be part of the creation of a separate 'male space' in households, spatially reflecting gender divisions around technology. However, Bakardjieva found mixed patterns in terms of spatial arrangements and gender technology-relations, and while some households demonstrated traditional gender divisions, others demonstrated more equal patterns.

In terms of temporal routines, as discussed earlier, Silverstone (1994) argued that television is highly integrated into our daily routines, and is also important in structuring them. This is supported by the research of Gauntlett and Hill (1999) who found that although routines were structured by broader work, social, and family activities, television programmes such as the news or soaps could provide fixed points in the day. This was particularly the case in the evening, during which programmes were often combined with an evening meal, and television in the evening was an important part of relaxing and

spending time with partners, housemates, or children. More recent research on family routines by Silva (2004) similarly found that television forms the main technology for leisure and relaxation, particularly in the evening. However, television was not seen as particularly significant in structuring daily routines, which Silva suggests may be due to the particularities of young families, as their routines were dominated school timetables. As argued by Gaunlett and Hill (1999), the extent to which television shapes routines varies considerably between different types of households. This illustrates the importance of examining different types of households such as retirees, which will be expanded on later. The less significant role of television in structuring daily routines may also reflect the increasing use of multiple channels such as News 24, development of new time-shifting devices such as DVD recorders and Sky Plus, and the use of the Internet to look up news or view programmes. Such technologies are argued to be eroding the fixed points provided by television programmes, and contributing to the blurring of temporal boundaries (Lee and Libaneu 2000). In comparison to television, research on the domestication of the Internet by Haddon (1999) found that it is mainly used for short periods and often to fill available time slots, rather than to structure routines. It is argued to play quite a modest role in people's temporal routines, although Haddon found that email formed the key activity which structured regular routines of usage. Many people only used the Internet occasionally, according to the need to find specific information or for work purposes, although there were some who used it for leisure or relaxation.

As with spatial location, time spent using technologies has to be negotiated between family members, and may lead to conflict around competing interests. Such issues were particularly prominent in early studies of television (e.g. Morley 1986) involving disagreements over what programmes to watch. In Morley's research, such disputes reflected more traditional 'patriarchal' gender relations, as the father generally retained dominance over use of the remote control and programme choice. Although gender relations have change a lot since Morley's early research, more recent studies similarly show that men in heterosexual couples are more likely to have control of the remote (e.g. Gaunlett and Hill 1999, Walker 1996). However, Gauntlett and Hill (1999) found that although men were the main user of the remote control in almost half the households in their study, there were only 11% of households in which the man decided on which programme was viewed, compared with 81% of households in which programme choices were said to be made jointly. Therefore while physically using the remote more often, this

did not mean that men had control over viewing. It is argued that as most households are now 'media rich' with multiple television sets and computers, and as the Internet and computers are more often used individually, conflict over usage will be less of an issue (Livingstone 2002). However, recent research on children's Internet use in the home found that conflicts do emerge in relation to how much time is spent on the Internet, what it is used for, where and when it is used (Bakardjieva 2005, Holloway and Valentine 2003). As discussed above, these conflicts often relate to parents' desire to monitor or restrict the amount of time children spend online. In households where computers are shared, family members also needed to negotiate time online, and often constructed informal schedules of when different household members may use the computer (Holloway and Valentine 2003, Bakardjieva 2005). These schedules are shaped by the daily routines and activities of household members (Bakardjieva 2005), and by understandings of particular computer activities as work or leisure, as work activities are prioritized over leisure uses such as gaming (Holloway and Valentine 2003). There are also gendered constraints on time to go online, and as discussed in the previous chapter, domestic duties have been found to restrict women's time to use the television (Morley 1992) and Internet at home (Burke 2003, Haddon 1999, Haythornthwaite and Kazner 2002). Having children is an important issue with regard to these gendered constraints, for instance Burke (2003) found that 25% of women in their study felt guilty about neglecting domestic roles and spending time on the computer, and 83% of these lived with young children. This raises the question of whether such issues would still be present in retired households where children do not live at home.

In terms of the process of 'conversion', studies have shown that television viewing is often a source of conversation outside the home (Morley 1992). Discussing programmes has been found to add to the pleasures of television viewing, as well as facilitating connections with colleagues and peers (Gauntlett and Hill 1999). There are gender differences regarding the discussion of television viewing though, and men are more reluctant to admit that they talk about television programmes, particularly fictional ones (Gauntlett and Hill 1999, Morley 1992). Holloway and Valentine's (2003) research has also found that the Internet and computers often form topics of conversation between teenagers, and computer games and Internet activities are frequently carried out as a shared activity with friends from schools or neighbourhoods. Such social connections are also continued online, as children used the Internet to keep in touch with friends in the local area, as well as distant

friends and relatives. Studies examining a variety of different social groups have illustrated the role of the Internet in facilitating online and offline social relationships (Valentine and Skelton 2008, Wellman et al 2002), which will be discussed in more detail in chapter eleven. In addition to role of technologies in facilitating social networks, studies have also shown that local support networks of family members, friends, and acquaintances are important in the initial stages of acquiring and setting up computer technologies, and that people consult with 'warm experts' in making decisions about the purchase of computer technologies (Bakardjieva 2005, Haddon 2004, Lehtonen 2003). Such social networks also continue to be important for sharing information about computer technologies, and dealing with technical problems. Therefore in examining the use of computer and Internet technologies in domestic space, it is important to situate the home within the context of these broader social connections and relationships.

### **Later life and technology use in the home**

The above research tells us a lot about relations around gender and age in young families, but does not address older people. Nevertheless, the above research and the domestication approach provides a framework for examining practices of Internet and ICT use among older age groups, and for evaluating what we already know from previous studies. As we saw in the previous chapter, there have only been a couple of studies of older people and Internet use in the home; Lim and Tan's (2003) research on older people in extended family households in Singapore, and Brabazon's (2008a) case study of her parents' domestic Internet use, although Bakardjieva's (2005) research on Internet use included three households with retired members. In terms of older technologies, again research is limited compared with studies of younger people, although there are exceptions such as Tulloch's (1989) ethnographic study of television viewing among older people, and Haddon and Silverstone's (1996) research on older people's use of various technologies in the home. Gauntlett and Hill's (1999) research on television also included some retired households in their sample, while not focusing on this age group. In terms of the 'appropriation' or acquisition of computers and Internet technologies by older people, as we saw in chapter two, there have been a number of studies which have examined the reasons why older people took up (or did not take up) computing or Internet use. Selwyn's (2004) research illustrates the importance of family members in this stage of acquisition, as has been found in studies of younger age groups. However, existing research does not tell us who decided to acquire a computer or the Internet in these households, and whether



there are gender patterns among older heterosexual couples in terms of ownership and purchase of computer and Internet technologies. In terms of older technologies such as the radio or television, Tulloch's (1989) research found traditional gender patterns among couples in the appropriation of television programmes, with a preference for news and action films such as Westerns among men, and a greater preference for soaps among women. These preferences intersected with class, and soaps were more popular among working class women. However, only Haddon and Silverstone (1996) have explored the decision to purchase these technologies among retired households, examining the acquisition of various ICTs through the life-course, although they do not really examine gendered patterns or negotiations around these decisions. They did find that the purchase of technologies was shaped by life changes, as well as more persistent generational values. For instance, early experiences of poverty among this generation had led to more cautious attitudes toward spending money throughout their lives. As noted earlier, at the time of Haddon and Silverstone's study few participants had computers and none had the Internet, and reluctance to adopt computers at home also related to biographical or generational experiences, in terms of a lack of experience with computers in work prior to retiring. Building on Haddon and Silverstone's (1996) research, these dynamics of acquiring technologies in later life, and their situation within biographical experiences, need to be revisited in relation to the use of computers and the Internet among older age groups. Whether such decisions are gendered also needs to be addressed.

In terms of the spatial location of computers in older households, Brabazon's (2008a) research provides some information about this (as discussed in chapter two), and illustrates the spatialization of gender patterns, with the location of the computer in a separate 'male space'. Similarly, it is interesting to note that the two retired couples included in Bakardjieva's (2005) study both demonstrated these more traditional gendered spatial divisions around computers. This raises the question as to whether such spatial arrangements are generally more common among older computer and Internet users, however, these studies only provide us with information about three retired couples. More research is needed to examine this issue further, and to assess whether such patterns are predominant among older households.

Regarding temporal routines, as discussed earlier, research has noted the importance of television during for structuring time and providing a routine during retirement (Morley 2000, Haddon and Silverstone 1996). Soap operas in particular have been found to be an

integral part of daily routines (Tulloch 1989). On the other hand, studies have generally found that older people restrict television viewing to the evening, which has been linked to a desire to 'keep busy' and the strong work ethic among older generations (Haddon and Silverstone 1996, Gauntlett and Hill 1999), as well as to 'high class values' (Tulloch 1989). Again the importance of television in shaping routines varies between retired households, and television is watched more among older people experiencing health or mobility problems, as well as those with lower incomes who are unable to participate in much outdoor leisure (Gauntlett and Hill 1999). However, research has yet to explore how computer and Internet use relate to temporal routines and experiences of time in retired households, although studies of younger age groups indicate that Internet use may be less pivotal in providing a routine.

There is also the question of how time to use computers and other technologies is negotiated among household members, and whether there are conflicts or constraints on time spent online, similar to that among younger families. With less family members to compete for the use of these technologies it would be expected that conflict would be less of an issue in later life. However, Haddon and Silverstone (1996) found that changes in temporal and spatial routines in retirement, and the increased time couples spend together in the home, could increase conflicts and competition over use of technologies such as the television. In terms of gendered constraints on time online, the research examined above suggests that these affect families with young children the most. However, we have also seen how gender divisions around domestic labour continue into later life, and may constrain the leisure of retired women. Furthermore, with changes in the fixed nature of the life-course, many children do not leave home, or return after divorce or separation, and older women often continue carry out domestic tasks on their behalf (Mason 1988, Thompson et al 1991). In addition, retirement may involve the onset of new caring activities, such as looking after elderly parents, spouses, or grandchildren. As discussed in chapter two, Richard, Weaver and Zorn (2005) found that domestic responsibilities can create gendered feelings of guilt about spending time online in retirement. The women in the two retired couples in Bakardjieva's study (2005) also described themselves as being too busy with domestic tasks to learn computing, which further suggests that such issues may remain significant among retired households. Additional research in a range of retired households is needed to clarify this issue, and assess whether gendered constraints continue to restrict time spent online in later life.

In relation to the stage of 'conversion', as we saw in chapter two, there have been several studies exploring the role of the Internet in social networks in later life. Such studies have generally suggested that it has a positive role in maintaining communications with distant relatives (e.g. Blit-Cohen and Litwin 2002, Climo 2001), and forming new online contacts (e.g. Lin et al 2004, Kanayama 2003, Xie 2005). Selwyn (2004) also found that family members were important in the process of acquiring a computer during retirement, and getting help and support. However, exploration of such broader social networks has not really been integrated with research on Internet and computer use in the home during retirement, and a number of questions remain unanswered. For instance, Tulloch (1989) found that television programmes were a source of debate and discussion both within retired households and their wider peer groups. However, little is known about how computer and Internet technologies relate to peer group interactions and discussions among older age groups. The relation of Internet and computer use at home to wider social activities also remains unclear. Studies of television viewing have found that retirees with busy and active lifestyles tend to watch less television (Gauntlett and Hill 1999). However, Internet use and computer use seem to reflect the opposite pattern, as research by Nimrod and Adoni (2006) found that they were associated with frequent participation in high culture activities such as going to the theatre, art exhibitions, and dining out. This may merely reflect class differences in Internet use though, and such issues need to be further unpacked. In addition, the location of technology use in the home within neighbourhood or community relations in later life has not really been explored. How the wider connections created by computer and Internet technologies shape meanings and experiences of 'home' during retirement, also remains unaddressed. Are technologies experienced as threatening the security of the home, as found in some studies of younger age groups (Frolich et al 2003) or extending the boundaries of the home in ways that are positively experienced in later life?

### **Summary**

To summarise, building on the arguments made in the first chapter, this chapter has stressed that in seeking to understand older people's Internet use within everyday life, it has to be situated within the real-life settings in which it takes place. In particular, the chapter has demonstrated the importance of the home for understanding everyday experiences of older Internet users. This is due to several reasons. Firstly, the home is the setting in which the Internet use most often takes place, particularly among older age

groups. Secondly, the home highly significant to understanding experiences of later life, as the activities of older people generally become increasingly home based, and the meanings of the home take on a particular significance in relation to privacy, independence, biography and memory. In addition, previous research has demonstrated how the everyday use of ICTs in domestic space is shaped by the meanings, interactions, temporalities and spatialities of the home, and therefore cannot be understood without addressing these issues. Such issues have yet to be satisfactorily explored among older computer and Internet users though, demonstrating gaps in literature which need to be addressed. In the light of the importance of addressing these issues, the location of the experiences of older computer users within the home will be a central part of this thesis.

In seeking to examine how the Internet and computers are used within domestic spaces during later life, this chapter has highlighted some of key research questions to be explored. These include; examining how the use of these technologies is situated within relationships and interactions in the home, whether there are any tensions or conflicts around Internet use, and exploring relationships of dependency/competence between household members. Another question which needs further exploration is whether Internet use among older heterosexual couples is gendered. This includes assessing gender differences in practices of Internet use, and in processes of acquiring and setting up computer/Internet technologies. We have also seen how there is a need to examine how domestic Internet use among older couples relates to the spatial and temporal geography of the home, and to daily temporal routines and activities. Examining temporal aspects also involves exploring subjective meanings of time in relation to concepts such as work and leisure, as well as assessing whether there are gendered constraints on time spent online. In addressing the issue of conversion, this thesis will also explore how domestic use of computer technologies relates to broader social networks and activities. It will also seek to examine how current Internet use in the home relates to broader biographies of technology use. These issues will be addressed in the subsequent chapters, beginning with a secondary analysis of quantitative survey data, which aimed to explore broader patterns in relation to some of these research questions. Following this, these issues will be explored in depth using qualitative data, which forms the main body of research in this thesis.

## **Chapter four**

### **Exploring patterns of Internet use in later life using secondary statistical analysis: relation to life-styles, living situation, demographic variables and constructions of ageing**

#### **Introduction**

In the previous two chapters we have identified a number of questions to be addressed in this thesis including; the relation of Internet use to domestic space, the need to further explore differences *within* older people, the relation of constructions of 'old age' to Internet use, and the importance of locating Internet use within various aspects of older people's everyday lives. While the main examination of these issues will be qualitative, this chapter reports on quantitative analysis of secondary survey data from the English Longitudinal Study of Ageing (ELSA) to further examine whether there are broader patterns in relation to some of these matters. It will begin by discussing the subjects which will be examined using this data set, and their relation to the gaps identified in literature in this area. Following this, there will be a brief discussion of the methodology and dataset used. Then the findings of this secondary analysis will be presented. In addition to illustrating class, gender, health, and age divisions within older people, the findings show important relations between living situation, caring activities, life-styles and Internet use. However, there were not clear differences between Internet users and non-users in perceptions of 'old age'. In seeking to understand the reasons for gender differences, findings support the idea of caring being an important gendered constraint.

The analysis of data in this chapter will begin by exploring demographic differences among older people. As argued in the first chapter, some of these differences are quite well supported in the literature, for instance, research has generally found that Internet use is higher among older people in younger cohorts, men, those in higher socio-economic groups, and with higher incomes (Selwyn et al 2003, National Statistics Online 2005, Soule 2005). However, these statistics are based on data from 2002 or earlier, and it is difficult to find more up to date statistics on Internet use and intersections between gender, class and age in the UK. Therefore this analysis will re-examine these differences, as well

as including an exploration of variables for which patterns are less clear or well established. For instance, although those in poor health in the general population have been found to use the Internet less (Fox 2006), the relationship between health and Internet use among older people presents mixed results (Blit-Cohen and Litwin 2004, Selwyn 2003, 2004). This analysis therefore aims to clarify the findings on health and Internet use. It also examines employment status as a demographic variable, which will include exploring whether there are differences between older people who are; employed, retired, semi-retired, unemployed, permanently sick or disabled, or looking after home and family. Differences according to this variable have not been explored quantitatively, although it may be expected that older people who are employed or semi-retired may be more likely to have access to computers in work, and therefore would be more likely to use the Internet. Given the constraints of domestic activities on technology use noted in studies of younger age groups, and also suggested in research on older people (Richardson et al 2005), it may be expected that older people who are 'looking after home and family' would be less likely to use the Internet.

In addition to examining the relation of various demographic variables to Internet use, this chapter also aims to untangle some of the reasons behind these divisions, and their relation to other life-style factors and constraints. As argued in chapter two, while there has been previous research examining differences *between* older people based on demographic factors, the reasons behind such differences are often neglected (Jaeger 2005). For instance, a number of studies have found gender differences in Internet use, but few have attempted to explain why such differences exist (Kennedy et al 2003), particularly among older people. Possible reasons for gender differences could be due to the constraints of caring/domestic responsibilities (Green 2001, Kennedy et al 2003). Also, the greater likelihood of being at home or employed in lower status, lower paid work (Arber 1991) means that older women may be less likely to have experience with computers in the workplace (Barnett et al 2000). The analysis in this chapter will therefore attempt to explore the reasons behind such differences.

In addition to unpacking these demographic variables in greater detail, this chapter will further explore the connection of Internet use to different aspects of older people's everyday lives. These include the connection of Internet use to different types of living situation. As argued in chapter two, the home is an important site for using the Internet,

and relationships within the home shape the use of technologies in this sphere. It has been suggested that being less likely to live with children or someone who uses the Internet is a significant factor in older people's lack of exposure to Internet technology (Fox 2006, Selwyn 2003). Research has found that family members can be important in getting older Internet users online (Selwyn 2003, 2004), and so household dynamics could be of importance, and are worth further exploration.

The analysis will also explore the relation of Internet use to various leisure activities, including participation in a hobby, recent education or training, membership of various organisations, holidays and outings, and social activities. There is reason to believe that particular leisure activities may be connected to Internet use. For instance, in Selwyn's (2004) research several older people used the Internet for carrying out or exploring offline hobbies, although other respondents felt that prioritising hobbies meant they had no time for the Internet. As discussed earlier, survey data has also found hobby-based activities such as exploring genealogy to be very popular among older Internet users (Fox 2005a), while Nimrod and Adoni (2006) found that computer and Internet use was associated with the 'sophisticated chooser' leisure style, and frequent participation in high culture activities. Whether this is due to class differences, or other aspects of participating in such activities, warrants further investigation. Therefore, this analysis will further explore the association of particular leisure activities with Internet use, and their connection to demographic variables.

In addition, the analysis will explore the relation of perceptions of ageing to the use of the Internet and computers. As identified in chapter two, constructions of 'old age' have been shown to be relevant in shaping the attitudes of designers and older Internet users. For instance, qualitative research found that older people who used the Internet demonstrated more positive attitudes toward ageing than non-users (Blit-Cohen 2004). Furthermore, survey data has found that 'feeling too old' is a significant reason for not wanting to use the Internet (Dutton et al 2005, Selwyn 2004). However, quantitative research has not explored which representations of ageing are drawn on in relation to Internet technology, or examined the relationship between different perceptions of ageing and Internet use. These various issues will now be explored in relation to findings of secondary quantitative analysis of data from the ELSA. Before turning to these findings, the methodology and data set will be briefly discussed.

## **Methodology**

### *Data set and sample*

Data for this analysis was derived from the English Longitudinal Study of Ageing (ELSA). The ELSA has been carried out since 1998, and follows the same people longitudinally (UK Data Archive 2006), although for the purposes of this analysis only the Wave 2 (2004-2005) data was utilised. This data was chosen because at the time of conducting this analysis (January 2007) it was the most recent available. The ELSA examines different aspects of older people's lives, including work and retirement, leisure, and health, and includes a question on whether respondents use the Internet. It was chosen because of in-depth questions on perceptions of ageing and participation in leisure activities, which are not available in most other surveys examining Internet use. The sample is designed to be representative of people living in private households in Britain over the age of 50, and also includes their younger partners. However, as this analysis was focused on older participants, those under the age 50 were excluded using a filter variable.

### *Measures/variables*

In the ELSA Wave 2 data set, Internet use is measured by nominal yes/no responses to the question of whether 'respondent uses the Internet and/or email'. Age was measured using a variable computed from date of birth and date of interview (Nunn 2005), which was then recoded into categories for the purpose of cross-tabulations. These categories included; below 50 (1), 50-59 (2), 60-69 (3), 70-79 (4), 80+ (5). Although participants below 50 were included in the coding, they were filtered from the analyses, so only the older four age groups were examined. 'Definitive sex variable' was used to measure gender. Health was examined using the variable 'Self-reported general health', coded as excellent (1), very good (2), good (3), fair (4), or poor (5). The variable chosen to measure occupational class (From HSE: NS-SEC long version) used the National Statistics Socio-Economic Classification (NS-SEC) to record the job details of participants, and was gathered at Wave 0 as part of the Health Survey England (HSE). Since then, participants' occupational class was only recorded if not available from the HSE, and therefore this item gave occupational details for the largest number of valid cases. As the responses to the item were numerous and not grouped into classes, this variable was recoded based on the 3 class version of the



NS-SEC; Managerial and Professional Occupations (1) , Intermediate Occupations (2), Routine manual occupations (3), Never worked and long term unemployed (4), Unclassifiable (5). Only the three classes were included in analyses.

The variable 'Best description of current situation' was used to measure work status, which was originally coded as; Retired (1), Employed (2), Self-employed (3), Unemployed (4), Permanently sick or disabled (5), Looking after home or family (6), Other answer not codeable (85), Irrelevant response (86), Other (95), Spontaneous: semi-retired (96). To make the number of responses smaller and more suitable for cross-tabulation, the responses employed (2) and self-employed (3) were combined, and response of 85, 86, or 95 were recoded as 'Other not codeable'. The recoded variable therefore included the following categories; Retired (1), Employed (2), Unemployed (3), Permanently sick or disabled (4), Looking after home or family (5), Semi-retired (6), uncodeable (7). The values labelled uncodeable (7) were then defined as discrete missing values and excluded from analyses using this variable.

The ELSA included several questions on caring activities, and the ones chosen for this analysis were; whether participants had cared from anyone in the past week, whether they lived with the person they cared for, and the number of hours spent caring in the past week. For the purpose of this analysis, as suggested by Hyde and Janevic (2004), the number of hours spent caring were recorded into four categories; low (up to 19 hours per week), medium (20-49 hours per week), high (50-167 hours per week), and round the clock care (168 hours per week). In terms of living situation, variables were based on nominal yes/no responses to questions of whether respondents had a child living in the household, a grandchild living in the household, or a 'husband, wife, or partner with whom they live'.

Participation in different leisure or lifestyle activities was measured by nominal yes/no response to questions of whether respondents had; 'taken part in formal education or training in the last 12 months', 'had a hobby or past-time', 'taken a holiday in the UK in the last 12 months', 'taken a holiday abroad in the last 12 months', or 'gone on a daytrip or outing in the last 12 months'. Organisational membership was measured by responses to the question 'Are you a member of any of these organisations, clubs or societies?' The possible organisational memberships were;

- 1) political party, trade union or environmental group
- 2) tenants or resident group or neighbourhood watch
- 3) church or other religious group
- 4) charitable association
- 5) an education, arts or music group or evening class
- 6) social club
- 7) sports club, gym, or exercise class

These were created as separate variables, for which responses were coded as No (0) and Yes (1). Attendance to the cinema, art gallery or museum, theatre/opera/concert attendance, and dining out were all measured by responses to the question; how often, if at all, do you do any of the following activities? Responses were originally coded as 1) twice a month or more 2) about once a month 3) every few months 4) about once or twice a year 5) less than once a year 6) never. To reduce the number of categories, and make the variables more suitable for cross-tabulation, these responses were recoded as;

- 1) Regularly (1, 2, 3)
- 2) Rarely (4, 5)
- 3) Never (6)

The main variable used to measure perceptions of ageing was based on responses to question 34, which asked respondents to rate 12 statements based on their own experience and views on old age, using a Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). For the purpose of this analysis, responses were recoded as nominal level variables with three categories; Agree (1), Neither Agree nor Disagree (2), Disagree (3). Recoded variables based on the following statements were included in this analysis; 'Retirement is a time of leisure', 'I don't think of myself as old', 'We can learn a lot from older people,' 'As I get older, I expect to become more lonely', 'Old age is a time of ill health', 'As I get older, I expect to be able to do the things I've always done,' 'I think of old people as generally grumpy and miserable', 'Old people don't get respect in society', 'Growing older doesn't bother me', 'Old age is a time of loneliness'. The variable 'Whether respondent thinks as they get older they become more tolerant' was excluded from the analysis, as it did not relate to the literature on Internet use. The other variable used to measure attitudes toward ageing was 'whether respondent has found growing older

a positive or negative experience', which was measured on a Likert type scale with responses ranging from 1 (very positive) to 5 (very negative). For the purpose of this analysis, the variable was recoded into a nominal variable with three categories; positive (1), neither positive or negative (2), and negative (3). This was also done by Demakakos, Hacker and Gjonca (2006), and makes the variable more suitable for cross-tabulation.

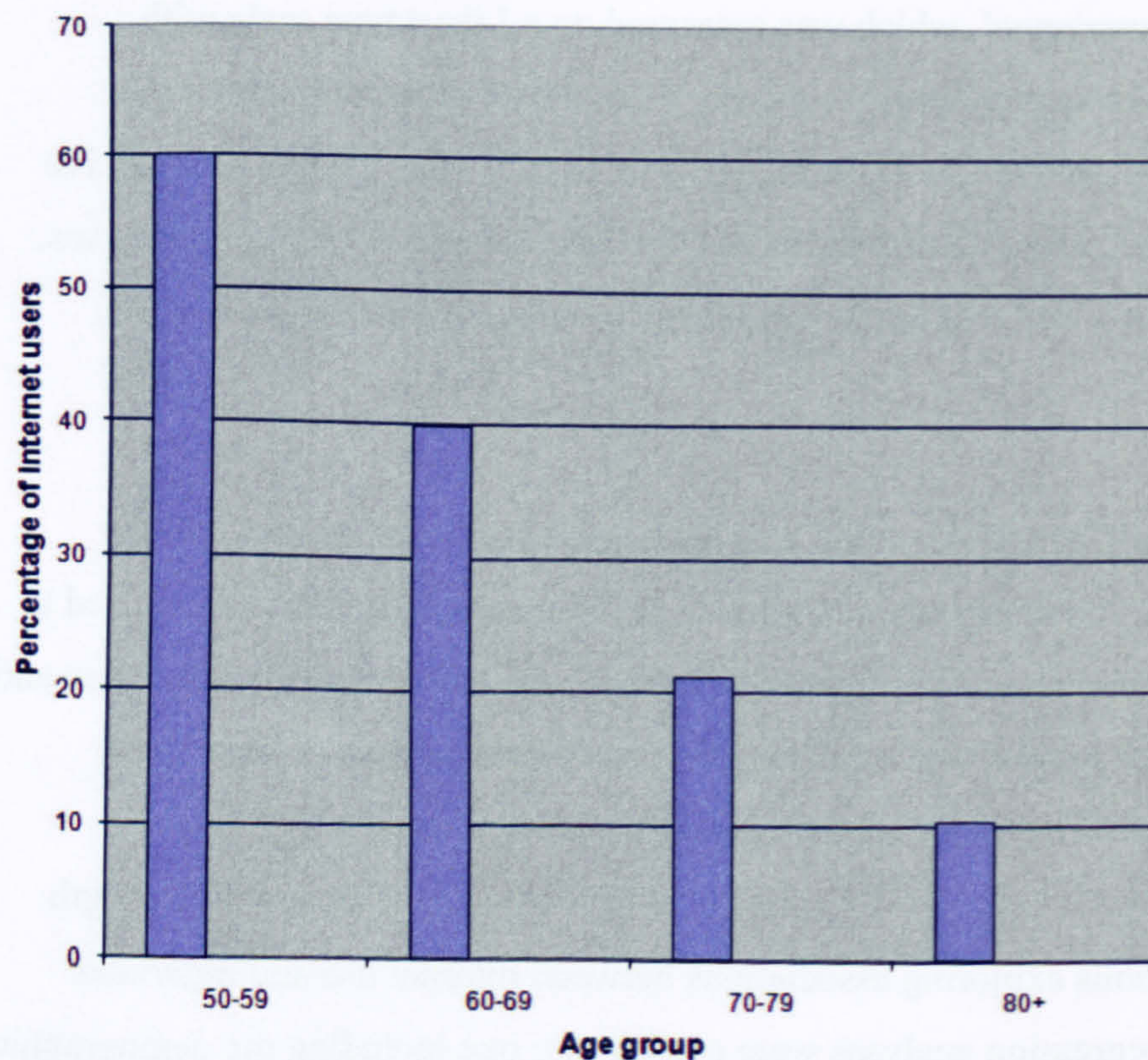
### *Analysis*

As the measure of Internet use in this study was based on a nominal variable, and the majority of independent variables were categorical, non-parametric statistics were used to explore whether there were associations between Internet use and various demographic and life-style variables. Cross-tabulations were used to examine percentage differences between Internet users and non-users, and chi-square tests were used to assess the significance of these associations, and Cramer's V tests were used to assess the strength. Following cross tabulations exploring associations between Internet use and individual variables, two logistic regression analyses were carried out; one including the demographic variables and the other including the lifestyle variables. These analyses were used to see how well sets of demographic and lifestyle variables explained Internet use together, and which variables were the best predictors.

### **Findings: socio-demographic variables**

#### *Age group*

The strongest association between Internet use and any demographic variable, was with age group ( $p < .001$ , Cramer's  $V = .358$ ). As may be expected, within the category of 'older people', the percentage of those who use the Internet or email decreases drastically with age (see fig. 1). Of all those aged 50-59, a majority of 60.1% use the Internet, compared with 39.9% of those aged 60-69, 21.1% of those aged 70-79, only 10.3% of those over 80.



**Figure 1: Percentage of Internet users by age group**

*Health*

The percentage of Internet users also differs according to self-reported general health, and appears to decrease as health worsens (see table one). While 57.1% of those with excellent self reported health use the Internet, only 25.8% of those with fair self-reported health and 19.2% of those with poor self reported health do. The association between self-reported general health and Internet use is highly significant ( $p < .001$ ), and is a moderate strength association (Cramer's  $V = .225$ ), although weaker than that of age group and Internet use.

**Table 1: Internet use by self-reported health**

<b>Respondent uses the Internet</b>	<b>Self-reported general health</b>				
	<b>excellent</b>	<b>very good</b>	<b>good</b>	<b>fair</b>	<b>poor</b>
No	42.9%	53.5%	62.7%	74.2%	80.8%
Yes	57.1%	46.5%	37.3%	25.8%	19.2%
Total	100%	100%	100%	100%	100%
	(1032)	(2312)	(2551)	(1517)	(557)

*Employment status*

There were also large differences in the percentages of Internet users among older people according work status (see table two). Among retired older people, only 28.3% use the Internet, compared with 62.5% of those who are employed, and 51.3% of those who are semi-retired. The percentage of those who use the Internet was also low among older people who described themselves as 'looking after home and family', of whom only 27.1% used the Internet. The lowest use of the Internet is among those who described themselves as 'permanently sick or disabled', of whom only 23.6% use the Internet. Perhaps surprisingly, the percentage of those who use the Internet among participants describing themselves as unemployed is 48.1%, which is much higher than that among other out of work groups. The association between current situation and Internet use is a fairly strong and highly significant association ( $p < .001$ , Cramer's  $V = .331$ ).

**Table 2: Internet use by employment status**

<b>Respondent uses the Internet</b>	<b>Best description of current work status</b>					
	<b>Retired</b>	<b>Employed</b>	<b>Unemployed</b>	<b>Permanently sick or disabled</b>	<b>Looking after home and family</b>	<b>Semi-retired</b>
No	71.7%	37.5%	51.9%	76.4%	72.9%	48.7%
Yes	28.3%	62.5%	48.1%	23.6%	27.1%	51.3%
Total	100%	100%	100%	100%	100%	100%
	(4120)	(2515)	(54)	(407)	(815)	(39)

It could be suggested that differences in Internet use based on work situation are due to the influence of age as an antecedent variable. As well as shaping Internet use, age shapes the likelihood of working or being retired, and could also explain the high rate of Internet use among people who define themselves as 'unemployed', compared with other non-working groups. However, when controlled for age, the associations between Internet use and work situation remained significant ( $p < .001$ ) and of moderate strength. The association did reduce slightly in strength though, both among those below 60 ( $\Phi = .255$ ) and those over 60 ( $\Phi = .200$ ).

Controlling for age also shaped the pattern of the association between Internet use and employment situation (see table three). Among those below age 60, there was little difference between those who are retired (61.5%) or employed (66.6%) in whether they use the Internet. However, among those who are over 60, a much lower percentage of retired people use the Internet (26.3%) compared with employed people (51.0%). This could be because those who retire below 60 are more likely to be from higher socio-economic groups with a better financial situation, while those who continue working after 60 may be more likely to be involved with computers/the Internet, and to enjoy better financial circumstances. Further research would be needed to determine these speculations.

**Table 3: Internet use by current work status and age group**

Age group	Respondent uses the Internet	Best description of current work status					
		Retired	Employed	Un-employed	Permanently sick or disabled	Looking after home and family	Semi-retired
Below 60	Yes	38.5%	33.4%	47.6%	71.1%	59.5%	55.6%
	No	61.5%	66.6%	52.4%	28.9%	40.5%	44.4%
	Total	100% (234)	100% (1843)	100% (42)	100% (232)	100% (257)	100% (9)
Over 60	Yes	73.7%	49.0%	66.7%	83.4%	79.0%	46.7%
	No	26.3%	51.0%	33.3%	16.6%	21.0%	53.3%
	Total	100% (3886)	100% (672)	100% (12)	100% (175)	100% (558)	100% (30)

*Occupational class*

Internet use was also significantly associated with class ( $p < .001$ ), and the association was the strongest following age group (Cramer's  $V = .345$ ). Older people employed in managerial and professional occupations are the most likely to use the Internet (61.1%), followed by those in intermediate occupations (41.0%), then those employed in routine and manual occupations (22.0%). This finding supports previous research using the 2002 ELSA data, which found that Internet use was higher among older people employed in managerial and professional occupations (Soule 2005).

*Gender*

Gender was also significantly associated with Internet use ( $p < .001$ ), but the association was weaker than that between Internet use and other demographic variables (Cramer's  $V = .113$ ). In consistency with the findings of previous research, the percentage of Internet users is greater among men (45.2 %) than women (34.1%). When differentiated by age, gender differences remained fairly consistent. Although Internet use falls for both men and women as age increases, in all age groups men were more likely to use the Internet than women (see table four). Gender differences were smallest in the 80 and over age group

(7% difference), followed by the 50-59 age group (10.5 % difference). The association between gender and Internet use remained significant ( $p < .05$ ) and of moderate strength in all groups. The strength of the association became slightly weaker among the 50-59 age group ( $\Phi = -.106$ ), while remaining the same among those 80 and over ( $\Phi = -.113$ ), and increasing slightly in strength among those aged 60-69 ( $\Phi = -.127$ ) and those aged 70-79 ( $\Phi = -.138$ ).

**Table 4: Internet use by gender and age**

Respondent uses the Internet/email	Age group							
	50-59 years		60-69 years		70-79 years		80+ years	
	Male	Female	Male	Female	Male	Female	Male	Female
No	34.1%	44.6%	53.3%	65.8%	72.9%	84.2%	85.4%	92.4%
Yes	65.9%	55.4%	46.7%	34.2%	27.1%	15.8%	14.6%	7.6%
Total	100%	100%	100%	100%	100%	100%	100%	100%
	(1145)	(1483)	(1214)	(1432)	(878)	(1005)	(314)	(502)

$(p < .001, \Phi = -.106)$    
 $(p < .001, \Phi = -.127)$    
 $(p < .001, \Phi = -.138)$    
 $(p < .05, \Phi = -.113)$

In exploring how gender differences relate to current work situation (see table five), the percentage of both employed men and women who use the Internet is very high (64.9% of men, and 60.0% of women), in comparison with much lower numbers of Internet users among men and women who are retired (34.7% among men and 22.7% among women), looking after the home and family (35.8% of men and 26.5% of women), and those who are permanently sick or disabled (25.0% of men and 21.9% of women). Nevertheless, among all types of work status, a greater percentage of men than women used the Internet, with the exception of those unemployed (although this association was not significant). This might suggest that the gender differences persist despite differences in work situation, however, the association between gender and Internet use only remained significant among respondents who were working ( $p < .05$ ) or retired ( $p < .001$ ). The association among participants who were retired increased slightly in strength ( $\Phi = .133$ ), while that among participants who were working it decreased in strength ( $\Phi = .050$ ), perhaps as older women in employment are more likely to have access to computers, reducing differences. Therefore when both men and women are looking after a home and family, or outside of



the workforce due to illness or unemployment, gender differences no longer remain significant.

**Table 5: Internet use by gender and occupation**

Gender	Respondent uses the Internet	Best description of current work status					
		Retired	Employed	Un-employed	Permanently sick or disabled	Looking after home and family	Semi-retired
Male	No	65.3%	35.1%	56.3%	75.0%	64.2%	40.7%
	Yes	34.7%	64.9%	43.8%	25.0%	35.8%	59.3%
	Total	100%	100%	100%	100%	100%	100%
		(1939)	(1269)	(32)	(220)	(53)	(27)
Female	No	77.3%	40.0%	45.5%	78.1%	73.5%	66.7%
	Yes	22.7%	60.0%	54.5%	21.9%	26.5%	33.3%
	Total	100%	100%	100%	100%	100%	100%
		(2181)	(1246)	(22)	(187)	(762)	(12)
		(p=<.001, Phi=.133)	(p=<.05, Phi=.050)	(p=>.05, Phi=.106)	(p=>.05, Phi=.036)	(p=>.05, Phi=.052)	(p=>.05, Phi=.239)

When the association between gender and Internet use was controlled for by occupational class, the difference between men and women almost disappeared in the intermediate occupational class, reflecting a higher percentage of women who used the Internet in this class (39.3%) and a lower percentage of men (41.0%). As a result, the relation was between gender and Internet use was no longer significant (p=>.05, Phi=-.016). This may be due to higher proportion of women employed in 'intermediate clerical and administrative occupations', and the greater likelihood of using computers for such occupations, in contrast to intermediate occupations such as agricultural or technical work, which men may be more likely to be employed in. In the managerial/professional occupational class, the percentage of Internet users is much higher among both men and women, but there is still around the same percentage gap between them, with more men using the Internet (65.0% of Internet users among men, 54.3% of Internet users among

women). Among men and women in manual/routine occupations, the percentage of Internet users is much lower, but there remains a slightly smaller but significant gap between men and women (25.9% of Internet users among men, 18.9% of Internet users among women). Although still significant among the Managerial/Professional ( $p < .001$ ,  $\Phi = .108$ ) and manual routine occupations ( $p < .001$ ,  $\Phi = .084$ ), associations reduced in strength in both these groups. The reduction in strength suggests class or occupational background may in part explain gender differences among older age groups.

### *Multivariate analysis*

To see how well the above demographic variables explained Internet use together, and which variables were the best predictors, a logistic regression analysis was carried out (see appendix A). As shown in table A-1, the overall model was significant ( $p < .001$ ), and Nagelkerke's R-square suggests that 34 % of the variance in Internet use is predicted by the model (see table A-2). The classification table (table A-3) shows that the model correctly predicts 83 % of cases in which the respondent does not use the Internet, and 60.8% of cases in which the respondent does use the Internet, a total of 74.3% cases correctly predicted. The histogram of predicted probabilities also indicates a fairly good model (see fig. 5, appendix A). However, the Hosmer and Lemeshow test (table A-4) was significant ( $p = .002$ ), which suggests that the model may not be a good fit, and that there may not be a significant difference between the observed and predicted models. However, this significance value could be due to the large sample size ( $N = 7646$ ). Another possibly problematic statistic is the large value of the  $-2 \log$  likelihood ( $-2LL = 8027.341$ ), which also suggests the fit of the model may not be very good (see table A-2), although this may be due to effects of the number and coding of independent variables on the degrees of freedom.

The majority of variables had a significant effect on Internet use (see table A-5). The strongest predictor of Internet use was social class ( $p < .001$ ,  $Wald = 621.138$ ), followed by age group ( $p < .001$ ,  $Wald = 348.200$ ). This fits with the results of cross-tabulations, in which class and age demonstrated the strongest associations with Internet use. However, only the managerial/professional and intermediate classes were included in the model, and only the age groups below 80. This suggests that those particular classes/age groups have more of an impact on Internet use. Individually, membership of the

managerial/professional class has the biggest impact on the model ( $p < .001$ , Wald=620.490). Of the variable gender, only 'male' was included in the model ( $p < .001$ , Wald=53.066), suggesting the importance of being male compared to being female in shaping Internet use, perhaps due to the fact men are more likely to use the Internet. All health status variables were significant except 'fair health' ( $p < .05$ , Wald=1.388), and 'poor health' was not included in the model. Although current work status was significant as a variable ( $p < .001$ , Wald=80.227), individual categories were not significant predictors, with the exception of 'permanently sick or disabled' ( $p < .05$ , Wald=80.227). However, the overall model did not really change when less useful variables were removed or recoded.

### **Leisure, life-styles, and living situation**

#### *Caring and living situation*

We now will examine relations between Internet use among older age groups and various lifestyle variables, beginning with caring and living situation. As would be expected based on previous research, those who had cared for someone in the past week were less likely to use the Internet (40.5% were Internet users) than those who had not (47.2% used the Internet). Nevertheless, this association was not quite significant ( $p > .05$ ), and was very weak ( $\Phi = .057$ ). Participants who lived with the person they cared for in the past week were even less likely to use the Internet, and only 32.3% were Internet users, compared with 46.2% of those who did not live with someone they cared for. This difference was significant ( $p < .001$ ) and a moderate size association ( $\Phi = .140$ ). Furthermore, the likelihood of using the Internet decreased as the number of hours spent caring in the past week increased (see table six). Among those who spent 19 hours or less caring in the past week 45.4% used the Internet, while among those who carried out round the clock care only 26.5% used the Internet. The association between Internet use and hours spent caring was significant ( $p < .001$ ) and was of moderate strength ( $\Phi = .154$ ). Therefore while having cared for someone in the past week may not be significantly associated with a reduction in Internet use, if respondents cared for someone they lived with, and dedicated a considerable amount of time to caring for them, this did have a significant impact on Internet use, as found in previous research on younger age groups (e.g. Blackburn et al 2005).

**Table 6: Internet use by hours spent caring**

Respondent uses the Internet	Hours spent caring in the past week			168 hours (round the clock)
	0-19 hours	20-49 hours	50-167 hours	
No	54.6%	57.9%	60.4%	73.5%
Yes	45.4%	42.1%	39.6%	26.5%
<i>Total</i>	100%	100%	100%	100%
	(493)	(164)	(53)	(200)

In terms of whether the gendered constraints of caring activities may help explain gender differences Internet use, once controlled for care, the association between gender and Internet use remained significant only among men and women working less than 19 hours per week ( $p < .05$ ). The association remained of moderate strength in this category, and actually increased slightly ( $\Phi = .120$ ). When looking at percentage differences (see table seven), men who care 19 hours or less a week are around 13% more likely to use the Internet than women, but gender differences virtually disappear among men and women caring 20-49 hours a week, or doing round the clock care. Inconsistently, there are large gender differences among those caring 50-167 hours a week, but these are not significant ( $p > .05$ ). On the whole, gender differences disappear when men and women care for a large number of hours, indicating that hours spent caring may partly explain gender differences in Internet use.

**Table 7: Internet use by gender and hours spent caring**

Respondent uses the Internet/email	Hours spent caring in past week							
	0-19 hours		20-49 hours		50-167 hours		168 hours (round the clock care)	
	Male	Female	Male	Female	Male	Female	Male	Female
No	45.9%	58.7%	59.1%	57.5%	46.7%	65.8%	75.4%	72.5%
Yes	54.1%	41.3%	40.9%	42.5%	53.3%	34.2%	24.6%	27.5%
<i>Total</i>	100%	100%	100%	100%	100%	100%	100%	100%
	(159)	(334)	(44)	(120)	(15)	(38)	(69)	(131)

( $p < .05$ ,  $\Phi = .120$ ) ( $p > .05$ ,  $\Phi = .014$ ) ( $p > .05$ ,  $\Phi = -.176$ ) ( $p > .05$ ,  $\Phi = .031$ )

In addition to caring activities, the impact of living situation was also examined (see table eight). There were significant associations between certain types of living situation and Internet use. Those who lived with a spouse or partner were more likely to use the Internet than those who did not (45.5% compared with 23.4%). This association was significant ( $p < .001$ ) and of moderate strength ( $\Phi = -.202$ ). Respondents who had a child living in the household were also more likely to use the Internet (49.9% compared with 36.7%), which was a significant and moderate strength association ( $p < .001$ ,  $\Phi = -.104$ ). On the other hand, respondents who had a grandchild living in the household were less likely to use the Internet than those who did not (17.6% compared with 40.1%). This association was again significant ( $p < .001$ ) but weak ( $\Phi = .055$ ). Having either parent living in the household made little difference to Internet use. Of those who lived with their mother 37.3% used the Internet, compared with 39.1% of those who did not, and the association was not significant and very weak ( $p > .05$ ,  $\Phi = .003$ ). There was a bigger difference between the percentage Internet users among those with a father living in the household (26.7%) and those who did not (39.1%), although again this was not significant ( $p > .05$ ,  $\Phi = .011$ )

**Table 8: Internet use by living situation**

Respondent uses Internet/email	Whether has a husband, wife or partner with whom they live		Whether respondent has a child in the household		Whether respondent has a grandchild in the household		Whether the mother of the respondent is in the household		Whether the father of the respondent is in the household	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
No	54.5%	76.6%	50.1%	63.3%	82.4%	59.9%	62.7%	60.9%	73.3%	60.9%
Yes	45.5%	23.4%	49.9%	36.7%	17.6%	40.1%	37.3%	39.1%	26.7%	39.1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	(5636)	(2149)	(1448)	(6525)	(119)	(8078)	(67)	(7906)	(15)	(7958)

( $p < .001$ ,  $\Phi = -.202$ ) ( $p < .001$ ,  $\Phi = -.104$ ) ( $p < .001$ ,  $\Phi = .055$ ) ( $p > .05$ ,  $\Phi = .003$ ) ( $p > .05$ ,  $\Phi = .011$ )

The significant associations could, however, be due to the influence of an intervening variable such as age, rather than the direct influence of household dynamics on Internet use. Age would shape the likelihood of Internet use and living situation, for instance, younger participants would be more likely to live with their child, and would also be more

likely to use the Internet. Once controlled for age, the association between having a child in the household and Internet use virtually disappeared, suggesting that it was merely due to age. It became insignificant in three out of four age groups ( $p > .05$ ), and while remaining significant in the 70-79 age group, the association was very weak ( $\Phi = .048$ ). While controlling for age reduced the strength of the association between living with a partner or spouse and Internet use, it remained significant and of moderate strength in all age groups. The association between having a grandchild in the household and Internet use became insignificant for participants over 70 ( $p > .05$ ,  $\Phi = .036$ ), but remained significant for those in the 60-69 age groups ( $p < .05$ ,  $\Phi = .053$ ), and increased in slightly strength for those in the 50-59 age group ( $p < .001$ ,  $\Phi = .083$ ).

It was also expected that the relationship between having a grandchild living in the household and Internet use maybe due to the effects of class. When controlled for class, the association remained significant only for those in the manual/routine occupational class, although the association was slightly weaker ( $\Phi = .041$ ). It seems class does control somewhat for the association between Internet use and having a grandchild in the household, but among those in routine and manual occupations there is still a significant, although weak, association. It may be that such differences are due to caring, however, expected cell counts were too low to carry out analyses. Overall, findings suggest that living situation, and particularly caring, are significant factors which warrant further investigation. This issue also emerged in the qualitative data gathered in this thesis, as will be discussed in chapter nine.

### *Perceptions of old age*

We will now examine whether there are associations between Internet use and particular perceptions of old age. In general, older people who used the Internet were less likely to agree with negative statements about old age. They were around 8% less likely to view old age as a 'period of loneliness', and around 7% less likely expect to become more lonely as they get older (see table nine). In addition, only 16.7% of Internet users 'generally thought of older people as grumpy and miserable' compared with 21.6% of non-users. They were also less likely to agree that 'older people do not get respect in society' and that 'old age is a time of ill-health', however there were only small percentage differences between users and non-users on these measures. Furthermore, once actual health status was

controlled for, the association between Internet use and views of old age as a time of ill-health disappeared, except for those in either excellent or very good general health. Nevertheless, on the whole this supports the suggestion that older Internet users are less likely to associate old age negatively with loss of abilities or ill health (Blit-Cohen and Litwin 2004). However, although statistically significant, these associations were all very weak. Furthermore, many of these associations may reflect interactions with age cohort, as more negative views of old age as a time of loneliness, or a lack of respect for older people in society, are more prominent among the 'old old' (Demakakos et al 2006), while Internet users tend to be younger.

In support of the suggestion that older Internet users are more likely to draw on positive views of old age (Blit-Cohen and Litwin 2004), older people who used the Internet were also more likely to describe their experience of growing older as being positive (see table). However, in contrast, non-users were more likely to agree that 'growing older doesn't bother me'. Again it may be expected that this difference is due to age, as older respondents are less likely to be bothered by growing older (Demakakos et al 2006). In keeping with this, once controlled for age this interaction was no longer significant. There were no significant differences between Internet users and non-users in whether they thought 'we can learn a lot from older people', or whether they thought of retirement as a 'time of leisure'. This is contrary to the suggestion that older Internet users may be more likely to engage with constructions of retirement in terms of leisure and consumption (Gilleard and Higgs 2008, Richardson et al 2005). There was also very little difference (1%) between Internet users and non-users in whether they expected to be able to continue doing the same things as they get older. The only moderate strength association was between Internet use and whether respondents thought of themselves as old ( $p < .001$ ,  $\Phi = .109$ ). As can be seen from the table, those who used the Internet were 10% more likely to agree that they 'didn't think of themselves as being old'. Nevertheless, when controlled for age, this association only remained significant and of moderate strength for those in the 50-59 age group ( $p < .001$ ,  $\Phi = .127$ ). On the whole, associations between perceptions of old age and Internet use were very weak. This is in contrast to the relevance of concepts of ageing demonstrated in qualitative studies, and also in reasons given for not using a computer in surveys. However, as Richardson et al (2005) found that perceptions of ageing are drawn on in discussions in complex and contradictory ways, it may be unsurprising that there are not clear cut quantitative patterns

**Table 9: Internet use by perceptions of ageing**

Perceptions of ageing		Respondent uses Internet/email		p	Phi
		No	Yes		
'Retirement is a time of leisure'	Agree	74.4%	75.8%	.254	.019
	Neither agree or disagree	14.8%	13.4%		
	Disagree	10.9%	10.8%		
'I don't think of myself as old'	Agree	71.9%	81.1%	<.001	.109
	Neither Agree or Disagree	12.8%	9.8%		
	Disagree	15.3%	9.1%		
'We can learn a lot from older people'	Agree	90.5%	89.2%	.148	.022
	Neither Agree or Disagree	8.4%	9.7%		
	Disagree	1.1%	1.1%		
'Growing older doesn't bother me'	Agree	58.4%	53.5%	<.001	.072
	Neither Agree or Disagree	18.8%	17.3%		
	Disagree	22.8%	29.2%		
'As I get older, I expect to be able to do the things I've always done'	Agree	44.0%	43.1%	.05	.027
	Neither Agree or Disagree	16.6%	15.0%		
	Disagree	39.5%	41.9%		
'I generally think of older people as grumpy and miserable'	Agree	21.6%	16.7%	<.001	.062
	Neither Agree or Disagree	24.3%	24.8%		
	Disagree	54.0%	58.5%		
'Old age is a time of ill-health'	Agree	50.4%	47.1%	.015	.033
	Neither Agree or Disagree	22.8%	24.8%		
	Disagree	26.8%	28.1%		
'As I get older, I expect to become more lonely'	Agree	41.5%	35.4%	<.001	.062
	Neither Agree or Disagree	25.6%	27.6%		
	Disagree	32.9%	37.0%		
'Old age is a time of loneliness'	Agree	34.3%	26.2%	<.001	.085
	Neither Agree or Disagree	23.7%	26.8%		
	Disagree	42.1%	46.9%		
'Old people do not get respect in society'	Agree	66.5%	63.8%	.001	.043
	Neither Agree or Disagree	17.3%	20.7%		
	Disagree	16.2%	15.5%		
'Growing older as a positive or negative experience'	Positive	53.6%	58.1%	<.05	.044
	Neither Positive or Negative	37.6%	34.4%		
	Negative	8.8%	7.6%		

*Having a hobby*

Various leisure and lifestyle activities were significantly associated with Internet use, including participation in a hobby. Among those who had a hobby or past time, 45.8 % used the Internet, compared with 21.8% of those who don't have a hobby (see table ten). The association between having a hobby and Internet use was a significant ( $p = <.001$ ) moderate strength association ( $\Phi = .221$ ). This in contrast to descriptions of involvement



in other hobbies detracting from the desire to go online (Selwyn 2004), although the nature of the association between hobby participation and Internet use is not clear without further investigation.

**Table 10: Internet use by participation in a hobby**

<b>Respondent uses the Internet</b>	<b>Respondent has a hobby or past time</b>	
	<b>No</b>	<b>Yes</b>
No	78.2%	54.2%
Yes	21.8%	45.8%
<b>Total</b>	<b>100%</b>	<b>100%</b>
	(2237)	(5736)

Controlling for class and age reduced the strength of the association between Internet use and having a hobby slightly, but it remained significant ( $p < .001$ ) and of moderate strength among all age/class groups. Controlling for health reduced the strength of the association for those in excellent-good health, but it remained as strong for those in fair health ( $\Phi = .221$ ) and increased for those in poor health ( $\Phi = .263$ ). This suggests an interaction between health, having a hobby, and Internet use, in which having a hobby makes more of an impact on Internet use among those in poor health.

*Taking part in recent education/training*

Among respondents who had taken part in formal education or training in the past 12 months, 68.3% used the Internet/email, compared with only 33.6% of those who had not taken part in any education or training in that time (see table eleven). This association was significant ( $p < .001$ ) and a moderate strength relationship ( $\Phi = -.203$ ). The association of educational activities with Internet use fits the profile of the ‘sophisticated choosers’ (Nimrod and Adoni 2006). It could also be that involvement in education encourages or necessitates the use of computers, as found in research among the general population (Anderson and Tracey 2002).

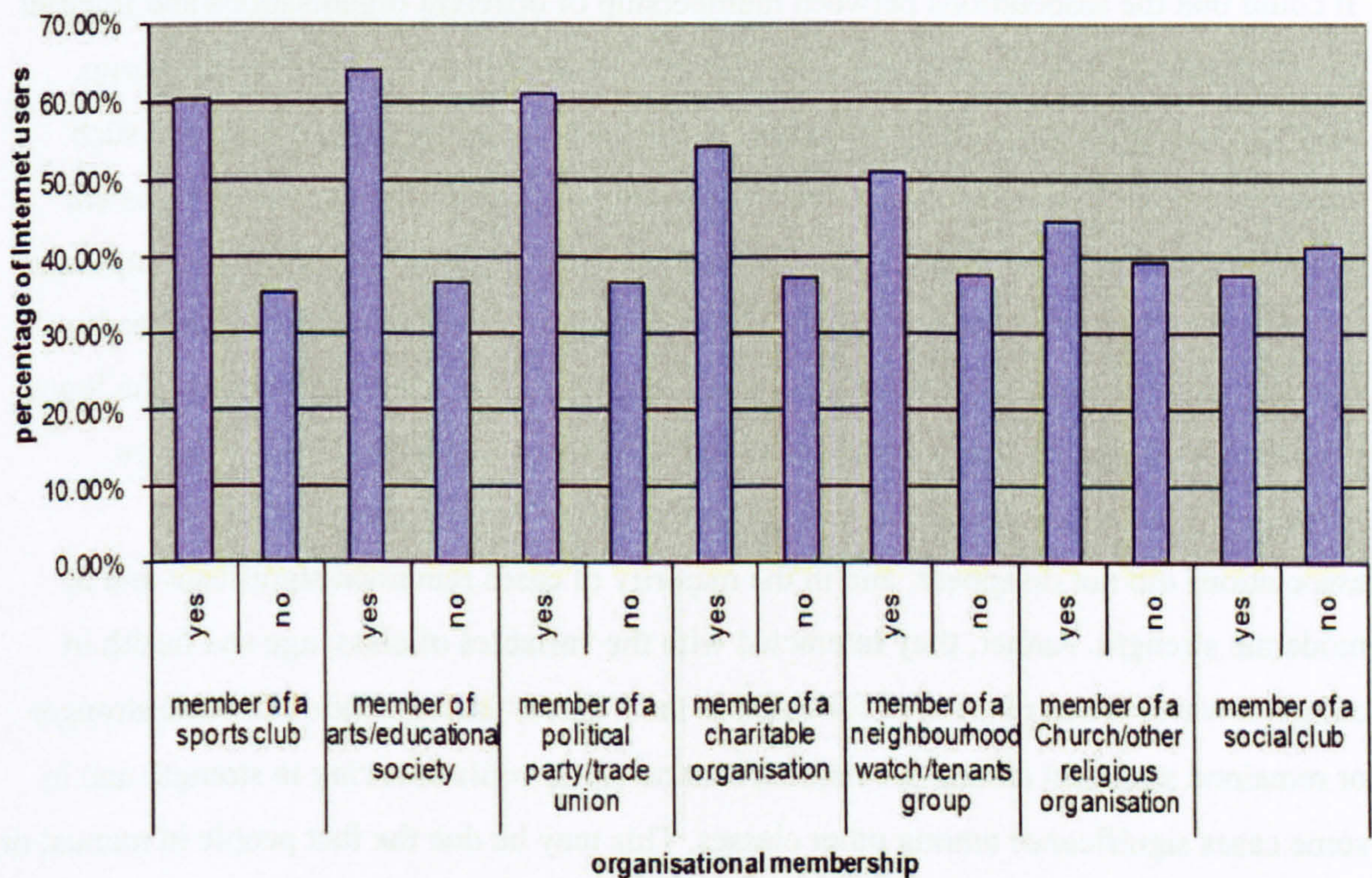
**Table 11: Internet use by participation in formal education or training**

<b>Respondent uses the Internet</b>	<b>Has respondent taken part in formal education or training in the past 12 months?</b>	
	<b>Yes</b>	<b>No</b>
No	31.7%	66.4%
Yes	68.3%	33.6%
<i>Total %</i>	100%	100%
	(649)	(6758)

In order to check whether associations between Internet use and recent participation in education were due to other intervening variables such as class, age, gender and health, cross-tabulations were re-run controlling for these factors. Again, associations were not removed by adding control variables, but interacted with different categories in different ways. When controlled for gender, the association remained significant for both men and women ( $p < .001$ ), but decreased in strength for men ( $\Phi = -.190$ ), while increasing slightly in strength for women ( $\Phi = -.220$ ). Controlling for age reduced the strength of the association for all age groups, although it remained significant, and was the strongest among the 60-69 age group ( $\Phi = -.176$ ). The association was also reduced in strength when controlling for class, although it remained significant ( $p < .001$ ) and of moderate strength in all groups. The association remained strongest among those in intermediate occupations ( $\Phi = -.190$ ). It seems that factors such as class and age may in part shape the association between Internet use and participation in recent education, but do not completely explain it.

### Organisational membership

Members of most organisations and groups were significantly more likely to use the Internet or email, with the exception of social club members (see fig. 2). Among those who were members of social clubs, only 37.6% used the Internet, compared with 41.3% of non-members. This was also the weakest association ( $p < .008$ ,  $\Phi = .030$ ). The association between Church membership and Internet use was also very weak ( $p < .001$ ,  $\Phi = .045$ ), and 44.6% of Church members used the Internet, compared with 39.3% of non-members.



**Figure 2: Percentage of Internet users by organisational membership**

All other associations between Internet use and organisational membership were of moderate strength. The strongest association was between sports club membership and Internet use ( $\Phi = .207$ ,  $p < .001$ ), and 60.5% of sports club members used the Internet, compared with 35.3% of non-members. The association between membership of an arts/music/or educational class was the next strongest ( $p < .001$ ,  $\Phi = .191$ ), and 64.1% of

members of these organisations used the Internet/email, compared with 36.8% of non-members. Following this, the strongest association was between membership of a political party/trade union/environmental group and use of the Internet ( $p < .001$ ,  $\Phi = .177$ ).

Among members of these groups, 61.1% used the Internet/email, compared with 36.8% of non-members. The associations between membership of a Charitable organisation ( $p < .001$ ,  $\Phi = .135$ ) or membership of a tenants/residents organisation ( $p < .001$ ,  $\Phi = .107$ ) were slightly weaker, although still significant. The percentage of Internet users among these groups were also smaller; 54.3% of those who were members of Charitable organisation, and 50.9% of those who members of a neighbourhood watch/tenants or residents association used the Internet.

It could be that the associations between membership of different organisations and Internet use are due to the effects of intervening variables such as class, health, and age group, which would influence both opportunities to use the Internet and to participate in such organisations. Research has found that the majority of organisational memberships are higher among those in managerial and professional occupations, younger age groups, and better health (Hyde and Janevic 2002). The exception to this is social club membership, which is higher among those in routine/manual occupations. This could explain the lower percentage of Internet users among social club members in contrast to other groups. However, when cross-tabulations were repeated controlling for these variables, associations did not disappear, and in the majority of cases remained significant and of moderate strength. Rather, they interacted with the variables of class, age and health in complex ways. When controlled for class, in most cases, the association became stronger or remained strongest among the manual/routine class, while reducing in strength and in some cases significance among other classes. This may be due to the fact people in manual or routine occupations are less likely to have had experience with computers in work, so such leisure activities may be particularly important in instigating computer use. Generally the association became weakest among the managerial/professional group, however, with sports club and political party membership the associations with Internet use were weakest among the intermediate occupational group. The only case in which the associations disappeared when controlled for class was among social club membership, for which there was not a very strong association with Internet use to begin with. This supports the prediction that the low proportion of Internet users among social club members was due to the fact they are more likely to be from routine/manual occupational backgrounds.

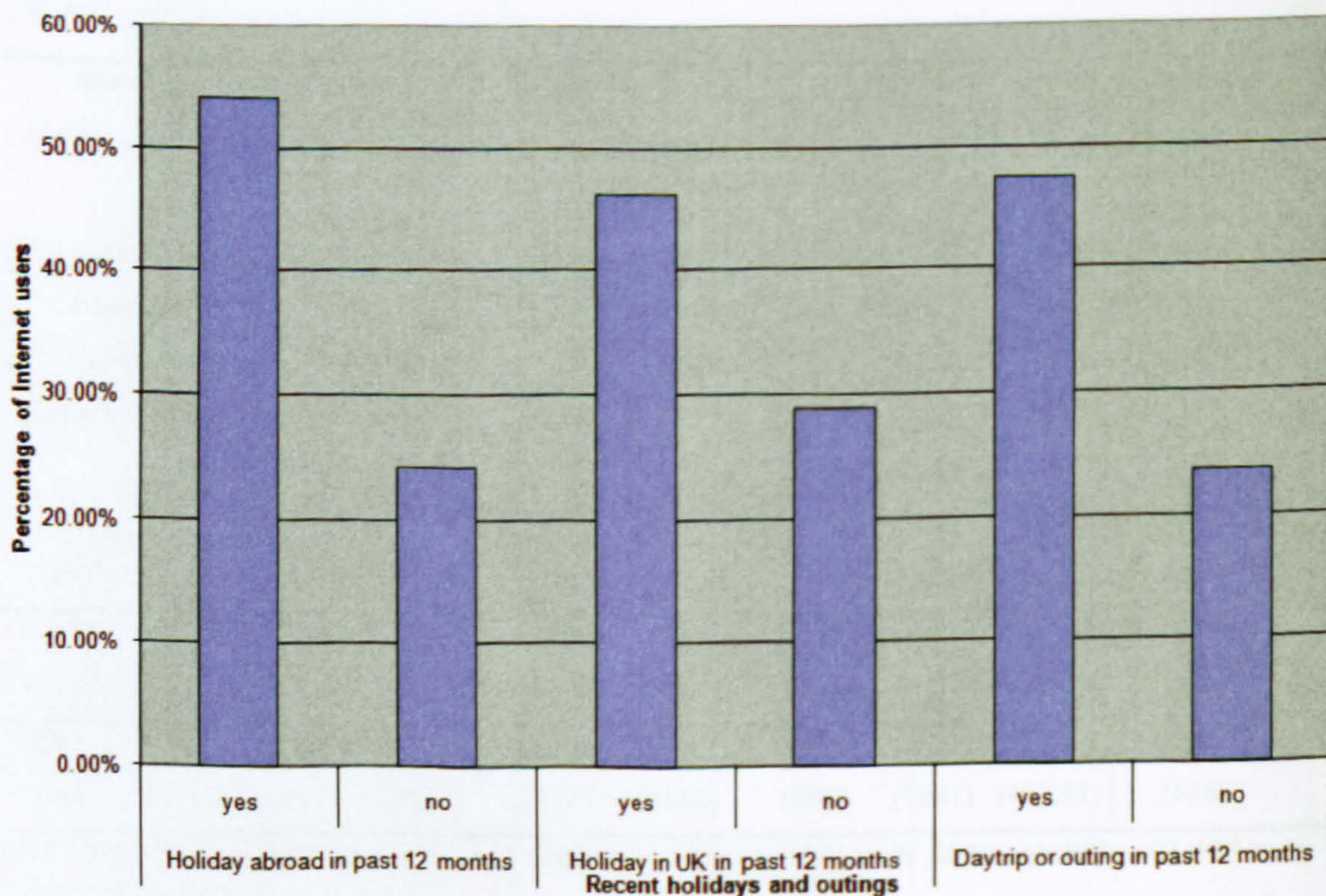
When controlling for age group the associations remained strongest or increased in strength among the 80 and over age group, while decreasing in strength in younger groups. However, in some cases, associations among the youngest age group (50-59 years) were the next strongest or equally strong associations. This was the case among political party and sports club membership, both of which have younger memberships (Hyde and Janevic 2002). Once controlled for health, the associations generally increased in strength for those in poorer health, while reducing in strength for those in excellent or very good health (for example, see table twelve). The exception to this is among social club membership, in which the interaction became insignificant except for those in excellent health. In general, it seems that for those in good health, percentages of Internet users are high regardless of organisational membership. However, for those in poorer health, group membership seems to make a big difference to whether participants use the Internet. It must be noted though, that the reason for these associations is unknown.

**Table 12: Internet use by group membership and health status**

		Excellent health		Very good health		Good health		Fair health		Poor health	
		Membership of an education, arts or music group or evening class		Membership of an education, arts or music group or evening class		Membership of an education, arts or music group or evening class		Membership of an education, arts or music group or evening class		Membership of an education, arts or music group or evening class	
Respondent uses the Internet/email		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No		45.9%	22.0%	55.9%	33.2%	64.5%	42.0%	75.9%	44.5%	82.2%	47.1%
Yes		54.1%	78.0%	44.1%	66.8%	35.5%	58.0%	24.1%	55.5%	17.8%	52.9%
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		(814)	(182)	(1867)	(352)	(2080)	(343)	(1278)	(119)	(472)	(34)
		(p=<.001, Phi=.188)		(p=<.001, Phi=.165)		(p=<.001, Phi=.161)		(p=<.001, Phi=.198)		(p=<.001, Phi=.219)	

## Holidays and outings

The percentage of Internet users was higher among those who had been on any type of holiday or outing in the past 12 months, than those who had not (see fig. 3). Out of those participants who had gone on a daytrip or outing in the past year, 47.4% used the Internet for email, compared with only 23.7% of those who had not. This is a significant, moderate strength association ( $p < .001$ ,  $\Phi = .232$ ). Among those who had taken a holiday in the UK in the past 12 months, 46.3% used the Internet email, compared with 28.9% of those who had not. This was a significant association ( $p < .001$ ), although slightly weaker than that between taking a day trip and using the Internet/email ( $\Phi = .177$ ). Of those participants who had taken a holiday abroad in the last 12 months, 54.1% used the Internet, compared with 24.2% of those who had not. This was again a significant association ( $p < .001$ ) and was stronger than that between other types of holiday and Internet use ( $\Phi = .307$ ). There were a higher percentage of Internet users among those who had been on a holiday abroad than other types of holiday, and larger difference in the percentage of Internet users between those who had or had not been on a holiday abroad.



**Figure 3: Percentage of Internet users in relation to holidays or outings in the past 12 months**

It could be that the reason for the higher proportion of Internet users among those who had taken a holiday abroad than other holiday types, is due to the association of this type of holiday with the sophisticated chooser profile and more privileged older people (Nimrod and Adoni 2006). The likelihood of having been on a holiday abroad in the past 12 months is greatly influenced by occupational class, age, and health (Hyde and Janevic 2002). To test whether such factors underpin the relationship between having a holiday abroad and Internet use, cross-tabulations were repeated controlling for these variables. Controlling for class reduced the strength of the association between Internet use and holidays abroad, although it remained significant for all class groups ( $p < .001$ ). The association remained strongest among the managerial professional class ( $\Phi = .290$ ). Similarly, controlling for age reduced the strength of associations with Internet use, although they remained significant ( $p < .001$ ) and of moderate strength. The association between Internet use and having a holiday abroad interacted with health status (see table thirteen), and increased in strength for those in poor health ( $\Phi = .362$ ), while reducing slightly in strength for other health status groups, although remaining significant ( $p < .001$ ). As can be seen below, there is a large difference in the percentage of Internet users among those with poor health, according to whether or not they have taken a holiday abroad in the past 12 months.

**Table 13: Internet use by holidays or outings in past 12 months and health status**

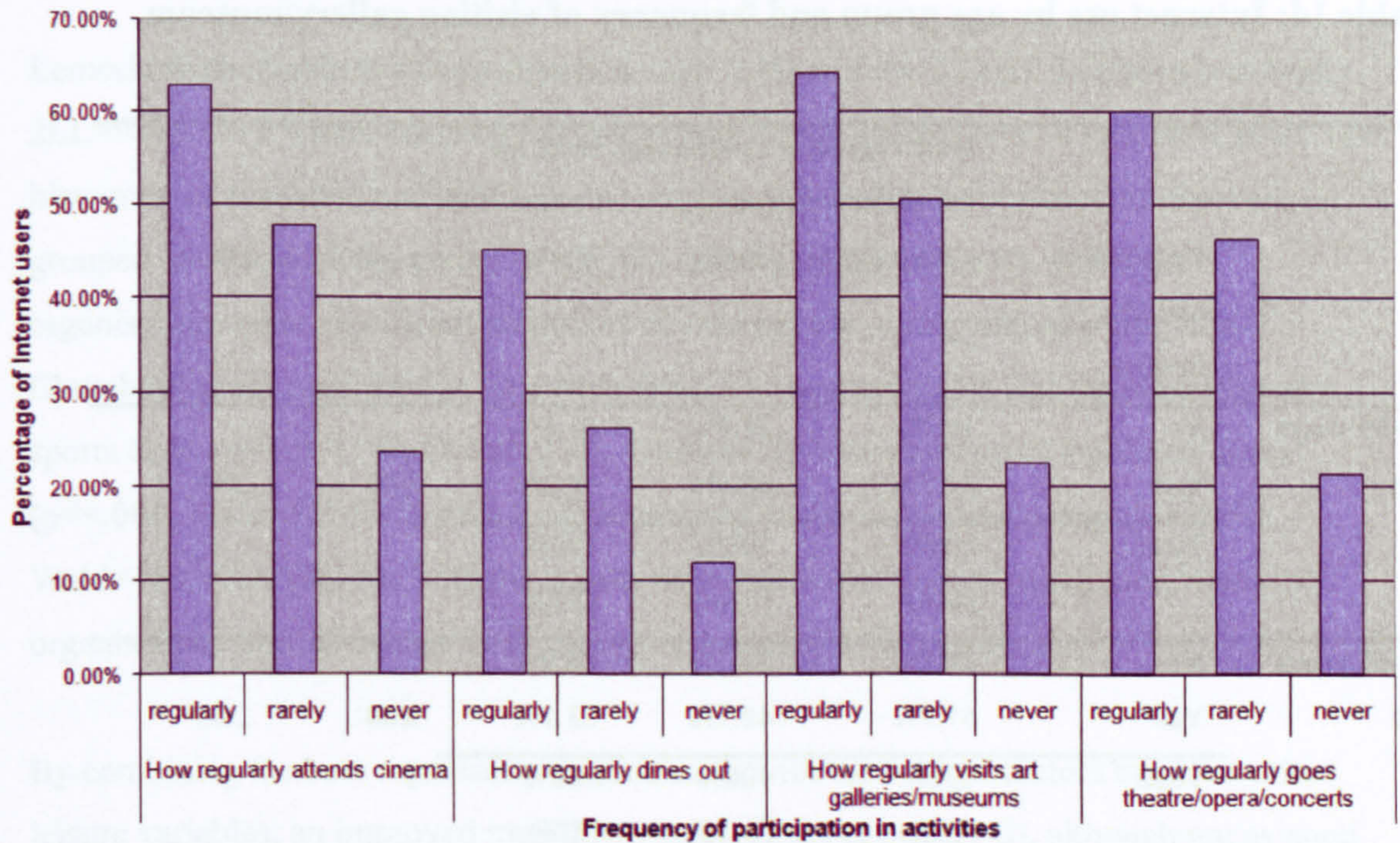
Respondent uses the Internet/email	Excellent health		Very good health		Good health		Fair health		Poor health	
	Respondent has taken a holiday abroad in the last 12 months		Respondent has taken a holiday abroad in the last 12 months		Respondent has taken a holiday abroad in the last 12 months		Respondent has taken a holiday abroad in the last 12 months		Respondent has taken a holiday abroad in the last 12 months	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No	60.4%	33.6%	70.0%	42.2%	75.0%	50.0%	82.5%	58.7%	88.9%	55.6%
Yes	39.6%	66.4%	30.0%	57.8%	25.0%	50.0%	17.5%	41.3%	11.1%	44.4%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	(359)	(673)	(936)	(1376)	(1297)	(1254)	(989)	(528)	(422)	(135)
	$(p < .001, \Phi = .259)$		$(p < .001, \Phi = .273)$		$(p < .001, \Phi = .259)$		$(p < .001, \Phi = .259)$		$(p < .001, \Phi = .362)$	

### *Social participation*

Respondents who participated in activities such as dining out, going to the cinema, or visiting art galleries and museums on a regular basis were more likely to use the Internet than those who participated in these activities less frequently or not at all (see fig. 4). Apart from dining out, the majority of respondents who regularly participated in these activities used the Internet. Among participants who attended the cinema regularly, 68.8% used the Internet, compared with 47.8% of those who rarely attended the cinema, and 23.6% who never attended the cinema. This was a significant association ( $p < .001$ ) which was also strong (Cramer's  $V = .314$ ). There was a larger percentage of Internet users among those who dine out regularly (45.3%), compared with those who rarely dine out (26.2%) or never do (11.9%). However, the percentage of those who use the Internet was lower among those who regularly dine out, than those who attend the cinema regularly, and the majority did not use the Internet (54.7%). The association was significant ( $p < .001$ ) but was smaller than that between cinema attendance and Internet use (Cramer's  $V = .215$ ).

Respondents who visit art exhibitions or museums regularly are also more likely to be Internet users than those who rarely or never do. Of those who regularly visit galleries or museums, 64.2% use the Internet, compared with 50.5% of those who rarely attend galleries or museums, and only 22.4% of those who never do. This is a similar pattern to that of cinema attendance. This association was significant ( $p < .001$ ) and the strongest association (Cramer's  $s = .330$ ). The majority of those who visited the opera/theatre/concerts regularly used the Internet (60.0%), compared with 46.3% of those who rarely did, and 21.2% of those who never did. This difference was again significant ( $p < .001$ ), and a strong association (Cramer's  $V = .307$ ). Participation in such activities is regarded as 'high culture', and reflects the 'sophisticated chooser' profile (Nimrod and Adoni 2006).





**Figure 4: Percentage of Internet users in relation to participation in social activities**

It may be expected that the association between participation in such activities and Internet use is the result of factors such as class or health. Controlling for class did reduce the strength of the associations slightly in strength, although they remained significant and of moderate strength in all class groups. Similarly, controlling for health reduced the strength of the associations, but only slightly, and they remained significant and of moderate strength. The associations remained strongest for those in poor health. When controlling for age, there was an interaction with the 50-59 age group, whereby associations decreased in strength as age increased, but increased in strength in this group (see table below for example).

**Table 14: Internet use by age group and frequency of visiting gallery/museum**

	Respondent uses the Internet	How regularly respondent visits an art gallery/museum			p-value	Phi
		Regularly	Rarely	Never		
<b>50-59 years old</b>	No	16.7%	31.6%	61.8%	.000	.344
	Yes	83.3%	68.4%	38.2%		
	Total	100%	100%	100%		
		(444)	(1264)	(790)		
<b>60-69 years old</b>	No	38.1%	51.3%	76.9%	.000	.303
	Yes	61.9%	48.7%	23.1%		
	Total	100%	100%	100%		
		(449)	(1108)	(876)		
<b>70-79 years old</b>	No	60.4%	71.9%	87.0%	.000	.233
	Yes	39.6%	28.1%	13.0%		
	Total	100%	100%	100%		
		(222)	(634)	(745)		
<b>80-89 years old</b>	No	76.0%	86.1%	91.0%	.003	.131
	Yes	24.0%	13.9%	9.0%		
	Total	100%	100%	100%		
		(50)	(173)	(456)		

*Multivariate analysis of leisure and Internet use*

Logistic regression was carried out to see how effectively different leisure variables predicted Internet use (see appendix B). First a regression was carried out to model the effects of organisational membership on Internet use. This model was not as good as that of demographic variables although, as show in table B-1, it was significant ( $p < .001$ ). Nagelkerke's R-square suggests this model only predicts 12.5% of the variance in Internet use (see table B-2). While correctly predicting 84.1% of cases in which respondents do not use the Internet, it only predicted 38.0% of cases in which they do, a total correct predictions of 65.4% (see table B-3). As with the demographic model, the Hosmer and

Lemeshow test (table B-4) was significant ( $p < .05$ ) and the 2 Log Likelihood was high ( $-2LL = 9448.891$ ), which suggests the model may not be a very good fit (see table B-2). The histogram of predicted probabilities also suggests a less effective model, as cases are grouped more toward the centre of the plot (see fig. 6, appendix B). All of the organisations were significant predictors of Internet use, except membership of a Church/religious organisation (see table B-5). The best predictor was 'membership of a sports club' ( $p < .001$ , Wald=205.934), followed by 'membership of a political party' ( $p < .001$ , Wald=122.941), then 'membership of an arts/education group' ( $p < .001$ , Wald=113.305). This fits with the results of cross-tabulations, in which these were the organisational memberships most strongly associated with Internet use.

By combining the best organisational predictors with the best predictors based on other leisure variables, an improved model was created (see appendix C), although not as good as that based on demographic variables. Using Nagelkerke's R-square, the model predicts around 27% of the variance in Internet use (see table C-2). It correctly predicts 78.1% of cases in which respondent do not use the Internet, and 59.1% of cases in which they do, a total correct predictions of 70.2% (see table C-3). The histogram of predicted probabilities also suggests a better fit (see fig. 7, appendix C). The same problems appear with the significance of the Hosmer and Lemeshow Test ( $p < .05$ ) and the large  $-2$  log likelihood value ( $-2LL = 7255.206$ ), although it is smaller than that of the organisational model (see tables C-4 and C-2). All predictors are significant (see table C-5), and the best predictor is 'having taken a holiday abroad in the past 12 months' ( $p < .001$ , Wald=185.248), followed by how regularly respondents visit a gallery or museum ( $p < .001$ , Wald= 98.142), then whether respondent has recently taken part in education/training ( $p < .001$ , Wald=88.606).

### **Summary and discussion**

The findings of this analysis demonstrate significant differences in Internet access levels *between* older people, based on class, age group, gender and health. As found in previous research (e.g. Selwyn et al 2003, National Statistics Online 2005, Soule 2005), the percentage of Internet users was significantly higher among younger cohorts, the managerial/professional class, men, and those in better health. This analysis has also sought to go beyond digital divisions, to unpack the reasons for such differences. In the case of gender, it has found that caring activities are an important factor in shaping

differences, which virtually disappeared once men and women cared over 16 hours. This reflects previous research on younger age groups (e.g. Blackburn et al 2005, Haddon 1999), and suggests that caring activities may also continue constrain technology use in later life, particularly among women. The analysis also found that women who were in paid employment rather than looking after a home and family were much more likely to use the Internet, as were those among managerial/professional occupational groups. However, as the ELSA data was used for cross-sectional analysis, this only provides a snapshot of the relation between technology use and later life. As discussed in chapter two, as younger cohorts enter retirement age divisions may disappear (Xie 2003). Furthermore, divisions based on factors such as class may change (Livingstone 1999), and like older technologies such as television which were initially adopted in middle class households, Internet and computer ownership may become more ubiquitous.

This chapter also included exploratory analysis of the relation between Internet use and various aspects of everyday life. In relation to questions of how social interactions and settings shape Internet use, there were significant associations between certain types of living situation and whether respondents used the Internet. However, it is difficult to understand the reasons for the influence of particular living situations from this data. The analysis also demonstrated how participation in leisure activities such as having a hobby, going on regular holidays and outings, or being a member of an organisation were associated with increased Internet use. Furthermore, these associations generally did not disappear when demographic variables were controlled for. Again, it was difficult to further explore the meaning of these associations using this survey data though. It could be that in general, an active lifestyle and broader social networks are connected with greater Internet use among older people, in contrast to the view that Internet use leads to a decline in social activity (DiMaggio et al 2001). However, there may be a more direct relation between participation in particular activities and Internet use, as some older people may be motivated to use the Internet in order to access resources for a hobby, organisation, or leisure activity. Qualitative research is needed to explore such possibilities further, and also to assess whether Internet use itself is seen in terms of leisure. Contrary to expectations, there was little difference between Internet users and non-users in attitudes toward old age. This may suggest that perceptions of ageing are not an important factor when examining Internet use among older people. However, as suggested above it could simply be that constructions of old age are drawn on in a complex and contradictory fashion when

discussing Internet use (Richardson et al 2005), and may be difficult to analyse quantitatively.

In sum, the analysis of survey data in this chapter was able to provide answers to certain research questions. The importance of socio-demographic differences in shaping Internet use among older people was highlighted, as was the relevance of work, leisure, caring activities and living situation. It was also able to shed light on associations between gender differences in Internet use among older age groups, and factors such as occupation, work situation and caring activities. However, the reasons for many of these associations, and subjective meanings and experiences of computer and Internet use in everyday life, could not be addressed using this quantitative survey data. Questions around biography were also unable to be addressed by this analysis. While this chapter has highlighted work, leisure, caring and living situation as areas of interest, qualitative research is needed to understand exactly how these different factors relate to Internet use. In the light of this, the next chapter sets out the methodology for the qualitative research which forms the main body of data in this thesis.

## **Chapter five**

### **Researching the Internet and Later Life: A discussion of qualitative methodology**

The previous chapter used quantitative secondary analysis of survey data to examine the relation of living situation, social/leisure activities, caring, and differences within older people to Internet use in later life. This analysis was able to provide information about general patterns in relation to many of these issues, however there were also a number of limitations to this approach. It was argued that this quantitative statistical analysis was unable to provide in-depth information on meanings and experiences of Internet use in later life, and their location within the context of the home, as well within biographical experiences of technology use. Therefore, in the light of these limitations, this chapter will now outline the qualitative approach that will form the main strategy for data gathering in this thesis. It will begin by expanding on the suitability of a qualitative research strategy and methodology, including more specific biographical and ethnographic approaches. It will be argued that a mixed method design involving multiple qualitative interviews, time-use diaries, and quasi-ethnographic methods is most effective for answering the research questions of this thesis, and providing an in-depth, contextual understanding of Internet use. Following this, the specific methods of sampling, data collection and analysis will be discussed, and the reasons for these choices outlined. This will also include a reflexive discussion of my experience of conducting and analysing this research, including exploration of any difficulties encountered, and how my role as a researcher may have shaped the outcome of the study.

#### **Qualitative approach**

While quantitative methods were used to provide some background data for this thesis, the main methodological approach taken will be qualitative. Quantitative research involves numerical data and statistics, and is useful for mapping out general patterns (Maynard 1994, Schroder et al 2003). However, qualitative methods are able to provide more in-depth accounts of social phenomena and the subjective meanings and experiences of those being studied (Holliday 2002, Maynard 1994, Schroder et al 2003, Scott 2002, Silverman 2005). As well as involving different ways of gathering data, qualitative and quantitative

approaches are associated with different methodologies, involving different ways of viewing the social world. Quantitative research is associated with positivist methodology, which proposes that the methods of the natural sciences can be applied to studying the social world (Scott 2002, Silverman 2005). This approach aims to uncover universal laws governing human behaviour through rigorous hypothesis testing (Scott 2002, Silverman 2005). Positivist methodology takes the epistemological position that the social world is an objective reality which can be uncovered, and that social phenomena are 'facts' (Neuman 2003, Scott 2003). It is argued that the researcher should take an objective role in studying social life, and that research should aim to be 'value free' (Neuman 2003, Maynard 1994, Scott 2002, Silverman 2005).

In contrast, qualitative research is associated with interpretivist methodology, which argues that we can only know the social world through people's perceptions and experiences of it (Neuman 2003, Scott 2002). Rather than acting on people objectively, social life is constructed through the creation and negotiation of shared meanings in interactions (Neuman 2003, Scott 2002). Although there are variations of interpretivism, including phenomenology, ethnomethodology, and symbolic interactionism, they are generally underpinned by this epistemological position (Scott 2002). Taking this view of social life means that rather than aiming to uncover universal laws, interpretive approaches focus on understanding the subjective meanings of respondents and their location in specific contexts (Neuman 2003). It is argued to be inappropriate to apply the methods of the natural sciences to studying the social world, as people have intentions and meanings which underpin behaviour, unlike other natural phenomena (Neuman 2003, Silverman 2005, Scott 2002). Furthermore, the view that research can be objective and value-free has been critiqued, as the views and beliefs of the researcher are necessarily a part of research (Harding 1990, Neuman 2003, Stanley and Wise 1993). As feminist researchers have pointed out, positivist research which was supposedly 'value-free' was in fact shaped by 'malestream bias', and ignored women's experiences (Maynard 1998). It is argued that rather than ignoring the beliefs and values of the researcher, they should be examined reflexively (Luff 1999, Maynard 1998, Neuman 2003). This is something I have sought to incorporate into the research process, keeping detailed notes reflecting on each interview. These reflections are incorporated into my discussions of data collection below.

Such positions do not represent polar opposites, however, and researchers may use both qualitative and quantitative methods, or adopt a methodological position in between a purely interpretivist or positivist approach (Scott 2002, Silverman 1995). It is argued by Silverman (1995, 2005) that neither qualitative nor quantitative methods are superior; rather the best method to use is one which fits the aims and theoretical approach of the study. In the case of this study, the aim is to develop an in-depth understanding of Internet use within the context of the home, and the everyday activities and interactions in this space. Qualitative methods are better suited to developing a detailed understanding of everyday experience and behaviour, and its location within specific contexts (Silverman 1995, 2005). The complex negotiation of Internet use within interactions in these spaces is difficult to grasp within statistical, numerical data (Schroder et al 2003). The research is also aimed at understanding the subjective meanings of Internet use in this context, which better fits with qualitative, interpretive approaches (Xie 2005, Neuman 2003, Scott 2002).

In addition to drawing more generally on qualitative methodology, the methods used in this study are also underpinned by more specific research strategies, namely biographical and ethnographic approaches. One of the main research questions in this study is how biographical experiences of technology use shape the use of computers and the Internet in domestic space during later life. In addition, as we saw in chapter two, exploring processes of domestication also involves following the biographies of objects, and the process of integrating them into the home (Silverstone et al 1992). Therefore, in seeking to address these issues, I have drawn on biographical approaches, which explore participants' past experiences or life histories, and locate them within broader social structures and processes of social change (Bornat 2002, Roberts 2002). There are various subcategories of biographical research, including oral history, life history, narratives, and auto/biography. These various approaches have different implications for the methods of data collection used and the focus of data analysis. Life-history and oral history approaches use interviews to explore the historical experiences of participants, while auto/biography does not have to involve interviews, and can use accounts from various sources, including diaries, letters or photographs (Roberts 2002). In contrast to these methods, narrative analysis focuses on the stories participants construct, rather than the historical events they describe (Riessman 1993, Roberts 2002). It explores participants' structuring and ordering of events, and the relation of 'story telling' to identity construction (Riessman 1993). I have not strictly adhered to one particular method of biographical research. However, like oral history and



life-history approaches I have used interviews to explore biographical experiences of technology use, which would be difficult to examine using other sources. As with narrative analysis and more recent interpretivist and postmodernist approaches to oral history, I aimed to explore participants' experiences and representations of technology use throughout the life-course, rather than seeking to produce a neutral record of historical events (Roberts 2002, Jamieson 2002). In addition, I am also interested in the narratives of technological change participants construct and their connection to broader discourses and social identities, as will be discussed in chapter five. A couple of previous studies of technology use in later life have taken a similar approach, incorporating examination of biographical issues as part of a broader examination technology use. For instance, Selwyn's (2004) research on older people's use and non-use of the use of computers and the Internet also explored histories of computer use, and their relation to previous paid employment. This lead him to describe interviews as "approaching a life-history' or "life story" method" (Selwyn 2004:371). However, he only examined computer use, and did not examine more general experiences of technology use throughout the life-course. In exploring these experiences, my approach builds on the work of Haddon and Silverstone (1996) who carried out in-depth interviews examining older people's broader biographical life experiences, including their experiences with different ICTs, and their relation to current technology use.

In addition to examining biographical experiences of technology use, this thesis also aims to explore issues around current technology use, such as gender differences in Internet practices, and the location of Internet use within everyday routines and activities. In aiming to gain an in-depth understanding of the location of Internet use within everyday lives and contexts, ethnographic approaches are particularly insightful. While ethnography is sometimes seen as a particular method, others argue that represents a broader research approach (see Brewer 2000, Hammersley and Atkinson 1983). Ethnography involves using multiple methods to get a more 'holistic' understanding of participants' daily lives (Brewer 2000, Schroder et al 2003). In terms of its application to researching media technologies, ethnography has been described as the study of mass media use in relation to the everyday interactions of social groups (Lull 1980 cited in Schoder et al 2003). Both general media ethnographies, and ethnographic approaches to the Internet, emphasise the importance of understanding the use of technology in everyday life, and its grounding in everyday spaces (Schroder et al 2003, Miller and Slater 2000). However, there are practical difficulties in

applying a 'truly ethnographic' methodology to studying Internet use in the home. Ethnography is generally defined as involving immersion in the research setting over an extended period of time, as well as participant observation (Hammersley and Atkinson 1983). This would be difficult to carry out in relation the use of computers in the Internet in the home, and could also be very intrusive (Silverstone et al 1990). Although numerous studies on other media activities such as television viewing have involved observation in the home (see Schroder et al 2003, Silverstone et al 1990), such technology use is easier to observe than Internet use, as it is more frequent and tied to set times. If ethnography involves observing activities as they naturally occur (Schroder et al 2003), this would be difficult to apply to studying Internet activities.

Therefore due to such practical difficulties, I have drawn on studies which have moved away from a more traditional ethnographic design, but adapted the principles of ethnography to studying the use of ICTs in domestic space. For instance, Haddon and Silverstone (1996:6) described their research on Internet use in young elderly households as a 'qualitative case study approach', using diaries and multiple interviews to develop an in-depth understanding of the 'particular character of their domestic lives'. Like ethnography, case studies involve a holistic, contextual approach, but do not necessitate use of participant observation (Foster 2002, Tellis 1997) or the same degree immersion in the field (Myers 1999, Yin 2003). A similar methodological strategy was adopted by Bakardjieva and Smith (2001), who used 'quasi-ethnographic' methods to examine the domestication of the Internet in Canadian households. While their research did not involve participant observation, it did involve 'ethnographic' interviews with individuals and family groups, a tour of the placement of computers within the home, and demonstrations of computer usage. Silverstone et al (1991) also incorporated various methods into their ethnographic examination of ICT use in the home, including; interviews, time-use diaries, maps of domestic space and social networks, as well as observing practices of technology use during and after interviews. Therefore in applying a 'quasi-ethnographic approach' I have used multiple methods, the main methods being qualitative interviews and time-use diaries, and also incorporating demonstrations of the location and use of computers during interviews. Such an approach enables a more holistic, in-depth understanding of the everyday use of these technologies in domestic space, and is suited to examining questions around temporality and spatiality in the home. These specific methods of data collection

will be expanded on in the section below, which reflects on the process of gathering data, beginning with the selection of respondents.

## **Data collection**

### *Sampling*

Participants in this study were sampled purposively, which involves deliberately selecting respondents of particular interest to the research (Scott 2002). When this selection is based on theory, it is termed theoretical sampling (Silverman 2005). Such an approach is in contrast to probability sampling which is generally used in large scale quantitative surveys, and involves randomly selecting participants (Bryman 2001, Scott 2002). Probability sampling aims to produce a sample that is representative of, and therefore generalizable, to the broader population on which the study is based (Bryman 2001). However, as qualitative research is more concerned with developing an in-depth understanding of social processes than with generalizability, it is more appropriate to construct a sample based on the research questions and theoretical interests of the study (Arber 1993, Bryman 2001, Silverman 2005). Purposive or theoretical sampling aids the development of theories and can enable useful comparisons to be made (Bryman 2001). It is not confined to the beginning of the study, but can continue in line with theory development until all theoretical categories of interest have been examined (Scott 2002, Bryman 2001). Discussion of issues involved in the theoretical selection of participants will be set out in the 'participants' section below.

In addition to the theoretical reasons for choosing a purposive sampling approach, there are also practical reasons for this choice. A probability sampling approach is difficult to administer when the population under study does not have any clear sampling frame (Silverman 2005, Bryman 2001). In this particular case, there is no obvious list of older Internet users which could be used as a basis for sampling. In previous studies, random samples of older Internet users have been taken from large-scale household surveys of Internet use (e.g. Selwyn 2003, 2004). As this study is not beginning with a large-scale survey though, this would not be a suitable option. Another method researchers in this area have used involves randomly sampling participants from the membership lists of Senior centres offering computer training (e.g. Blit Cohen and Litwin 2002). These participants

would be representative of that organisation rather than older Internet users in general though, and participants undertaking computer training in later life may be quite different to those who had used computers at an earlier stage.

A purposive/theoretical sampling approach to selecting participants was also combined with other non-probability methods of sampling, including self-selection and snowball sampling (Bryman 2001, Warren 2002). Such an approach has been utilised in previous studies of older technology users, due to difficulties of accessing this population. For instance, Haddon and Silverstone (1996) contacted respondents through assistance from organisations working with older people, personal contacts, and snowball sampling. Self-selection involves respondents volunteering to take part in a study, for instance, in response to advertisements on websites (Bradley 1999, Selwyn 2004). This approach is viewed as involving bias, as only certain types of respondents may be likely to volunteer (Zhang 2000). However, as qualitative research is less concerned with representativeness, this is not a key issue. Rather than placing advertisements in websites which would only attract a limited set of participants (Pitkow and Kehoe 1996), I contacted a range of different organisations involved with older people in the local area, including retirement communities, advocacy centres for older people, and various leisure or social organisations. In some cases advertisements were placed in these organisations, while in others I arranged to talk to members at a meeting or event, or a gatekeeper at the organisation forwarded details of the study to people who may be interested, or put me in touch with them directly. Snowball sampling was also used to contact further participants through existing sample members (Arber 1993, Scott 2002). These methods of sampling were guided by the theory development, for instance, the desire to further explore class issues led to targeting of specific organisations involved with working class older people, and also making inquiries with previous contacts aimed at locating participants among this population.

### *Participants*

A total of seventeen households took part in the study (see table fifteen below), including thirteen couples and four single person households, although for one couple (household 14) only one partner was interviewed. Participants were selected based on the criterion that they had a computer and Internet connection in their household, and that they were retired

from full-time paid work. They were selected based on retirement status rather than chronological age (Jaeger 2005), because as discussed in chapter one, defining old age is a complex issue. Furthermore, as discussed in chapter two, retired people have specific circumstances which are interesting to explore in relation to Internet use in domestic space, including increased time spent in the home, changes in temporal routines, and changing concepts of work and leisure (Malson 1988, Thompson et al 1991). Defining 'retirement' is also complex though, as retirement is becoming more fluid and is no longer limited to a fixed age, or to giving up working completely (Blaikie 1999). Furthermore, as we have seen, for women or those who have never worked, retirement may not represent a distinct stage (Deem 1988, Haddon and Silverstone 1996). Such diversity need not be viewed as a problem though, and I sought to explore the relation of Internet use to these different experiences of retirement. In taking into account varying degrees of retirement, I took an approach similar to that of Nimrod and Adoni's (2006) study of leisure in retirement. They excluded participants who had officially retired but worked full-time, while including those who worked part-time or occasionally, and used different levels of retirement as a background characteristic to be explored in relation to leisure.

I also aimed to incorporate a diverse selection of households, in order to further examine the meanings of the demographic divisions within older people, which were found in the quantitative analysis in chapter three, as well as in previous studies. This included examining cohort or age group differences, and the sample included a range of ages from 52-100. Such cohort differences were expected to be important in shaping biographical experiences with computers in work context, and subsequent experiences of using them during retirement (Mollenkopf and Kasper 2005). I also sought to include participants from different class backgrounds, in order to examine how such differences shaped biographical experiences with technologies, as well as possible financial constraints on using these technologies in later life. Class was defined based on occupation(s) prior to retiring, although it is complicated by the fact that occupational class is not static, and may reflect upward (or downward) mobility during the life-course. It was more difficult to recruit working class participants though, reflecting the higher proportion of Internet users among middle class older people. Nevertheless, the final sample included a total of seven households in which participants had been employed in working class occupations.

**Table 15: Description of study participants**

Household members and age	Former occupation(s)	Workplace experience of;		Computing equipment in the home	Research participation
		Computers	Internet		
1. Emma (57) Jeff (62)	research assistant, administrator teacher	Yes. Minimal use.	Yes. No.	1 shared computer and Internet connection	Interviewed together once, both completed diaries and individual interviews
2. Andrew (65) Jenny (59)	draftsman lecturer, administrator	Yes. Yes.	Yes Yes	1 shared computer and Internet connection.	Interviewed together once, both completed diaries
3. Barbara (67) George (71)	part-time occupational therapist project manager	No Yes	No Intranet, but not WWW.	1 shared computer with Internet connection and a word processor.	Interviewed together once.
4. William (80) Hilda (83)	accountant primary school teacher	Yes No	No No	1 computer with Internet connection, only used by William.	Interviewed together once, William was interviewed individually and completed diary
5. Maggie (73) Richard (74)	teacher, running care home electrical contractor, running care home	Yes Yes.	No No	Have own separate computers/Internet connection, plus a laptop.	Interviewed together once
6. Enid (80) Albert (88)	teacher, writer, clerical cartographer	No No	No No	Own separate computers/Internet connection.	Interviewed together on two occasions, and both filled out diaries
7. Audrey (76) Fred (79)	head teacher local counsellor	Yes No	No No	Own separate computers/Internet connection, additional computer used by son when visiting.	Interviewed together once, and both completed diaries and individual interviews
8. Bill (70) Jane (68)	joiner sales clerk, printing, auxiliary nurse	No No	No No	1 computer/Internet connection, mainly used by Bill.	Interviewed together on two occasions, and both completed diaries.

**Table 15 continued**

<b>Deidre (67)</b>	deputy head	Yes.	Intranet, but not WWW.	1 computer and 1 laptop with Internet connections, computer is mainly used by him, and the laptop is mainly used by her.	Interviewed together once, both completed diaries and individual interviews
<b>Arthur (70)</b>	teaching, freelance photojournalis m	Yes.	No.		
<b>Betty (100)</b>	accounts clerk.	No.	No.	1 computer and Internet connection which is only used by him.	Interviewed together on one occasion.
<b>John (77)</b>	computer operations shift leader.	Yes.	No.		
<b>Brenda (72)</b>	accounts clerk.	Yes.	No.	1 computer and Internet connection which is mainly used by her.	Interviewed together once, she has also completed diary and individual follow up interview.
<b>Greg (75)</b>	factory worker.	No.	No		
<b>Ian (57)</b>	physics lab technician	Yes.	Yes.	1 computer and Internet connection which is shared between them.	Interviewed together once, and both completed diaries individual interviews
<b>Lesley (53)</b>	electronic engineer	No.	Yes.		
<b>Carol (71)</b>	education officer, teaching, clerical	Yes.	Yes	1 laptop with Internet connection.	Interviewed on two occasions, and completed diary.
<b>Joan (66)</b>	factory worker, care assistant	No.	No.	1 laptop with Internet connection, mainly used by her.	Joan has been interviewed once and completed a diary, although her partner did not participate in the study.
<b>Mike (68)</b>	painter and decorator	No.	No.		
<b>Dot (69)</b>	factory worker.	No	No	1 laptop with Internet connection.	Interviewed once and completed diary.
<b>Pearl (72)</b>	executive officer RAF, clerical/office work	Yes	Yes (in p/t work after retirement)	1 PC with Internet connection.	Interviewed on two occasions, and completed diary.
<b>Jack (71)</b>	lecturer	Yes	Yes.	1 laptop with Internet connection.	Interviewed on two occasions, and completed diary.

However, diversity in the sample is limited by a lack of inclusion of participants from ethnic minority backgrounds, although this perhaps reflects the demographics of the area.

As discussed above, the selection of participants was guided by theoretical developments during the study. For instance, as this study aimed to explore gender relations within the home, only heterosexual couples rather than participants living alone were initially included. In these households, it was only necessary that one older participant used the Internet rather than both partners, and different levels of usage provided an interesting factor to explore. However, single person households were later included in the sample, in order to explore how the different dynamics in these households related to meanings and experiences of technology use in domestic space.

### *Qualitative Interviews*

The main method of data gathering in this study was qualitative interviewing, and a total of 32 interviews were conducted with retirees. In contrast to quantitative or survey interviews, qualitative methods of interviewing enable the interpretations, meanings, and experiences of respondents to be explored in-depth (Bryman 2001, Warren 2002). As discussed earlier, they may also be integrated within the broader research strategy of biographical approaches (Platt 2002) enabling events to be located in a broader temporality, and allowing discussion of past, present, and future (Warren 2002). Qualitative interviews may be unstructured or semi-structured (Fielding 1993, Scott 2002), however, I decided to use a semi-structured approach. While in unstructured interviews the researcher only has a list of topics, a semi-structured interview involves a more detailed list of questions (Bryman 2001). However, unlike quantitative structured interviews, the interviewer can vary the order or phrasing of these questions in accordance with the situation, and follow up interesting lines of inquiry that emerge (Fielding 1993, Scott 2002). Although unstructured interviews are often favoured as they rely less on the researcher's perspective, and enable richer, more in-depth data (Chazifotiou 2000, Fielding 1993), they are more demanding of the interviewer's skills to maintain rapport and phrase questions suitably (Scott 2002). As I needed to address a range of complex and specific issues within interviews, and also to phrase sensitive questions around household relations carefully, a semi-structured approach was used. My interview guide included questions on biographies of technology use, routines, experiences of retirement, spatial location of technologies, meanings of work and leisure, and household relations around technology use (see appendix D), although this guide was modified when interviewing single person households (see appendix E). Some



additional background information such as date of birth was gathered in written form, by asking participants to fill in a short questionnaire (see appendices F and G).

The qualitative interviews conducted in this study involved a combination of individual and joint interviews. Where couples were included, they were interviewed together on the first occasion, and then following completion of diaries, individual interviews were carried out. This combination was chosen because individual and joint interviews have different strengths and weaknesses (Seymour et al 1995). Joint interviews can provide insight into the negotiations, power dynamics, and interactions between couples (Arksey 1996, Allan 1980, Seymour et al 1995, Valentine 1999a). For instance, in many joint interviews I conducted, couples corrected each other or disagreed about particular issues, such as who did the most housework or how technology should be defined, illustrating interesting gendered negotiations around these subjects. Joint interviews can aid the development of rapport (Arksey 1996) and I found that they were often more informal and 'chatty' than single interviews, as well as often producing richer and more in-depth accounts of various issues (Valentine 1999b). On the other hand, they can be inhibiting for some people, and make it difficult for them to divulge certain information (Arksey 1996, Valentine 1999a, 1999b). Participants are also more likely to produce a collaborative account in joint interviews, and in many interviews couples would ask each other whether something was correct, or produce a joint account of what 'they' did or thought (Arksey 1996, Valentine 1999a). In addition, while I encouraged both partners to give their opinion in joint interviews, there was often a tendency for one person to dominate discussions, and single interviews were useful in accessing individual opinions. However, some participants did not want to subsequently participate in a single interview, and therefore two joint interviews had to be conducted, as will be discussed in more detail in relation to ethical issues. In one case, this was due to the participant having hearing difficulties, as his wife needed to sit next to him in the interview and often repeat interview questions to him.

Nevertheless, carrying out multiple interviews with respondents is not only a useful way to examine both individual and joint accounts, but can have various other advantages in itself. All respondents were invited to participate in two interviews; one before and one after completing a time use diary, although in some cases they dropped out the research process and only participated in the initial interview (see table fifteen). Multiple interviews with respondents have been argued to increase rapport and trust between the researcher and

participant, which enables more in-depth data to be gathered (Charmaz 2002, Burgess-Limerick and Burgess-Limerick. 1998). Later interviews can be used to gain clarification and follow up emerging areas of interest, and explore events as they progress (Charmaz 2002, Burgess-Limerick and Burgess-Limerick. 1998). In the case of this study, multiple interviews enabled changes in the use of technologies of over time to be explored, including changes in relation to moving home, and technical difficulties. Multiple interviews also enable the researcher to develop a more detailed understanding through immersion in the research setting over time (Charmaz 2002), which is particularly important in ethnographic or case study approaches.

All the interviews took place within respondents' own homes. This was the most suitable location for interviews, as the thesis is focused on Internet and computer use in the domestic context (Schroder et al 2003, Lim and Tan 2004). It was also the location felt to be most convenient and comfortable for participants (Schroder et al 2003), and although participants were offered a choice of location, all of them choose to have the interviews in their own homes. Setting the interviews in participants' homes generally created a more informal, relaxed atmosphere, particularly as the majority of interviews were situated in the living room and accompanied with tea and biscuits! The living room was also a useful setting for seeing the location of other ICTs, and in addition, many participants showed me the location of their computer. This was useful in facilitating further discussion of spatial location and dynamics, as well as adding to my understanding of this issue in different households. However, locating the interviews in respondents' homes meant that there were sometimes interruptions, such as neighbours popping round (and in one case the plumber), telephone calls, and pets wandering in and out of the room. This again added to my understanding of these domestic situations though.

The location of interviews on respondents' own territory is also argued to improve the power balance in their favour during interview situations (Schroder et al 2003). Other factors which shape the power balance and level of rapport developed in interviews are the social characteristics of the interviewer and respondents, for instance, those of gender or class (Phoenix 1994, Fielding 1993). Rather than aiming for objectivity, it is argued that reflexivity on the characteristics of the interviewer and their possible implications for interview interactions can be a useful way of taking such effects into account (Stanley and Wise 1993). In terms of gender and class, my personal characteristics were most similar to

the women I interviewed from middle class backgrounds, although I did not notice any gender or class effects in interviewing men or working class participants. The main factor which seemed to shape interviews, and perhaps the strongest difference between myself and interview respondents, was that of age or generation. As found in previous research (Laz 2003), this difference often prompted discussion of age-related issues which may not have been emerged otherwise, and will be further explored in chapter five. For instance, in discussing technology use, participants frequently contrasted themselves as ‘older people’ with me as ‘young person’. It has also been suggested that older respondents may be more likely participate in studies run by young research students as a way of ‘helping them out’ (Gilhooey 2002), and many participants in this study also expressed a desire to ‘help out’ with my studies in this way.

### *Time use diaries*

In addition to qualitative interviews, data was also gathered using time-use diaries. After carrying out their initial interview, participants were then asked to spend a week recording their technology use and other everyday activities in a diary which I had constructed (see appendix H), before taking part in a follow up interview discussing diary activities. Time-use diaries are a type of diary specifically commissioned for research purposes, and are divided into time slots used to examine time spent participating in particular activities throughout the day (Bytheway and Johnson 2002). Although time-use diaries may be analysed quantitatively, they can be used as part of qualitative studies in seeking to understand everyday behaviour (Hislop et al 2005). Therefore, instead of using these diaries to produce quantitative data, I used them to help provide an in-depth picture of everyday activities, and a useful measure of comparing participants’ accounts with a record of events (Bytheway and Johnson 2002). Such an approach has been used in various studies of ICT use, for instance, Silverstone et al (1991) used time use diaries as part of ethnographic research examining technology use in family homes, and argued that the use of diaries was an essential element in uncovering gendered patterns of activities, the space-time geography of the households, and for encouraging individuals to reflect on the patterns of their daily activities. I also found that diaries were particularly useful in gaining insight into daily temporal routines, including gendered aspects of these temporalities, as will be discussed in chapters eight and ten.

Despite the usefulness of diaries for researching technology use, there are certain shortcomings. For instance, Silverstone et al (1991) noted that time use diaries were time-consuming and demanding for participants, and as a result, they varied in the detail and quality of their completion. The demands of filling out a diary can be problematic and a source of bias, as some respondents are unwilling to participate or drop out during the process (Bytheway and Johnson 2002, Silverman 2005). I sought to address this by making diaries as simple and quick to fill in as possible, for instance, using tick boxes to mark participation in activities (Bytheway and Johnson 2002). Participants were also asked for feedback on any problems with the diaries, which was then used to improve their design. However, several participants still dropped out due to the time-consuming nature of completing the diaries, and some who completed them commented that it was quite demanding on their time. On the other hand, several participants reported that they enjoyed completing their diary, and found it interesting to see how they spent their time. A further critique which has been made of diary methods is that they focus on rational, linear, clock time, and do not access the complexity of social or subjective time. However, this critique is argued to rely on a dichotomy separating social and linear time (Gershuny and Sullivan 1998). Furthermore, by combining diaries with interviews, I was able to explore the meaning and experience of activities recorded in greater depth (Bytheway and Johnson 2002, Martinson and Schwartz 2002). Interviews also revealed interesting tensions between quantifiable 'recorded time' and perceptions and experiences of time, which are discussed in detail in chapter eight. Rather than simply revealing quantifiable clock time, discussion of diaries also illustrated the intersection of multiple temporalities in shaping routines. Through interviews, I was also able to gain clarification about anything that was absent or unclear in the diaries, and ask whether activities recorded represented a 'typical' week. Another potential problem with diary-based research is whether filling out diaries may change behaviour (Silverman 2002, Bytheway and Johnson 2002). However, while diaries did make participants conscious of their use of time, this prompted interesting reflections on time and everyday activities (Silverstone et al 1991), which otherwise often remain tacit and difficult to recall.

## **Ethics**

While this study did not present any particular ethical problems, general ethical issues around informed consent, confidentiality, anonymity and prevention of harm needed to be addressed in designing and conducting the research. Informed consent involves providing participants with detailed information on the study, including what it is about, why it is being carried out, who is funding it, and how the data will be used (British Sociological Association (BSA) 2002). As well as being given information about my research verbally, participants were given a detailed information sheet (see appendix I) which explained about the aims of the study, what participation involves, why they have been chosen, the right to withdraw information, and confidentiality (Gilhoody 2002). In writing these sheets I sought to keep the information 'jargon free' and easy to read, to ensure that it was clear and understandable to participants (BSA 2002, Gilhoody 2002, Silverman 2002). They were also encouraged to ask questions after reading the information sheet before they agreed to take part, and the introductory section of the interview guide recapped over study information, as well confidentiality and anonymity. As well as being given clear information, for consent to be valid it should be 'freely given' (BSA 2002), which involves making sure there is no undue pressure to take part (Gilhoody 2002). Therefore, after initially contacting participants they were given time to read the information sheet and think about whether they wanted to participate in the research, before letting me know their decision. At the time of the interview, participants were given a consent form to sign checking that they understood the aims of the study and were happy to take part (see appendix J). However, informed consent can be complicated when interviewing couples, as one partner may assume or prevent the consent of the other (Valentine 1999b). One of the things I had to be aware of was that both participants had read the information sheet, and were fully informed about the study. This was particularly the case where I sent the information sheet via email, as in some households one partner was not computer literate, or did not often check emails. Therefore, as well as giving information verbally on the phone before hand and asking that both partners read the information sheet, I always brought a printed copy to interviews and checked they had both read through it. Another issue which complicates informed consent, is that it is not necessarily something which takes place simply at the beginning of research, but may be an ongoing process (Scott 2002, Silverman 2005). This involves reassuring participants of the right to withdraw from

the study, and also to withdraw their data if they later change their mind (Silverman 2005). As stated earlier, some participants dropped out due to the demands of filling out the time-use diaries, while a couple of participants dropped out due to unforeseen issues such as the ill-health of a spouse or family member. These participants were reassured that this was not a problem, and thanked for their contribution to the research.

The issue of informed consent is also tied into that of preventing harm coming to participants. According to the BSA (2002) ethical statement, researchers should try to anticipate and minimise any sources of potential harm to participants. Informed consent is part of this, in making respondents fully aware of what participation will involve, and preventing the harm which may be caused by deception. Nevertheless, informing participants about any potential risks does not absolve the researcher of responsibility (BSA 2002). In this study, there were no physical risks, or obvious sources of harm to participants. However, the study does raise potentially sensitive issues around relationships in the home and conflicts over technology use. There is particularly a need for sensitivity when conducting joint interviews, as interview discussions may lead to disagreements or arguments (Arksey 1999, Valentine 1999a). Such issues were minimised through wording questions sensitively, putting more sensitive questions later on in the interview schedule, and informing participants that they have the right to withdraw from the interview at any time, or to refuse to answer certain questions (Scott 2002). The sensitivity and suitability of questions was also tested through pilot interviews. The non-verbal responses of participants were also monitored throughout interviews, to check that questions were not making them uncomfortable, and to give an indication of whether an issue should be further explored or not. Although, as we have seen, couples disagreed about various issues, there were no outright conflicts, and no participants seemed to be distressed by the discussions. Another issue when interviewing couples is the negotiation of separate interviews, and preventing any distress to participants in doing so. As discussed earlier, some participants did not want to do interviews separately, and therefore rather than causing any distress or losing interviews, I simply conducted two joint interviews with these couples instead (Valentine 1999a, Seymour et al 1995).

The issue of prevention of harm also ties into that of anonymity and confidentiality. This was addressed through keeping what is said between only relevant parties, storing data securely, and disguising the identities of participants (Bryman 2001, BSA 2002, Gilhooey

2002). When seeking informed consent the extent of anonymity and confidentiality was made clear, and participants were informed that only my supervisor and I would have access to the data (Bryman 2001, BSA 2002, Gilhooey 2002). Pseudonyms were also used to disguise the identities of participants (Bryman 2001, Scott 2002), and any characteristics and details which it was felt may identify participants were also changed, including the name of city in which the research was located, and the name of the retirement community in which a number of participants lived (Neuman 2003). Interviewing couples also raises particular issues around confidentiality and anonymity, as participants might reveal something in separate interviews they don't want their partner to know about (Valentine 1999a). I sought to deal with this through keeping their information confidential, disguising identities in writing up the findings, and offering a summary report rather than full transcripts to participants after interviews (Seymour et al 1995, Valentine 1999b). As found in previous research (Valentine 1999b, Valentine et al 2001) privacy during interviews could be problematic, and when interviewing respondents separately, their spouse often remained in the next room (or in one case in the same room), or dropped in during interviewing. As discussed above, some participants did not want to have separate interviews at all, therefore it was difficult to fully create privacy during the interview situation.

### **Data analysis**

As is the case in much qualitative research, data analysis was not confined to a fixed stage after all data has been collected, but analysis and interpretation occurred across the research process (Neuman 2003, Silverman 2005). For instance, while interviewing, I was involved in interpreting participants' responses, and guiding them toward particular themes and issues (Mauther and Doucet 1998). Analysis and interpretation also took place while listening to interview tapes and transcribing data, and noting down prominent themes (Scott 2002, Silverman 2005, Skeggs 1994, Kvale 1996, Birch 1998). As recommended by Silverman (2005), I also engaged in more formal analysis of transcripts after each interview, rather than waiting for all the data to be collected. This analysis was then used to guide the progression of research, and assess the suitability of the methodological approach and theoretical concepts, as well as guiding further selection of participants (Bryman 2001, Scott 2002, Silverman 2005).

Transcripts were analysed using qualitative thematic analysis (Scott 2002), which involved exploring the data for patterns or themes (Neuman 2003). This analysis was assisted by use of the qualitative computer analysis software 'Atlas/ti', although this software was used as a tool to aid the organisation and retrieval of data, rather than to structure or determine analysis (Barry 1998, Kelle 1997). Thematic analysis began with a careful reading and re-reading of transcripts, whilst making notes of key concepts and categories in the margins (Bryman 2001, Fielding 1993, Neuman 2003, Scott 2002). After reading transcripts and noting down codes manually, transcripts were uploaded and coded on Atlas/ti, which was also used to retrieve quotes supporting these codes. Following initial coding, the various themes and categories were listed down, and connections between them were explored (Bryman 2001, Neuman 2003). Similar codes were then incorporated into larger thematic categories or 'master themes' (Smith 1995) which included; constructions of age and technology, techno-biographies, embodiment, work/leisure boundaries, spatial location, household relations around technology, gender and technology use, temporalities, support networks, and trust and risk. These master themes were integrated into six thematic categories which form the basis of the subsequent findings chapters; ageing/biography/generation, embodiment, work and leisure, temporalities, space and home, and social networks beyond the home. However, such thematic coding has been critiqued by narrative researchers, who argue that fragmenting data in this way loses the context and temporal ordering of what is being said (Bryman 2001). Therefore, as I was interested in participants' biographies of technology use, I also retained sensitivity to the temporal ordering of events, and the construction of biographical accounts and stories.

## Summary

This chapter has presented the argument that a qualitative methodology offers the best approach for acquiring an in-depth understanding of experiences of Internet use in domestic space during later life. More specifically, it has been argued that biographical and 'quasi-ethnographic' research strategies are particularly important for guiding data collection in this study. Based on such an approach, multiple methods have been used, including multiple qualitative interviews, time-use diaries, 'tours' of spatial location, and demonstrations of computer and Internet use. This facilitates an in-depth understanding of how these technologies are used within domestic space in later life, which has not previously been available with regard to older Internet and computer users. Building on



ethnographic approaches to studying the ICT use of younger age groups, and Haddon and Silverstone's (1996) research on the use of older ICTS in later life, this methodological approach extends the field of research on older Internet users. The methodological approach in this chapter informs the data presented in the subsequent findings chapters of the thesis, and has enabled a detailed account to be constructed of computer and Internet use within the temporalities, spatialities and relationships in domestic space. For example, the use of diaries has enabled tensions between 'recorded time' and experiences or perceptions of time to be explored, something which is discussed at length in chapter ten, and contributes to accounts of time and activities throughout the thesis. By moving beyond one-off interviews, the data was also able to capture changing relations with technologies over a short period, including those prompted by spatial changes such as moving home (discussed in chapter nine) and technical difficulties. Understanding relations with technology over time was particularly aided by the biographical approach taken in this study, and these changing relations are embedded throughout the findings chapters of this thesis, as well being subject to detailed discussion in the following two chapters.

## **Chapter six**

### **'From as early as I can remember I was listening to music on the radio': Ageing, biographies, generation and narratives of technological change**

#### **Introduction**

Drawing on the biographical research strategy outlined in the previous chapter, this chapter examines how current ICT use in retirement is situated within changing experiences of technology use throughout the life-course. It explores the interconnection of ageing, biography, generation and social change, throughout discussions of 'technobiographies'. The chapter will begin by exploring the location of initial experiences of using different ICTs within different life-stages and transitions. This reveals the interconnection of the biographies of these objects with personal experiences of change, and with broader social and technological change. Discussions of technological change also led to reflection on the passage of time and changing age identities, and the use of the computers and other 'new' technologies were often placed at odds with participants' identities as 'older people', in contrast to the perceived technological abilities of today's 'young people'. However, it will be argued that such divisions are not static, but reflect the different formative experiences of different cohorts, and technologies they 'grew up' with. This has important implications for understanding age divisions in Internet use, which will be subsequently discussed.

In examining these issues, this chapter draws on theories of 'social generations' and particularly 'media generations', which were discussed in detail in chapter two. To recap briefly, 'social generations' are a cohort of people born at the same time, and sharing certain historical experiences (Edmunds and Turner 2002), although 'family generations' also intersect with these social generations. It is also argued by Mannheim (1952) that social generations have a shared generational consciousness, and that the formative experiences of a generation are particularly important in shaping their experiences and values. Theorists of media generations have adopted this latter idea, arguing that different generations or cohorts have shared experiences of 'growing up' with a particular technology, which then shape experiences of technology use throughout their lives (Bolin and Westlund 2009). However, the experiences of generations are not unified, but are differentiated by relations around gender, class or ethnicity (Edmunds and Turner 2002). Therefore this chapter also explores the intersection of generation with gender and class,

when considering the relation between biographical and social change (Henwood et al 2001).

This chapter also draws on theories of age identities and biography, and although such theories were briefly discussed in chapter two, they will now be expanded on in more detail. Kaufman and Elder (2002:169), define age identity as; “the subjective evaluation of a person’s age, which is subject to individual and historical experiences.” Biography is important for understanding age identity, as identities are processual, and draw on narratives of past, present, and future (Hockey and James 2003). As we saw in chapter two, age identities are not simply a result of natural, biological processes, but are given meaning through society, and negotiated and constructed in social interactions and relationships (Hockey and James 2003, Lin et al 2004). Coupland et al (1991) defined two main processes by which identifications of ‘old age’ are made in conversations. The first of these processes is age categorization, which involves either disclosing chronological age, generational or age related roles, or discussing age experiences such as those of illness/decline. The second process described by Coupland is that of temporal framing, in which age identifications are made through situating oneself temporally through discussing the past, or historical and cultural change. I will also extend such theories in this chapter, by examining how age identities are constructed in relation to computer technologies. The importance of media technologies in defining boundaries between age groups or generations has been noted (Buckingham 2006), although previous research has tended focus on the identities of ‘youth’ or ‘childhood’. The role of these technologies in constructing identities in later life or ‘old age’ remains relatively unaddressed, and will now be examined in relation to participants’ technobiographies.

### **Life-course, biography and technology**

In examining technobiographies (Henwood et al 2001), patterns and meanings of technology use at different stages of the life-course can be illustrated, as well as the intersection of life-stage with class and gender. As argued by Lunt and Livingstone (1992), the meanings of objects are shaped by relations of biography, gender and family. This links ‘individual time’ with ‘family time’, involving collective family transitions, as well as with the ‘historical time’ of social change (Hareven 1994:439). The biographies of participants in this study are situated within a historical backdrop of broader social change in the 20<sup>th</sup> century, including an increase in income, social security, access to education, and changes

in gender roles (Gilleard and Higgs 2002). These changes also included technological changes in the spheres of work and the home, with increased income leading to increasing ownership of consumer durables. One technology to enter the domestic space in this period was the radio, which spread through homes during the 1920s (Haddon and Silverstone 1996). A number of retirees described themselves as being brought up with having the radio at home in their childhood. For instance, Ian said “I was brought up with sound right from when I was a child, Mum always had the radio on, or she had gramophone records”, while Pearl said “from being young, my father had really old fashioned ones at first, and we called it the wireless of course.” As a result the radio was “normal and always in existence”, and also provided stability and continuity with previous generations (Lunt and Livingstone 1992: 132).

While available at an earlier stage, the spread of telephones into homes in Britain was quite slow (Haddon and Silverstone 1996), and home ownership of telephones did not reach 50% until the mid-1970s (Hamill 2000). Reflecting this, few participants owned a telephone at home during their youth, although some like Carol reported acquiring a telephone in the 1950s whilst living at home. As suggested Lunt and Livingstone (1992) this usage was situated within the family context, and relationships in the home. Carol described how her use of the telephone had to be negotiated within family relations saying; “my Dad used to make sure that we didn’t use that too frequently. [...] So I didn’t have unlimited access until I left home.” Other participants acquired a telephone during married life, often in the 1960s, although Dot didn’t have a telephone until the 1980s, which may reflect class relations. Similarly, televisions began to spread throughout homes in Britain during the 1950s (Tapscott 1998, Bolin and Westlund 2009), and as a result only a couple of participants in the younger cohorts described having a television at home in their youth. For instance, Ian discussed how his Mum had bought a television to watch the Coronation when he was a child, while Jeff described having a television at home ‘as long as I can remember’. Acquisition of the television also varied in relation to class, for instance, Dot recalled how she “always listened to radio” because “as a kid that’s all we had. Before mum and dad could afford a telly we always had radio”. Similarly Carol hadn’t had television at home until she had secured a job as a teacher, and then had been able to buy one for her parents.

The acquisition of the telephone, and particularly the television, was situated within relations of social comparison and social status (Lunt and Livingstone 1992). A number of participants compared their ownership of these technologies to others around them saying things like 'not everyone had one in those days'. For instance, Joan described how when at 18 her parents had acquired their first television 'other people around us had TVs, not everyone I remember, but it was a massive thing to own a TV in those days.' As her comment suggests, acquiring a television was deemed to be quite exciting, and Carol described it as 'a window on the world'. Another participant, Ian, recalled how at the time of Coronation 'we were the only house on the entire street to have a TV'. He discussed how later on his mother was also the 'very first one in the street' to get a colour television, and had acquired one before himself and his wife did. As he said "she had to be the first", which his wife related to competition with the neighbours saying "you didn't keep up with the Joneses I think you had to keep up with the Lawsons." While for participants the radio provided continuity with their parents' generation, this was not the case with television, which was described in terms of change. Participants like Betty and John who had got their first television after they were married, remembered how they had covered it up with a cloth and pretended it was a bird when Betty's parents came to stay, as they thought they would disapprove. However, after seeing their television, her parents later decided to get one themselves, as John said 'oh they wouldn't have one at any price [...] until they saw ours!' This couple described how their parents had initially resisted various new technologies, but later adopted them after experiencing them at their home. This is similar to accounts of the role of younger family members in encouraging the adoption of computers and the Internet among retirees today (e.g. Selwyn 2004). It illustrates how intergenerational relations around ICTs are not static, but reflect change over the life-course of individuals and cohorts.

As found by Lunt and Livingstone (1992:115-116), many participants purchased staple goods such as the television during the life-stage of beginning a family, as goods which are previously perceived as 'luxuries' often become regarded as 'necessities' after having children. The meanings of technologies as 'necessities' was subject to negotiation within households though. For instance, Arthur described how it was his wife Deidre's 'idea forty years ago to get a telephone. I couldn't see why we would have a telephone when there's a perfectly good box down the street. Quite seriously!' This may reflect gender differences in technology use, and an emphasis on communication technologies among women

(Frissen 1995), as Deidre was later the one to instigate getting a mobile, while Arthur instigated the purchase of a home computer. A number of women also described how having children prompted their decision to purchase a television, transforming it into a 'necessity'. For instance, Emma discussed how before she had children 'we didn't have television' but then felt it was necessary as they were spending a lot of time solely with her and 'there ought to be another voice to give them an alternative view of the world'. Similarly, Pearl located her decision to purchase a television within the family and having children;

"...when we moved into the house in 1961 we didn't have a television and we didn't want one, we had lots of other interests [...] then I had my first little girl in 62 and we then got a television, I think because we were in more in the evenings [...] but even then we didn't watch it all the time and as the girls were growing up they would watch children's programmes, it went off while we had our meals so we had a family meal and television went on later on that night."

The changing construction of particular technologies as 'necessities' also reflects broader changes in their social meanings, as they become more widely owned throughout society, and increasingly seen as essential for everyday life (Gordon et al 1999). The television is now recognised as a 'necessity' in the 'poverty and social exclusion survey', although the computer still remains as 'luxury', as less than half respondents in this survey regarded it as an essential (Gordon et al 2000).

As well as linking the decision to purchase a television to having children, Pearl also described how the time spent using the television was structured around having children, as they 'would watch children's programmes', and it went off so they could have a 'family meal.' Several other women described their early routines of television viewing as being shaped by their children, and the broadcast times for 'children's programmes'. For instance, Lesley discussed how "when the children were little it would be on for children's television programmes mid morning and then it would go off and on at teatime". It is interesting to note that only women discussed the use of these technologies as being shaped by their children, which reflects the gendered division of labour in this sample, as most women had taken time out to care for children while their partners had not. It also suggests the nature of women's time as 'relational' and shaped by the needs and demands of others (Davies 1996).

Only a couple of the younger participants like Lesley and Ian, and Emma recalled getting a computer when their children were at home. For Lesley and Ian, this was due to Ian's occupation as a physics technician, and his early involvement with computers, while Emma had an 'awful BBC computer' that the children played games on. While the majority of participants didn't have a computer at home, early experiences of computing in work were related to the gendered division of labour. A number of women had given up work because as Carol said "in those days you didn't work really if you had kids", but as roles changed women like Carol and Deidre returned to work and retrained, which also led to the acquisition of computing skills as part of their new careers. Their biographies were linked to broader societal changes in gender roles, which were described by Deidre saying, "when I first gave up work to have the kids, I never envisaged going back as a career [...] there was a big change in the sixties, about the way women perceived what they were going to do". In a later period, Lesley had similarly taken time out to look after children, and learned computing on a course designed to get 'women back into work.'

Half of the participants in the sample had used a computer in work, although work experiences with computers, and particularly the Internet, were clustered more highly among the younger cohorts. Younger participants like Andrew described the 'computerisation of the workplace' in which various activities which had been done by hand were taken over by the computer. Experience of computing in work was also divided by occupation, as Hilda said "I retired twenty years ago; computers weren't in schools then, not at all, and certainly not in nursery schools". This also suggests gender differences in occupation, as her husband William who worked as a chartered accountant had used earlier forms of computer in work. However, there were not clear gender differences, with fairly even numbers of men and women having used computers in work. This may reflect the fact that women in clerical occupations are more likely to use computers, and a number of women had used computers or typewriters in relation to these roles. Gender also intersected with class, for instance, while Brenda had used computers as an accounts clerk, her husband who worked as factory worker had not. Many of the working class participants, particularly men, had done industrial labour that did not involve computers, although as John said, they were incorporated into the machinery. However, this was also true for working class women, as Jane who worked as sales clerk said "nearest to a computer I got were the till!"

For those who had previously used computers in work, acquisition of a computer at home was often situated within the transition to retirement, and loss of work access, as Selwyn (2004) found. As Jenny and Andrew said 'once you've had it I don't think you can do without it', while George described how he was "so inconvenienced not having a computer to produce documents I got a word processor [...] almost as soon as I retired." Out of those twelve participants who had not used a computer in work, eight had since taken it up in retirement, although four of them only used computers to a limited extent. Dot, Jane, and Joan had only just begun learning computing, while Fred used computers infrequently, mainly for games. This suggests that computer use in work is important to take up in retirement, and experience in work was perceived to be important by participants, as Hilda stated; "well I was a nursery school teacher [...] so computers are just a foreign country to me, and as I say I've not learned to handle one." It is significant to note that all the non-computer users in the sample had not used them in work, and no participants had discontinued use as they did in Selwyn's (2004) research. For those participants who had taken up computing following retirement, reasons for this were often centred around communication with family, pursuing hobbies and activities, and 'keeping up to date', as found in previous studies (e.g. Dickinson and Hill 2007, Richardson et al 2005, Selwyn 2004). Motivation and help from family members was important, for instance, Dot recalled how her grandchildren had encouraged her to go online, and she began to use the Internet to communicate with family who had moved away, as will be discussed in more detail in chapter eleven. Again this links individual experiences of technology to transitions within the family (Hareven 1994).

### **The life-course, cohorts and age identities**

In discussing changes in ICTs over the life-course, this led to reflection on the passage of time and changing age identities. Such reflections were not only prompted by discussion of ICTs as 'biographical objects' personally owned by participants, but also broader changes in ICTs as public commodities (Hockey and James 2003). Participants contrasted the technologies available when they were younger or in 'their time' to those experienced in later life. For instance, as Albert said regarding his work as cartographer, while it is now done by computers "in my time it was all done by hand." Similarly in discussing the spread of computers throughout various spheres of society Hilda described how 'it's a very different world now, from our earlier days.' According to Lunt and Livingstone (1992:106) reference to 'our time' or 'my day' does not refer to participants' life-span, but



a period when an individual is in early or late adulthood. As with other biographical objects, the ageing or outdating of technologies could lead participants to reflect on their own ageing (Hockey and James 2003). For instance, one couple described seeing domestic technologies used by their parents had used in a museum, and she remarked 'That's when technology really clicks in. You think 'God I am getting old!'

As experiences of using computers were embedded within a later stage of the life-course, these technologies generally prompted reflections on participant's identities as 'old' or 'retired', as William said; "well, you may learn programmes and how to handle them alright at your age but it's not so easy when you're old and retired". This was particularly the case for participants who were only just beginning to learn computing, as Jane said 'I'm nearly seventy, I've left it a bit late'. However, this idea was contested by other participants stating 'it's never too late to learn'. The concept of 'silver surfers' itself invokes an association (or disassociation) between old age and the Internet as a new technology, as Jane said; 'I've got the nickname now from a couple of people in Church, I'm a 'silver surfer', silver hair and [...] a 'silver surfer' is someone who's learning the Internet or the computer and they're old...' As the comments above illustrate, participants used a variety of discursive techniques in describing themselves as older. Some like Jane described their chronological age, while others used the labels of 'old', 'retired' or 'elderly' (Coupland et al 1991). As argued by Richardson et al (2005) and Jaeger (2005), these new technologies were placed at odds with participants' identities as older, and were seen as being harder to learn on 'old age';

Brenda: "Oh yeah, these young people I mean the lads next door are fifteen and, and my grandsons, there's fifteen, sixteen and seventeen [...] they're absolutely brilliant on that computer. I mean you know, and they can show me things, I think there's a big age difference, but I think they're brought up with it now aren't they? [...] Oh yeah, I think the technology gap, but I don't think it's insurmountable it's just... our brains are not as active are they? Whatever we like to say, I think as you get older it is harder to accumulate new..."

Greg: "Well as you get older it does get harder doesn't it?"

Brenda: "...messages really. So no I think the youngsters are great on them."

In Brenda's discussion, the idea of technologies being more difficult to learn in old age also draws on broader discourses surrounding later life, in particular the discourse of decline (Richardson et al 2005). Such discourses will be discussed in more detail in chapter seven, in relation to constructions of the ageing body.

Identity is always relational, and categories of young/old cannot be constructed without reference to one another (Coupland et al 1991). In Brenda's discussion the experiences of 'old people' are contrasted with those 'young people', reproducing the young/old binary (Woodward 1991). This division is hierarchical, and in various accounts, younger people were portrayed as having superior computing abilities to older people. They were not only described as using computers more easily, but also as using them for different practices. With the exception of Dot, participants did not use the computer for social networking sites such as MySpace or Facebook, while describing them as being very popular among their grandchildren and sometimes children. This again reproduced the young/old binary at times, as Joan said; 'I don't think they are geared for the elderly, why should they be? I think they are geared for the younger with all these Facebook and things.' This again implies the design of the technology itself as being inherently youthful (Jaeger 2005), and not 'for the elderly'.

These differences were often situated in relation to differences between family generations. For instance, a number of participants described how their children had used computers at an earlier stage than themselves, and while not generally having them at home, they had greater experience of computing in work. As Deidre said 'my daughters forty, and she's fairly at ease...she didn't have it at school, but she's always, as soon as she's got to work she's always been using computers' while Fred stated;

"....my two lads, computers are something they use every day. I mean Andrew at the British library, everything's computerised [...] And Timothy's at six form college teaching computers so [...] he's well in...two granddaughters of course, they've lived with them all their lives. It's an age...yes the older you are, if you didn't have them."

Here Fred discusses the greater level of work experiences of with computers among their children, and several participants reported children who were more competent with computers and had got them involved or helped them. However, others like Ian and Arthur had helped their children with computing, and as Arthur said, he had 'informed the lower

generations as well'. Fred's quote also illustrates how the experiences of participants' children who had come across computers in work, were again contrasted with grandchildren who had 'lived with them all their lives.' Richard discusses this division between his grandchildren and children, saying;

"I mean I've got grandchildren of four that are, at school they're on computers, and they just grew up with it. And the grandchildren in Switzerland, that are what sort of nine, twelve, their mother asked them for help, and she's been brought up with computers, but she still asks them."

A number of participants described their grandchildren as having grown up with computers, and as a result using them automatically or 'naturally', as William said 'they can work into these things without thinking', which also relates to the embodied nature of these competencies, as will be discussed in the following chapter.

While constructing differences between 'young' and 'old', these different experiences of 'growing up with technologies' imply cohort rather than age differences, which intersect with family generations and life-stage (Hareven 1994). Although social and technological changes are experienced by people across various cohorts or age groups, particular cohorts or social generations experience them at a particular point in their lives (Mannheim 1952). Therefore while participants' children generally experienced computers earlier on in their working careers than themselves, their grandchildren 'grew up' with having computers in home and school. In keeping with theories of 'media generations', the stage at which events are experienced appears significant, and 'formative experiences' were described as being important in shaping later experiences. Throughout interviews there was a sense that the values and preferences that shaped technology use in later life were grounded in earlier experiences. For instance, while young people were described as 'growing up with computers', as noted earlier, many participants recalled how they had 'grown up with the radio' and the preference for radio listening continued into later life, and remained the favourite technology for many participants. Participants like Pearl, Dot and Ian described how this was a result of their upbringing, as Ian said; "from as early as I remember I was listening to music on the radio. So yeah that is just built into me, I've got to have music." As a result, the radio was described as being 'just part of life' in retirement, and subsequent

chapters will illustrate how such experiences shaped practices, temporal routines, and spatial organisation of technology use at home.

As we saw in chapter two, the theory regarding the importance of 'formative experiences' has been used to divide people into 'media generations' who are influenced by experiences of particular technologies in their youth (Bolin and Westlund 2009). There are several different age cohorts among participants in this study, whose ages range from 53-100. Using Becker's (2000) classification, participants can be divided into three cohorts according to their year of birth, and relation to historical events (see table sixteen). The oldest of these cohorts is the 'Pre War generation', although the oldest participant, Betty was born in 1908, just prior to this cohort. They experienced World War Two in adolescence or early adulthood, and were affected by the economic depression in the 1930's, and the poverty and unemployment that went with this (De Vries 2005).

The largest group of participants are part of the 'silent generation' who only experienced the War in childhood. This cohort was exposed to economic growth and reconstruction after the war (Becker 2000), had better access to education (De Vries 2005), and entered the job market at a time when there was a high demand for labour. The youngest cohort is the baby boomers, and the majority of participants form part of the early baby boom born 1945-1954, who are characterised by experiences of cultural revolution and post materialist values, and also by a time of affluence and the rise of consumer culture

**Table 16: Age Cohorts within participants**

<b>Generations/age cohorts (Becker 2000)</b>	<b>Participants</b>
<b>'Baby boomers'</b> (early baby boom 1945-1954, late baby boom 1955-1969)	Lesley (53) and Ian (57) Emma (57) and Jeff (62) *Jenny (59) <sup>1</sup>
<b>'Silent Generation'</b> (1930-1944)	*Andrew (65) Joan (66) Deidre (67) and Arthur (70) Barbara (67) and George (71) Jane (68) and Bill (70) Dot (69) Jack (71) Carol (71) Pearl (72) Brenda (72) and Greg (75) Maggie (73) and Richard (74) *Audrey (76) *John (77)
<b>'Pre War Generation'</b> (1910-1929)	*Fred (79) William (80) and Hilda (83) Enid (80) and Albert (88) *Betty (100)

In terms of whether there were different media preferences among these cohorts, the preference for the radio and experience of 'growing up' with it seemed to span across them, even those amongst the 'baby boomers'. As 58-year old Ian said in reference to his frequent use of the radio; "I was born before television, so my formative years...I didn't see a TV, just listened to the radio at home." In addition, contrary to expectations, the importance of these formative experiences of the radio were actually more prominent in the two younger cohorts of participants, rather than those born in 20's or 30's as suggested by Bolin and Westlund (2009). However, cohort differences were reflected in experiences of when technologies were first accessed, as discussed above. Furthermore, there were

<sup>1</sup> Those participants with an asterisk by their names are part of a couple, but their spouse is located within a different cohort.

differences between cohorts in experiences of computer use. For instance, Lesley who was among the youngest cohort, stated that herself and her husband “fall into the age bracket between 50 and 60” and “there are a lot of people our generation who do have computers and do have the internet access.” Similarly Andrew described shared experiences among his age group or ‘generation’, saying how his friends who had computers would “all get nervous at the same things and do daft things in exactly the same way” because “in a sense you’re all the same bloody generation!” This was in contrast to participants in older cohorts who reported few people among their age group who used the Internet and computers. However, it must be noted that cohort also intersects with class, and there were fewer working class participants using computers, and with experiences of computing in work.

In discussing shared experiences of technology use with people of a similar ‘generation’ this did not necessarily reflect a sense of belonging to a specific generation as indicated in table sixteen, or generational consciousness or self awareness in the sense described by Mannheim (1952). Often the term generation was used more to refer to the differences between older and younger generations (Lunt and Livingstone 1992). As Deidre initially said when asked about what being part of a generation meant “We obviously are part of a generation, at the moment an older generation, senior citizens.” However, she went onto describe the specific social experiences of her generation in relation to changes in gender roles, education and pensions. Her husband Arthur reflected a strong generational consciousness saying;

“I would identify myself as the luckiest generation, possibly the luckiest generation there has ever been, I say in this country, I can only speak for this country, because we just missed the war, I was alive during the war but I was a baby, a youngster, 1939 I was born, I was 6 when the war finished, I can remember the odd shell going over, what I mean we weren’t involved, we didn’t have to fight [...] There was never any question of being out of a job, you could pick your job [...] pensions were better than they are now, firms were giving out pensions related to your final salary, a lot of them have stopped that now, if you want to say what generation, what was important about my generation that was it, we were very lucky.”

While not giving his generation a label, his description very much fits that of the ‘silent generation’ (Becker 2000). However, most references to generation did not draw on this

kind of consciousness, and seemed to reflect a sense of similarity with ‘people like us’ (Coupland et al 1991, Hockey 2008 citing Jenkins 2004) rather than awareness of belonging to a specific generation. In a sense though, while not necessarily being aware of belonging to a specific social generation, the fact that participants referred to shared experiences of using particular media among ‘their generation’, suggests a sense of consciousness of belonging to a ‘media generation’. The idea of generational consciousness has not really been discussed among theorists of media generations, and although participants may not be aware of the boundaries of specific media generations, there was definitely a sense of shared experience.

While age categories may be portrayed as static, the concept of cohorts or generations implies social change (Lunt and Livingstone 1992: 105). The dynamics of these changes and shifts within cohorts of older people are discussed by Audrey in the following extract;

“Well most of use are in our seventies, eighties [...] and then of course now you get people coming on site in their sixties who are computer literate, they bring their computer with them. When we first moved in ten years ago, not many of us had computers [...] So it is quite obvious that the younger you get the more computer literate you are, even as a retired person.[...] you see my generation, because I was [working] at a school I came in contact with computers, but I think the majority of people working in offices didn’t in my generation, they just weren’t there [...] I think now people, it’s part and parcel of their work experience, so they just bring it through into their own personal life.”

This fits with predictions discussed in chapter two, in which it was suggested that younger generations such as the ‘baby boomers’ will bring their work experiences of computing through to retirement, changing the age divide in Internet use (Fox 2006, Xie 2003). Similarly, participants anticipated technological changes which would effect future generations, as Ian discusses below;

“the children, it is just second nature to them and I think it will get even, I think your generation will find it difficult to understand how the kids are using them in the future because [...] keyboards will disappear, screens will disappear, there won’t be such a thing as a mouse, it will just be around you, and you talk to it, will be in the house, there won’t be any screens, if you want to see something it will be

projected somewhere and appear as a 3D image, I think 100 years from now we won't even recognise a computer if we saw it"

This suggests that the current generation of 'young people' will similarly find their skills outdated as new forms of computer technology continue to advance. Again such discussions problematize the notion of 'new technology', as something which is relative to changing cohorts or generations (Bolin and Westlund 2009).

### **Narratives of technological change**

In discussing technological change since 'their day', these narratives were not neutral, but also implied a value judgement on this change as either negative or progressive (Lunt and Livingstone 1992, Ofcom 2006). According to Lunt and Livingstone (1992) there are two contrasting narratives or discourses which arise when discussing social change; the 'belief in progress' narrative and the 'apocalyptic vision'. Some participants responded positively toward technological change, describing it in terms of progress or improvement. For instance, Brenda stated; "I mean technology's improving all the time" and "most of it is for the better." Similarly when asked how she would define technology Joan described it in terms of advancement saying;

"I suppose it's advance, easier to use, I think everything is more advanced, technology is the in thing, everything is run by technology to what it was like years ago, not that many years ago actually..."

A number of participants also emphasised the benefits of technologies for making things quicker and easier. This included the benefits of domestic technologies, for instance Brenda stated; "I mean when you think of the old, even the twin tub to the modern washer [...] it is so much easier just to put it all in a one drum" while Betty said that "What I found added to what we already had was the microwave. I found that was good." These reflections are gendered; it was mainly women who reflected on the benefits of changes in domestic technologies, illustrating gendered meanings and experiences of technologies which will be discussed in detail in chapter nine. The benefits of computers and other media technologies were also emphasised by some participants, for instance, Maggie said "it was a lot quicker and easier to alter it on the computer than on the typewriter when you had to re-type everything".



However, other participants subscribed more to the 'apocalyptic vision' narrative, describing change negatively, in contrast to the past as a 'golden age'. In Lunt and Livingstone's (1992) research on consumption, these negative views usually focused on a decline in morality, community and family, and the increase in debt and irresponsibility with money. In discussing technology use, negative views focused on a decline in personal relationships, and also the waste created by continuous technological change, as also found in the Ofcom survey (2006). Several participants expressed dismay about the way in which technology became outdated so quickly, and could not be passed down to anyone. As Barbara said; "...the fact it's obsolete almost as soon as it comes out, I find that distressing in a way but er, I suppose that's just progress", while Andrew described how;

"Everybody's buying much more modern equipment, cost me a fortune but you can't pass it on to anyone because nobody wants it...It just gets dumped. [...] The point is as things develop and they get better, it just renders everything before it absolutely useless."

This waste was located within the fast pace of change of the present period, in contrast to earlier days. In response to this, some participants like Barbara and George resisted getting the latest 'up-to date technology', and had kept the same washing machine since 1978 until it recently broke. However, there was a sense of having to move with the times, or risk being excluded from society, highlighting the tension between agency and structural constraint in response to technological change. As George said "as more and more people go onto email that tends to replace writing letters and telephone" and therefore "it would be very inconvenient not to have email [...] it'd be like not having a telephone twenty years ago, you just couldn't do things." While there was a sense of resistance to updating and buying new technology, there was also a point at which it was felt that you had to keep up in order to be involved in society, as Emma discusses;

"You get to the point where there's no point going back to old technology, you have to forge ahead even if you don't know really understand it or know why, what the benefits are [laughs]. You don't have any option any more! Like we've got records still, but we don't play them [...] and we don't play cassettes very much

now. You have to upgrade everything to CDs, and you get forced into it whether you want to or not. “

In relation to this theme, Fred described how the switch from phone and letter communications was creating exclusions. He was shocked to find that when he tried to communicate with firms such as the gas and electricity by letter, they asked him to communicate via email or telephone, and expressed concern that “a lot of people won’t be capable of doing it, or won’t have it.” He went on link this to the phenomenon of the digital divide saying;

“...the worry I have is that, there’s a lot of people who haven’t got computers, and everybody expects you to have them. [...] and it seems there’s an unfair, there’s two societies really. I think there are a lot of people who don’t want them [...] I mean, when I was young you were lucky if you had a washing machine. I mean I remember the first television coming in and things like that. I think things are changing so fast that I don’t know what the answer is.”

As stated by Lunt and Livingstone (1992) such narratives of change focus on early experiences in youth or ‘in my day’, and contrast the stability of the past with the present as a time of rapid change, ignoring the changes that occurred in early generations. This contrast between the ‘good old days’ and present times was also evident in discussions of changes in personal relationships and communications as a result of technological change, as illustrated by Hilda’s discussion below;

“I don’t really like computers, cos I don’t like screens, I prefer people’s faces and a bit of individual attention. And when you’re ordering something there’s always a screen on erm...in shops and things, you know. I’d just rather have an individual person. I mean the banks used to function I think much better before they got all this system, you went in and you spoke to somebody and you got served and you were satisfied. But now there’s no such things as a bank manager and you’re faced with something, the computer’s broken down or it’s made a mistake, or it must be the computer it’s...well, it’s just not as good [...] as the good old days!”

Here she describes how increasing use of technologies in institutions such as the bank was bringing about a decline in personal relationships and communications. As she later said

when discussing the shift to automated telephone services “it’s this lack of person touch really, that bothers me. I think we’ve lost something since that went”, while her husband William felt it had ‘damaged personal relationships.’ Such views were expressed by several other participants, for instance, Pearl stated that “you do lose the personal communication quite a bit” with email, while George said “it’s not really contacting people is it to have an anonymous message on the screen?” Communications using email or mobile phones were described as being inferior to offline communications, as Jeff’s comment illustrates;

“... by being in front of the machine, it’s an inanimate object really, it’s not actually person to person communication. I think it’s a lower level of, lower quality interactive communication really, it’s done through machine, you know. I put it as inferior to interpersonal communication ...”

In discussing changes in personal communications, participants also described the shift from paper to electronic communications, a theme which occurred across participants adopting both positive and negative accounts of technological change. As George observed “as more and more people go onto email that tends to replace writing letters and telephone”. The decline in letter writing was particularly described among younger generations. For instance, while participants like Enid enjoyed letter writing and found it great fun, she stated that it was not something her children or grandchildren had kept up. As Audrey said in reference to her grandchildren; “the tradition of writing a letter seems to have passed now [...] texting and emailing is quicker and easy.” Some participants like Audrey, Arthur, Enid, Dot, and Brenda embraced this change, describing email communications as making it easy to keep up regular communication with people at a distance, including grandchildren who would ‘never write a letter’, which will be discussed in greater detail in chapter eleven. However, other participants like Emma, Jeff, and William felt that email was an inferior in comparison to handwritten letters, particularly when it came to saying something personal as Jeff describes;

“I use it to inform people about this or that, but I think I prefer writing letters to close friends really, I think it’s a more personal, more intimate sort of way of communicating, and people keep letters, can read them again and erm... whereas there’s something very ephemeral about emails...”

Participants like Emma and Jeff, Andrew and Jenny, felt they needed a hard copy of emails, and were worried about their ephemeral nature. Again, feelings toward these changes were linked to values and experiences learned during an earlier period, and shared 'generational' experiences. For instance, Andrew described a need for paper back ups as characteristic of his generation, and their experience in work of 'everything being done on paper' to doing things on the computer. He described how as a result of these experiences if he booked something like a holiday online "this is the generation thing- I've then also rung to confirm and I always write a letter of confirmation as well." A preference for using books for information and entertainment rather than computers was also described as being due to the early experiences of these cohorts, which contrasted with younger generations. As Barbara said;

"I mean we both like books, we read, we've always read avidly. I mean probably future generations won't have books, I mean the grandchildren seem to read as well but our house has got books in every room, you know it's just part of what we've enjoyed and grew up with. And we do use books for information, so it isn't always the computer."

Similarly, when discussing herself and her partner's need to read print rather than reading material on screen, Hilda stated; "Well to our generation there's nothing like a book is there?" This preference was also linked to an aesthetic and embodied preference for the feel of paper, as Deidre said, she couldn't imagine moving to reading electronic books as "the physical is so ingrained in me, the physical act of reading."

In analysing attitudes toward technological change, it appeared that certain participants demonstrated predominantly positive or negative views. In seeking to further explore these differences in attitudes toward to technology, participant were organised into a typology, dividing them according to their attitudes into 'sceptics' and 'enthusiasts' (see table seventeen). The 'sceptic' takes a negative view of the impact of technological change on interpersonal relationships, and "worries that technology increasingly renders communication processes anonymous, distorted and marginal" (Horning et al 1999:299). The de-valuing of computer based interactions, and preference for interpersonal communications or older methods of communication among participants like Emma, Jeff, and Hilda, reflects the profile of the 'sceptic' (Horning et al 1999). In contrast, 'enthusiasts' like Audrey or Brenda demonstrated predominantly positive attitudes toward

technological change as useful and beneficial, and embraced new methods of communicating. Participants expressing these views varied in their engagement with computer and Internet technologies though, for instance, while expressing similar attitudes Hilda did not use the computer at all while Emma used it frequently. They were therefore also sub-divided according to level of use into 'frequent users' and 'non-users/minimal users' who either didn't use a computer or had only just began to learn.

Looking at the divisions in this typology, it may be expected that as different cohorts grew up with different positions in relation to social and technological change, the narratives or attitudes adopted by participants may differ according to these cohorts. For instance, participants growing up in the 1930's will have experienced the depression and economic hardship, while the post-war periods involved economic regeneration and increased affluence (Becker 2000, Gilleard and Higgs 2002, Lunt and Livingstone 1992). However, in examining patterns in the attitudes toward technology (see table seventeen), they do not seem to differ according to cohort. In fact, there is the opposite effect to what may be expected, demonstrating a predominance of younger participants reporting anti-technology views, although these views were also noted among older participants like William and Hilda. However, as found with other earlier technologies like the television (Buckingham 1993) there is a predominance of middle class participants adopting anti-technology attitudes, particularly among the frequent users, which suggests the importance of class over cohort in this instance. It must be noted that as found by Lunt and Livingstone (1992) and Ofcom (2006), the same participants did adopt different attitudes toward technologies at times, and participants who expressed sceptical views regarding the effects of technology on social relations still noted positive aspects such as speed or convenience. Nevertheless, there were clear divisions between participants expressing predominantly positive or negative views

**Table 17: Typology of attitudes toward technology**

Use patterns	Attitudes toward technology	
<p><b>'Sceptics'-characteristics;</b>                      -generally negative views of technological change</p> <p>-online communications as inferior, older technologies as preferable</p> <p>-Internet use = tool not enjoyment/leisure</p> <p>- attitudes regarding security</p> <p>-No participation in online banking, online shopping limited.</p>	<p><b>'Enthusiasts'-characteristics;</b>                      -generally positive assessment of technological change</p> <p>-embracing online communications and new technology</p> <p>-Enjoy going online-computers seen as leisure</p> <p>-enthusiastic about computer technologies                      Not fearful.</p> <p>-Participation in banking and shopping without concern (except minimal users).</p>	
<b>Frequent users</b>	<p>Lesley (53):                      Previous occupation: Physics lab technician</p> <p>Emma (57)                      Previous occupation: various including research assistant, and admin</p> <p>Jenny (59)                      Previous occupation: lecturer/administrator</p> <p>Jeff (62)                      Previous occupation: teacher</p> <p>Andrew (65)                      Previous occupation: draftsman</p> <p>Barbara (67)                      Previous occupation: Occupational therapist</p> <p>George (71)                      Previous occupation: project manager</p> <p>William (80)                      Previous occupation: accountant</p>	<p>Deidre (67)                      Previous occupation: head-mistress.</p> <p>Arthur (70)                      Previous occupation: teaching, freelance photojournalist</p> <p>Brenda (72)                      Previous occupation: accounts clerk</p> <p>Audrey (76)                      Previous occupation: head teacher</p>
<b>'Non users/minimal use'</b>	<p>Greg (75):                      Previous occupation: Factory worker.</p> <p>Fred (79):                      Previous occupation: local counsellor</p> <p>Hilda (80)                      Previous occupation: teacher</p>	<p>Joan (66)                      Previous occupation: Factory worker, carer.</p> <p>Dot (69)                      Previous occupation: factory worker</p>

## **Summary**

Through examining the 'technobiographies' of participants, this chapter has illustrated how the biographies of ICTs are intertwined with personal experiences of change throughout the life-course. Individual biographies were intertwined with broader social and technological change, which were shared with people of a similar age cohort. Although different cohorts could be identified within this sample, they described similar experiences of 'growing up' with having the radio at home. As a result, the radio remained a favourite technology into retirement for many participants, supporting theories of 'media generations' which argue that 'formative experiences' of technology use shape practices, experiences, and values of technology use throughout the life-course (Bolin and Westlund 2009). This importance of early experiences in shaping the use of ICTs during later life is something which is fundamental to this thesis, and re-emerges throughout subsequent chapters examining the current use of ICTs at home during retirement. It also has important implications for understanding the age-related digital divide, and Internet use among older age groups. In the same way that participants had grown up with the radio, they described young people today as being 'brought up' with computers and the Internet. As a result, these technologies were seen as being used 'naturally' by younger generations. This suggests that rather than the age-related digital division being merely the result of changes in later life, the earlier experiences of a cohort are important in shaping technology use throughout their lives (Rama et al 2001). This means that the age division in Internet use will not remain static, but will change as older cohorts enter retirement, bringing with them a greater level of experience of using these technologies at an earlier age (Xie 2003). The changing nature of age relations around technology use was also illustrated by participants' discussions of earlier intergenerational relations with their parents, and differences in their adoption and use of 'new' technologies like the television. Therefore while binaries between 'young' and 'old' were often reproduced in discussions, such divisions are not static, and a biographical perspective illustrates how definitions of 'new technologies' are relative to each generation (Bolin and Westlund 2009).

While suggesting the relevance of 'cohort' for examining the intersection between individual experiences and social change, this chapter has also highlighted the importance of gender and class in shaping experiences and attitudes toward technological change. The stage at which technologies were acquired was shaped by class, with working class

participants generally being later to adopt new technologies like the television. There were also class issues around the television signifying social status, and similarity or difference from neighbours. Working class participants were also less likely to have experiences with computers in a work context, which meant they were less likely to use them in retirement. In terms of gender, we have seen how women's early experiences of using the television and other technologies were situated within gender divisions of labour, as women were more likely to be at home caring for children. However, there were also experiences of social change in gender roles, and computers were sometimes part of the process of re-entering the workforce and retraining. These changes came later on in the lives of many participants though, in contrast to younger generations. The implications of earlier gender patterns and changing gender roles for current technology use in retirement is an important issue, which will be returned to in subsequent chapters. Different 'types' of participants also responded differently to technological change, and constructed different narratives when discussing it. This illustrates agency in personal responses to the changes experienced by individuals and cohorts, although there were limitations to this, and a sense of having to move with pace of technological change or be excluded from society. The following chapter will now discuss the embodied dimensions of these relations between ageing, generation, biography, and technological change.



## Chapter seven

### **‘It’s like pianos, you need to keep practising’: Embodiment, biographies and technology use**

#### **Introduction**

The previous chapter has explored the interaction of individual biographies and experiences of ageing with broader social and technological change. This chapter will now look at the embodied dimensions of ageing and generational change in relation to technology use. It will begin by applying theories of embodiment to understanding how the transmission of knowledge across generations, and generational change, are embodied processes. Following this, it will be argued that changes in technologies across generations can also lead also to such changes in embodiment. In contrast to depictions of computer use as escaping the constraints of the body, it will be argued that computing can be understood as an embodied process or ‘body technique’. The findings of this study will then be used to examine these processes, as the biographies of participants illustrate how technological change prompted changes in embodiment throughout their life-courses. Findings also illuminate the process of acquiring computing skills as an embodied competency, and as a form of ‘practical knowledge’ which can only be ‘learned by doing’. These experiences of technology use were embedded within constructions and experiences of ageing bodies. Although discourses of ageing were drawn on in a more complex manner, the contrast between the embodied competencies of different generations often reproduced hierarchies between young and old.

While the transmission of societal traditions has been portrayed in the past as solely a cognitive process, this process also takes place at the level of embodiment as “collective pasts become sedimented in individual and collective bodies” (Narvaez 2006:52). Bourdieu’s concept of habitus captures the embodied aspects of cultural transmission across generations (Crossley 2007). Bourdieu (1990 cited in Eyerman and Turner 1998) refers to habitus as ‘durable, transposable dispositions’ which shape attitudes and tastes, as well as ways of speaking, moving, and styles of dress (Lawler 2005). Through the transmission of habitus, the past is reproduced in the present (Crossley 2006), and Bourdieu describes how the dispositions and cultural competencies structured by habitus are “only active when *embodied* in a competence acquired in the course of a particular history” (1977:81). The transmission of knowledge which takes place in the acquisition of

habitus does not all take place on a conscious level though, and Bourdieu (1977:78-79) discusses how much of the past knowledge it incorporates is 'forgotten' or naturalized, appearing as 'second nature'.

As well as accounting for the transmission of tradition, these theories can also be used to grasp changes in embodiment across generations. For instance, Bourdieu (1977:78) also describes how the 'different conditions of existence' experienced by different generations may produce differences in habitus, leading to different perceptions of the world and possibly generational conflict. This idea of a generational habitus has been further developed by Gilleard and Higgs (2005:70), who describe it as "a set of dispositions that generate and structure individual practices, which emerge and are defined by the forces operating in particular cultural field". Gilleard and Higgs (2005) argue this notion of 'generational habitus' is able to avoid the problematic issues around Mannheim's (1952) idea of generational consciousness, and that it is the shared values, dispositions and practices that define a generation, rather than conscious reflection on similarities and shared experiences. They suggest that the changes in the 1960's and the shift toward 'reflexive modernization' have led to a new generational field, in contrast to that associated with the earlier form of modernity. However, Gilleard and Higgs (2005) challenge the importance of 'cohort' and 'formative experiences' in shaping generational habitus, and describe this new habitus as spanning across cohorts born after the 1930's, rather than being restricted to a particular cohort. This is in contrast to the findings of the previous chapter, which illustrated the importance of formative experiences in shaping the technology use of cohorts.

An alternative conception of 'generational habitus' is discussed by Edmunds and Turner (1998), who instead associate it with the maintenance of shared generational values and practices established early on, and a strong generational consciousness. Edmunds and Turner (2002) and Eyerman and Turner (1998) also develop the embodied aspects of habitus, which is somewhat neglected by Gilleard and Higgs (2005). They adapt Bourdieu's concept of habitus to account for changes in embodied practices across generations, stating that "...generational habitus becomes embodied in the social actors who are carriers of such cultures. Their dress, speech and deportment come to embody the history and experiences of a particular generation" (Edmunds and Turner 2002:15).

Some authors have adapted the ideas of 'habitus' and 'generational habitus' to studying ICT use. For instance, research has discussed the particular technological habitus of young people or the 'digital generation', who due to growing up with computers and other digital technologies, have developed particular skills and dispositions toward using them (Johnson 2009, Zevenbergen 2007). However, such discussions do not often recognise the technological skills that older generations have acquired during their life-times, for instance, educational researcher Zevenbergen (2007: 20) states that "growing up in a digital world offers different potential for constructing a technological habitus than for those who have not grown up immersed in technologies." This statement fails to recognise that although older generations have not grown up with these *digital* technologies, they have grown up with *other* technologies. Although Gilleard and Higgs (2008) briefly discuss the concept of generational habitus in relation to older Internet users, they focus on the degree of immersion in consumer culture. Barnett and Adkins (2004) also discuss the concept of 'habitus' in relation to older computer users, but use it in relation to shared lifestyles and interests, rather than technological dispositions acquired over a life-time. Therefore, the idea of technology generations and habitus do not seem to have been fully incorporated in discussions of older Internet users.

Furthermore, while the idea of 'habitus' implies embodied dispositions, the embodied nature of technology use appears to have been neglected in research on 'technological habitus'. Although such issues are discussed by Sterne (2003), he does not relate the embodied dimensions of habitus to theories of generations, and generational differences in technology use. Furthermore, the embodied aspects of generational differences in technology use do not seem to have received much attention elsewhere, and have not been incorporated into empirical research on generations and technology. Such embodied dimensions of habitus may be better developed in relation to the work of anthropologist Mauss (1979), who discussed habitus in relation to the concept of 'body techniques' (Sterne 2003). The term 'body techniques' refers to "...the ways in which from society to society men know how to use their bodies" (Mauss 1979:97), and addresses cultural and historical variation in embodied practices such as walking, running, and posture. According to Mauss the acquisition of body techniques is not natural, but is part of the transmission of societal tradition, and there "is no technique and no transmission in the absence of tradition" (1979:104). Like Bourdieu's concept of habitus, 'body techniques'

are described as forms of 'practical reason' (Mauss 1979), and involve "embodied, pre-reflective understanding of knowledge" (Crossley 2006:103).

The concept of 'body techniques' was later adapted by Crossley (2007) who further developed the concept of 'practical understanding'. He discusses how the 'practical understanding' incorporated in body techniques involves knowledge which is difficult to verbalize, and is grasped practically through action rather than theoretically. As a result, the process and principles involved in learning these skills can be difficult to elucidate from experienced practitioners, although observation of the experiences of new learners can make the acquisition of body techniques more explicit. Participation in body techniques is not evenly spread throughout society though, and Mauss (1979) discusses how body techniques are socially patterned according to divisions such as gender, age, and 'prestige'. The concept of 'body techniques' can therefore be used to explore demographic patterns in diffusion embodied practices (Crossley 2007). Similarly Bourdieu discusses embodied social distinctions based on differences in habitus, and while he focuses on class distinctions, Eyerman and Turner (1998) argue that similar distinctions could be made between the embodied practices of different generations. As they rightly point out though, these generational distinctions also intersect with those based on class and gender.

While Crossley does not explicitly apply the concept of 'body techniques' to technology use, Hayles (1999) applies a similar notion of 'incorporating practices' to understanding how technological practices become inscribed into our embodiment. An incorporating practice is defined as "...an action that is encoded into bodily memory by repeated performances until it becomes habitual" (Hayles 1999:199). She argues that technological change leads to changes in incorporating practices, as new technologies require people to use their bodies in different ways. Like Crossley's argument that body techniques can be understood by examining the experiences of learners, Hayles suggests that changes in bodily practices can be encapsulated by examining adaption to new technologies. However, it appears that empirical research has yet to apply concepts of 'incorporating practices' or 'body techniques' to use of computer technologies. By applying these concepts to understanding computing, this approach may be used to understand the embodied process of learning to use computer and Internet technologies. As older generations have learned computing skills at a later stage in their life, and had to adapt to computers as a new technology, their experiences may be able to make explicit embodied processes which would be naturalised to younger generations.

## **Theorising technology use in relation to lived experiences and constructions of the body**

As well as technological change resulting in changes in embodied practices, it may also relate to changes in lived experiences of the body (Shilling 2005, 2007). While the acquisition of body techniques may involve processes that are largely unconscious, the body may 'reappear' through lived experiences of bodily pain, discomfort, and demands (Leder 1990). Such experiences of the body may also occur in relation to technology use, as despite fluidity in online identities, we still have to return to the needs of the body such as eating, sleeping, and the bodily discomfort created by spending time on the computer (Lupton 1995). In contrast to earlier disembodied views of Internet use, recent research has begun to examine the relation between the use of computer and Internet technologies and experiences of disabled (Moser 2006) and gendered bodies (White 2006, Bryant 2003). For instance, White's research highlights a strong sense of bodily pain and discomfort in the accounts of male computer programmers, and awareness of their bodies as 'large and sedentary' (2006: 404). As with other aspects of embodiment, these lived experiences are embedded within broader cultural meanings and discourses. For instance, while technical mastery is associated with hegemonic masculinities, White argues that the construction of the bodies of computer programmers in terms of stasis, fat, and laziness, associates them with de-valued masculinities. Similarly, Moser (2006) found that constructions of computers and other technologies as compensating for disabilities reproduced boundaries between normal/abnormal and able/disabled bodies.

While research on gender and disability has begun to examine the relations between embodiment and technology use, research on the Internet and embodiment has neglected older bodies (Featherstone 1995). With the exception of emerging unpublished research examining images of older bodies in Saga zone discussion forums (Garde-Hansen 2008), I could not locate any other research or theory focusing on the relation of ageing bodies to computer or Internet use. However, as discussed earlier in chapter two, previous studies have illustrated how Internet and computer technologies relate to broader representations of ageing. Contrary to hopes for new images of older bodies (Featherstone 1995), studies suggest that computer technologies are firmly located within existing discourses. For instance, in chapter two we saw how the accounts of older Internet users frequently drew on the discourse of decline (Richardson et al 2005), as did many discussions of older people in computer research and design literature (Ostlund 2002, 2005). Other research by

Lin et al (2004) examining age identities on the 'Senior Net' forum, found that rather than avoiding identifications based on embodiment, themes around the body and health were prominent in online discussions. However, while these studies have examined representations of ageing which are highly embodied, none of them focused on the ageing body or embodiment. Furthermore, this research has generally focused on discursive representations rather than lived experiences of the body in later life, except some brief discussion by Richardson et al (2005). Although much previous research has noted physical limitations on computing among older Internet users (e.g. Hill et al 2008, Selwyn 2004, Saunders 2004), lived experiences of ageing bodies are not explored in detail, or related to broader literatures on the topic.

As well as attending to cultural meanings and discourses surrounding ageing, it important to attend to real lived experiences of pain, illness and frailty (Twigg 2004), and experiences of change in the materiality of the body over time (Crossley 2006, Phoenix et al 2007). However, signs of bodily ageing are always interpreted in relation to broader cultural meanings (Crossley 2006), and it is impossible to separate these meanings from the materiality of the body (Twigg 2004, Woodward 1991). It is argued that the body cannot be reduced merely to discourse, but an understanding of the body must take into account the way in which it is simultaneously both social and biological (Shilling 2005). There is a call for perspectives in both the sociology of ageing (Twigg 2004, Laz 2003) and the broader sociology of embodiment (Shilling 2003), which draw on insights from both social constructionist and phenomenological perspectives. Such an approach would examine both lived experiences of real, material bodies, and their constitution in relation to broader discourses. This chapter aims to bring these different elements together, in examining the relationship between computer technologies and experiences and constructions of embodiment in later life. However, as suggested by Crossley (2007) and Shilling (2005) it also aims to bring these perspectives together with the concept of 'body techniques', in examining biographical experiences of acquiring computing skills as an embodied competency.

## **Technobiographies and changing body techniques**

As discussed by Mauss (1979), the evolution of a particular body technique may be experienced within one's own life-time. In seeking to examine such experiences in relation to computer technologies, we will now focus on the embodied dimensions of participants' 'technobiographies'. Through examining these 'embodied biographies' (Williams 2000a), we will see how the technological changes experienced within their life-courses resulted in changes in embodied competencies. As noted in the previous chapter, despite some variation according to age cohort, gender, and occupation, interviewees had generally come to computing at a later stage in their lives, either post-retirement or toward the latter part of their careers. Prior to the introduction of computers in the work place, participants described how 'in their day' various tasks including cartography, calculations, and statistical reports were 'done by hand'. For example, before the mechanization of various clerical tasks after the Second World War, calculations were carried by clerical workers- generally women-who were termed 'computers' (Balsamo 1996, Hayles 2005). Women like Pearl and Betty described how they had carried out even complex calculations 'in their head' rather than using machines, as Pearl found in her first job as an office junior;

"I worked for a stint in the pay bills office doing wages for hundreds of men, did it all in our heads. The boss, she used to check the sheets with a really old fashioned adding machine, that's about all we used, and that's why I don't need an adding machine when I'm adding up"

Therefore many skills which are now associated with 'computational machines' were then the domain of human intelligence (Hayles 2005). These abilities had stayed with participants like Pearl, who stated that she still does not 'need an adding machine'. The loss of this embodied competency among younger generations was noted by Betty and John, stating 'it makes me fear and tremble for shop assistants who have to use the machine to work out the change, ninety eight pence from a quid, that sort of thing'.

Participants generally experienced the shift from manual to computerised labour in the late eighties or early nineties. In his occupation as a draftsman, Andrew described this process as a 'transformation from everything being done on paper'. A number of participants recalled initial feelings of fear and apprehension when beginning to use computer technologies, and distrusted the change from manual to computerised transactions. For example, as an accounts clerk Brenda had continued to keep ledgers or paper back ups 'just

in case'. It was often difficult to adapt from doing tasks manually, and for many participants using computers to do tasks initially took longer, as Pearl describes;

“...at first because you were learning to use them they did take longer than when you were doing them by hand, like tables and things like that, lists, I could probably write mine quicker.”

This illustrates the difficulties of adapting to new embodied practices, as those skills learned earlier on often remain ingrained (Mauss 1979). However these initial misgivings were often followed by an appreciation of the benefits of computer technologies for making manual tasks quicker and easier. For instance, Andrew found that in contrast to adding up figures manually “when you’ve got an Excel spreadsheet you can just do it absolutely automatically” and “it was just brilliant compared to the way that we were doing it.” However, as discussed earlier, many participants had left work before the introduction of computers, and had not learned computing until after retirement.

While discussing a shift from manual to computerised labour, in examining the evolution of embodied practices it is often the case that ‘new techniques mutate of old’ (Crossley 2007:92). While not using PCs until a later stage in their lives, many participants had used typewriters, and some had used word-processors or older forms of main-frame computer. The skills and experiences learned on these machines often shaped their later experiences of computer use, in work and home contexts. This was particularly the case with using typewriters, which necessitated the development of ‘familiarity with the keyboard’ and the embodied competency of touch-typing. As with participation in other embodied techniques (Crossley 2007), typing skills were gendered, reflecting the predominant employment of women in clerical positions. Although a couple of men in the sample had used a type writer, none had learned to touch-type, in contrast with a number of women who had learned either in school or in relation to clerical work. These women had generally typed letters for their husbands in the past, before they learned to use computers. However, while men in the sample had learned to use the keyboard, they had not acquired the embodied competency of touch typing with two hands. This was described by Albert saying; “...if I had a letter to write in the past I always had to get Enid to type it for me because I still work like this [one finger at a time]. I am getting faster, but the amount I do I can manage like that now...” Their husbands’ limited practice of typing with one finger was often a source of observation or amusement to women in the sample.



However, skills with using a type-writer did not always translate into skills at using a computer. While Carol and Pearl felt the keyboard skills they had learned in earlier clerical occupations or courses had helped them with computing, others like Enid felt it would be “better to start with an absolutely clean slate.” As well as gender differences in the acquisition of typing skills, there were gender differences in the construction of these skills and their perceived relevance to computing. Men frequently described typing as unimportant or ‘not proper computing’, while women like Enid and Carol felt the computer was merely a ‘glorified typewriter’. This relates to broader gender divisions in the constructions of skills and technologies, which will be explored in greater detail in chapter nine. While some women found their typing skills useful in learning computing, others like Joan had forgotten much of the typing skills she had acquired, although traces of them remained;

“...it did leave me with that little bit of, I remembered ASDFG when I went on to the computer. I can’t say it’s coming back because I’m not using two hands, that was totally touch-typing when you are reading and typing.”

This suggests limits to the transferability of earlier embodied competencies to new practices (Crossley 2007), as the development of computer technologies necessitates the development of new embodied competencies (Hayles 1999). For example, earlier forms of computers and typewriters didn’t have a mouse, and as described by Brenda this could be difficult to adapt to; “the one thing I never liked was the mouse, I’ve got used to it now but oh for ages I used to struggle with that.” Although Brenda overcame this difficulty, some women like Betty who had previously been proficient at typing had not learned computing. This was in part because due to feelings of fear regarding using new technologies, but was also because she had ‘trouble with the mouse’.

These struggles to adjust to new demands on embodiment posed by computer technologies were contrasted to the experiences of younger people. As discussed in chapter six, unlike older generations who came to computing later in life, young people were described as having ‘grown up’ with computers. Therefore using tools such as the mouse simply came naturally to them, and did not have to be learned;

Ian: "...they don't think twice about it, they've been brought up with computers in school and keyboard skills and things that people had to learn, I've taught people who didn't know how to use a keyboard, were completely useless with a mouse ..."

This discussion pinpoints a cultural shift in embodied competencies in relation to technological change, in which the skills of using the mouse many of their generation struggled to learn are 'second nature' to younger generations. In contrast to older generations, embodied competency with computers was described as general capacity among young people, as illustrated by descriptions of them using computers 'naturally' or 'automatically'. Knowledge of computing was seen as being embedded instinctively into young people's thought patterns and actions. For instance, Andrew described how "their dexterity and mindset is completely different to mine" while Jenny described an instinctive knowledge of computing among 'young kids' saying "they think in a computer way, whereas we think in terms of a hard copy, a paper, a book." Such generational differences in body techniques are also illustrated by description of young people in Japan as the 'thumb generation', due to their extensive use of mobile phones and computer games leading to increased dexterity in their thumbs (Buckingham 2006 citing Brooke 2002). However, as noted earlier, while participants described increased embodied competency in computing among young people, they also discussed a loss of other manual skills. Similarly, accounts of the thumb generation describe how the continual use of computers and mobiles had led to a loss in writing skills (Brooke 2002). This reflects the patterning of body techniques according to historical and cultural location (Crossley 2007, Mauss 1979), and points a generational division in embodiment (Edmunds and Turner 2002). It again illustrates how as argued in theories of media generations, the acquisition of technological abilities during the formative period is important (Bolin and Westlund 2009), but also demonstrates the embodied nature of these generational differences.

### **Acquiring computing skills as an embodied competency**

We have so far used an examination of participants' technobiographies to illustrate how personal experiences intertwine with broader cultural shifts in body techniques. However, we will now focus more closely on experiences with computers to illuminate the embodied nature of acquiring of computing skills. From the initial reservations felt by many participants regarding computing, progression toward competency was described as

something that could only be achieved through practise or 'use'. Although some participants initially sought help from courses or manuals, these were generally not found to be very useful. As Jack said 'what little I know I know from just trying it, hands on', while Carol stated;

"...I must have started 'Introduction to Computers' courses so many times over the last 10 years of my working life and unless you've got one in front of you there's no point in going, because it's like pianos, you need to keep on practicing."

Similarly, Ian described how he 'can't learn by sitting in a classroom' but has to 'get in front of a keyboard on a new piece of software and plug away at it for several weeks, and then it just comes naturally.' Therefore computing was not something which could be learned theoretically, but something that needed to be learned through action and practice (Crossley 2007, Wacquant 2004). Although new learners like Jane and Dot sometimes needed a particular application to be explained or made explicit (Crossley 2007), they similarly felt that it was practice that they needed to progress. This reflects other forms of embodied, practical knowledge, which can only be acquired through 'learning by doing' (Wacquant 2004). As illustrated by Carol above, the practical nature of learning computing was compared to other embodied competencies such as 'playing the piano' or 'riding a bike'.

While acquiring greater competency with computing, the majority of participants did not understand, or want to understand, the inner workings of computers (Lupton 1995). As Jenny said; "we haven't got any interest in the box itself" while her partner Andrew stated that "it's not in my nature to want to take it apart and rebuild it again." Therefore the tacit, practical knowledge possessed by many participants enabled them to use them computers for what they wanted, without really understanding how they worked (Polanyi 1966). In contrast, Ian's previous job as physics technician involved programming and building new computers, and he found everyday use of computers less enjoyable;

"I always say to people it's like a train set, people who have train sets, they don't build them to run them they build them to build them [...] once we'd got it running, the word processor was working, you get bored with it [...] it is the thrill of building it, it's then just a tool."

This reflects the contrast between tacit, everyday knowledge and expert knowledge, in which the knowledge of technicians makes the connections between everyday practices and the inner workings of machines explicit (Polanyi 1966). This pattern also reflects the instrumental nature of learning computers, as most participants focused on what they needed to know, rather trying to understand computers as a whole. As Jenny stated, she didn't want to know about the various aspects of computing, all she wanted was 'to be able to do this little bit that I want to do, and I want to be able to do it well.' Most participants wanted to learn only a particular set of practices, as George reflects;

“... the people who set up computers are trained in computers, but they're not trained to listen to people and what they actually want [...] Which may not be endless clever things [...] you just want email, Internet and the ability to type.”

For the majority of participants, like George, the applications perceived as most relevant were email, information searching, and word processing, reflecting general patterns among older computer users (Selwyn et al 2003, Hill et al 2008). Most participants did not feel there was 'any point' in learning about social networking sites or chat-rooms, although one participant had used them for communication with grandchildren. It was often similarly argued that there was 'no need' to use the Internet for activities such as shopping or banking, as these facilities were nearby and could be accessed in person. While some participants used the Internet for news, others like Jeff or William felt that although they "could if they wanted to" they "haven't got that desire to do so." Discussions of this approach to computing also drew on age differences, and the instrumental, functional approach of older people who used the Internet as a 'tool' was also differentiated from that of younger people who used it more flexibly. As Ian said; "to them it is a games machine or homework machine, whatever they want it to be."

Like other forms of practical, embodied knowledge, for those who reached a high level of competency, computing was described as 'coming naturally' or becoming 'automatic'. As Arthur discussed, when he first began learning computing "there were so many simple solutions that you didn't know", whereas "today we just do these things automatically all the time, and you forget once you've got started that other people struggle with these." This comment also highlights how the struggles of acquiring computing skills become forgotten once the learner has reached embodied competency (Crossley 2007). Similarly, Ian couldn't understand why people found word processing difficult, saying that "you use

that without thinking about it don't you?" However, his wife Lesley pointed out that this was not the case for beginners, although the embodied nature of computing skills meant initial difficulties were often forgotten;

"... I think the more you use a computer, the more comfortable you become with it. I think that is fair, if you were hands on everyday, some things just become you don't know how you know them, because you've now learnt it, it's automatic...you could compare it to the skills you have at home. If you were to ask your mum how she made apple pie, she could tell you the recipe but how she makes it the way it is the skills she has learnt over time and how she does things without thinking about it. And I think computing falls into the same bracket."

Like other practical knowledge, Maggie's comment illustrates the nature of computing skills as a practical, embodied competency which is learned by doing, and then becomes automatic, something that is 'done without thinking' (Crossley 2007, Wacquant 2004). She also highlights the nature of such embodied, practical knowledge as something which is difficult to put into words or make explicit. As with other forms of tacit knowledge, it involves knowing 'more than we can tell' (Polanyi 1966:4). This sentiment was echoed by her husband Ian saying 'you don't know how you know it.' Although involving expert theoretical knowledge, Ian's understanding of computing also entailed tacit, practical knowledge which was difficult to describe.

However, although several participants had acquired competency with computing, changes in computer technologies could disrupt this, necessitating the adoption of new body techniques. For instance while they 'felt confident' with their earlier computer, Barbara and George described how their usage had gone down when they bought a new one because they found it difficult to adapt to. Similarly, Brenda had decided not to get a laptop as it would demand a new form of technique for moving the cursor instead of the mouse, which would not be 'easy to manipulate.' As found with other technologies, there were often limits to the extent skills learned from earlier forms of computer applications could be transferred to later ones. As well as changes in software disrupting embodied competencies, similar effects could be produced by changes in hardware. For example, Lesley described how she found it difficult to adapt to new programmes saying;

"...I *hated* the change from Works to Windows, I got happy with one set of instructions on how to do something and then Ian would come along and make the

computer more efficient, more organized and better and it didn't do it the way I used to know how to do."

Therefore while computing involved practical, tacit knowledge which could become encoded in embodied memory, this knowledge could be disrupted by changes in hardware and software, and could be difficult to transfer to new practices (Crossley 2007). The need for adaptation reflects the fast pace of change in computer technologies, as well as in contemporary society, which requires flexible, adaptable bodies (Martin 1994, Shilling and Mellor 2007). This flexibility reflects a higher level of competency with computer technologies, and in contrast to Lesley's difficulties in adapting to change, her partner Ian found it easy to apply his knowledge to new programmes and 'loved change' in computing. As Lesley said in the quote on page eleven, for someone like Ian "the more you do it the more comfortable you are with it, the easier it becomes, the more you can even understand new stuff that is coming in." This pace of change meant that for many participants, knowledge of earlier computing applications could also be forgotten or displaced by new skills. As Narvaez (2006) argues, the body can be a site of collective forgetting as well as collective remembering. For example, Barbara described how after learning to use their new computer she was no longer able to use the word-processor due to lack of regular practice. As she said, due to the changes in technology 'now a days if you practice it's not like riding a bicycle, you never forget riding a bicycle'. Similarly, Deidre described how after regularly using her laptop, when she recently tried to use her husband's computer she found she had 'almost forgotten how to use a mouse, I don't use a mouse now so, you do so much automatically'.

### **Computer use, constructions and experiences of the ageing body**

We have so far focused on how technological change over time prompted changes in embodied competencies. However, the relation of embodiment to computer use also involved discussion of lived experiences of the ageing body, and changes in the body in later life. Several participants, particularly those in older cohorts, described bodily changes including ill-health, disability, poor eyesight, and a 'slowing down' in physical activity. As Enid said;

"...it's just advancing years that make you recognise your limits [...] we just get tired more easily, as Albert said we can't remember new things as we used to [...]"

we've been retired for twenty years now, so we've deteriorated I suppose... everything takes much longer."

For some participants, computer use transcended these physical limitations; for instance, Fred described computing an activity which was easy to keep up in later life because "it isn't physically demanding. I can sit there in a nice comfortable chair...the older I get, the less I want physically demanding things, I soon get tired." For Albert, while hearing problems interfered with social interactions and radio or television use, computer and Internet activities were unaffected by them. As his wife Enid said "the computer's been a great blessing [...] with Albert's increasing hearing loss, the enjoyment he's had out of doing the photography and doing the posters...I'm sure made a tremendous difference." For Deidre, deteriorating eyesight meant that she increasingly used the computer and television as a source of enjoyment instead of reading. She also described how online facilities such as travel booking and shopping were increasingly useful in later life because; "you obviously haven't the energy at seventy that you had at fifty or thirty [...] it does save quite a bit of effort." For other participants though, health problems and the body could be experienced as a constraint on computer use. Hilda described poor eyesight as one of the reasons she didn't use the computer, saying "apart from anything else, I think my eyesight would go against it." As described in studies of other groups of computer users, more general experiences of bodily pain and discomfort could also limit computer use (Lupton 1995, White 2006). For example, Andrew and Jenny found the 'physical aspects' of computing restricting, and described how too much time on the computer could make your 'eyes hurt' or your 'back ache'. This reflects a more complex relation between the body and technology, as both may be experienced as constraining as well as enabling (Shilling 2005).

Discussions of changes in the ageing body were also intertwined with broader cultural discourses, and it is difficult to separate lived experiences from these cultural representations (Woodward 1991, Crossley 2006). As generally found in representations of ageing, the 'discourse of decline' was prominent in accounts (Richardson et al 2005). Difficulties learning computing were not only seen as the result of generational differences, but were also linked to decline in memory and mental capabilities with old age. For instance, Dot stated that; "...as you are older your brain is slower than when you were younger so it takes longer for you to memorise things." Mental decline was also a concern for more established computer users, for instance Albert discussed difficulties

when adapting to new programmes. He stated that “with age there’s a certain amount that you can learn that with electronics that sort of thing, there’s so many new words, and the memory won’t retain the descriptions of what’s actually going on.” Participants also related differences in computing ability to physical decline, for example, William considered difficulty reading computer screens as possibly “a factor of older people’s eyes, younger people may find screens easier than we do”, although he wasn’t sure that this was ‘really the case’. However, at times, some participants did contest the discourse of decline. For instance, while initially discussing the difficulties of learning computing in later life, Jane and Dot went on to state that “age shouldn’t be any barrier to learning.” The clearest resistance to this discourse came from Carol, who argued consistently that “the capacity to learn continues long after retirement.” She presented various examples of people who had learned computing and other new skills in their seventies or eighties, and argued while there may be some genuine experiences of memory problems, the association of mental decline with old age is socially constructed, saying;

“It’s self-fulfilling this thing, if we’re told that we’re going to lose our memories as we get older then we tend if we make little mistakes to think “Oh my god that’s a sign of ageing...”

She goes on to state that while “there is an expectation that older people degenerate, because the physical degenerates doesn’t mean that the mental degenerates at the same rate, if at all.” However, this comment invokes images of the ‘mask of ageing’ (Featherstone and Hepworth 1991), contrasting continuing mental abilities with physical degeneration in old age. This division between mind and body was evident in descriptions of older people who were mentally active and able to use computers, while experiencing declining physical health and mobility. It also emerged in relation to the discourse of ‘positive’ or ‘successful’ ageing, which emphasises personal responsibility and the importance of ‘keeping active’ (Katz 2000, 2001, Laliberte-Rudman 2006). Interview discussions drew on this discourse in contradictory ways; on the one hand, several participants described computer use as a way of keeping ‘mentally active’ and keeping ‘the grey matter going’. On the other, the use of the Internet for activities such as shopping was seen as creating laziness and physical inactivity, and a danger of getting stuck indoors, as described by Andrew;



'...if you need to go to the bank, to walk into town only takes fifteen minutes, and at least walking there and back you've done a mile and a half brisk walking, so it's doing you good as well [...] Cos I guess it is very easy if you are that way inclined to [...] just get stuck behind your computer, or to just do everything from home on your computer.'

This reflects the division between body and mind found in depictions of computer culture (Lupton 1995, White 2006), in which the body seen as being neglected through too much time spent online. However, a number of participants felt that these facilities were useful for older people who were not able to get out, and would be a useful asset when they did become physically immobile, again linking technology use to a narrative of decline. This future possibility was discussed by Audrey and Fred saying;

Audrey: "I've set up a Tesco one [account], but we don't, we haven't used it. I suppose we shall do eventually but... "

Fred: "Eventually, but at the moment we're capable of..."

Audrey: "Of getting to the supermarket, so we don't have that."

This illustrates how the discourse of decline can shape perceptions of the future, as well accounts of the past. The influence of the narrative of decline in creating fear and negative expectations for the future has been noted in studies of young people (Phoenix et al 2007). Retirees in this study also anticipated future ill-health problems and decline, for instance Emma stated; "we're lucky we're healthy [...] If either of use got seriously ill, or had mobility problems or something like that...I think these things as you get older, they do start to impinge more." These fears often arose in relation to computing as Lesley discusses;

"God help me if he pops his clogs because that is it we are going back to proper banking [...] That is the downside of Internet banking if only half of a couple only understand a computer and I face that, I know that if I don't get to grips with what is on a computer and anything happens to my partner, anything happens to Ian, I am the equivalent of up a creek without a paddle and I think any couple faces that and the older you get you face more possibilities of illness, dementia and losing it completely..."

In the above comment Lesley discusses how the division in competency with Internet banking may be problematic in the event of her husband's death or future ill-health. This draws on the narrative of old age as decline, and as she said getting older involves "more possibilities of illness, dementia and losing it completely." Other participants linked concerns about security in online transactions to mental decline, for instance Enid stated that "when we go really ga ga we'll pass the affairs over to our son, when we can't cope." Hilda similarly expressed concerns about a decline in memory compromising the security of online banking saying; "You get a bit more, a bit more nervous about things going wrong when you get older don't you? [...] it's partly because your memory starts playing tricks with you!"

Lesley's comment also reflects the association of old age with death, in contrast to the denial of death in discourses of successful ageing (Laliberte-Rudman 2006). However, mortality is also a reality that highlights limitations to purely social constructionist accounts of embodiment and the ageing body (Twigg 2004). The issue of mortality also arose among similar couples like John and Betty where only one person was computer literate, and their partner would not be able to access the bank account if they died. It also arose in relation to online communications, for example Bill and Jane used the computer for contacting members of the Unison Retired Members Association and described how when members died they "don't let you know [...] and you're sending stuff out every month." Another participant, Audrey, expressed concern about what would happen her online genealogy research after she died, and hoped one of her grandchildren would carry it on. As argued by Shilling (2005), online experiences are always situated within and return to the physical, with mortality representing the ultimate limitation to attempts to challenge the constraints of the body through cybertechnologies.

### **Summary**

In addressing the relation of computer and Internet use to various aspects of embodiment in later life, this chapter has addressed a previously a neglected area (see also Buse forthcoming). It therefore has implications for wider sociological literatures on ageing, embodiment and technology use, as well more specific implications for understanding the experiences of older Internet users. This chapter has adopted a 'multi-faceted' approach to embodiment (Laz 2003, Twigg 2004, Shilling 2003, 2005) exploring the relation of computer use to lived experiences and discursive constructions of the ageing body.

However, perhaps the most important and original finding in this chapter, is that computing can be understood as an embodied practice or 'body technique'. Like other 'body techniques', we have seen how computing skills can only be acquired practically through repetition and 'hands on' experience, although they later become automatic or unconscious once a level of embodied competency is reached (Crossley 2007, Wacquant 2004). This has important practical implications for policy makers seeking to engage older age groups with computer technologies. While access to training courses and classes has sometimes been seen as the solution to getting older people online (Selwyn 2004), this study illustrates how it is only by having a chance to practice these skills on a regular basis that they are acquired. This may explain why older people both in my research and in previous studies have often found training classes and guidance manuals unhelpful (Dickinson and Hill 2007, Richardson et al 2005, Saunders 2004). It also supports experimental studies discussed in chapter two, which found that 'practical hands' methods of training are most effective for teaching older age groups computing skills (see Czaja and Lee 2008 for review). These methods have also been found most effective among younger age groups though, reflecting how an understanding of the 'practical' and 'embodied' nature of learning computing is relevant for all age groups.

In terms of our understanding of the experiences of older computer and Internet users, this chapter has also stressed the importance of situating embodied practices of computer use in later life, within the embodied skills and technological competencies acquired over the life-course. This has implications for those seeking to design computer technologies better suited to older age groups. As we saw in chapter two, researchers in this area have often presented difficulties using computer interfaces such as the mouse as being due to deterioration in physiological and cognitive abilities in later life (Czaja and Lee 2008). Although participants in my research did discuss physical decline and bodily constraints, problems using interfaces like the mouse were mainly attributed to the fact this hardware did not map easily onto earlier embodied technological competencies, and was difficult to adapt to. While keyboard skills had often been learned from using typewriters or word processors, using a mouse demanded new embodied knowledge and skills. Previous experimental research has found that problems using the mouse are generally overcome after time spent practicing (Alm et al 2002), as was also the case for participants in my research. However, the findings in this chapter also suggest that computer systems and appliances which map more easily onto familiar technological practices may be most

useable and desirable for older computer learners, as suggested by Dickinson and Hill (2008).

The findings in this chapter also support the arguments made in chapter six, that the generation gap between 'young' and 'old' reflects the different biographical experiences of age cohorts, rather than being simply a product of deterioration in capacities with age. It again illustrates the importance of 'formative experiences', as technologies experienced early on in the life-course were more easily adopted, and used 'naturally', in contrast to struggles adapting to computer technologies in later life. However, this chapter also extends such as arguments by illustrating the 'embodied' nature of 'technobiographies', and of differences between 'media generations'. While sociologists have discussed how the different experiences of generations may produce embodied differences in their posture, dress, and mannerisms, this chapter illustrates how the different *technological* experiences of generations may result in differences in embodied competencies. This has broader implications for sociologists studying technology use and embodiment, and the relation between them. Although the theoretical implications of societal and technological change for embodiment have been discussed (e.g. Hayles 1999, Shilling 2003, Shilling and Mellor 2007), there has been a lack of empirical research exploring such issues. This chapter illustrates the lived experiences of these broader changes, and illuminates how specific changes in ICTs relate to changes in the embodied practices and competencies of individuals and generations.

Taking a biographical approach is also relevant to understandings of ageing body, as while theorists have argued for an multi-faceted approach to embodiment in later life, the biographical dimension of embodied experiences is has generally been neglected. Understanding experiences of older bodies within the context of biographies also helps to move beyond the focus on decline and disability (Twigg 2004), and situate experiences of embodiment in later life within competencies and experiences acquired over a life-time. While this chapter and the previous one have explored the biographical experiences of technology throughout the life-course, the next chapter will focus on the more recent transition to retirement, and the negotiation of temporal and spatial boundaries between work and leisure in relation to this transition. However, in exploring more recent experiences of technology use, it will also illustrate the relevance of earlier biographical and cohort experiences to understanding practices and values in later life.

## **Chapter eight**

### **‘When you retire, everything becomes enjoyment’: ICT use and the work/leisure boundary in retirement**

#### **Introduction**

The previous chapters have examined the biographies of participants, and the location of technology use in later life within the context of change throughout the life-course. This chapter will now focus on the transition to retirement and negotiation of the work/leisure boundary, within the context of gendered biographies of home and work. Retirement is a time that highlights boundaries, marking the transition from the public sphere and the world of work, to a period of leisure (Roche, 1989). However, the depiction of retirement as a period of free time or leisure time has since been critiqued, particularly in relation to feminist perspectives, which will subsequently be explored in more detail. This chapter will also examine the situation of technology use within divisions of work/leisure/retirement, and assess whether computer and Internet use in retirement is experienced as leisure. It will further explore how meanings of technologies as work or leisure shape their temporal and spatial location in the home. While it has been argued that ICTs blur traditional work/leisure boundaries, in this chapter it will be argued that such boundaries are also reconstructed by participants. This chapter also illustrates how practices and meanings of technologies as work or leisure during retirement, reflect meanings and values established earlier on in the life-course.

While there has been considerable research on children’s use of computers and the Internet for leisure (Livingstone, 2002, Holloway and Valentine, 2003), there is a relative lack of research on the leisure use of these technologies among adults (Green, 2001). Studies of adults and computer based leisure are increasing though, and have examined areas such as participation in online gaming (Royse et al 2007), gender differences in computer based leisure (Martinson et al 2002) and the relationship between ICTs and offline travel and leisure (Mohktarian et al 2006). Nevertheless, there is still a failure to examine such leisure among older adults. It is relevant to examine computer based leisure among older age groups though, because research suggests important age differences in the meanings of technologies as leisure. Although not examining retirees, studies of younger families illustrate the relevance of age, and found that while parents generally viewed time as a resource to be well spent and the use of ICTs for leisure as wasted time, children

demonstrated a 'present-time orientation' toward enjoyment (Holloway and Valentine, 2003; Livingstone, 2002). Also as discussed in chapter two, survey research found significant differences between retirees and younger age groups in both the likelihood of using the Internet for leisure, and the particular leisure activities it is used for (Fox, 2004, Selwyn et al 2003). However, this data provides no information on the subjective meanings of these activities, or whether they are experienced as leisure.

After reviewing the literature, I have found only one study which has examined whether older people subjectively define computing activities as leisure. Using questionnaire based research, Barnett et al (2000) compared older people's use of the Internet and computers with other sources of information, leisure, and communication. Out of the 38 respondents who owned a computer, 35 said they used it for information, 33 for leisure or entertainment, and 26 for keeping in touch. This suggests quite a high leisure usage in contrast to other survey data, although these differences may reflect the location of this research in Australia. The study found that older men and women were equally likely to use the computer for leisure, although men were slightly more likely to use the Internet for this purpose. However, it is difficult to ascertain the reasons for these gender differences, as the study did not explore meanings of leisure, or examine why certain participants defined these technologies as leisure while others did not. Qualitative research is needed to obtain more detailed information on the meanings of computer based leisure activities (Green and Adam, 1998, Green 2001) among older age groups. While some qualitative research on older Internet users has noted connections with offline hobbies and leisure activities (e.g. Selwyn 2004), to my knowledge there have been no qualitative studies which focus on leisure in any detail, or explore subjective meanings of technologies as work or leisure.

### **Feminist leisure research**

In seeking to explore these meanings, and examine gender differences, this chapter draws on the insights from different feminist perspectives on leisure. Research in this area has been briefly discussed in chapters two and three, but will now be expanded on in more detail. As we saw in these chapters, the division of work/leisure times and spaces emerged during industrialisation, and leisure time became defined in opposition to work, as time outside of paid employment. However, materialist feminist perspectives in the 1980's contested the traditional work/leisure dichotomy (Aitichson 2003), as it has little meaning

for women outside of the work force, who may find it more difficult to separate periods of work and leisure (Deem, 1988; Green et al 1990). Furthermore they argued that the definition of 'work' solely as paid labour ignores the unpaid domestic work undertaken by many women, which as we saw in chapter three, complicates definitions of 'home' as a place of leisure. Due to this complexity, rather than imposing definitions based on activities themselves, researchers like Green et al (1990) have argued that we should instead explore the subjective meanings and context of leisure. The emphasis on subjectivity is particularly useful when examining the computerised leisure of retirees, whose times similarly cannot be defined by traditional work/leisure boundaries (Roche 1989, Adam 1995). In addition, computer and Internet technologies are argued to blur temporal and spatial boundaries between work/leisure (Mohktarian et al 2006), which again necessitates more complex and subjective definitions. The issue of context highlighted by materialist feminist approaches is also an important part of this thesis (Green 2001), and as argued in chapters two and three, perceptions of and relationships in different spaces may shape, and in turn be shaped, by technology use (Holloway and Valentine 2003). While the home has been constructed as a space of leisure, in chapter two we saw how different spaces within the home have different meanings in terms of work and leisure, public and private. The placement of computer technologies may be continuous with perceptions of these spaces or may disrupt them (Green 2001), as illustrated by the use of computers for home-working (Dart 2006, Ward, 2006).

However, as discussed in chapter two in relation to broader feminist theory, materialist feminist approaches to leisure have been critiqued for generalising about the leisure experiences of 'women', and viewing women's leisure as overly determined by structure (Wearing 1998). Post-structuralist feminist perspectives have highlighted the importance of diversity and differences between women (Green 1998), and the intersection of gender with different dimensions of power, including age (Henderson et al 2002). As argued in chapter two, I therefore aim to attend to differences between women based on factors such as class and age, and move away from an emphasis on purely structural factors. This also involves exploring the way in which work/leisure boundaries are contested, negotiated and reinforced in everyday interactions and discussions. However, awareness of gendered inequalities in leisure will be retained, in terms of structural differences in the economic sphere, and domestic constraints on leisure. In doing so, this analysis is in keeping with feminist approaches to leisure that have combined attention to diversity, agency, and

culture, with an awareness of continuing structural constraints (e.g. Aitchison 2003, Green 1998).

A growing number of studies examining ICT use have begun to incorporate insights from feminist perspectives on leisure. For instance, Martinson et al (2002) examined whether women defined any aspects of computer and Internet use as leisure, and also the context in which this leisure took place. They found that women generally viewed computers and the Internet as 'tools' rather than leisure technologies, while men have been more likely to view these technologies in terms of play (Singh, 2001). Nevertheless, a feminist approach is yet to be applied to understanding the computerised leisure of older men and women. In the light of these gaps in research, this chapter explores the role of the Internet and computers in experiences of work and leisure in retirement. Guided by insights from different feminist perspectives, it will now explore the subjective meanings of work, leisure and retirement.

### **Examining the boundaries of work/leisure/retirement**

Experiences of the transition to retirement varied between participants in relation to gender and cohort. For some participants, retirement was seen as more of a fixed stage and generally took place at sixty or sixty five. These participants were generally among the older cohorts, for instance William and Hilda and Enid and Albert were in their eighties and were the oldest couples in the study, and Maggie was in her seventies. When interviewing these participants, the question of why they decided to retire was treated with some surprise, and they replied they had to because they were 'getting old' and had 'reached retirement age'. Among these participants, retirement was seen simply as a 'given' when you get to a certain age, in keeping with older definitions (Blaikie 1999). In contrast, there was greater variety in the age and reasons for retirement among younger participants, many of whom had retired earlier due to health reasons, redundancy, or to pursue other interests. The difference among age cohorts could be a reflection of broader changes, involving increasing diversity in the age and pathways to retirement (Blaikie 1999). However, it could simply be that age and distance from the retirement transition effects perceptions of it.

The transition to retirement also varied according to gender, and as has been found in previous feminist research (e.g. Skucha and Bernard 2000), the boundary between work and retirement was less clear for many women in this study. As discussed in chapter six,



although none of the women in this sample had been full-time housewives on a permanent basis, a number of them had taken time out to look after children or had only ever worked part-time. This situation made it difficult to pinpoint exactly when they had retired, for instance, when asked about the date of retirement Enid replied; 'When did I leave work? It's difficult to say, I've done contract jobs [...] it's been hit and miss, I haven't had a proper career really have I?' Similarly, Barbara had done part-time work on and off both before and after retirement, and said 'I never really felt I'd retired'. The lack of a clear division between retirement and work was also shaped by the continuing domestic role experienced by women in the sample (Skucha and Bernard 2000, Mason, 1988). As Enid pointed out 'a housewives work is never done', and in most couples, the woman carried out the majority of domestic work. Some were less willing to admit this during interviews, which contrasted with the division of labour demonstrated in their time-use diaries.

Men in the study on the other hand, seemed to find it easier to pinpoint a specific date for retirement. However, the transition was complicated for both male and female participants, by more staggered processes of leaving work. This reflects broader patterns in which the stages of education/work/retirement are becoming less distinct (Blaikie 1999), with greater diversity in the ages and pathways to retirement, and increasing continuation of work and education in later life. For both male and female participants, voluntary work and studying were experienced as work, although they struggled with the dichotomy of paid work/leisure in negotiating this definition. This created a tension in many accounts between the view that everything after retirement was a matter of choice therefore leisure, and the experience of certain activities beyond retirement as work. The following discussion illustrates these tensions;

Barbara: '...I think perhaps when you 'retire' in inverted commas, everything becomes enjoyment [...] cos you only tend to do things that you enjoy. You have more choice, the thing about when you retire, I think we're lucky that we have choice, and so we choose to do things, so I suppose you could say they're more enjoyment aren't they, rather than work? [...] Although one hopes, I think we both enjoyed our work, so I suppose, but we don't have to do things so I suppose...are we having to do things on the computer?'

George: 'Well if you get involved in some voluntary activity, having said "I'm going to do this, be on that committee" you have to do it. So sometimes it feels like

a chore, you don't want to go to a committee meeting tonight, but then if you're realistic doing that meets a need, you're contributing to the world, you're helping somebody, you're doing something useful [...] You can't have the feeling of contributing without that, so in a way it's like work, but unpaid work.'

This account illustrates shifting definitions of work and leisure, as Barbara initially states that everything after retirement is a matter of choice and therefore leisure, before considering the possibility of paid work as enjoyment. As found in early feminist research on leisure (Green et al 1990), several respondents described their previous paid work as enjoyable. Experiences of paid work as enjoyable blur boundaries of work/leisure/retirement, as does the experience of unpaid activities beyond retirement as work. In the above discussion, George points out the 'work-like' qualities of voluntary work, suggesting the importance of going beyond definitions of work as paid employment. While freely chosen and unpaid, he felt these activities still represented a 'work like' fixed time commitment.

The different experiences of the boundaries between work/retirement among men and women in the sample may also reflect the greater investment in the domestic sphere among women, compared with the high investment in the sphere of paid work for men (Solomon and Szwabo, 1994 cited in Barnett et al 2000, Thompson et al 1991). For women who have had a high level of identification with the domestic sphere rather than paid work, their role in retirement may be more continuous with their previous activities (Thompson et al 1991). Barbara described how her and her husband had 'always had traditional roles', and she supposed 'those have carried on.' Similarly, despite the teaching and writing work Enid carried out between taking time out to care for her children, she identified herself as a 'housewife'. These different identities may also help explain why women such as Barbara and Hilda invoked a more traditional definition of everything after retirement as leisure, while their husbands were keen to point out the 'work-like' nature of their voluntary activities. Other studies have found that due to their investment in work based identities, men are more likely to take on 'work-like' organisational roles after retirement (Solomon and Szwabo, 1994 cited in Barnett et al 2000 Haddon and Silverstone 1996). Although both men and women in the sample had taken on voluntary work roles, there appears to be a stronger emphasis on these activities among men.

## **Meanings of computing as work or leisure**

We have explored the divisions of work/leisure/retirement, and we will now examine meanings of work and leisure, and whether computer and Internet activities can be seen as leisure. As discussed in chapter seven the most popular uses of the Internet in this study were email and information searches, while the main use of the computer was for word processing. A number of participants also used the Internet to research offline hobbies, travel, or for holiday booking. None of them downloaded music and as we saw in chapter six, they did not generally use chat-rooms or social networking sites, although a number of them had used 'Friends Reunited'. With the exception of this website, Arthur was the only participant who had used chat-rooms, although he only used Spanish chat-rooms in relation to learning Spanish. The only participant who had used social networking sites was Dot, who had gone onto Face-book to communicate with her grandchildren. Several participants used computers for card games such as Solitaire, or used the Internet and computer as part of genealogy research, which again reflects quantitative survey findings (Fox 2004). Participation in these activities was quite evenly distributed between men and women, for instance, three men and three women used the Internet for genealogy, and four men and five women used the computer for games. However, as argued above, it is important to attend to subjective meanings and experiences, rather than making assumptions based on activities.

Turning to these subjective meanings, interviewees generally described leisure as constituting activities that were enjoyable, self-directed, and freely chosen. However, as has been also found in previous research (Green et al 1990), several women found 'leisure' more difficult to define than men. Although men and women similarly defined leisure in terms of enjoyment or choice, Hilda, Enid, and Emma found the term 'leisure' hard to apply to their own activities. Maggie also felt that many activities she enjoyed such as helping people or making jam would not normally be seen as leisure. However, definitions of work and leisure were complex among both male and female participants, varying and shifting throughout interviews. Computer and Internet activities were particularly difficult to categorise, in contrast to television viewing, which was consistently described as leisure. For several respondents, their lack of participation in activities such computer games was seen as demonstrating that they don't use computers for leisure. For instance, when asked about whether they used the computer for leisure, Jenny and Andrew's immediate response was to point out that they 'don't use it for computer games'. Similarly, other participants

were quick to point out that they do not use the computer for chat-rooms, or just 'browsing for the sake of it'. This again reflects the finding in quantitative studies that those over 60 were less likely to use the computer to 'browse for fun' (Fox 2004), or for 'no particular reason' (Selwyn 2004).

Even among those retirees who did participate in such activities, they were not necessarily categorised as leisure. The five participants who played computer games frequently described them as enjoyable or relaxing. However, participants like Fred and Bill were reluctant to define them as leisure, with Fred seeing them more as a way of 'passing time'. Similarly, use of the Internet for genealogy research was not straightforwardly depicted as leisure. For Audrey, it was very much enjoyable, while for Andrew and Emma the picture was more complex. Emma was hesitant to use the term 'enjoyable' to describe any of her computer-based activities, including genealogy research. While Andrew acknowledged genealogy itself as enjoyable, he separated this enjoyment from the use of the Internet or computer, saying "...it's the genealogy that's the interest not the computer, it's just a tool to help me get where I want away from the computer that's all." This separation emerged in other discussions, for instance, while describing emailing friends or family as enjoyable, George stated "it's not particularly the computer that's enjoyable, it's talking to this person." Maggie on the other hand felt communicating with family online was 'particularly leisure'. These findings challenge the assumption that if using the computer or Internet for activities such as researching a hobby, older people are necessarily using these technologies for leisure. This discontinuity between activities and meanings demonstrates the importance of examining subjective meanings of leisure and technologies.

Whether participants described the use of computers and the Internet as leisure often reflected their general attitudes toward technology, as illustrated by the typology in chapter six. On the one hand, 'enthusiasts' like Audrey, Brenda, and Joan who expressed positive attitudes toward technological change, also described the use of computer and Internet technologies as leisure and enjoyment. On the other-hand, 'sceptics' like Emma, William, Barbara, George, Jenny and Andrew who expressed negative attitudes toward technological change, saw the use of computers and the Internet as a 'tool' rather than leisure. Like the sceptics in Horning et al's typology (1999), they described the use of computer technologies as a waste of time, and sought to restrict their use, or keep it for specific purposes. As Barbara said; "we don't use it for entertainment [...] or anything in that way, 'oh I've got an idle moment I'll go on the computer' we don't think like that..."

However, it must be noted that again, some participants shifted between different positions regarding whether the use of computers and the Internet constituted leisure. For instance, when interviewed together Deidre and Arthur both agreed that computer use was an enjoyable leisure activity. However, in his follow up interview Arthur later said “I don’t know about enjoyment, I just sort of use it, it is a tool rather than enjoyment itself”, although his wife Deidre maintained that computing activities were enjoyable. For others the meanings of computer use were very much dependent on the activity, for instance, while Carol generally saw computing as leisure and enjoyed seeking information, writing reports was felt to be more of a chore. This reflects that while suggesting types of users, definitions of work and leisure are fluid and shifting.

Divisions in attitudes toward computer technologies may also reflect class differences, as the attitudes of the sceptics reflect similar discourses to those around earlier media such as television, which have been found to be more prevalent among middle class households (Buckingham 1993). In such discourses the use of these technologies is constructed as passive, lacking cultural value, and a waste of time, and is therefore restricted. When examining patterns in attitudes toward computing, there did appear to be a higher proportion of working class participants who embraced computing as leisure, and out of the six working class computer users in the study, only one did not see computing as leisure. It may also be significant to note that the only participant to use ‘Facebook’ was working class, and although no other participant used these sites, two other working class women- Brenda and Joan- seemed more open to the possibility of using them. However, middle class participants like Deidre, Audrey, Maggie and Richard also embraced the use of computers as leisure, so the relationship is not entirely clear cut.

In contrast to previous research, the meanings of computing as leisure were not clearly gendered. In previous studies, women were more likely to conceptualise computers and the Internet as ‘tools’ rather than enjoyment (Singh 2001). However, descriptions of the Internet as a ‘useful tool’ to facilitate activities or a ‘means to an end’ occurred among both men and women in this sample. This may reflect the more complex patterns of confidence and attitudes toward technologies found in this study, which will be discussed in more detail in chapter nine. The frequent construction of computers and the Internet as a tool rather than leisure may also reflect the intersection of gender with cohort or age related patterns. The coding of computer technologies in terms of youth, and the comparative lack

of biographical experience with these technologies among older generations (Richardson et al 2005), may result in a lack confidence and enthusiasm with ICTs among both older men and women. In a typology of Internet users based on survey research, 50-64 year olds were most likely to belong to the 'utilitarian' category, viewing the Internet as a useful 'functional' tool, and being less enthusiastic about its possibilities (Howard et al 2002). Similarly, Selwyn (2004) noted a general ambiguity toward computers among older people, similar to that found among women (Martinson et al 2002). This is in contrast to studies of young people, who have been found to prefer using these technologies for leisure purposes (Holloway and Valentine 2003).

As well as a lack of experience and confidence with computer technologies, such generational divisions reflect patterns established early on, and the fact that while many of today's young people first came across computers in a home or leisure setting, as we saw in chapter six, many participants in my research had initial experiences with computing in a work context. For instance, Emma had used computers in her previous occupation as a research assistant, and had always 'associated the computer with work'. Similarly, retired lecturer Jack felt using the Internet for banking or travel booking was work because it "reminds me of working in an office even though I'm doing it for myself." As well as being used in relation to hobbies and leisure activities, computers were also used to facilitate 'work like' activities beyond retirement, such as studying, voluntary work activities, or keeping accounts. This often provided continuity with previous paid work roles, for instance, William had used computers as a chartered accountant, and continued to use them for voluntary accounting work. In contrast to previous expectations (Percival 2002), several women also used computers for voluntary work activities, for instance, Maggie used computers to carry out accounting work for various charities, while Enid used the computer to write and submit articles to the local bulletin. The use of computers for voluntary work was evenly distributed between men and women, which may reflect the fairly even numbers of men and women who had used computers in a work context.

Among those few participants who had a computer at home when their children were younger, intergenerational differences in meanings of computing as work or leisure also emerged in this context. For instance, while Emma used her computer to work from home as a researcher, she described how her children played games on it. Similarly, Lesley described how her 'children would play games' on the computer while she 'would do

accounts and minutes on it.' Therefore practices and meanings in retirement often reflected continuity with these earlier biographical experiences. However, it must be noted that some participants like Audrey who had used computers in work still experienced them as leisure in retirement, although she always enjoyed using computers even in a work context. Furthermore, for those who had not used computers in work, they could facilitate the take up of new work activities and roles in retirement. For example, Bill described how computers were part of a 'completely different' role for him, doing voluntary administrative or 'office work' in contrast to his previous 'practical' work as a joiner. Nevertheless, biographical experiences are clearly important to meanings and practices of work and leisure in retirement. We will now explore how these biographical experiences, and meanings of ICTs as work or leisure, relate to the organisation of temporal and spatial boundaries.

### **Technology use, work activities, and boundary work in retirement**

The meanings of technologies in relation to work and leisure shaped their temporal and spatial location in the home, and the construction (or de-construction) of work/leisure boundaries in this space (Frolich et al 2003). Computer technologies could be argued to facilitate the blurring of divisions between work/retirement, work/home and work/leisure, through bringing the meanings of work into domestic spaces and times (Ward, 2006). The location of the computer was often central to the creation of a 'study' or 'work room' at home (Percival 2000). Furthermore, the demands of 'work-like' activities structured many participants' time on the computer, bringing organisational temporalities and the 'economic times' of deadlines and fixed schedules into the home (Kaufman-Scarborough 2006). For participants like Jenny, who used the computer for part-time paid work outside the home, this blurred the segregation of these spheres. She described how she used the computer "for work here and work in the office, so it gets a bit mixed up" and stated that; "You can end doing a bit of work at home, and a bit of [...] leisure at work, that can happen through Internet."

Such transgression of traditional boundaries through ICT use is generally celebrated, however as found in studies of home workers, a lack of boundaries can be experienced as problematic (Surman 2002). Several participants missed having a clear division between work and leisure, as this lead to increased demands on their time. This loss of boundaries was described by George, saying; "There is a boundary when you stop, on most people you

stop work when you leave work [...] basically it's a chunk of time, we don't have that now." As a result of lacking this boundary, both male and female participants described the increased demands of voluntary work activities and informal requests from people, in contrast to the view of retirement as period of leisure. In an effort to restrict these demands, Carol described how she would label her voluntary activities as work, even though she saw these more in terms of leisure;

"There's a contradiction there, because people say 'Can you do such and such on Thursday morning and I say 'I can't, I'm going to work'. Because any other explanation is too long, and if I say 'I'm going to do my charity work' it sounds so poncey, so I say 'I'm going to work' so it's shorthand, which is a bit of a contradiction."

This suggests that due to this lack of clear boundaries in retirement, participants reconstruct work/leisure divisions when organising their time and activities. This includes the organisation of their technology use, and some participants deliberately limited work activities on the computer to traditional working hours. For instance, Maggie kept accounting to the day-time so she could relax in the evening, and it would not be "going round in her head at night." Similarly, while playing computer games or checking emails at night, Bill restricted voluntary work activities to the day-time. For others like Emma or William, after using the computer in the day for work purposes, they didn't feel like using it for 'play'. This reconstruction of boundaries is also reflected in the spatial location of ICTs, and while the location of computers in a separate 'work-space' could be seen as transgressing boundaries, it could also be seen as a way of separating work from leisure and other home activities. In contrast, while the computer was often kept in an office space, television viewing was consistently seen as leisure, and all participants kept their main television in the living room, in keeping with the meaning of this space (Frohlich et al 2003). Such boundary work has been described in studies of home workers, who allocated separate times and spaces for work and leisure activities, in order to reclaim some time for themselves (Ward 2006, Surman 2002). However, in trying to separate their activities in this way, this reinforces dichotomies between work/leisure, home/work.

In contrast to the restriction of work activities on the computer to the day-time, use of leisure technologies such as the television was restricted to the evening. Although available to watch television in the daytime, most participants said they would feel wrong about



doing so, as time in the day should be spent doing 'something useful'. Not wanting to watch television during the day was also tied to ideas of 'wasted time', as stated by Andrew;

"Well I wouldn't want to get into day time television, that's for sure. That is a waste of time. If I'm sitting here and it's pouring with rain outside and I've nothing to do, I'd far sooner read something or do something else, but I'd never bother putting the TV on."

These comments again draw on the 'anti-television discourse' (Buckingham, 1993), in describing television viewing as lazy and passive, which may suggest class factors. However, this restriction of television viewing to the evening seemed to occur across most participants in the study, regardless of class background.

The depiction of day-time television as wasted time may also reflect cohort or generational factors, and it is argued that older generations are more concerned with not wasting time, due to their strong 'work ethic' and dislike for over indulgence (Richardson et al 2005). Older people in Haddon and Silverstone's (1996) research similarly restricted television viewing due to ideas of 'wasted time', in contrast to the more 'present time' orientation of younger generations (Livingstone 2002). However, Tsuji (2005) argues that the 'busy ethic' adopted by many retirees in seeking to spend their time wisely, can be distinguished from the 'work ethic', which emphasises efficiency and speed rather than quality. However, participants like Richard clearly linked his need to keep busy to a work ethic established earlier in life. As he said "because I had me own business for many years we've got a work ethic, and we would be bored if we didn't have something like this to do", while his partner Maggie said "I was always busy at work, and I've been busy not at work by doing voluntary things." These divisions illustrate how the meanings of economic time continue to shape the times of those outside employment (Adam 1995:94).

Other participants linked their restriction of television viewing to values established at an earlier stage. For instance George and Barbara described not wanting to watch television during the day as being something generational or 'old fashioned' connected to their upbringing, and Ian and Lesley similarly located these values within their earlier experiences, as illustrated by the following discussion;

Lesley: "...the computer requires you to sit in front of it, and I think that we are of the age group...."

Ian: "...daytime is for daytime activities, that is drilled into us a bit."

Lesley: "And let's face it, daytime television used to be absolute rubbish and when we were growing up there wasn't much daytime television..."

Ian: "Wasn't any at all, BBC shut down."

Lesley: "...and would only come back on at 4.00, there was no daytime television..."

This again illustrates how values and patterns established in the formative years shape later experiences, and suggests generational differences in constructions of time, leisure, and technology.

While discussing attempts to reconstruct work/leisure boundaries in retirement, as we saw earlier, these boundaries have always been more blurred for women in the sample, due to domestic and caring activities. Although both men and women were affected by the loss of the boundary provided by paid work, even while working outside the home women described how their time never neatly divided into work/leisure, as Jane's discussion illustrates;

'...you just used to go to work, come home and do a meal, fit your housework in when you could, you know, but when you're retired people say 'Would you like to do so and so?' and then they mention it to somebody else and they say 'Would you like to help us?' and by the time you've finished you're working when you've retired and not getting paid for it...'

As she said, whilst in paid employment she was still 'fitting her housework in' and 'doing a meal' when she got home. This was discussed by other women such as Brenda, who described how "when I was at work it was fly around before you went to work and do the dusting."

This gendered blurring of boundaries continued into retirement, and throughout both interviews and time-use diaries it emerged that women in the study were far more likely to multi-task technology use with other activities. A number of women in the sample combined television viewing or radio listening with housework, sewing, or voluntary work tasks. Only two men combined technology use with housework, and one of these men was single. This reflects previous research, which describes women's greater participation in 'background leisure' at the same time as household tasks, due to the demands of domestic life (Green and Adam 1998). Such capabilities were recognised as a gendered practice, and several women stated that 'men can't multitask.' Participants sometimes located these practices within earlier gender divisions, and the responsibility of caring for children, as Hilda said;

“...you have to be terribly aware, and you have to have your mind on several things at once [...] if you're at home looking after small children [...] Whereas if you're in an office job or something like that, I know you get interruptions but you're sitting down and doing a job, and I think that tells. I think most women are more capable of thinking about two or three things at once than the men folk.”

However, these patterns were also described as emerging at an even earlier stage, during their formative years. For instance, while Deidre described the ability to multitask as something which developed whilst 'bringing up kids' it was something she had 'always done', and as a child she would listen to the radio while doing her homework. Similarly, Pearl described how when she was younger “we didn't have a telly but I used to do all my homework with music on and my dad used to go mad!” Therefore gender divisions in multi-tasking may not only reflect the domestic constraints experienced while caring for a family as many researchers have argued (e.g. Green and Adam 1998), but also patterns established earlier in life-course. Perhaps these earlier experiences of multitasking reflect the internalisation of gendered norms or practices at early age, although further research would be needed to ascertain the reasons for this.

While a number of women combined television or radio listening with other household activities, the majority of participants did not multitask with computing, perhaps due its frequent location away from other activities in the home, which will be discussed in more detail in chapter nine. This may also reflect generational differences, as the Oxford Internet Survey found that retirees were less likely to multi-task when using the Internet than

younger age groups (Dutton and Helsper 2007). A number of participants described how they had to concentrate whilst on the computer, and 'do one thing at a time', reflecting the lesser degree of familiarity with the computer among older cohorts, in contrast to technologies like the television and particularly the radio, which were used during their formative years.

### **Summary**

This chapter has assessed how computer and Internet technologies fit into experiences of work, leisure and retirement, and whether these technologies are experienced as leisure. Participants frequently used computers and the Internet to facilitate offline leisure, and sometimes for computer based leisure activities such as games, genealogy, or browsing. However, while participating in these activities, retirees were often hesitant to define them as leisure, and the activities themselves were not always consistent with their expected meanings. This illustrates the importance of attending to subjective meanings, rather than defining 'leisure' simply based on activities (Green et al 1990). The hesitance to describe computer technologies as leisure is in contrast to studies of children and teenagers, who are more likely to embrace the use of these technologies for entertainment (Holloway and Valentine 2003, Livingstone 2002). The more ambivalent attitudes toward computer technologies found among older age groups (Selwyn 2004) may reflect lower levels of experience and confidence with these technologies. However, this study has found that for respondents who had experience of computing in work context, meanings in retirement reflect these earlier biographical experiences, and the continuing association of computers with work. Additionally, as argued in chapters five and six, meanings of computer and Internet use in retirement are not only shaped by more recent biographical experiences in a work context, but also values established earlier on in the life-course, and shared by members of the same cohort. The restriction of the use of entertainment technologies like the television reflects the strong work ethic among older generations and values they were 'brought up with', as well as temporal patterns established early on.

This again supports the argument made in chapters five and six; that age divisions in Internet use need to be understood in the context of biographical experiences shared by current older cohorts, rather than merely the social circumstances of later life. It also extends this argument beyond divisions in Internet use, to its relevance for understanding differences in perceptions and practices of use, which have been identified in survey data.

The lower use of these technologies for activities such as 'browsing for fun' among older age groups (Fox 2004), reflects their meanings as 'tools' or work technologies, which are located within earlier biographical experiences. The fact that retirees are less likely to multi-task computing with other activities also reflects these 'technobiographies', and the lesser degree of familiarity with computers, in contrast to the radio. It has been argued that if young people prefer using computers and the Internet as sources of entertainment, rather focusing on their value for improving future work prospects, this is how they should be marketed by those seeking to engage younger age groups (Holloway and Valentine 2003). However, with older age groups it seems that the opposite pattern is the case, and a focus on the functional value of these technologies as a tool, and their usefulness for voluntary work and organisational activities, may therefore be more relevant for engaging these cohorts. This chapter also illustrates the importance of focusing on practices which not only fit with older people's everyday lives, but their biographical experiences.

In this chapter I have also sought to bring together and extend current research on leisure, gender, technology use, and later life. In terms of gender, this chapter did not find clear differences between men and women in the sample in the meanings of technologies as leisure. However, there were gender differences in negotiation of the boundaries between work/leisure/retirement. Defining these boundaries was particularly difficult for retired women, for whom the division of paid work and leisure is complicated by domestic and caring labour in the home, which supports previous research on older women and leisure (Mason 1988, Skucha and Bernard 2000). This fluidity between work/leisure boundaries established at an earlier stage of the life-course continued into later life, and was reflected in the combination of technology use with other activities in the household. Again this multi-tasking reflected gender patterns shared by members of the same cohort, and experiences of carving out leisure while caring for a home and family earlier in the life-course. However, discussions also suggest that such gender patterns may be established during childhood, which is an interesting finding warranting further exploration. This suggests the relevance of a biographical approach to understanding lived experiences of gender, leisure and technology, both for older and younger age groups.

In this chapter, we have also seen how while computers and the Internet could challenge traditional boundaries between work/leisure, participants often reconstructed these boundaries in their organization of time and space around technologies. The restrictions placed on use of these technologies suggest efforts to create boundaries where the

separation of paid work/leisure no longer applies, reflecting research on home workers (Surman, 2002, Ward, 2006), and illustrating how such issues are relevant to other social groups outside of paid employment. This also supports arguments for more complex understandings of the 'effects' of new technologies on time and space, which will be discussed in more detail in chapter ten. While this chapter has explored temporal and spatial meanings around work and leisure, the next chapter will explore other spatial meanings and relations that shape technology use in the home during retirement.

## **Chapter nine**

### **‘It’s the computer that’s dictated what we’ve done upstairs’: Technology use, space and relations in the home**

#### **Introduction**

This chapter extends the analysis of spatial relations around technology use which began in chapter eight, and examines the context of the home in greater depth. While the previous chapter highlighted how concepts of work and leisure shaped the temporal and spatial location of technologies, this chapter explores other meanings which shape use of technologies in this space. However, it also illustrates how technologies may shape meanings of the home, as well as being shaped by them (Holloway and Valentine 2003). This chapter will additionally examine how the location of computers is negotiated within relationships in the home, including those around ownership, competency, and competition over use of spaces and technologies. It explores whether such relations are gendered, and illustrates complex patterns in technological competency, alongside more traditional gender divisions in constructions of technologies and spaces. In examining these issues biographically, it will be argued that the home is not static, but changes over time in relation life-course and family transitions, as well as broader changes housing design. While situated within changing meanings of the home in later life though, those technologies which participants had used at an early age and were most familiar with, continued to be the most highly integrated or ‘domesticated’ into this sphere. Therefore, as argued in earlier chapters, findings again indicate the relevance of both life-stage and generational patterns in shaping technology use in the home.

In examining these issues, this chapter draws on research from the domestication framework, discussed in chapters one and two. To recap briefly, this perspective has been applied to understanding the integration of technologies into the home, and the process of making alien and frightening objects part of domestic space (Ward 2006). It involves four key stages; 1. Appropriation (purchase and ownership) 2. Objectification (spatial location and display), 3. Incorporation (integration into temporal routines), 4. Conversion (discussion with others outside the home). It is now recognised that time and space are interconnected, and therefore it is difficult to separate them in analysing technology use (Holloway and Valentine 2003). However, while recognising these interconnections, for

the purpose of organisation, this chapter focuses primarily on the first two stages and the integration and spatial location of technologies in the home. Temporal issues will be explored in more detail in the following chapter, while the final chapter examines connections beyond the home.

The process of 'making room for the Internet' in the home is something which still in ongoing (Bakardjieva 2005:138), and the degree to which it has become domesticated is subject to debate. In particular, the extent to which the Internet and computers have found a place in the homes retirees is open to question. As argued in chapters one and two, research on domestic Internet use has generally focused on younger families or households, and there has been a lack of research on the domestication and spatial location of these technologies among older age groups. While Lim and Tan's (2004) research in Singapore examined older people's Internet use within the home and family context, it did not examine time-space relations in these households. As discussed in chapter two, the examples of retired couples in Brabazon's (2008a) and Bakarjieva's (2005) research suggest that the traditional gender divisions around ownership of space and technologies may be more prominent in retired households. However, these studies only incorporate a few retired couples in total, and further research is needed to assess such relations on a broader scale. In the light of these gaps in research, this chapter will now examine how retirees are finding a place for the Internet in their homes, both in terms of its physical location through the computer, and the degree to which it is felt to be part of domestic space. It will also assess whether gender patterns emerge in relations around space and technology.

### **The changing home in retirement**

Before turning to the domestication of computers and the Internet, we will first address the changing meanings of home during retirement, within which technology use is located. The home is not static, but changes throughout the life-course (Hockey and James 2003, Valentine 1999c), and technology use in the home is situated within these changes (Ward 2006). Participants who remained in their family home experienced changes such as their children moving out, or physical limitations on the use of space in the home. The following discussion illustrates the experience of some of these changes;

Lesley: "When I think back, we have lived here a long time, without giving a huge potted history Ian has always done DIY, he's always done the jobs around the



house [...] he built the coffee table, this coffee table and that unit, and he put the fireplace in and put the bricks on and did the woodwork, we've always painted and we've always decorated [...] there have always been jobs around the house that Ian has done and life for us has been like that, the years just go by and we have lived here and it's just part, our kids have grown here and they have gone, but you don't know what's around the corner, we went from being able to do anything that you choose [...] and then health things can change your whole outlook..."

This discussion illustrates how the histories and biographies of participants are intertwined with their homes, as Lesley reflected on how the home has been part of 'what life was like' and how they had lived there 'as the years just go by.' Through discussion of continual home improvements and amendments, it also illustrates home-making as an ongoing activity, and the home as something which "never *is*, it is always in the process of '*becoming*'" (Bhatti 2006:321). As Lesley said elsewhere "a house always has a job that needs doing, you never ever get to the point where your house is all done." The discussion again illustrates how participants' biographies are connected with 'family time' (Hareven 1994), as the transitions of their children leaving home also shaped their transition to retirement, and changing experience of the home. This emerged in various interviews, for instance, Deidre and Arthur described how they had remained in the same home for forty years, and while they could have made money by moving home earlier, they felt it was more important spend the money on family activities such as holidays while they "couldn't have afforded to do that if we'd bought bigger and bigger houses." In retirement they were now moving again, partly to be nearer to their daughter and grandchildren as they were coming "through there to babysit a lot anyway!" Others like Carol had initially moved to be near her family, but moved away in retirement when her grandchildren were older and in school most of the time. For Dot, downsizing to smaller homes during her life had also coincided with the transitions of her children getting married and leaving home, as when her "eldest got married, the maisonette was too big, was just me and my son so we moved into a two bedroom flat", and then she had moved again to a one bed-room flat when he got married.

Participants also described changes in divisions of public/private, shared/separate spaces in the home, in relation to family transitions and children moving out. Several couples recalled how their dining and living room spaces were initially kept separate, and when

their children had lived at home they had always sat and eaten their meals at the table, and would never watch television at the same time. However, in retirement many participants combined meal times with television viewing. For instance, Deidre described how “my daughter laughs because all those years I would refuse to let them watch television at meal times. They had to sit at the table properly and have proper meals!” Here she connects previous household arrangements to constructions of ‘proper family meals’, and a desire to set a good example to children (Valentine 1999c). However, in later life children moving home could create more freedom in space and activities in the home. As Brenda said “because we have got older we please ourselves, you are not showing someone else what they should do are you? You’re doing what you want to do now, growing old disgracefully!” This also reflects broader social changes in the division of public/private spaces in houses, which were discussed in chapter two, and shift from the clear separation of these spaces, to combined kitchen/diners and open plan spaces (Madigan and Munro 1999).

For participants who had moved home in retirement, this often involved downsizing to a smaller home, either due to lower financial means, or physical constraints. For instance, Deidre and Arthur found the size of their family home and garden increasingly difficult to manage, while in their new flat “...our garden is now done for us, as we get on in life this will do us, we don’t want to work in the garden, it hurts, literally hurts.” Other participants had moved to a retirement community in anticipation of future ill-health, as ‘continuing care’ facilities were available there. This emphasis on downsizing and physical limitations, links experiences of home in later life to the narrative of decline (Tsuji 2005) described in chapters two and seven. However, as illustrated by Lesley’s discussion above, even among participants who remained in their own homes, physical difficulties could limit the use of this space (Bhatti 2006, Percival 2000). This was noted by a number of participants, including women who described difficulty in getting housework done as quickly as they used to, and felt guilty about this. As Jane said “I find it difficult with me back and me legs, but you get there, you get through [...] I will admit I’m not as through as I was when I was younger.” This reflects the continuing gendered division of domestic tasks discussed in the previous chapter. Physical limitations could also mean a reduction in out of home activities and mobilities, as will be further explored in chapter eleven, which could mean spending more time at home (Laws 1997).

Experiences of home in retirement did not always reflect this narrative of decline though. Some participants remained happy in their family home without difficulty, for instance Pearl had lived in the same house for forty five years and said “it’s just really right for me the house” as “people are lovely, the neighbours are nice and it’s quite a nice area.” Similarly, Betty and John had lived in the same house since before their retirement, and were very happy with their home and the neighbourhood community. Many participants had taken up new hobbies and activities in retirement, both inside and outside the home, including gardening, studying, bowling, and running. For Deidre and Arthur, and Carol, the availability of new leisure opportunities was a factor in their decision to move to the city. Couples like Jenny and Andrew, and Emma and Jeff, had begun new relationships together later in life, and moved home when they decided to live together or get married. Therefore experiences of home also related to more recent constructions of retirement as a time of leisure (Laws 1997), and the increasing fluidity in life-course transitions and relationships (Blaikie 1999). It may be significant to note that these participants who started new relationships in later life were among younger cohorts in the sample, who may be more open to such changes. However, while it is important to recognise more positive experiences of home in later life, and challenge the narrative of decline, as described above experiences of home in retirement did face constraints, including those around health, gender, and class.

### **Locating the computer in the home**

It is into this context of changing meanings of home in retirement that the computer and other technologies are located. As pointed out in chapter six, in contrast to other ICTs which were bought at an earlier stage of the life-course, in most households the computer was purchased after retirement, often after losing work access. A number of participants had been given their initial computer by a family member, as found by Selwyn (2004). However, as discussed above, the majority of participants did not have the initial computer they had acquired, with the exception of those like Joan and Dot who had bought one within the last couple of years. While often receiving their first computer as a gift, most participants had since gone on to buy their own. For instance, since their initial ‘hand me down’ computer, Audrey had bought her own when she wanted one that was ‘faster and more up-to-date’, and she had updated to a new computer a couple of times since then. However, her husband Fred had continued to receive ‘hand me down’ computers, as he was less enthusiastic about computer use.

Once in the home, the decision of where to locate the computer was shaped by the existing meanings and physicality of different spaces. For instance, Dot stated that she wouldn't have it in the bedroom because 'bedroom's are for sleeping in aren't they?' This in contrast to the incorporation of computers and other ICTs into the bedrooms and 'personal spaces' of young people (Holloway and Valentine 2003, Livingstone 2002) and reflects age related differences in the meanings of this space (Green 2001). However, several participants had their computer in the bedroom, rather than the alternatives of the living room or kitchen. None of the participants in the study located their computer in the kitchen, which may reflect the gendered construction of the kitchen as a feminine space (Morley 2000). For instance, while John was unhappy with the location of his computer in the bedroom, it was preferred to the kitchen, and as he said to his wife Betty; "I'm not having it in there, not with you cooking." Another couple, Enid and Albert, had chosen to put their computer in the attic of the retirement bungalow because as she said;

"we thought it was obviously the workroom wasn't it? When we saw the show house it was set up as a sort of studio [...] with a little easel and a half finished painting."

Therefore the location of their computer was shaped by the intended design of the space, and the majority of participants in the retirement community kept their computers in the attic. As discussed in the previous chapter, concepts of work/leisure were important, which is illustrated by Enid's description of the attic as 'obviously a work space'. However, the computer was not always shaped by the intended design of different spaces, but could also challenge them (Blunt and Dowling 2006). For instance Jenny and Andrew's spare bedroom had been converted into a study when they moved the computer there, and she described how "we've made the computer priority there [...] it's the computer that's dictated what we've done upstairs." This attributes agency to the computer in shaping the meanings of space in the home (Holloway and Valentine 2003).

The location of the computer was not always freely chosen however, and could be constrained by changes in the home during retirement. For instance Bill and Jane had downsized, and although they were unhappy having their computer in the spare bedroom and felt they 'had lost a bedroom' to it, this was the only place to keep it. For participants who had moved to the retirement community, space could be similarly restricted. For instance, Enid and Albert found the location of their computer in the attic problematic, due

to the poor lighting and constraints of the sloping roof. While Enid ideally wanted a separate room for the computer, space was limited, as she said “these are reasonably spacious these bungalows for retirement places” but they could “easily use twice the space.” However, for other participants, changes in later life such as children moving out meant they had more freedom in terms of where to keep technologies, as Lesley described;

“...it used to live in the corner of the dining room for a very long time, and then it was on the dining room table for quite a while until Christmas came and you kept moving it and finally, finally when the children left home we had a spare bedroom, so we put it in the bedroom.”

This illustrates how the location of the technologies can shift throughout the life-course, as the needs of households change through factors such as children moving out (Ward 2006) Similarly, Jenny and Andrew found they had more room for the computer after they had moved to a bigger house together. For Deidre and Arthur who moved home during the period of interviewing, the Internet was also part of this change, and was used to search for new homes, auction a picture they wanted to sell before the move, write letters, and to transfer the money from the sale of their old home. Other participants who had remained in the same house sometimes experimented with keeping their computer in different rooms before settling on their current location. The upgrading of technologies also meant that they moved around the home as they were replaced by newer models. As discussed in chapter six, some participants disliked throwing away old technologies, and would put them into storage, try to pass them on to someone, or move them into a different room. For instance after upgrading her computer Audrey ended up with a spare one which she kept in the attic for her son to use, while Pearl had four mobiles at home, although only one of them actually worked! Participants often had multiple sets of older ICTs like televisions and particularly radios around the house, which had been upgraded over their life-times.

In terms of the current location of computers, the majority of households had their computer a spare bedroom or attic, while three participants had a laptop based in the living room, three had their computer in their main bedroom, and only one couple had it in the dining room. As well as the changing freedoms and constraints around space in retirement, another key factor which underpinned the choice of location was the desire to have the computer in a ‘separate space’. For example, as Barbara said “it’s convenient away from here, we wouldn’t really want it down here so [...] I think it’s much easier to have it in a

separate room.” As found by Frohlich et al (2003), the ideal location for the computer was usually somewhere ‘out of the way’, and not in competition with other household activities in ‘public’ spaces. Several participants described how having this separate location enabled activities such as television viewing or listening to the music to take place in the living room, while computing could continue in another room. As Fred said; “the thing about it is one of us can watch television and [the other can] disappear you know, it’s handy.” Emma and Jeff were one of the few couples who had their computer in a public space, and they found having the computer in the dining room very awkward, as she said;

“...we still climb over each other, trying to get things from the dining room, when one person’s on the computer and you have to ask them to move their chair so you can squeeze behind them. So...we’ve occasionally talked about converting the loft, not necessarily into a computer room...I think a lot of people do something like that, make it into kind of a study.”

Therefore while they have their computer in a public space, this is not seen as effective, and the ideal space is described as a separate ‘study.’ However, the dining room was preferred to alternative of the living room. This reflects the frequent use of computers for ‘work-like’ activities discussed in the previous chapter, and the importance of being able to work on the computer in peace away from other distractions (Frohlich et al 2003). It also reflects the desire to avoid potential conflict over competition for use of shared spaces, which will be discussed in more detail below. However, in contrast to the majority of participants who wanted their computer ‘out of the way’ from other activities, three women had a laptop in the living room, and were quite happy with this location. Rather than avoiding integration with other household activities, these women often used their laptops at the same time as watching television. This may reflect the fact that these women did not really use the computer for ‘work like’ activities, and therefore did not need a separate location. It also reflects gender differences in multitasking, as discussed in chapter eight.

The desire among most participants to have their computer in a separate space may also reflect the fact it is used individually, while technologies such as the television are generally sociable or shared activities (Haddon 1999). Several participants described computers as anti-social, as Lesley said;

“... we’ve never had it in the living room [...] because they are the most antisocial piece of equipment you could ever come across, but they are necessary at times and if someone is on the computer you do not have their attention and this is our living space and this is where we talk, this is where we watch the television and talk to each other and is not the place for the computer for me.”

This reflects similar comments made by participants in Holloway and Valentine’s (2003) research, who sometimes resented the intrusion of the computer into ‘family time’ together. Although couples would occasionally show each other something on the computer such as a photograph or email, doing activities on the computer together was not a frequent occurrence. As Ian said “whether you’re playing games or answering emails, it is still just you doing it.” None of the participants played games together on the computer, and they would often print out emails to share with their partner rather than showing them on the screen.

Keeping the computer ‘out of the way’ may also reflect its relative newness to older generations, which means that it remains “not quite to be trusted – not quite domestic” (Habib 2002:13). For instance, although Pearl lived on her own, she still kept her computer in the spare bedroom rather than the living room, because she does not “like it to sort of interfere, intrude in here [...] it is just in the little bedroom, just totally out of the way, I can shut it away and forget about it.” This suggests that rather than being integrated into the household (Ward 2006), computers were still seen as something alien and separate and from other household artefacts. In contrast, the radio was very much ‘part of life’ for many participants, and a number of them had a ‘radio in every room’. This reflects the greater level of familiarity with the radio due to ‘growing up with it’, which was discussed in chapter six, as Jeff said; “really it’s what I’m familiar with, so I like the radio.” As suggested by Holloway and Valentine (2003), the separation location of computers may reflect fear or dislike, and a number of participants described such feelings. This is illustrative of the “emotional embodied relationship that computer users have with their personal computers” (Lupton 1995:98), which invokes strong emotions of fear, anxiety or frustration. In this relationship, computers are also attributed with human emotions and agency, for instance, Hilda a non-computer user did not want her husband’s computer in the living room because she “didn’t want another screen looking at her”, while Lesley who disliked the computer did not want it ‘in her face’ downstairs. While much of the emphasis

in domestication research is on how people adapt to computing and fit it into their lives, for some like Hilda it is an object of fear or an 'intruder' that they wish expel or exclude from domestic space (Holloway and Valentine 2003). For some participants though, fears were mainly associated with new computer technologies, and were overcome with time. However, when upgrading or acquiring new computer equipment initial fears often returned, as described by Jenny and Andrew;

"we're fine with the PC, when we first got we were scared of it, a bit, but like now we're going to have wireless because they'll be two machines in the house, and that again is like 'Oh you know, how does this work?'"

Andrew: "Something else to go wrong!"

Therefore the fast pace of change and upgrading of computer technologies means that they can be difficult to 'domesticate', as the acquisition of new computing equipment can bring back old uncertainties and difficulties.

### **Negotiating ownership of space and technologies**

We so far have examined the location of computers within changing meanings and constraints on space in the home, and we will now address the ownership of technologies and spaces in greater detail. Previous research has found that it is generally men who instigate the purchase of technologies in households (Wheelock 1992). In this study, as suggested in the literature, there were a greater number of households where the man initiated the purchase of computer, although gender patterns were not entirely clear cut. In six of the couples, the man instigated the initial decision to purchase a computer or word-processor at home, in three households the woman instigated it, and in three households it was described as a joint decision. However, while a computer was initially bought for one partner or the other, four couples had since gone on to purchase a shared computer as a 'joint decision'. These included Emma and Jeff, Andrew and Jenny, George and Barbara, and Ian and Lesley. There were four couples in which each partner now had their own computer; Maggie and Richard, Enid and Albert, Audrey and Fred, Deidre and Arthur. Among the other four couples, only one partner used and therefore owned the computer; William, Brenda, John, and Joan all used a computer while their partners did not. However, while Joan was the sole user of the computer in her household, it was bought



through her husband's account as chairman of the rugby club, and she was unsure if it would be reclaimed when he finished his position.

As found by Holloway and Valentine (2003) these ownership divisions were also expressed spatially, merging the stages of objectification and appropriation. Some couples like Enid and Albert, and Maggie and Richard, who had their own computers, still kept them in the same room, although they had separate 'work stations' set up. However, other couples like Audrey and Fred had their computers in separate spaces because they preferred to "get away and work independently." She had her computer in the shared space of 'their main bedroom' while her husband Fred kept his computer "in what we call 'Fred's room' cos all his bedding and his [...] clothes and everything are in there and his computer's in there." Similarly, Deidre had her laptop in the living room, while her husband Arthur had his computer in a separate attic space which he described as 'his shed'. This reflects Brabazon's (2008a) research, in which her father's computer marked out the ownership of his 'digital shed'. While Deidre mainly used the laptop though, her ownership of it was felt to be less clearly defined;

Interviewer: "Is it one each or do you share them both?"

Arthur: "No that's basically Deidre's computer..."

Deidre: [laughs].

Arthur: "...although we take it with us when we go abroad [laughter], now listen [laughing], we take it for holidays when we go abroad...go on [to Deidre] what did you want to say? You're free to say what you want."

Deidre: "But of course, we only take it abroad so he can put his photographs on it, you know."

Interviewer: "Oh right."

Arthur: "Why would we want it abroad otherwise...?"

Deidre: "And then you write on it abroad as well."

This suggests some tension over the ownership of the laptop, as Deidre found the idea of it being 'her computer' amusing, because when they took it holiday for three months of the year it was mainly used by him. Previous research has found that women may find it more difficult to carve out their own space in the home (Deem 1986), and in Deidre's case this also includes the ownership of technologies. However, one woman in the study, Betty, described the attic as 'her room', in which she worked on her knitting machines and also had a TV and DVD player, while her husband had his own space at his allotment.

It is argued that in modern households where multiple technologies are located in separate spaces, conflict over use is no longer an issue (Livingstone 1992). Although some couples in this study shared their computer, conflict over use was not described as being prominent. For instance, in Barbara and George's case, he mainly used the word-processor and she mainly used the computer, while as a new user Jane didn't spend much time on Bill's computer, although she did feel that if she began to use it more his use would take priority. Similarly, Lesley was a less keen computer user and felt that there was therefore not much competition between herself and Ian over use, and when there was this could be easily negotiated between them. As she said "there's nothing that wouldn't wait, nothing in this world that is so important that one or the other of us wouldn't just move if the other one wanted the computer." In the other two households where the computer was shared more regularly, participants again did not describe any outright conflict over use. Instead they described processes of 'give and take' and a careful organisation of time for using these technologies, which will be discussed in more detail in the following chapter. However, it must be noted that participants' emphasis on a lack of conflict may reflect their desired self-representation in interviews, and they were all keen to stress that they didn't 'fight' or 'fall out' over technology use. As may be expected, any conflict over technologies had lessened since earlier on in the life-course, as there was less competition between the interests of different family members. For instance, Carol recalled how her when her children were at home they "always had the television on", and she had to "go and turn the retched thing off." Similarly Lesley and Ian described how use of their computer previously had to be negotiated by taking turns with their children, whereas now there was little competition for use.

Although most participants did not have to compete for use of the computer, there were competing interests around using the television. Out of the seventeen households in the

study, only eight had more than one TV, and many couples shared a television. While there were common programmes participants liked to watch together, a number of couples described differences, which generally followed traditional gender patterns. For instance, men often enjoyed sport, while their wives enjoyed soaps or 'soppy things' (Morley 2000). In response to these differences, in a couple of households, as found in Morley's (1986) research, one person generally had monopoly of the remote control and programme choice. This was the case in Ian and Lesley's household, as she said;

"Ian is in charge of the remote control so we tend to watch his choice, unless there is something very particular that I want to watch [...] it sounds like I'm very subservient there but with the television it is Ian's choice most of the time, it is, but it's not something I dislike, and if it's something I'm not interested in I will go elsewhere..."

Later in the interview Lesley described how Ian had 'his chair' which was the 'prime viewing seat' in front of the television, and he kept the four remotes on the arm of the chair. This division was also due to relations around competency, and as Ian said "I am the only one who knows how to use them." Similarly, Joan stated that she mainly let her husband 'put on what he wants and I just watch it', although she did have the option of watching TV in another room. However, in Betty and John's household the opposite pattern emerged, in which she had charge of the remote, although there was some disagreement before this was established;

Interviewer: "What about you if he was watching Top Gear or something you didn't like?"

John: "I don't get the chance!"

Betty: "I'd go to sleep."

John: "Oh please!"

Betty: "Wouldn't I?"

John: "No"

Betty: "I do!"

John: "You'd say 'I don't want that on' and turn it over."

Betty: "I've never said that to you."

John: "Who has the remote?"

Betty: "It's usually on there [points to table in side of the couch where she's sitting]."

John: "It's usually on your lap [Betty laughs]! And when you go to sleep I nick it!"

While Betty initially protested, she later admitted that she normally kept control of the remote, although she said they don't 'fall out' over it. She went to agree that she was the one who normally chose the television programme, although as she pointed out, it was easier for him to do other things such as using the computer or going to the bowls club, whereas she was limited because of her ill-health.

There was not only competition for shared technologies though, but also for use of shared spaces like the living room. For instance, Jenny described how when her husband was watching television; "because I'm sitting here I tend to watch television, but I don't actually like the amount of television we watch." Rather than describing direct conflict over the use of shared technologies and spaces, participants would generally either put up with their partner's choice, or find something else to do in another room. In such instances, there may be inequalities or discrepancies in who leaves the room though, and with the exception of John, it generally seemed to be women. For instance, Jane described how she would go and watch television on the smaller set in the bedroom if her husband Bill wanted to watch sport, saying; "I don't mind [...] if I want something else I go upstairs, I've got a TV in my bedroom as well [...] and that's what I do, so Bill can have his football on the big screen you see." However, it was not only women who had to put up with their partner's programmes, for instance when Audrey watched Coronation Street she described how her husband Fred is "not really interested, but he watches it." Among those women who had their computer in the living room, competition was not a problem for Dot who lived alone, but Deidre and Joan would on occasion move their laptops, should the need arise. As Joan said; "on an evening if I didn't want to watch telly I would take that upstairs, I've only done that half a dozen times." Other participants had different strategies to deal with competing use of the technologies and spaces in the home. One strategy was to adapt technology, for instance, Hilda's husband William disliked the television, so she

listened to it with headphones on! Another strategy for dealing with competition for programme choice was to simply record programmes for later, or to use new technologies such as Sky Plus or the website 'BBC iPlayer' to watch programmes at a later time. This illustrates the value of the 'time-shifting properties' of these new technologies for avoiding conflict, as found with older technologies such as the video (Haddon and Silverstone 1996).

### **The gendering of household technologies and competencies**

Patterns in the control and ownership of technologies and spaces are also situated within divisions around competency, and the gendering of skills and technologies. These divisions were not as traditionally gendered as found in previous research (e.g. Wheelock 1992, Cockburn and Omrod 1993), and demonstrated more mixed patterns between households. In three couples, relations of competency were described as being roughly equal, for instance, Barbara and George and Jenny and Andrew perceived themselves as having similar problems with computers. As Andrew said "I think we both panic at the same time [...] and we both try to get out of things in much the same way", while Barbara stated that "neither of use is competent with fixing it." Maggie and Richard felt themselves to be equally competent with computers, and would help each other out with different things. There were four couples in which the woman was described as the most competent in using computers and dealing with technical difficulties; Emma and Jeff, Brenda and Greg, Joan and Mike, Audrey and Fred. Joan and Brenda's husbands didn't really use the computer at all, although Greg had 'had a go', while Audrey's husband Fred only used his computer to a limited extent. Although Emma's husband Jeff used the computer regularly, she was "more prepared to have a go at fiddling when things go wrong" and he "relied on her." However, there were a greater number of six couples in which the man was described as being most competent at dealing with such problems; William and Hilda, Enid and Albert, Arthur and Deidre, Jane and Bill, Betty and John, Ian and Lesley. Hilda and Betty didn't use their partner's computer at all, while Jane had just begun learning to use the computer. Enid, Deidre and Lesley were regular computer users, however, they relied on their partners for setting up computers and dealing with problems. For some participants, competency with computers also reflected a general competence with ICTs, for instance, Emma, Joan, Bill and John were more competent than their partners with setting up and fixing technologies in general. However, others like Audrey and Arthur were more

competent with computers but not with using other ICTs, and both relied on their partners when it came to setting up the video or DVD recorder.

As argued by Brabazon (2008a) 'relationships of co-dependency' were established in these households in which if one partner was able to deal with these technologies, the other one did not try to acquire these skills themselves. For instance, Jane stated that with the computer if "anything was needed Bill did it for us you know, so I didn't really need to" while Hilda said that "I can see the use in it, but I can't be bothered to be honest. You get to the stage when you think, well if somebody's doing it for you why bother?" However, Jane had now started learning because "just lately I've felt as though I'd like to have a go." Similar patterns were established in Arthur and Deidre's household where she relied on him for help with the computer, and he relied on her for help with setting the video. As Arthur said, because his wife had always set the video he had "never bothered [...] we have our own divisions that we bother about. I rely on her having knowing how to do that, and she relies on me knowing how to do the other things so it works fine." The practical nature of learning computing means that through reliance on a partner and lack of use, computing skills are not acquired. This is reflected on by Betty in the following discussion;

Interviewer: "Why do you think it is that with things like the mobile or the computer you don't feel comfortable, but you're alright with things like the television or the telephone?"

Betty: "I don't know why it is."

John: "Well the television, no fair do's, we've had the video machine donkey's years but you still can't programme it, the television you use several times a day and..."

Betty: "Yeah it's use."

Therefore such divisions are reinforced because, as discussed in chapter seven, it is only through use or practice that familiarity and competency with computing is acquired. The construction of such divisions in relation to use or practice is also illustrated in Barbara and George's household. As noted earlier, he mainly used the word processor and was most competent with that, while she had forgotten how to use the word-processor but had

become more competent with the computer. Such divisions could also be reinforced by spatial arrangements, for instance, Hilda's fear or dislike of computers created the desire to keep it in a separate space, but this separation may also reinforce lack of familiarity. In contrast, it is suggested that the integration of computers into public spaces like the kitchen may help create familiarity, and remove the fear and mystique surrounding them (Green 2001:182). As suggested by Cockburn and Omrod (1993), such divisions may be avoided in single households, and Lesley described how while in her household Ian was the 'whiz kid', her sister was single and therefore she "is the whiz kid, she's the one that puts it together because she has had to." She described this division being gendered saying "I suppose we allow the men folk to do this unless they can't and then we learn to do it ourselves." However, the four single women in the study varied in terms of competency, for instance, new users Dot and Jean were not very confident with their computers at present.

This suggests that as well as household relationships, confidence with computing was also shaped by wider factors. As discussed in chapters six and seven, biography was important, and participants like Joan and Dot who lacked confidence with computers had no previous experience of using them in work. In couples, the more competent partner generally had greater work experience with computing. For instance, John had worked as computer operations shift leader, and while his partner Betty had no experience of computing in work, and had avoided technology all her life. As she said "I worked in the motor trade all my life, and people used to say 'Come on, I'll teach you to drive', a couple of lessons and they gave up." This avoidance of technology was found to be more common among older women in Mollenkopf and Kasper's (2005) survey research, although as discussed in chapter six, patterns in this study were not always so clearly gendered. For instance, Emma had used computers regularly in her work as a research assistant and administrator, while her partner Jeff had only briefly come across computing in work. Similarly, Deidre described how she had become more competent with the video through recording things for teaching, while her husband 'had to learn' computing while working as a freelance journalist. However, biographical experiences were not always behind differences in computing, and neither Jane nor Bill had used a computer in work, yet he become more confident with computing after retirement.

As found by Turkle (2004) ratings of competency seemed to be linked to participants' identities, and assessments of themselves as technological versus non-technological people. For instance Betty stated that 'anything technical loses me', and described herself as a 'technophobe', while her husband John described himself as the 'mechanical one'. This seemed to be more the case among women in the study, for instance Jane described herself as 'not having the mindset' for computing, while Deidre said she was 'not that way minded naturally'. In contrast, none of the men in the study seemed to relate a lack of competency with computing to them being a technological person or not, and men like Fred and Greg put their lesser competency down to a lack of time and interest. As found by Cockburn and Omrod (1993), men were less likely to admit fear of technology, which may reflect the gendering of emotions, in which emotional expression is associated with femininity (Seidler 1998, Duncombe and Marsden 1998). However, although Emma felt that she was 'not a technological person' she did point out that she is 'more technologically minded' than her husband and has a 'logical brain' which helps approach computing systematically. Both Emma and Joan described themselves as being the more technological person in their household, including anything from computing to changing plugs. As Joan said "light fuses and plugs, I do all that, my husband does it and everything goes bang!"

Definitions of oneself as technological or non-technological also drew on the broader gendering of technologies and skills (Cockburn and Omrod 1993). As discussed in chapter seven, while women were more likely to have typing skills and to view them as important to computing, men often described these skills as not 'proper computing'. The gendering of skills also relates to the division of household technologies into 'brown goods', including ICTs which are seen as 'high technology', and 'white goods' like domestic appliances which are seen as less technological (Cockburn and Omrod 1993). Therefore the ability to use technologies such as the microwave or fridge does generally not come into consideration of oneself as a technological person, as such appliances are often not considered technology. While Betty described herself as a 'technophobe' she was quite happy using these domestic technologies, as well as older ICTs such as the TV, typewriter or radio. As discussed in chapter eight, women generally did the majority of domestic labour, and therefore used domestic technologies most often. When exploring definitions of 'technology', the majority of participants did not initially consider domestic appliances. As found by Cockburn and Omrod (1993) and Brabazon (2008a) this was often due to the perception of these technologies as ordinary or everyday, as Jean said "no they are just



everyday things” although she later went on to consider that “I suppose they are technology from years ago.” Similarly when asked if domestic appliances were technology John replied “I suppose so. Been there all my life, so I don’t really realise they’re technology.” Here the ‘newness’ of different appliances is reflected in their definition as ‘technology’, while older technologies represented something ‘normal’ which had always been there (Lunt and Livingstone 1992: 132). However, it must be noted that the initial hesitance of some participants to describe such appliances as technology also reflects the context of the interview and the focus on computer and Internet technologies. As Carol said; “I suppose I’m defining technology very narrowly when I respond to your question because of the context in which we are speaking, so I’m thinking we’re talking about digitalisation and computers and stuff like that.”

The division between technologies in the home also constructs the use of ‘brown goods’ such as the computer as ‘clever’ and ‘complicated’ (Cockburn and Omrod 1993) and as requiring greater skill. Such divisions were reinforced by some participants, for instance, Jane felt that in being able to use the computer, her husband Bill was “a lot cleverer than I am.” This fits with Brabazon’s (2008a:47) account of her mother’s perception of technologies as something that “requires skills she doesn’t have.” However, as we saw in chapter seven some women challenged these constructions of skill, reconfiguring computers as ‘glorified typewriters’, or comparing computing to domestic skills as a form of practical knowledge. As with discussions of typing skills, there were sometimes disagreements between couples regarding the gendering of domestic skills and technologies. For instance, while Deidre felt the washing machine was technology, her husband Arthur thought of technology in terms of “hi-fi, surround sound, tellies, obviously computers” and felt that domestic appliances are “mechanical to me, I see that as two different things.” Similarly, Ian argued that “Mechanical things aren’t really technological they are just different configurations of a piece of metal work, they’re not really technology” while his wife Lesley felt that “if it does something that you don’t do by hand then it is technology.” This couple went on to disagree when asked if domestic appliances count as technology;

Interviewer: "What about domestic appliances like the washing machine, microwave?"

Lesley: "Yeah they do use electronics in fairness."

Ian: "No they don't, washing machine doesn't use electronics"

Lesley: "Yes they do, the washing machine's got a computer board in it."

Ian: "No it hasn't, that's an old fashioned one."

Interviewer: "Do you see that being...?"

Lesley: "I consider that being technology yes, because the difference between washing by hand and putting it in the machine..."

Ian: "If it had a microprocessor in it I would call it a technology, but it hasn't."

In this discussion Ian defined technology based on a division between 'mechanical' appliances, and those that use electronics. However, his wife Lesley defined technology based on the contrast between using machinery to do tasks such as washing, and 'doing them by hand'. As argued by Livingstone (1992:120) women were more likely to emphasise the meaning of technology in terms of utility. However, it was not only women that adopted this definition, for instance, Jack described technology as "anything that's produced by human beings made of parts that performs some useful function." While in the two households discussed above the men were more likely to exclude domestic appliances from definitions of technology, Barbara and George demonstrated the opposite pattern. When asked which of their household technologies they used most, George replied "out of all the technology I would say the fridge" while his wife Barbara argued that the fridge is "not a technology!" This again suggests a greater complexity in relations of gender and technology.

## **Summary**

This chapter has examined the location of technologies in the home, and their situation within the physical dimensions, interpretations and relationships in this space. It has illustrated how meanings of home and the location of technologies are not static, but changed across the life-course, in relation to family transitions, physical limitations, and moving house. Changing meanings of home were also embedded within discourses surrounding 'old age', such as the 'narrative of decline' (Tsuji 2005). This illustrates the relevance of a biographical perspective for understanding spatial relations around technology use in the home, and supports arguments that domestication needs to be explored as an ongoing process over a longer period of time (Haddon 2004, 2006, Ward 2005). As well as attending to the changing biographies of individuals and objects, this chapter also illustrates the importance of attending to broader changes in the architecture and design of homes, which have generally not been addressed in research on the domestication of technologies.

However, while situating the spatial location of technology use within changing perceptions of home in later life, this chapter again illustrates continuities with experiences earlier on in the life-course. The radio which participants grew up with was highly integrated into other household activities and spaces, while the computer was kept in a separate space, and remained not fully domesticated. This is at odds with integration of computers and the Internet into the bedrooms and personal spaces of younger people, and into shared spaces in the homes of many younger families (e.g. Holloway and Valentine 2003, Bakarjieva 2005). Therefore, the degree of domestication and integration of technologies into spaces in the home seems to reflect the 'newness' of a technology, which is relative to different cohorts, and changes over time. It is interesting to note that while in Cockburn and Omrod's (1993) study the microwave was regarded as 'technological' and used with some trepidation, it was regarded as a part of everyday domestic activity by participants in my research. In addition, the comfortable place the television had found in participants' living rooms is in contrast to earlier accounts of when it entered homes in Britain during the 1950's (Spiegel 1992 cited in Holloway and Valentine 2003). The spatial location and degree of domestication of computers in homes is therefore something which like other technologies, may be expected to change over time, and will also be

different for younger cohorts of retirees. However, while participants often become 'used to' their computer over time, upgrading to a new model could recreate old fears, and therefore the speed at which computers are upgraded may delay their domestication.

This thesis also sought to address relationships around space and technology in the home, including those around ownership, conflicts, and competency, and to examine whether such relations are gendered. As argued in chapter two and three, such relations have not been fully explored in retired households. Households demonstrated mixed patterns in terms of technological competency, supporting arguments for increasing complexity and fluidity in gender-technology relations (Gill and Grint 1995). However, in examining these issues, what was counted as 'technology' and 'technological skill' was highly gendered, and domestic technologies were often excluded from this definition. While in this study gender patterns around space and technology are fairly mixed, previous studies and my own quantitative findings in chapter four show gender divisions in Internet access among older people. In seeking to understand and challenge these divisions, this chapter illustrates how revaluing 'feminine' technological skills involved in using typewriters and domestic appliances may be useful in overcoming perceptions of oneself as 'non-technological', which can deter older women from using computers (Brabazon 2008a). However, divisions in computing skills were reinforced by dependency on a partner, and as argued in chapter seven, without regular practice these skills cannot be acquired. This chapter also illustrates the importance of considering biographies for those seeking to understand gender-technology relations, and diversity between households. The mixture of traditional and changing patterns within households illustrates how broader social changes take to time to filter into everyday life, and co-exist alongside older patterns (Gauntlett and Hill 1999). However, they also illustrate tensions between continuity with early experiences, and the changing gender relations experienced in individual life-times. These issues around gender and technology are further explored in the following chapter, which focuses on the temporal aspects of technology use in the home.

## **Chapter ten**

### **‘Computer minutes take half an hour’: technology use, time and retirement**

#### **Introduction**

The previous chapter explored spatial relations around technology use in the home, and this chapter will focus on the temporal aspects of technology use in this sphere. While temporality has emerged as a recurrent theme throughout the chapters of this thesis, this chapter focuses in more detail on the everyday experiences of time which relate to the use of technologies at home in retirement. Contrary to the association of the Internet with particular forms of new temporality, it will be argued that the use of these technologies is situated within a range of intersecting temporalities, including daily rhythms and routines, the tension between ‘free time’ and ‘limited time’, ‘relational’ time, and the ‘natural’ times of the body and the environment (Adam 1995). This challenges views of technology having a deterministic or straightforward effect on experiences of temporality, and points to how it varies according to the context, and the temporal orientations of different technology users (Horning et al 1999). Continuing the previous theme of domestication, this chapter also addresses the degree to which computers and the Internet are integrated into daily routines, and the negotiation of time to use these technologies between household members.

We will begin by briefly examining theories of time and technology use, before addressing critiques of these theories. As discussed in chapters one and two, the Internet is argued to be contributing to changes in the ‘organisation’ and ‘perceptions’ of time in contemporary society (Lee and Libaneau 2000: 44). This includes the compression of time and space, enabling instantaneous communications and transactions at a distance, and immediate access to information (Castells 2000, Urry 2003). New ICTs also add to the acceleration of life in contemporary society, and the increasingly fast pace of change (Wajcman 2008). This ‘timeless time’ is also characterised by the ‘de-sequencing’ of time (Castells 2001: 13-14), involving blurring of temporal and spatial boundaries, and greater flexibility in temporal routines (Green 2002, Lee and Libaneau 2000). However, while there has been much theorisation of the way in which the Internet impacts on experiences of time and space, such work has generally remained theoretical, and failed to examine how such

changes are experienced in everyday life (Green 2002). This creates a deterministic view of the straightforward 'effects' of technology on temporality (Wajcman 2008), and also ignores the multiplicity and complexity of times in everyday life (Adam 1995). It is argued that more empirical research on the use of these technologies in everyday contexts is needed, to create a "richer analysis of the relationship between technology and time" (Wajcman 2008:61).

Research in this area is growing though, addressing everyday experiences of technology use and temporality among younger families (e.g. Livingstone 2002, Green 2002, Haddon 1999, Holloway and Valentine 2003). As discussed in chapter eight, there is also a growing body of research examining home-working and the negotiation of work/leisure boundaries in relation to technology use (e.g. Kaufman-Scarborough 2006, Ward 2006). However, there is still a lack of research on technology and experiences of time among older people or retirees. It is highly relevant to examine experiences among retirees though, as they are differentially positioned outside of economic time (Adam 1995, 2006), and the 'fast time' of the workplace (Parkins 2004). In contrast to the emphasis on the acceleration of life in contemporary culture, studies have described a 'slowing down' in the pace of activities during retirement and a decrease in time-pressure, although retirement may bring new time demands and experiences of 'busyness' (Haddon and Silverstone 1996, Roche 1989, Tsuji 2005). The question of how technologies which are associated with speed and acceleration may fit with experiences of 'slowing down' in retirement remains to be addressed. In addition, while research has explored how these technologies fit into the daily routines of younger age groups, such experiences remain neglected among retired households. Although research by Haddon and Silverstone (1996) provides information about the role of technologies such as the television in structuring time in retirement, it does not tell us anything about computers or the Internet. The only research I could find which explores temporality in relation to Internet use in later life was that conducted by Blit-Cohen and Litwin (2004), comparing the temporal orientations of older computer users and non-users. They found that computer users were more orientated towards the future, while non-users tended to dwell more in the past. However, this does not tell us anything about the relation of technology use to everyday experiences of time in retirement. In seeking to address this gap, we will now turn to the findings of this study, drawing on data from both interview discussions and time-use diaries. Rather than technologies having a straightforward effect on time, this data demonstrates the various

temporal meanings and structures which relate to the use of computers, the Internet, and other technologies during retirement.

### **Reflections on time**

Before turning to these different temporal themes however, we will first examine participants' reflections on time, prompted by the methods of this study. References to various forms of time emerged throughout interviews, however, the practice of recording time use in the diaries lead to more specific reflections on how it was spent. As Pearl said; "I tell you what, it really makes you realise what you do do, accounting for every little fifteen minutes." This reflects how the practice of recording activities as quantifiable, measurable units of clock time, differs from everyday lived experiences of time (Adam 1995, Gershuny and Sullivan 1998). There were often contrasts between perceptions and recordings of time, and a number of participants were surprised at the amount of time they spent doing routine activities such as sleeping, eating or going food shopping. Participants' initial perceptions about their daily routines (or lack of) often contrasted with the patterns revealed in their diaries, as will be discussed in more detail below. Several participants were also surprised at the amount of time they spent watching television, and Brenda was keen to point out that this was not typical behaviour, but it was due to the Olympics being on television that week. Therefore, reflections about the diaries not only revealed contrasts with perceptions of how time *was* spent, but also revealed normative views about how it *should* be spent. This often concerned whether participants felt they had kept themselves as active enough, as Carol discusses;

"I think when your life is measured out it's always surprising, because in my head I am active all the time, but quite clearly I'm not, that bit was a surprise, I see myself as a very active person but in fact that suggests I spend quite a lot of time in bed, at least 8 hours, no 7-8 hours, quite a lot of time eating in company but not by myself, so yes, there were some things that surprised me."

This concern with keeping active reflects the 'busy ethic' or 'work ethic' among retirees (Tsuji 2005, Haddon and Silverstone 1996), which was discussed earlier in relation to work and leisure time. These concerns were also gendered though, and as found in previous research on women and leisure (e.g. Wimbush 1988), it seemed to be mainly women in the study who described 'feeling guilty' about doing nothing, particularly with

regard to not doing enough housework. As Pearl said “I think when I look back on it, how little housework I’ve done really”, while Jane thought that after reading their diaries I would ‘probably be wondering’ why her husband did most of the food shopping. As argued in the literature on the ‘sociology of emotions’, the emotion of guilt works to reproduce social norms, as non-conformity with expected behaviours leads to feelings of guilt, and subsequent self-controlling of behaviour in order to avoid such feelings (Fields et al 2008, Scheff 1988). In this case, perceived failure to adhere to gendered norms around the division of labour, produced feelings of guilt and self-monitoring of the ‘appropriate’ level of domestic work. In contrast, men in the study like Fred or Jack lamented the amount of time spent doing activities they ‘were not really interested in’ like food shopping or washing dishes.

One of the critiques of time-use diaries is that not all time use can be easily broken down into quantifiable units (Gershuny and Sullivan 1998). This was one of the problems which participants came across when trying to record their activities, as Lesley discusses below;

Lesley: “We didn’t quite know how to describe the time, when we’re not doing anything [...] we’re just having a chat or looking down the garden, what are you doing? Is that leisure or hobby or rest? How you tie that in as an occupation? I don’t know but there was a lot of that in small doses....”

Interviewer: “...I suppose that’s something I could consider adding in...”

Lesley: “‘Doing nothing time’, see how many future people put a tick in ‘doing nothing’, tea drinking time....”

Similarly, Pearl found that it was difficult to keep track of the “little things in between that you do, that you don’t realise you’re doing at the same time as you’re doing something else.” This reveals the tensions between time as recorded and the “fragmented, effervescent quality of experienced time, which defies sequence and cannot be measured, but is imbued with meaning and significance” (Gershuny and Sullivan 1998:70). However, through encouraging participants to record simultaneous activities in their diaries, and also discussing subjective experiences of time and activities, this research has sought to



incorporate these different forms of social time. We will now turn to the some of key temporal themes which arose during interview discussions.

### **Technologies and changing experiences of time in retirement: time-passing, time-saving, or time-consuming?**

In keeping with traditional depictions of retirement (Roche 1989), a number of participants experienced more free time and freedom with how they chose to spend their time. As found in previous research, participants described themselves as having less 'urgency' or time 'pressure', and also observed a 'slowing down' in the pace of activities. This often created more time for the things they wanted to do, for instance, Greg had taken up bowling in retirement, which he did not have time for before, while George described spending more time on his hobby of collecting and selling stamps "than when I was working, because there's more time available." For some, increased free time also meant more time to spend using the computer, or learning how to use particular applications. As Audrey said; "when I was at work I wouldn't have had the time to sit and the patience to do it, but there's not the same urgency now." Similarly Arthur stated that;

"I think now my use of the computer will change, in that I will now have time to study the software and the programmes and therefore I'll go into more, you know, all the shortcuts and the possibilities, whereas I've just had to get on with it up to now."

Therefore in contrast to the association of the Internet and computing with the acceleration of modern life, they could be fitted into the slower pace and increase in free time in retirement, as a hobby which was 'time passing.' However, while many participants felt they technically had more free time in retirement, there was also a sense of a continuing lack of time. Participants generally described themselves as busy, and often felt there was 'not enough hours in the day' to do the things they wanted. As Jack said;

"...people always used to tell me who were retired, 'you'll wonder how you ever had time to go to work before you retired', I thought what a load of nonsense, but it actually does seem true, I don't know why but it seems there's less time now than before [...] in fact you now have more time to spend on the things you had to do very quickly before [...] so the work seems to fill the time no matter what..."

As Jack discusses, there was often a feeling that activities that were carried out quickly before simply expanded to 'take up' time in retirement. For some, lack of time reflected new constraints from voluntary work, as Jane discussed in chapter eight saying; "Well I think you've got more time on your hands, but you do more than you did when you were at work." For others, lack of time was experienced in relation to the take up of new hobbies, as Greg said; "we don't have a minute to spare! Dog walking, gardening, bowling, you name it we do it!" A sense of limited time was also connected to awareness of mortality, and time running out in later life, reconstructing concepts of linear time (Adam 1995), and depictions of old age as a "downhill slide to death" (Tsuji 2006:8). As Hilda said, after retirement "time's more limited then. I mean you know that you're running out as it were." Andrew and Jenny described this lack of time as the reason for their early retirement, saying "there's all sorts of things we wanted to do and at our age you can't hang about [...] you don't know how long you've got so you cram in what you can." For Lesley and Ian, in contrast to the view of retirement as a time for slowing down, they felt that "time accelerates as you get older." This again illustrates mortality as the ultimate embodied constraint on experiences in later life, as discussed in chapter seven.

In the context of experiences of time in retirement as limited, it could be argued that the speed of new ICTs may be important for 'saving time'. In keeping with theories of time and technology, many participants described the 'speed of accessing information' and 'communicating' as the main advantages of Internet use. Carrying out activities online rather than having do them in person was felt to also save considerable time, for instance, Jenny stated; "It just saves so much time, because to go and actually look these things up would take hours and days and weeks." Such activities included searching library catalogues, online banking, and carrying out research. These time-saving advantages are highlighted by Audrey in the extract below;

"... I'm quite an impatient person, and I find it very satisfying that I can do things and find information and it's all done quickly. If you have to go to [...] the library or you've to go to the bank [...] I find it very satisfying that things are there at my fingertips and I can access things, you know, quickly and easily."

As well as the time-saving properties of these online facilities, the use of the Internet for news was described by several participants as saving time. As Albert said, he and Enid “always used to buy a newspaper” but they found “it took up too much time”, while it was much “easier to find what they wanted” from the range of newspapers online, without having to wade through endless supplements and irrelevant items. In addition to the benefits of the Internet for saving time, the time-saving properties of word-processing programmes were also noted by respondents, as Jeff said “you can move text around and do redrafts very quickly [...] it’s much, much faster than having to do it all handwritten.”

However, as well as saving time, computer and Internet technologies could also be experienced as time consuming. As suggested by Lee and Libaneau (2000) in real situations technical problems and slow connections could limit the time-saving advantages of the Internet. There was a contradiction between the speed of computers and the Internet, and the slowness is created by such technical problems, which is illustrated by the following discussion;

Interviewer: “And what would you say that you liked most about the Internet or computers?”

Carol: “Speed of communication.”

Interviewer: “Mmm. And what would you say was the aspect that you liked least?”

Carol: “Oh the technology, it drives me crackers, when it’s very, very slow [...] when it says ‘updates, updates’ I just think ‘Oh, I’ll do that in a minute’ and then it freezes and it says ‘Do not switch off your computer’ and I’m half way through something, and it just takes up time then I’ve got to go back to it. That’s the kind of thing that drives me mad, and everybody tells me ‘If I had Broadband that wouldn’t be the worry’ but you know, it’s still fifteen odd [...] a month...”

Here she describes computers and the Internet as both fast and annoyingly slow. As she rightly points out, the slowness of her connection is partly due to the fact that she does not have Broadband, but she is not able to afford it. Most participants had switched to Broadband, and felt that their older dial up connection was extremely slow in comparison. The slowness of computers was the main reason cited for upgrading to a newer model. However, most participants still experienced times when their computer or Internet

connection would 'freeze up', or when viruses lead to it slowing down. Trying to fix technical problems could also take up quite a lot of time, and the continual upgrading of computer technologies discussed earlier meant that difficulties getting new technology up and running could be an ongoing issue. For instance, Audrey had bought wireless broadband during the period of interviewing, which initially wouldn't work on her and her husband's computers, and she "had spent the week installing it with great difficulty." In Albert's time use diary it similarly emerged that he 'spent a lot of time' that week trying to fix problems with his new computer and printer. Time was also felt to be wasted through difficulty figuring out how to use particular programmes or applications, as discussed by Barbara;

"I find sometimes it is what I feel time wasting [...] because of not knowing, I suppose not being on top of all the technology, because it doesn't seem to do what I want it to do ..."

Barbara links this difficulty to her not being competent with computers, and Lesley similarly complained that she "can't make them do what I want them to do, and I don't seem to have the patience or the time to spend learning." However, Barbara's husband George felt it was a fault of the computer industry for not making things 'user friendly', which relates to gendered constructions of competency discussed in the previous chapter.

As well as technical problems, the demands of responding to emails could create new time pressures, and 'take-up' time. For instance, Pearl who was secretary of a running club felt the demand for a quick response to emails from members necessitated her spending a lot of time on the computer. As she said; "it takes up too much of my time [...] one drawback as well is if someone sends you an e-mail, they expect you are sitting there all day, if they don't get a reply they want to know why and get a bit upset." Participants like William and Emma similarly felt that the need to reply to emails was time-consuming, and something of a 'burden'. This illustrates how the connectivity provided by the Internet is not always positively experienced, as will be further discussed in chapter eleven. In addition to checking emails, searching for information on the Internet could also 'take up a lot of time', and it was easy to lose track of time when on the computer, as described by Lesley;

"...computer minutes take half an hour', this has been a saying in our house for a very long time, and it is true, 'it will only take a minute', it doesn't only take a

minute, it never takes a minute. You go online and go to look up a hotel and by the time you've gone in, by the time you've looked at the site and then go to the ones that are like it, it just takes too much time and time is precious."

Here in contrast to the view of Internet technologies as inherently fast and time-saving, Lesley describes the nature of 'computer minutes' as time consuming. Her description of 'losing track of time' illustrates how computers can change the time-space relations of the home (Holloway and Valentine 2003). Other participants similarly described losing a sense of time when on the computer, as they went on to the Internet for a specific activity, and then drifted into doing something else. This losing track of time was particularly the case for participants who researched genealogy online, as Ian describes;

"I'll be looking at the email and drift into doing something else 'oh I'll have a go at that as well', I don't specifically think I will go and do some genealogy, I just think 'oh I'll go and do that now while I've got a minute', and then a minute stretches into half an hour, an hour..."

Similarly, Emma described how she 'sometimes gets sidetracked' on the computer when she gets an email about her family tree and "then suddenly you're away on something you didn't intend to do, and you haven't got time to do, and it's quite easy to lose track of that."

The way in which time spent on the computer was interpreted depended on participants' orientation toward technology. As discussed above, participants like Lesley and Barbara felt that time spent on the computer was wasted, particularly when trying to figure out applications. In contrast, Audrey stated that one of the things she enjoyed about computing was "if I want to do something and it won't do it, I'll spend endless time making it do it, you know, I enjoy that side of it." As found by Horning et al (1999) it was generally 'sceptics' who viewed time spent on the computer as wasteful. As Lesley said; "time is precious and time spent on the Internet is just wasted". This connects perceptions of time using ICTs as wasted to a view of time in retirement as a limited and precious resource, as found in previous research (Haddon and Silverstone 1996, Richardson et al 2005). Due to this limited time, participants like Lesley, Emma and Jeff described themselves as prioritising activities, and computers were not high up in this hierarchy, as Emma states;

"I do feel a huge pressure of 'were not here for ever'! [laughs] I know we all feel that none of us is going to die, but we are, and that's not within our control, and I

don't know how long we've got, and what do I really, really wanna do with my life? And sitting in front of the computer is not one of those things that's on my list to be honest [laughs]!”

For 'sceptics', computers and the Internet were seen as addictive (Horning et al 1999), and they tried not to get 'too engrossed in it' or spend too much time on the computer. As Jeff stated; "I think I'm sometimes tempted to be on it more than I should, you know, when I should be doing other things and being out and about and going for walks." In contrast, 'enthusiasts' like Audrey and Arthur embraced the increased free time to spend on the computer in retirement, and Audrey described how she would be 'very bored' and 'lost without' the use of the Internet for genealogy.

### **Flexibility vs. routines**

As well as debatably involving more free time, retirement was described as providing freedom from 'fixed points' or fixed routines. A number of participants described how they 'didn't have a routine' now, as they were no longer restricted by the schedule of the working week, and work deadlines or schedules. As Ian said; "there isn't a desperate urge to do things because you have to be at work tomorrow, and you don't think I must get it done this weekend because I won't be able to work on it until next weekend." Fred also pointed out that there was 'no real time restriction' in terms of scheduling activities or holidays, which were no longer shaped by the time-tables of work or school. Similarly Carol described a shift away from the more fixed organisation of her time, saying;

"I was a very well ordered person in my work life, although not necessarily in domestic life [...] and so I kept very regular hours, both at work and in my day to day activities. Saturday's were given over to shopping in the morning and so on and then Sunday's would be given over to marking or preparation, and then the week started again, whereas now Saturdays and Sundays are a hotchpotch of anything, which is really very nice and therefore I don't have to wait for the weekend to have a nice time ..."

Carol's account reflects a change in the organisation of her time, as it is now freed from the constraints of the working week. However, it also illustrates how her routine was shaped by domestic activities, something which didn't emerge in the accounts of men in the study. As discussed earlier in relation to work and leisure time, women's earlier routines

generally involved fitting in housework or childcare around their work schedule, reflecting the 'relational' nature their time (Davies 1996), which will be discussed in more detail below. Many participants enjoyed the freedom from fixed routines in retirement, as found by Roche (1989), and some disliked the idea of fixed routines, and deliberately tried to avoid being tied to one. However, lack of routine in retirement was not always perceived positively, and some participants like Jenny felt that they 'need more routine in their life'. As Pearl stated "I often wish I did have a routine more, I tend to do things as they happen rather than have a routine." Deidre also felt that this lack of structure meant that it was difficult to schedule anything, as she never knew what she would be doing from one week to the next;

"You haven't got the same routine, I'm constantly having to cancel [...] things like hairdressing appointments because at one time I would just know, 'O.K you are working there', you know, you'd be able to fit in a hair appointment there. Now because we change what we do from week to week, you know, I find something I made six weeks ago is no use at all... "

In the context of this lack of routine, rather than structuring time like earlier technologies such as the television (Haddon and Silverstone 1996), the Internet is argued to facilitate temporal flexibility (Lee and Libaneau 2000). In keeping with such arguments, while most participants restricted television viewing to the evenings and particular programmes, the Internet was described as not being restricted to a routine. When asked if there was a particular time they would use the computer, participants generally replied 'whenever' or 'anytime'. As Barbara said; "I mean the thing about the computer is you can use it 24 hours a day if you want to. You can use it in the middle of the night." Although Barbara had never actually used the computer in the middle of the night, participants like Audrey, William, Jack and Pearl had on occasions when they couldn't sleep, and William described his patterns of computer use as being 'almost random'. This flexibility created a freedom to send emails or access services when they would not normally be available, as Jack said "you can do whatever you want to in the middle of the night [...] tickets, banking, e-mail." In general, Internet and computer use were felt to be something which fitted around other activities and filled available slots of time, rather than determining routines, which supports previous domestication research on the Internet (Haddon 1999). Many participants left their computers on all day, so they were available when needed, and tended to go on and off the computer for short periods. However, it was not only the

Internet and computers which could be used flexibly, and the radio was often 'all day' in combination with various activities, rather than being used at a fixed time.

On the other hand, in contrast to the flexibility suggested in interviews, time-use diaries often revealed more regular patterns in activities. For instance, while Brenda and Greg resisted the idea of having a 'fixed routine', their diaries revealed regularities in their daily activities, including particular times for walking the dog, watching television, and for his activities at the allotment and bowling club. In addition, every day they would wake up around the same time, and have a cup of tea while watching television. When asked about this, Brenda admitted that;

"there is a bit of a routine, for all you say there is a bit, because you usually get up about quarter to eight, he comes down and makes a cup of tea and we go and lie in bed, it's probably quarter to nine when we turn out of bed, and then after that it depends, usually Greg goes off with the dogs so while he's out with a dog it's an easy time to get the Hoover out..."

The majority of participants also demonstrated more regular patterns in Internet and computer use than they expected, and generally used their computer and Internet on a daily basis, suggesting a high degree of domestication into everyday routines. For Carol, her routines of use related to having a dial up connection and the cost of phone calls at different times, as she said;

"For the email, I only use it if I can possibly do it after eight, or before eight in the morning, so I often get up quite early to go in to see what there is, and certainly weekends I use it much more extensively."

For most participants, their most 'constant' or 'regular use' of the Internet and computer was for emails, which were generally checked first thing in the morning, and last thing at night, as well as at more irregular intervals throughout the day. As Maggie said; "first thing in the morning, go upstairs switch them on, check for emails, and last thing at night we go and switch them off." William and Enid viewed checking email in the morning as an 'extension of the post', and Enid felt this was something that had become 'natural' to her. This regular checking related to the pressure to respond to emails discussed earlier, as Pearl said; "when I wake up in the morning I switch it on and see if there are any emails that need replying to very quickly." As Pearl's comment illustrates, routines of checking



emails also related to embodied times of sleeping and waking up, and the environmental rhythm of night and day (Adam 1995), although they were not restricted by these rhythms. These 'natural' rhythms also intertwined with the economic times of work and leisure discussed earlier, and the restriction of 'work like' computing activities to the day time illustrates their relation to both these temporalities. For instance, while Maggie's restriction of work activities to the day time maintained work/leisure boundaries, it also meant that she could relax in the evening, and prevented concerns about these activities disrupting her sleep. However, the location of computers in a separate and generally fixed location meant they were less integrated into these bodily rhythms than other technologies. For example, a number of participants listened to the radio while getting dressed, having a bath, or going to sleep at night. As discussed earlier, this reflects the level of familiarity with the radio, resulting in a high degree of integration in domestic activities, times and spaces.

In addition, both television and the radio were often combined with meal times, while the computer was not used in this way. While television use was generally avoided during the day, an exception was often made at meal times, and a number of participants put the television on when having their breakfast, dinner or at 'teatime'. These mealtimes often coincided with the times of news broadcasts on the radio or television, and most participants still tuned into the radio or television news at a set time of day, particularly the one o'clock, six o'clock, and ten o'clock news. This is in contradiction to the view that these fixed points would be eroded by the Internet and channels such as News 24 (Lee and Libaneau 2000). For instance, although Hilda watched news 24, she still watched the television and radio news at particular times;

Hilda: "Yes I think we certainly have the news first thing in the morning and at teatime, that's fixed...."

Interviewer: "Would that be on the television or on the radio?"

Hilda: "On the radio."

Interviewer: "Radio, right."

Hilda: "I watch the television news usually about seven o'clock, because there's a good, there's normally a good weather forecast on just before seven on news 24. I do like the weather forecast, and then after that if there's nothing else we want to hear we play CDs. I think that's the sort of basic pattern..."

Like Hilda, Maggie also watched 'News 24' as well as regularly watching the 'ordinary' television news at slots of one o'clock and six o'clock. Although as discussed above, a few participants used the Internet for news, most preferred to get their news from the television, radio, or newspapers. Those who did use the Internet for news still watched television news at particular times, and usually described their use of the Internet as a replacement of newspapers rather than the television.

As well the 'natural times' of embodied rhythms and the cycle of night and day (Adam 1995), routines of technology use also related to the environmental times of the seasons and weather. If the weather was good, participants would reserve television viewing or computer use to the evening so they could get outdoors, however, they would use these technologies more if the weather was bad, as Lesley said 'it is weather dependent'. Similarly, several participants reported using the computer or television more in the winter, when they couldn't get outdoors as much, as Ian said; "that's winter things for when I can't get outside and can't do any woodwork, can't do any DIY stuff, so go online. It's something to do during the winter." This reflects the division between indoor and outdoor space (Holloway and Valentine 2003), and the prioritising of outdoor activities among some participants. It also illustrates how computer and Internet use are situated within a multiplicity of different temporalities (Adam 1995), which shape rhythms and routines in retirement.

### **Household relations and relational time**

As well as being situated within the temporalities of embodied rhythms, time spent on the computer or Internet was also situated within relations in the household. As discussed in the previous chapter, there were several households in which the computer was shared, and it could not be used 'anytime' but only when it 'was available'. In order to deal with this, Emma and Jeff described a careful organisation or scheduling their time to use the computer, as she said 'we have to kind of negotiate it at the beginning of the day.' The other couple who had to regularly compete for use of the computer was Jenny and Andrew, and while there was no formal scheduling of time to use the computer, they described it as a process of 'give and take'. However, the discussion below suggests some conflict over computer use the previous day, when Jenny was waiting for Andrew to finish using it;

Jenny: "And we fight!"

Andrew: "Do we?"

Jenny: "Well we nearly did. I was chuntering around yesterday [laughter]."

Interviewer: "Do you think that's an issue, if you both want to get on at the same time?"

Jenny: "No not yet..."

Andrew: "It doesn't happen very often, but yesterday Jenny came back [...] and wanted to just go on the computer, and I was on looking at some family history thing, and I do this 'Oh I'll just spend ten minutes looking at this' and two and a half hours later I'm still there [...] it does actually then start to build up and take a lot of time. [...] And if Jenny wants to get on and do something that she wants then she has...well she sits and waits and vice versa, but it doesn't happen very often really."

This account indicates some discrepancy between the two participants in that she perceived them as fighting over usage, whereas he seemed surprised by this, and described it more in terms of patiently waiting for each other. His account also indicates 'losing track of time' while on the computer as being at the root of tensions over usage. While as discussed earlier, conflict was not felt to be a big issue, there were suggestions in other households of potential conflicts and tensions centred around the amount of time spent on the computer. For instance, Hilda stated that she was quite happy for husband William to use the computer as long as he didn't spend 'too much time on it.' Similarly Brenda's husband Greg described how they hardly saw each other because when he wasn't outside she was either on her computer or her knitting machine, and he jokingly said that he could get a divorce on the grounds of 'desertion'.

As found by Holloway and Valentine (2003: 116), in seeking to organise their time on a shared computer, participants would often organise the needs of different household members into 'hierarchies of use'. This emerged in Lesley and Ian's interview, when discussing competition for the computer at an earlier stage when their children were at home;

“What tended to happen was the youngest one would get the earlier time and the next oldest, there are two of them they could have it afterwards if there was going to be an issue, Ian would wait until they went to bed. I never bothered except to type the minutes and if I was typing the minutes ‘mummy rules okay’ and nobody gets to go on the computer if I needed it, because mine would only be once a month or once every six weeks.”

This discussion suggests that in Lesley and Ian’s household, the youngest family members had priority for using the computer because they went to bed earlier, illustrating the intersection of embodied temporalities with those of household relations. However, because Lesley so seldom used the computer, when she did her use would take priority. In Emma and Jeff’s household, when organising her time to use the computer, Emma often prioritised Jeff’s usage, as the following extract illustrates;

Emma: “...I find out where you wanna be during the day, because I’m out at set times usually and your in more than I am, and then I try and, usually try and fit in around your arrangements, Jeff’s arrangements. If he’s out or he says ‘I’m going out in the afternoon’, and I think well I’ll go on the computer then, but sometimes I have to say ‘Right I’ve got an assignment, I’ve got to do it this weekend, I need to go on the computer’ and he’ll say O.K, that’s alright...normally! [laughs]... We don’t have rows about it [laughter]...”

This suggests that her time is organised relationally around his needs (Davies 1996), and suggests traditional gender patterns in the organisation of time and space. While this was not the case in most households, as discussed in the previous chapter, it was generally women who left the living room when they didn’t like their partner’s choice of television programme, illustrating the organisation of their time and space in relation to their husband’s needs. However, Emma’s discussion also illustrates that when she wanted to use the computer for an assignment, her use was prioritised, demonstrating the prioritisation of work over leisure time, as found by Holloway and Valentine (2003).

The gendering of time, and the ‘relational’ nature of women’s time, also emerged in discussions among households where the computer was not shared. We have seen how technology use is situated within the rhythms and needs of the body, and there is often a gendered division in terms of who attends to these needs (Twigg 2004). For example, Enid

described how her time on the computer was often interrupted by having to prepare meals, while this was not considered by her husband, as illustrated by the following extract;

Enid: "Any times when we felt that working on the computer was interrupted for any reason? I think just food and the telephone."

Albert: "Oh no, I don't think so."

Enid: "Yeah, well me anyway, I have to stop and go and do food don't I?"

Albert: "Oh you do, yes."

Enid: "And answer the telephone, I do the answering the telephone."

This shows how as well as being situated within one's own bodily limits, computer use was also situated within rhythms of caring for other bodies. Similarly, Audrey kept more time-consuming computer activities in the afternoon "because there's lots of other domestic things to do in the morning." This reflects the self-monitoring of behaviour in response to social norms and feelings of guilt discussed above, as Enid said; "I've got this old fashioned idea that I should be doing housework on a Monday morning." For participants like Dot who lived on their own, their routines were not constrained by other household members, as Dot said; "with living on my own I've got nobody else to interfere with me routine have I?" However, while living alone, Carol's use of the CD player was still shaped in relation to the times of her neighbours;

"Because I live in a flat, there are people above and to the side of me and below me, I'm very cautious about using my CD...because I like music loud, if I'm gonna listen to it, I want to hear it properly. Unless everybody's out, and everybody's out now, so this time of day if I'm at home I let rip."

Therefore her music listening was still shaped relationally by the times of her neighbours and their routines. Caring for others outside the home could also place constraints on technology use and other activities. For instance, Brenda described how caring for her daughter who was ill with Multiple Sclerosis meant that it was difficult for her to make any fixed arrangements, as she didn't know when she might be needed. This meant she could not commit to regular voluntary work or leisure activities, and while she would like to attend courses to improve her skills in computing practices such as digital photography, she found it difficult to commit to a fixed timetable. As she said; "it has to be very

spontaneous what I do so that's possibly why I don't do as many courses as I'd like to do." She also described caring as a general constraint on her time, including using the computer;

"...on the computer particularly I like the digital camera and doing photographs, one of the things I do want to do and I will do it eventually is put all the old ones, scan them in, name them and put captions on, but as I say, time is the thing isn't it? Last week to be fair I was in Newcastle for two full days because my daughter was in hospital [...] I was staying most of the day with her, so they were two days when I did nothing except read a book on the train and chat and sit with her in the bed, things like that take it out of you a bit [...] it's just really a question of if you're going up to a hospital and sitting in a room and you can't really do things, you can't do anything, so that does take a bit of time off me ..."

Here caring activities were described as 'taking time off her' and as the reason for her lack of time, however, caring for her daughter took priority above other commitments. It appeared to be only her time which was 'tied' in this way, and her husband was still able to take part in regular activities at the bowling club and the allotment. As she said "at least I'm around and it's usually me that ends up having to go to the hospital if she needs to go [...] or anything like that." This fits with the findings of my quantitative analysis in chapter four, which showed that caring activities reduced the likelihood of being online, and helped explain gender divisions between older men and women. However, while women did the majority of domestic work, both men and women were involved in caring activities in retirement, although for women these had taken a more prominent role earlier on. Nine women and seven men in the sample currently participated in some caring activities, including babysitting, caring for ill relatives, and helping out neighbours. However, the women who participated in caring activities often cared for a greater amount of individuals, and perhaps devoted more time to these activities. For instance, Deidre and Arthur both helped with babysitting their grandchildren, but Deidre also visited elderly neighbours, and recorded more time spent caring in her diary. In contrast to previous quantitative research though (e.g. Kennedy et al 2003), the constraints of caring activities did not necessarily result in women spending less time on the computer than men. For instance, while spending more time caring that week, Deidre spent more time on the computer than Arthur. There were mixed results among couples in terms of who was felt to

spend the most time on the computer, although there were six households in which the man was described as using the computer most and only three where the woman was seen as using it more. Descriptions of these patterns generally fitted with the findings of time-use diaries. Rather than reflecting the amount of time spent caring, differences between couples in the amount of time spent online normally reflected different levels of competency and interest in computers. For instance, while Brenda's activities were more constrained by caring, her husband was not interested in using the computer, and therefore she used it more, as with Audrey and Fred. However, although Emma was more competent, she used the computer more in work and therefore less at home. While there may not be clear cut quantitative differences in terms of time spent on the computer, the qualitative experience of activities being organised and shaped by the demands of domestic and caring activities emerged among women, but not men, in the sample. This difference in the 'quality' rather than the 'quantity' of time using technologies (Wajcman 2008) is also reflected in the higher levels of multi-tasking among women, as discussed earlier in chapter eight.

Caring activities could also continue via the Internet, through looking up health information for others. Previous research has found that this activity is gendered (Liff and Shepherd 2004), and that more women use the Internet to look up health information for other people. In my research, five women and four men had used the Internet for general health information. Out of these participants, two of the women had used the Internet to look up health information for other people, for instance, Emma had looked up information regarding her husband's health scare, and had also looked information about her brother's illness "not for him, because I know he'd been already on the Internet, but I just did it for me, and to reassure my Dad." Lesley also looked up health information for other people, as she said; "whenever any member of our family has something wrong with them you go and type the illness in and see exactly what it involves." Two men in the sample had also looked up information for other people; Bill had looked up information with his wife Jane regarding the illnesses of a cousin and a friend, and had looked up information for her when she was unwell. Similarly, John had carried out health related activities on the Internet for himself and his wife Betty. However, it must be noted that both of these men were in households where their wife did not really use the Internet, and it appeared that their wives often encouraged them to look up these materials, or they looked up them together. This supports other work showing how traditional gender divisions around caring

and emotional labour may be reproduced through Internet technologies (Denzin 1998). It also illustrates the role of the Internet in intergenerational family relationships, something which will be discussed in detail in the following chapter.

### **Summary**

This chapter has examined the relationship between temporality and the use of the Internet and other ICTS at home in retirement. As suggested by earlier critiques, it has illustrated how these technologies cannot simply be associated with increasing speed and flexibility, but are shaped by the context and relations in which they are located (Green 2002). In the context of everyday home life, the 'effects' of technology on experiences of time was not straightforward, and they could be experienced as both time-consuming and time-saving. This supports arguments made by Wajcman (2008:61) that for a "richer analysis of the relationship between technology and time", theoretical discussions of changing temporalities need to be brought together with research on the everyday use of technologies. On the one hand, theoretical discussions of the changes in temporality prompted by new ICTs have often lacked support from empirical research, while on the other; domestication research has often lacked connection to these broader theories. My research illustrates the importance of dialogue between these areas, and bringing together a broader theoretical understanding of changes in temporality, with a micro-analysis of the everyday temporal routines and rhythms of households. It also illustrates the importance of bringing such research and theory together with wider discussions in the sociology of time, to aid an understanding of the location of technologies within a multiplicity of different temporalities in everyday life (Adam 1995).

On an empirical level, this chapter also suggests the importance of using multiple sources of time for developing this richer understanding, as diaries were important for prompting reflections on time, and discussion of differences between time as perceived and lived. This is a key issue in seeking to understand how technologies relate to contemporary experiences of temporality. For instance, the Internet and other new ICTs are argued to be contributing to the 'speeding up' of life in contemporary society, but while people report qualitative experiences of greater time pressure and pace of work, there is no clear quantitative increase in the number of hours people work (Wajcman 2008). This tension between quantitative measurements of time and qualitative experiences is also relevant for understanding gender divisions, as will be discussed below.



This chapter also illustrates the importance of examining how such experiences of time and technology vary among different social groups, as the specific circumstances of retirement shaped the temporal experiences associated with computers and the Internet. Unlike younger age groups, retirees are outside the time-pressure of the work place (Parkin 2004), and the pressure created by balancing caring for a younger family with paid work (Wajcman 2008). However, while there was discussion of a 'slowing down' in the pace of life during retirement, retirees also experienced pressures due to new time commitments, and a sense of time 'running out' in old age. Therefore broader social changes in temporality need to be situated within these life-course experiences, as well as individual experiences of life-changes. Despite commonalities, there was variation between retirees, according to different types of users and their attitudes toward technology, as found by Horning et al (1999). While enthusiasts were more likely to emphasis the benefits of the Internet for saving time, sceptics were more likely to view time spent using these technologies as 'wasted time'. As argued in chapter two, this illustrates how the Internet cannot be depicted as having a straightforwardly positive impact on the lives of older people (Selwyn 2004), and illustrates the complex 'effects' of technology when explored in everyday contexts.

The experiences of time among retirees in this chapter were also differentiated according to gender, and findings further illustrate how gender divisions within older people are constructed in the micro-setting of the home. In chapter four, we saw how caring appeared to be an important factor in explaining statistical gender divisions in Internet use among older people, although this analysis was unable to explore such issues further. By investigating relations around caring and computer use in everyday life, this chapter has illustrated how while such activities may not result in the *quantitative* differences in the amount of time spent using technologies, they *qualitatively* affected experiences of time using them, and the organisation of temporal routines. This illustrates how caring constraints remain important after retirement, and are not only relevant for those caring for younger families. These findings also have wider implications for addressing gender divisions among various age groups, and support arguments discussed in chapter two; that digital divisions need to be explored qualitatively in everyday life in order to better understand them. This chapter has emphasised the importance of the specific experiences in retirement in shaping temporal routines and experiences of technology use. However, as argued throughout this thesis, such experiences are grounded in domestic divisions,

practices, and values established earlier on in the life-course. This includes the continuation of earlier domestic divisions discussed in chapter eight, and the level of familiarity with technologies.

While this chapter and the previous one have focused on time-space relations in the home, ICTs are also argued to blur the temporal and spatial boundaries of this space. Furthermore it is argued that relations around technology in the home need to be located in a broader context (Holloway and Valentine 2003). Therefore, the final chapter goes beyond the home, locating the use of these technologies within broader networks.

## **Chapter eleven**

### **'It's a way of bringing families together that was never possible before': Extending temporal and spatial boundaries beyond the home**

#### **Introduction**

The previous chapters have explored how the use of the Internet and computers is situated within the temporalities and spatialities of the home. This chapter goes 'beyond the home' to examine the way in which new technologies connect the home to wider social networks, and also to assess how online relationships are situated within spaces and mobilities outside the home. It will begin by briefly examining literature on spatiality and social networks, and counter arguments regarding the impact of Internet use on sociability. Contrary to these arguments, it will be suggested that rather than 'impacting' on offline relations, online and offline spaces and relationships are intertwined (Valentine and Skelton 2008:481, Wellman et al 2002). The findings of this research illustrate how online connections can extend relationships across time and space, however, online relationships were also embedded with offline ones, and the Internet was used to facilitate and organise offline travel and meetings. While most participants emphasised the advantages of these online connections, they could also create intrusions on privacy and security. As a result of lacking face to face contact, online relationships with unknown correspondents and particularly financial transactions could be perceived as risky, and it was often difficult to establish trust. Furthermore, engagement with online social interactions varied between participants, again suggesting that the effects of technology are neither predictable nor universal (Horning et al 1999).

It has been argued that research should extend the concept of the home to explore its broader location within a surrounding neighbourhood or local community, and also to address the way in which new technologies enable connections unrestricted by temporal and spatial location (Holloway and Valentine 2003). As argued earlier, such technologies contribute to the leaky boundaries and porosity of the home, challenging divisions between public/private, work/leisure (Blunt and Dowling 2006). Despite the positive benefits of such connections, some authors argue that use of these technologies is isolating the home and reducing outdoor activities and socialising (Holloway and Valentine 2003). These fears reflect broader discourses around the impact of the Internet on sociability, in which it is suggested that too much time spent online reduces offline interactions, and leads to

isolation (DiMaggio et al 2001). On the other hand, some theorists champion the positive role of the Internet in maintaining social networks, and enabling new connections to be made (Hlebec et al 2006). Research in this area shows mixed findings, and while a couple of studies support the idea that the Internet is reducing offline interactions, others show an increase in sociability, or suggest little impact on social interactions (DiMaggio et al 2001, Hlebec et al 2006). However, it is argued that simplistic conclusions regarding the impact of the Internet on travel and sociability present an over-deterministic view of the 'effects' of technology (Wellman et al 2003). Instead, it is suggested that changes in social interactions are not simply a result of Internet use, but reflect a broader societal shift from localised neighbourhood communities, to spatially dispersed networks of friends, family, and work colleagues (Castells 2001, Wellman and Gulia 1999). Furthermore, accounts of the impact of technology on social interactions ignore the complex interconnections between online and offline spaces and relationships (Valentine and Skelton 2008, Wellman et al 2002). While to some extent the Internet and other new communications technologies may transform online relationships, it is argued that offline travel and meetings remain necessary to everyday social interactions (Urry 2002, 2003). Indeed, the Internet may facilitate the organisation and planning of offline meetings, although as found in Valentine and Skelton's (2008) research on the deaf community, it may transform the spaces in which these meetings take place.

In theorisations of the impact of the Internet on mobility and relationships, older age groups have not received much attention. However, as we saw in chapter two, several studies of older Internet users have suggested that the Internet has positive implications for the maintenance of family, friendship, and support networks, and reducing isolation (Blit-Cohen and Litwin 2004, Richardson et al 2006). Due to increased geographical mobility, the Internet has been found to be important for maintaining inter-generational relationships in dispersed families (Climo 2001), and has been found particularly useful for keeping in touch with grandchildren (Richardson et al 2006). As with research on younger age groups, these studies suggest that the Internet does not displace or reduce offline interactions, but add to existing offline social networks (Blit-Cohen and Litwin 2004). For instance, Climo (2001) notes an increase in face to face contact between elderly parents in America and children in Israel, due to cheaper and improved air travel, which occurs alongside an increase in daily communication via email and cheap telephone calls. However, with the exception of Climo's research, most of these

studies focus on online relationships, and do not examine their integration with travel and offline spaces. In order to address these issues, we will now examine how the older people in this study used the Internet to facilitate social networks beyond the home, the relation of Internet use to offline travel and mobilities, and experiences of connectivity from within the home.

### **Maintaining social networks online**

As found in previous research on older age groups (Richardson et al 2006), participants emphasised the value of the Internet for communicating with friends and family, particularly those who now lived abroad, or who had moved to different parts of the country. As Lesley stated;

“...I like the fact I can e-mail my sisters and we can e-mail people abroad, it’s a way of bringing families together that was never possible before when phone calls were huge prices and the time differences didn’t allow it. You can just drop an e-mail to somebody and say ‘hi, hope you are OK, all well here, Fred is getting married’, it can be short but you’re still communicating with family and with friends and I do feel that is actually a wonderful side of the system...”

As Lesley discusses, due to the expense of travel and phone calls, and the time differences, the Internet was valuable for communicating with geographically distant family and friends. It was also useful for friends and family who were socially distant (Holloway and Valentine 2003), for instance, Audrey had previously lost touch with her nieces, but was now “in touch with all of them by email whereas none of them would write letters, and I don’t know their phone numbers...so I would never phone them.” Participants also described how email was useful for keeping in touch with people who they would occasionally send a letter or card to, but rarely saw. As Andrew said, he found email useful for ‘friends from way, way back...that we’ve continued Christmas card over the eons of time, but never actually seen for 20, 30 years...’ While the Internet was used most for these more distant communications, participants also used it to contact some friends and family nearby, as well local voluntary organisations. However, not all participants used email for communication with family, and exceptions to this were Emma and Jeff and Jane and Bill, as not many of their family were online. It might be expected that this distribution would be influenced by class, however, Emma and Jeff were middle class, and with the exception of Jane and Bill all the other working class participants used email for this

purpose. In fact Dot, a working class woman, was one of the most enthusiastic Internet users with regard to communicating with family members online.

These online communications generally took place via email and sometimes Skype, although Brenda, John, and Audrey had also used MSN messenger and webcams. As noted earlier, only Dot used the social networking site 'Face-book' to communicate with family. This fits with previous research, which found little difference between older and younger age groups in use of email, compared with a much lower usage of instant messaging, chat-rooms, and particularly social networking sites, among older age groups (Dutton and Helsper 2007). The use of email rather than other methods of communication often related to the age of those participants corresponded with, for instance, Dot used Facebook to communicate with her grandchildren, and had gotten interested after watching them using it. In contrast, Audrey had tried using a webcam and instant messenger to communicate with a friend in Australia but found that it "didn't do very well" as "she's my age, and I don't think she's all that interested, she prefers to send emails." Furthermore, many participants had siblings or friends their age who were not online, and therefore they phoned them instead of emailing. In contrast, the Internet was particularly used for communicating with grandchildren, nephews, and nieces, because as noted earlier, email had 'replaced letter writing' for communicating among younger generations.

As can be seen above, online communications were generally an extension of existing offline family and friendship networks, rather than involving new 'virtual' ties (Castells 2001). However, the Internet was also used to establish some new contacts online, and to recover friendship and family networks which had previously remained dormant. As noted earlier, several participants were involved in genealogy, and through interactive websites such as 'Genes Reunited' and 'Ancestry.com', they had made new contacts with other genealogists. These genealogical social networks were often based around a mutual sharing of information and resources (Yakel 2004), as Audrey said; "I do my own research here and then feed it onto 'Genes Reunited [...] and they look at my tree and I share theirs.'" Through these websites, participants had also made contact with distant relatives, for instance, Ian had been doing genealogical research for 25 years, and described how he had found six relatives online, including one he "didn't even know he had who lives in Doncaster." Audrey also found that "quite a lot of different relatives get in touch" through Genes Reunited, which included distant relatives, as well as one of the nieces who she now maintained regular email contact with.

Through researching past family connections, genealogy enabled the extension of family networks across temporal as well as spatial boundaries. Participants often described how genealogy was inspired by the desire to recover information about ancestors and deceased family members, in the absence of oral history (Meethan 2008). For instance, Andrew had wanted to find out how his grandfather and grandmother had met as “he came from Somerset and she came from Huddersfield, how did they get together in those days?” Another participant, Ian described how when he was younger he wasn’t interested in family history and never thought to question family members about it, and by the time he became interested “they are gone, and you’ve never asked anybody and it’s too late.” He was now using genealogy to uncover this absent information and find out ‘what his granddad did’, where his Mum and Dad were born, and “just asking why, and when, and where.” Research into deceased family members did not only occur in the absence of oral history though, but could sometimes be inspired by family stories. For instance, Brenda described how she and her sister had been ‘fascinated’ by the stories of their Aunties, which made them want to find out more. As well as extending family relationships into the past, the Internet also enabled old friendships to be recovered. While none of the participants used social networking sites in general, the website ‘Friends Reunited’ was a popular resource for participants to get in touch again with old friends they had lost touch with. For instance, Audrey was now in regular email contact with an old school friend who had moved to Australia and had ‘found her through Friends Reunited’.

In addition to exploring past family relationships, genealogy was also connected to a concern with the future, and recording family relationships for future generations. In addition, as found by Lambert (1996), genealogy provided a way to be remembered by future generations, as Lesley said;

“I think genealogy is something that with time, with age comes almost the need to write down something about your existence, if you don’t write down your husband, your wife, your children, your brothers and sisters, their children, it is almost proving that you have existed for want of a better description, and I think that’s why as you get older you start thinking it’s important to record and to be recorded, just that you are alive, that you have happened.”

Therefore, the Internet was not only used to extend networks with family members, but also to celebrate and record family relationships in new ways (Castells 2001 citing Waller

2000). In the case of genealogy, this involved the presentation of family trees on websites such as 'Genes Reunited', while Dot used her Facebook page to display family photographs. The recording and transmission of family histories and connections has been described as an important part of grandparents' role in the family (Ross et al 2005), and such discussions illustrate how the use of the Internet is integrated into these practices of grand-parenting. Photographs are an important part of this process of recording and passing down family history, for instance, Audrey discussed how she recently received pictures of her husbands' cousins and their grandchildren, and had "scanned those and put them into the family tree." Lesley on the other hand found that "when you get older, you inherit all those old photographs and you don't know who they are" and genealogy had enabled her "put names to faces" and now "the old photos mean something." This reflects the importance of visual images in imagining distant places and people (Urry 2000), and photographs were also an important part of current online communications. A number of participants described sending and receiving photos as a way to keep up with changes in the lives of friends and family. For instance, William and Hilda's son had sent pictures of his new baby, while Richard described how when communicating with friends in Cyprus he would "send photos back and forward to show how we're progressing in the garden and things like that." The visual aspect of communicating with family and friends abroad was also emphasised by participants using Skype, for instance Richard stated that using Skype to communicate with family meant that he "could see them in Switzerland as well as talk to them." In addition, Brenda and John described how their friends abroad had bought a new home, and had sent them the link to the estate agent's website where they could get a 'virtual tour'. For Dot, the ability to use photographs easily in online communications made them "more intimate really, especially when they are putting photos on, you can't put a photo on a phone apart from a mobile."

Such discussions illustrate the importance of photographs for extending family 'togetherness' across time and space, which is particularly important for dispersed families (Rose 2003), and for older people whose children have moved out of home. It also demonstrates the integration of new technologies such as the Internet (including email, webcams, and social networking sites) and digital photography into the process of creating this togetherness with absent family members (Riviere 2005). As well as the display and sending of photographs online, computers and the Internet were transforming practices of sharing and displaying photographs in other ways. For instance, two couples described



how they had 'gone digital' with their photographs, scanning old photographs into the computer, and getting rid of original copies and albums. Another couple described how their friends would come round and view their photographs on the computer, rather than looking at hard copies. Such practices did not always replace older methods of exhibiting photographs though, and many participants printed digital photographs and presented them in photo albums, or around the home. For instance, Dot had created a collage of family pictures on the wall of her flat, including some of those sent online, while another couple had family pictures displayed in a 'digital photo frame'. The display of photographs in this way is part of the production of domestic space and the creation of homeliness. However, sending and receiving photographs also extends domestic space temporally and spatially, through creating a sense of togetherness with family members no longer present in the home (Rose 2003).

Despite the importance of the Internet for communicating with family members, as found in previous research, the use of the Internet did not replace communication by telephone (Castells 2001, Hlebec et al 2006), and both forms of communication were often integrated. For instance, Brenda described how when communicating with her cousin in Scotland; "I probably e-mail her nearly every day, probably ring three times a week, it's a mixture." This was particularly the case in more local or intimate relationships, whereas more distant ones tended to be conducted primarily via email. Some participants only used the telephone for nearby communications, while using email to maintain geographically distant ones. For instance, Carol described how when communicating with family nearby this was "usually by telephone, I like personal touches [...] I've got family in Australia so that's email most of it, but my kids, not really." The phone was generally preferred to email in instances where participants wanted to 'have a chat', as George said; "I much prefer a telephone if you just want to chat [...] it's much nicer to talk", although Skype was also used for chatting. As discussed in chapter six, preferences regarding email versus other forms of communication also reflected participants' general attitudes toward technology, and although all Internet users in the study used email, they varied in the extent to which they embraced online communication. Enthusiasts like Audrey, Dot, and Brenda enjoyed using the Internet for personal communications on various levels, while 'sceptics' preferred older forms of communication such as letter writing or telephone, and face to face interactions. For instance, in contrast to Dot's view of online communications as 'more intimate', Jeff felt that email was 'inferior to interpersonal communication' in

offline spaces. However, as will be discussed below, the findings of this study illustrate how online communications did not reduce offline meetings and travel, but were intertwined with offline interactions.

### **Technology use, mobilities and offline spaces beyond the home**

While enabling social networks to be maintained from within the location of the home, the Internet was also integrated into mobilities and spaces outside the home. The family and social networks established online were generally grounded in prior offline relationships, and as suggested by Urry (2002, 2003), offline travel and meetings often remained an important part of maintaining these relationships. This was particularly the case for relationships with nearby friends and family, but also for more distant ones. For instance, Brenda and Greg, and Betty and John, had used email and Skype to maintain relationships with friends that they had met on holiday abroad, and had also arranged for some of these friends to visit them at home via email. As well as being used to re-establish old friendships online, sites such as 'Friends Reunited' were also used to organise offline school reunions. Email was sometimes preferred to phone calls for making arrangements for offline meetings, particularly for events such as reunions or organisational meetings where large numbers of people were involved. This was because of the possibility of 'one to many' communication via email (Holloway and Valentine 2003), and also because email was more flexible, and gave people time to consider arrangements. These advantages also applied to local, personal arrangements, for instance, Audrey preferred to use email rather than the phone to schedule meetings with friends her local area saying;

“...it's easier than phone calling really [...] Cos we all look at our email more or less everyday, certainly Lesley and I do, so it's easier to present options and let people think about it and then decide what we're going to do...”

As found by Holloway and Valentine (2003) and Wellman et al (2002), the use of the Internet was integrated into local neighbourhood spaces and relationships. For instance, some members of the retirement community emailed their neighbours as well as seeing them in person, and Richard was currently involved in setting up a local area network to connect members of the community. The Internet was also used to organise residents committees in the retirement community, and to schedule neighbourhood watch meetings. In addition, computer use was often situated within local 'networks of support', and a number of participants described giving or receiving help from neighbours, friends, and

family nearby (Selwyn 2004). For instance, Audrey regularly helped her neighbours in the retirement community with computers, while Brenda received technical help from her neighbour's children. Not all participants had such local sources of support though, and instead sought help from local computer technicians or stores. For instance, Jenny and Andrew had bought their computer from a local shop as the person who worked there provided a 'closer contact' and 'safety net' if things went wrong.

As with other online social networks, genealogical networks continued into offline spaces, and offline travel was still important to researching genealogy (Timothy and Guelke 2008). Participants like Ian were also part of local genealogy groups, which met offline as well as communicating through the Internet. Not all the information needed was available online, as Andrew said, "in some cases it still means having to go to places to look through records." Researching genealogy often involved trips to local research centres, and the information gathered would then be fed back onto the Internet. For instance, Audrey described how "it's useful to be able to check with other people, because people go into different research places, and you can often sort out between you what it's likely to be." As will be discussed in more detail below, concerns about the accuracy of information online meant that it was often necessary to go and look at the original copy of records. The desire to travel in connection with genealogy was also motivated by an 'obligation to place' (Urry 2000, 2002), in terms of the sensory and emotional experience of visiting the home of one's ancestors. For instance, in connection with researching his family history, Andrew had made trips to Somerset a couple of times just to see 'where people finished up living', while Pearl had found out where her "uncle was killed right at the end of the Second World War" and described a desire to visit "where he's buried on the border of Germany and Holland."

Participants often used the Internet for planning such journeys, for instance Audrey had booked 'a genealogy holiday' online, which involved using an extensive research library at a stately home. The Internet was also integrated into more general experiences of planning travel, including holidays in this country and abroad, and the planning of day trips and outings. As noted earlier, one of the most popular uses of the Internet among this sample was to book holidays or travel tickets. It was also used for other aspects of planning travel such as looking up route maps, finding hotels, renting cars abroad, and viewing images of holiday destinations, hotels, or cruise ships beforehand. Participants described the benefits of having this information available online, compared to earlier methods of finding

information via visits to travel agents, and telephoning or writing to inquire about accommodation. As Andrew said;

“...there’s a lot of information on the Internet about all those sorts of thing [...] it gives distances between places, address, accommodation, all that kind of stuff you know. I’ve thought afterwards the idea of trying to organise all that by looking at brochures, or by telephone, or writing letters to ask people if they’ve got a room, waiting for a reply [...] for it all to just be there!”

Participants like Andrew recalled this change in practices of planning or booking holidays within his life-time, and he went on to say that “people will wonder in under ten years time how they ever managed to do without it.” His wife Jenny compared these new practices to those of the older generation, describing how her Dad “would have set off writing, about six months before they went off on holiday, writing and getting details of this and that.” The ability to book holidays online from home illustrates the complex relation between online and offline travel (Valentine and Skelton 2008:481), as it prevents unnecessary trips to the travel agent, while facilitating other offline journeys. However, not all participants found online holiday booking to be useful, for instance, although they looked up places and hotels, Lesley and Ian preferred to get a travel agent to book things, as booking online took ‘so much effort and time.’ Although embracing the advantages of the Internet for various interactions, Audrey also found that she normally booked her holidays at “the same place each time on the telephone” rather than the Internet because “I’ve always done it by phone, we’ve gone for many years.” Therefore, as argued throughout this thesis, practices of technology use established earlier on in life-course often continued into later life. This was also illustrated by the fact that although they had booked holidays online, participants like Andrew or Barbara would also ‘ring to confirm’, and liked to have a paper copy of the booking details. As discussed in chapter six, this was described as ‘generational thing’ which related to shared experiences of difficulties adapting to computerisation of the workplace, and a feeling of needing to have a paper back up in case in anything went wrong. As Andrew said; “it’s that back up process from a working situation where everything was on paper and you were always trying to cover yourself.”

In addition to planning and organising travel, some participants also accessed the Internet while on holiday, and used Internet cafes to keep in touch with family back home. For example, Brenda described how when they were in Tenerife she would go into an Internet

café about 'twice a fortnight' to email her daughter "only because knowing she ain't well, I like to keep contact." Therefore, her caring activities continued online while abroad. Other participants like Jack, Carol, and Emma, used email to communicate with their family at home when they were off travelling, and while in Australia, Carol also used Internet cafes to manage her online banking. Internet and computer use on holiday enabled participants to 'let people know that they are safe' and keep in touch, but also formed part of the recording of holiday experiences. This included use of digital photography, emailing photographs, and typing up holiday logs or diaries, although none of them kept online blogs. The use of email to communicate while abroad supports the idea that online communications are not limited to specific locations, and the 'person is now the portal' (Wellman et al 2002). However, the mobility of computer technologies themselves as objects (Urry 2000, 2002) was less fluid than found in studies of other age groups. While using Internet cafes, few participants actually took a laptop on holiday, with the exception of Deidre and Arthur who took one on holiday with them to Spain for three months of each year. Although Jack had a laptop, he stated that using an Internet café was much easier when travelling than 'carting the laptop around'. Even in terms of more local mobilities, while a couple of participants occasionally used a computer in the home of family member, as discussed earlier, the location of their own computers and laptops at home was generally quite fixed. Only Deidre and Arthur took their laptop outside the home, and while Joan had tried to take her laptop to use in her friend's home on one occasion, she found that the Internet connection wouldn't work and said she 'wouldn't do it again'. This may again reflect generational differences, as survey research has found that older age groups are less likely to use the Internet in multiple locations (Dutton and Helsper 2007).

Other technologies such as mobile phones, radios and iPods or MP3 players were more mobile as objects, outside as well as inside the home. Only a couple of participants had MP3 players or iPods, but these were used in a more mobile fashion, for instance, Carol and Arthur took their MP3 players with them when travelling abroad, while other participants like Deidre listened to hers while exercising outside the home. Many participants had a radio in their car, and therefore radio listening was integrated with car journeys, which emerged throughout Lesley's time use diary. Other participants like Barbara took a travel radio on holiday with them, while Carol and Arthur listened to the radio on their MP3 players when travelling. Again this reflects the familiarity with the radio among older cohorts, and its high degree of integration into their everyday lives, both

inside and outside the home. For instance, Barbara described how she “listened to the radio all the time” and took it with her on holiday because she felt “bereft if I haven’t got my radio.” Mobile phones were also frequently used to keep in touch with people when travelling, hiking, or just ‘out and about’, and also to arrange lifts after train journeys or other outings. For Joan, her mobile had become a ‘necessity’ and she wouldn’t “go anywhere without it, it’s horrible to think I haven’t got the phone on me if I leave it anywhere, it is more or less constant.” However, the use of mobile phones by other participants was more limited, for instance, Audrey and Fred, William and Hilda, and Emma kept their mobiles mainly ‘for emergencies’, and often left them switched off or forgot to take them when going out. Emma also described how she had difficulty doing an activity like texting while ‘on the go’ saying;

“Now I’ve learned how to text, but I mean I was told that this is kind of spontaneous cos my younger daughter will text me ‘Hi I’m in a club and I’m listening to blah, blah blah’ I think well I can’t use it like that. I’ve got to be in the quiet of my room working out how to do it.”

Therefore in these cases, the fluidity enabled by technologies such as mobiles is somewhat more limited, which may reflect generational issues concerning the difficulties of multi-tasking with new technologies, discussed in chapter eight. However, for some participants switching off a mobile phone or not using email on holiday was deliberate resistance to the intrusion of these technologies across temporal and spatial boundaries. As we saw in chapter ten, the pressure of replying to emails could be experienced as intrusive, as could the constant availability enabled by mobile phones. As Hilda said; ‘we don’t have them switched on because we don’t want always to be available.’ Lesley and Ian similarly resisted the use of the Internet and mobiles to communicate while on holiday abroad, as illustrated by the following discussion;

Lesley: “We’ve never been in an Internet café have we?”

Ian: “When we are on holiday we don’t have mobile phones are either, we’ve got mobile phones here but if we go abroad we just leave them behind because we are on holiday and that includes not going into Internet cafes, not answering the phone...”

Lesley: "E-mails will wait until we get home, life is precious, time is precious I think that is it for us."

This again reflects the different positions of 'sceptics' and enthusiasts, and as found by Horning et al (1999), 'sceptics' are more likely to view new technologies as intrusive, rather than embrace their possibilities for communication. The use of mobile phones was also gendered, and as noted earlier, men were sometimes less frequent users of both landline and mobile phones. For Brenda's husband Greg, not having a mobile was perhaps a way of avoiding additional chores and being 'on duty' (Green 2002) as Brenda said;

"...Greg doesn't have a mobile phone cos he doesn't want us to know where he is, that's what he said 'I don't want you ringing me and finding me and getting me jobs to do' [...] My eldest son says 'If only he'd take a mobile phone we'd ring him and he could do our shopping Mum' and I said 'Yeah but he won't have one cos of that reason' [laughs]."

This is in contrast to her use of email to continue caring activities while abroad, and highlights gendered issues around mobility and availability (Green 2002). As well as deliberate limitations on the mobilities and use of technologies while travelling, there were also external constraints on the abilities of some participants to travel. For younger, healthier participants like Jenny and Andrew, retirement provided new opportunities for travel. However, other participants like Audrey and Fred, John and Betty, and William and Hilda now travelled less due to physical constraints, and John and Betty had recently had to cancel a holiday they had booked as she wasn't well enough to go. There were also financial constraints on the travel experiences of some participants, for instance Bill and Jane found that 'it's becoming increasingly harder to go on holiday, financially' because as Jane said 'as you get older nowadays if you haven't got a lot of income or loads of pension which we haven't got, it is getting difficult.' This reveals class restrictions on offline mobilities, alongside those associated with age or health. For some like Audrey 'virtual travel' and Internet connections were increasingly important with the reduction of these offline travel activities, although as discussed in chapter seven, physical constraints could limit the use of the Internet. Not all participants with limited mobility embraced the use of the Internet though, and Betty and Hilda did not use the computer or Internet, while Jane

rarely used them. Therefore offline mobility as well as online could be restricted, and these participants had to get their husbands to print out emails from friends and family abroad.

These comments also suggest that mobilities are not static, and the ‘mobility biographies’ (Axhausen 2007) of participants reveal change throughout the life-course. As discussed above, participants’ experiences of change related to embodied changes associated with the process of ageing, and also to changing access to resources. They also related to broader social changes, in terms of costs of travel and communication, changes in booking and planning holidays, and changing experiences of travel. As Arthur said ‘travel has changed completely’ in his lifetime, and while his generation had the ‘best of traffic’, the increasing speed and density of traffic meant driving was ‘getting harder and more expensive’.

Therefore, as well positive changes in travel, participants also described disadvantages, and new risks associated with fast and busy roads, and terrorism. Online mobilities and ‘virtual travel’ (Urry 2000, 2002) also created new risks, which will be addressed below.

### **Trust and risk in online interactions**

While as discussed above, the Internet facilitated the extension of social and information networks, the transgression of temporal and spatial boundaries also raised issues around trust and risk. Online interactions are often seen as more risky due to the relatively new nature of such interactions (Rutter 2001), a lack of prior knowledge of online correspondents, and a lack of face to face contact (Stald 2003, Urry 2002, 2003). As discussed above, most of the online relationships in this study were grounded in offline spaces, and few were conducted on a purely online basis. Most participants did not take part in social networking sites such as Facebook or MySpace, mainly due to a professed lack of interest, but in some cases due to concerns with risks associated with using these sites, as Jack discusses below;

“Facebook and all of that, I’m not against it but I’m afraid that young people, this is my fear for them, you hear stories, they put all this personal information on and people can hack into that [...] I don’t think you always have to be anonymous, if you are sure you’re only talking to the people you’re talking to, but I know people can hack into just about everything...”



Therefore his fears are due to the lack of security of information on these sites, and also due to the lack of knowledge or face to face verification of respondents. Similarly, Lesley and Ian expressed concern about the display of personal information on these sites because as she put it 'there is an element of society who isn't very nice'. In particular, she was concerned about her daughter putting family pictures of their grandson on the Internet, because 'anyone could access them'. While Dot used Facebook, this was mainly to communicate with family rather than unknown respondents, and therefore it did not involve communications without prior knowledge or face to face contact. Other communications on sites such as 'Friends Reunited' were also with people who were previously known on a face to face basis.

Participants who communicated with unknown correspondents on genealogy websites were not concerned about security, but did have concerns about the reliability or accuracy of the information they received. As Jenny said "you can't trust everything that's on the Internet [...] apparently a load of these records have been transcribed by American students who don't really know the names and understand the words and things, so they just put down what they think." Similarly Audrey felt that;

"...it worries me that [...] some of their trees are so different from mine, it seems to me there are a lot of people just go on and search [...] the general registry offices things, the births, deaths, and marriages [...] and find an appropriate name at an appropriate time that they think 'this is it', without any more evidence. And they get some weird and wonderful trees er, whereas I always try to verify by buying the certificate, or going to registry office and checking up. But I think a lot of people don't do that..."

As suggested by Audrey's comment, in order to validate the reliability of online information, she compared it with offline documents, necessitating offline travel (Urry 2002, 2003). Reservations about reliability arose in discussing other kinds of online research, particularly searches for health information, and the trustworthiness of online information was a key concern across many interviews. These concerns were often due to the diversity of Internet sources, and the freedom for 'anyone to put information online', blurring of boundaries between users and producers (Hardey 2001, Nettleton et al 2004). As Jenny discusses below;

“...you can put something in and you get an extract of Encyclopaedia Britannica coming up and you get the thoughts of, you know, Tim Smith down the road coming up, and they’re just kind of on the side and then you’ve got to chose. You can’t always see, I mean sometimes it’s obvious which one is the trustworthy one and which may be really good and may not be, but sometimes it’s not that easy.”

Such mistrust involves epistemological issues concerning what counts as ‘the truth’ or ‘fact’, and for many respondents, Internet documents presenting personal opinion did not fit this definition (Hardey 2001). As Andrew said regarding online genealogy and historical research “you can’t just read everything that crops up on people’s names like that as being absolutely ‘the truth’...there’s no background to it, it’s just what their views are.” It was felt that certain authors on the Internet may be trying to push a particular agenda or have an ‘axe to grind’, rather than presenting factual information. On the other hand, respondents were more likely to trust an Internet source if it was legitimated by a recognised authority, as Emma describes;

“I’m quite wary about reading lots of American stuff, although I think lots of American stuff is probably more advanced, but I don’t know who to trust, whereas I think, you know, if it’s the sort of BMA or something, I don’t know [...] I feel I can make up my mind a bit better.”

Here Emma is happier to trust information from a recognised health organisation such as the BMA, while Jenny similarly stated that if materials are from “an academic type source then you tend to rely on it.” This fits with previous research on the Internet and health, which found that while the Internet enables alternative views to be heard, most people look to traditional authorities when evaluating the reliability of information (Hardey 2001, Hirji 2004, Nettleton and Burrows 2003, Nettleton et al 2004). It also suggests the importance of prior knowledge of an individual or organisation in establishing trust.

As well as concerns about the reliability of information, there were also concerns about the availability of unsavoury or pornographic materials on the Internet, as Hilda said “it seems as though there are a lot of horrid things on it.” Similarly Andrew expressed concerns regarding children’s access to pornographic material saying; “if you’ve got a kid of seven or eight [...] you never know what they’re going to be confronted with onscreen.” Andrew’s comment relates to concerns about the vulnerability of children and the Internet,

as found in research on young people and technology use (Holloway and Valentine 2003). Such issues may be less prominent than in other studies, as the respondents' children are now grown up. It is interesting to note that Andrew had neither children nor grandchildren, so it was not personally an issue for him. Such comments therefore drew on popular discourses about Internet risks (Holloway and Valentine 2003) rather than personal experiences.

While these fears reflect concerns about the nature of the materials entering the home via the Internet, participants also expressed concerns about personal details leaving the home and getting into the wrong hands (Turrow 2003). Security risks were a strong issue in interview discussions, particularly in relation to financial transactions (Urry 2002, 2003) including travel booking, banking, and shopping. Many participants expressed concerns about their card details 'being out there', and about hackers stealing personal information. Worries about online transactions were particularly pertinent following recent news coverage about banks 'losing huge amounts of data'. Out of a total of 29 respondents, nine did Internet banking, and for those who did not bank online, it was often due to these perceived security risks. Most participants did some online shopping or holiday booking, although Carol, Ian and Lesley, and William avoided shopping altogether for security reasons. Dot and Joan were also yet to buy anything online, although this was something that as new users they hadn't tried yet, rather than being due to security risks. However while most participants did some shopping, they often restricted the amount of shopping they did or limited it to particular 'trusted' sites. As Emma said "we don't buy an awful lot. We're a bit worried about putting your finances on" while George stated that "the fewer people you give details to, the safer you are." Even those who were more enthusiastic about online shopping, tended to shop with trusted brands or people, for instance Audrey usually bought from Amazon or Marks and Spencer's, while Maggie and Richard, and Deidre and Arthur made sure they bought from companies that were 'reputable'. Amazon in particular was felt to be reputable site which many participants bought from, as Bill said; "Amazon, that's a pretty well known thing isn't it?" Often websites or companies were recommended or discussed with friends and family members, which helped evaluate security. This again illustrates the importance of prior knowledge of companies or brands, and also the importance of brand identity in establishing trust (Rutter 2001).

Participation in, and perception of, the risks involved in online financial transactions were related again to general attitudes toward technology, and the typology of users in chapter

six. Those with a sceptical attitude toward technology like Ian and Lesley, William and Hilda, Emma and Jeff, and Barbara and George, also expressed strong concerns about online security, and restricted their online shopping and banking activities. In contrast, Deidre and Arthur described themselves as being “perfectly happy to buy things over the Internet”, while Brenda stated that “people do tend to get worried about things when probably they just don’t need to.” ‘Enthusiasts’ like these participants, tended to embrace the possibilities of online shopping and banking more fully, although Brenda had not done any online banking, but this was not due to security fears. While still aware risks existed, enthusiasts did not see them as greater than offline ones, and felt that with necessary precautions like online security systems and firewalls, personal responsibility, and the reliability of institutions, risks could be minimised effectively.

However, even participants who were now confident with Internet shopping, banking or holiday booking, often described how they were ‘nervous about it’ at first. As found in previous research (Dutton and Shepherd 2003, Rutter 2001) trust was established as a process over time, through successful personal experiences. For instance, Jenny described being a “bit apprehensive at first” with booking holidays online, but found that “it worked fine so I’d be more confident next time”, while Brenda described how after successful financial transactions she now felt ‘braver’ and with “each little thing, you go a step further.” Several participants described similar experiences of building up confidence and trust in online transactions, as a result of a lack of problems, and the competence of banks in dealing with any security issues that did arise. In contrast, the lack of trust of online sites such as ‘Facebook’ may relate to a continued lack of experience or use. However, bad experiences can undermine trust (Dutton and Shepherd 2003) and highlight the risks associated with computers (Lupton 1995). This was particularly the case for one respondent, who stopped doing online banking and limited his shopping following an irregularity in his account;

Enid: “And we’ve stopped...you did a bit of online banking didn’t you?”

Albert: “Oh yes, I’ve stopped that.”

Interviewer: “Why did you stop doing that?”

Albert: "Well because of the fraud that's going on. Not knowing erm all the details of these things, I find it easier not to use them [...] I had the monthly statement and a sum of money had gone out of the account and back again [...] so they must have made a mistake or something had gone wrong, but it made me realise that er it could have easily happened and I may not have noticed it until the end of the month when the statement came so er I decided to cut off those things all together."

Despite such cases, studies have generally found that experience increases confidence, and that Internet users have a higher level of trust than non-users (Dutton and Shepherd 2003). In this study, Hilda and Jane hadn't used the Internet and were quite fearful over the security of their partner's online transactions. However, as discussed, security concerns remained among many participants who did carry out some transactions online.

### **Summary**

This chapter has gone 'beyond the home' to examine how the Internet enables the extension of the social networks of retirees across time and space. The findings of this chapter support arguments that rather reducing offline social interactions, online social networks were highly interconnected with offline spaces, mobilities and relationships. Rather than communicating with strangers online as suggested in accounts of 'virtual communities' (Wellman and Gulia 1999), most online communications involved maintaining existing 'real life' friendship and family relationships (Castells 2001). However, this chapter has also illustrated how the Internet was used reawaken 'dormant' connections with friends and family members, with whom participants had lost touch. For instance websites such as 'Friends Reunited' were used to re-establish contact with old friends from the past. Similarly, genealogy sites such as 'Genes Reunited' or 'Ancestry.com' were used to unearth connections with family members with whom contact had either been lost, or not previously established. The ability to revive these dormant relationships seems to be an important and fairly unique facet of online interactions, which does not seem to have received much attention in discussions of online social networks. While such connections could be re-traced without the Internet, it makes it much easier to do so, particularly in the case of old friends who would otherwise be extremely difficult to trace. Such practices therefore illustrate how Internet may be used to celebrate and extend family and social networks in new ways (Castells 2001 citing Waller 2000).

Another important finding in this chapter is relevance of photographs in the maintenance of family and friendship networks through the Internet, particularly the use of family photographs. This is also an area which has been comparatively neglected in discussions of 'network society' and new technologies (Shove et al 2008). Online social practices of displaying, sending, and receiving photographs, were also related to the production of domestic space offline. This is both in terms of practices of displaying, sharing, and storing family photographs in the home, and the extension of domestic space and 'family togetherness' beyond the home (Rose 2003). An examination of the use of digitalised photographs is therefore relevant for researchers considering location of Internet use within domestic space, and those exploring online social networks. In particular it is useful area for exploring the interconnections between online and offline spaces, social networks, and practices. This chapter has illustrated the importance of bringing together social geography literatures on photographs and spatiality, together with sociological research on the use of ICTs. However, while previous research on the use of photographs in family relations has often focused on mothering (e.g. Rose 2003, 2004), this study illustrates the role of such practices in grand-parenting, which would be an interesting area for future research to explore.

This chapter therefore illustrates the importance of examining the role of the Internet in the social networks and interactions of different social groups. While research by Valentine and Skelton (2008) has illustrated the use of the Internet in deaf community networks, this study illustrates the specific experiences of online social networks among retirees. Like other age groups or generations, participants in this study found the Internet useful for maintaining connections with distant family members and friends. However, the use of email rather than social networking sites reflects a characteristic of older cohorts, as does the tendency to use the Internet in fewer locations (Dutton and Helpser 2007). The interest in tracing historical family networks is also more common among older age groups (Fox 2004), but seems to reflect life-stage rather than cohort, and was described as being related to a sense of mortality in later life, and a desire to leave a legacy behind. In contrast to the participants in this study, younger people are also more likely to communicate with strangers online (Ofcom 2008). However, while older age groups have been situated amongst those excluded from the web 2.0 phenomenon (Brabazon 2008b) and rarely use sites like MySpace and Facebook, they are forming online social networks on sites such as Friends Reunited and genealogy websites, which relate to their specific interests. For

policy makers seeking to engage older age groups with the Internet, this again illustrates the importance focusing on the aspects of these technologies which are relevant to their daily lives (Selwyn 2004).

Not only were current everyday experiences important in shaping online social practices though, but they were also embedded within biographical experiences throughout the life-course. Online social networks not only reflected the current circumstances of retirement such as children and grandchildren moving away, but also the tracing of biographical family and friendship networks. Experiences of changes in 'mobility biographies' (Axhausen 2007) also reflect the intertwining of age and generation in shaping experiences of online and offline travel. In addition, practices and experiences of using online social networks and transactions are shaped by earlier biographical experiences shared among older cohorts. For instance, the sense of needing a paper back of online documents when conducting online transactions was described as being 'generational', rooted in a lack of trust of computers when they entered the workplace toward the latter part of participants' careers. In addition, technologies like the radio which participants 'grew up' were more highly integrated into travel and mobilities outside the home. Participants' online social networks were often situated within earlier generational practices, and were described as a continuation and extension of earlier practices of letter writing or sending cards.

As well as such continuities, participants also described intergenerational change, and the move away from letter writing among younger generations, and its replacement with the use of texting or online communications. When discussing online practices as a generational or cohort phenomenon, this may suggest that age differences in the use of new ICTs for social networking will change, as younger cohorts move through the life-course. For instance, Smith et al (2009) are debating whether the high level of use of social networking sites and blogs for political activities among young people is a generational phenomenon that will alter their civic engagement in the future, or whether this is merely a life-cycle phenomenon which will die out. However, the fast pace of change in online social networking suggests that long term cohort effects would not be found with such practices. For instance, the popularity of MySpace was shortly replaced by Facebook, and it has now been argued that members are leaving Facebook, and it is no longer the 'cool' site (Connelly 2009). The age profile of Facebook is also changing, and Ofcom has already reported that there has been a decrease in the number of 15-24 year olds using this site, while the prominence of 25-34 year olds has increased (Wray and Jones 2009). It is unclear

whether the age dynamic of this site is changing as people who set up profiles a couple of years ago enter the next age bracket, or if younger age members are being replaced by older ones. It may be that younger age groups who have grown up with these technologies are quicker to adapt to such changes, and that newer trends in social networking are taken up more slowly by older generations. This may explain increasing usage of older social networking sites like Friends Reunited among participants in this study, but lack of use of websites such as Facebook. Such differences in the choice of sites may also reflect different interests though, as well the fact that sites such as Friends Reunited are increasingly being targeted toward older markets, and it is currently being rebranded as 'social networking for grownups' (O'Meara 2008). Perhaps as argued in chapter seven, it is the ability to flexibly adapt to constant changes in computer and Internet technologies that characterises the 'digital generation', rather than continuity in practices of technology use. The intersection of ageing, cohort/generation, and social change in shaping experiences of time, space, and technology use has been a recurrent theme throughout these findings chapters, and the theoretical relevance of these findings will now be drawn together in the following discussion chapter.



## **Chapter twelve**

### **Understanding computer and Internet use in later life within the context of 'embodied technobiographies': a discussion of implications for policy and academic literatures**

The previous chapters have examined the qualitative findings of this study, in relation to the themes of ageing/biographies/generation, embodiment, the work/leisure boundary, space and the home, temporalities, and social networks beyond the home. This chapter presents a conceptual discussion of the central themes and arguments which underpin findings in these different areas, and examines their implications for sociological theory and policy debates concerning the use of computers and the Internet in later life. It will begin by briefly recapping over the aims and objectives of the study. Following this, the chapter will focus on the key finding and central argument made throughout this thesis; that Internet and computer use in later life need be understood in the context of 'embodied technobiographies'. This includes both personal biographical experiences of technology use throughout the life-course, and shared experiences with members of the same historical cohort or generation. Therefore it will be argued that rather being merely the result of the conditions of later life, age divisions in Internet use reflect the different biographical experiences of different cohorts, and the difficulties of adapting older embodied competencies to new technologies. These findings also have practical implications for policy makers and computer designers seeking to engage older computer users, and for designers seeking to improve the suitability of computer technologies for older age groups, which will then be discussed. Following this, the chapter will explore wider implications of this thesis for sociological literatures in the areas of technology use, embodiment, gender, social change and ageing/old age.

#### **An everyday and biographical approach to understanding Internet use at home in retirement**

This thesis began by arguing that while policy debates have centred on the implications of the age-related digital divide, understandings of Internet use in later life need to examine the everyday practices and experiences of those older people who *do* use the Internet. Furthermore, examining everyday practices is important in enabling the micro-construction of divisions to be explored, as well aiding the development of more complex notions of

digital divisions in practices, support, and the extent of use, rather than simply access (DiMaggio et al 2001). While studies have begun to take an everyday life approach to understanding Internet use among older age groups, it was argued that two areas have been neglected; the location of experiences of technology use within everyday spaces, and within biographical experiences throughout the life-course. In particular, it was argued that there was a lack of research on the use of the Internet in domestic space during later life. Due to the fact that the majority of Internet use takes place in the home, and also the salience of this space for understanding relations around technology, age, and gender, the home was chosen as the spatial context for this study. The domestication framework was drawn on in seeking to examine how older people make use of computers and the Internet in this context, and the location of these technologies within the temporalities, spatialities, and relationships in this setting. This thesis has therefore aimed for an in-depth understanding of Internet and computer use grounded in the everyday accounts of retirees, rather than at 'grand theorising'. These aims underpinned the qualitative, 'quasi-ethnographic' methodological approach, which formed the main part of data gathering in this thesis, and incorporated multiple methods in order to gain a holistic understanding of Internet use in domestic space.

As well as understanding everyday practices of Internet use within the context of the home, this thesis aimed to locate technology use in later life within the context of experiences of technology use throughout the life-course. This is something which has been neglected in much of the previous research on ICT use among older age groups, and results in 'old age' being depicted as a static and isolated stage (Mollenkopf and Kasper 2005). Indeed, as was seen in chapter two, there is little work on the general population that discusses the importance of locating technology use within biographical experiences, although there are exceptions such as Henwood et al (2001). Therefore the methodological approach in this study also drew on biographical research strategies, and interviews examined everyday experiences of technology use throughout the life-course, as well as current experiences. As suggested by Haddon (2004, 2006) I sought to extend the domestication framework by bringing it together with sociological literatures on ageing, biography, generation/cohort and the life-course. Thus a micro-level analysis of practices of use in the home was brought together with an examination of these broader social processes. This represents a rather novel approach to understanding the use of computers and the Internet in later life. There have been several domestication studies examining the use of computer technologies

within a particular life-stage however; there are not many which have explored their location within the different life-stages experienced by an individual. Although a similar design was undertaken by Haddon and Silverstone (1996) in examining the ICT use of retirees, their research was conducted before computers and the Internet were widely integrated into homes in Britain. Therefore, these dynamics needed to be revisited, exploring the relation of domesticating computers and the Internet to the life-experiences of retirees.

Before turning to the implications of this thesis, a brief reflection on the limitations of the study is needed. This research has focused on a small, qualitative sample, which may limit the representativeness of the findings. Furthermore, although participants from both working and middle class backgrounds were integrated into the study, the diversity of the sample was limited regarding ethnicity, and the sample consisted solely of participants from 'white British' ethnic backgrounds. All the couples were heterosexual, and the study did not explore relations around technology in same sex couples. Also the outcome of this study may be somewhat different if conducted in a different geographical location. For instance, during her recent anthropological study of contemporary life in a rural community, Degnen (2009) noted how few silver surfers there were. Nonetheless, this study has produced rich and detailed accounts of biographical and everyday practices of technology use among older people who *are* online, which also have wider conceptual and practical implications. Moreover, inferences with other empirical and theoretical material lend further support to the conclusions drawn in the following discussion.

#### **Understanding the relation between 'old age' and Internet use: continuity or change, life-stage or generation?**

While policy debates around Internet use and later life have centred on the well-established digital divide, as argued in chapter two, it is unclear whether age divisions are due to the particular material and physiological conditions of later life, or a result of the particular technological experiences of current older cohorts. This issue is fundamental to understanding the relation between old age and technology use, and is an issue of continuity versus change. In terms of the specific relation between age and the use of Internet and computer technologies, if the differences between older people and younger age groups are due to cohort experiences, they will disappear as younger cohorts enter retirement (Xie 2005). However, if they are due to the circumstances of later life, they will

continue as younger age groups grow old. Through using biographical methods to examine change retrospectively, this thesis sought to unpack these issues, and their role in shaping the use of these technologies at home during later life.

In some ways, the use (or non-use) of computers and the Internet in domestic space was shaped by particular circumstances experienced during later life and retirement. As we saw in chapter six, for those participants who had a computer or Internet access in work, retirement often prompted acquisition at home after losing this access, as was also found by Selwyn (2004). Experiences of technology use in retirement were also situated within constructions of 'old age', and the view that older people were less capable of learning to use new technologies such as the Internet was often reproduced by participants, and could deter learning to use them. The use of computers and other ICTs also related to spatial changes in the home during retirement, as discussed in chapter nine. For instance, a number of participants had moved home, which often involved downsizing to a smaller home due to financial constraints, or moving to a retirement community, and this could restrict the choice of spatial location for the computer. On the other hand, retirement also created new temporal and spatial freedoms, since children had left home by this stage. For some this meant greater choice regarding the spatial location of the computer and other ICTs, and also reduced competition for time using these technologies, as discussed in chapter nine. The increase in free time could lead to more time being spent using computers, which reflects the finding that while being less likely to use the Internet, retirees spend the highest amount of time online (Allen 2007). However, as we saw in chapter nine, changes in temporality during retirement could affect computing in complex ways, and a sense of time running out in later life meant that many participants did not want to waste time using these technologies. Similar issues have been noted in earlier studies of retirees and their use of technologies such as television (e.g. Gauntlett and Hill 1999, Haddon and Silverstone 1996, Tulloch 1989) although temporal and spatial dynamics of Internet and computer use in the home have not previously been explored among retirees. It may therefore seem that experiences of computer and Internet use in later life reflect the material and social circumstances of retirement, rather than cohort experiences.

However, in examining ICT use in the home during later life, it soon emerged that values, meanings, practices, and experiences of use were not only shaped by the specific circumstances of retirement, but were also situated within life-long experiences. For

instance, as we saw in chapter eight, the temporal and spatial and location of technologies in the home was shaped by meanings of work and leisure which continued from earlier stages of the life-course. Computers were often associated with work rather than leisure (Buse 2009), reflecting the context in which many respondents first encountered them. They were often used to continue previous work roles, and some participants restricted computer usage to traditional working hours. This is in contrast to studies of today's young people, who have early experiences of using computers in a home and leisure context, and have been found to prefer using these technologies for leisure or entertainment (Holloway and Valentine 2003). In contrast, television had always been experienced as a leisure technology, and was located in the living room, and generally used only in the evening which was seen as 'leisure time' or 'family time'. As found in previous research (e.g. Gauntlett and Hill 1999, Haddon and Silverstone 1996) the restriction of television viewing to the evening also reflected the strong 'work ethic' among these cohorts, and the values they had been 'brought up' with, as well as the desire to 'keep busy' in retirement. In addition, it was also shaped by temporal patterns established early on, as television programmes had not previously been broadcast during the day.

As discussed in chapter six, the stage at which technologies were encountered was important, and those used earlier on in life or during the 'formative period' were generally more integrated into everyday life in retirement. While several different cohorts may be identified within this group of participants, leading to slight variations in the stage at which technologies were acquired, there were commonalities between them. Participants across the different cohorts in this study described themselves 'growing up' with using the radio and this technology remained an important part of their lives in retirement, being described as something which was 'built into them' and 'came naturally'. This was reflected in patterns of temporal and spatial organisation of technology use in the home, and as discussed in chapter ten, technologies which were familiar to participants such as the radio and television were incorporated into spaces throughout the home, while the computer tended to be located in a separate space 'out of the way'. It was often perceived as an 'intruder' in spaces such as the living room and as something 'out of place' or 'unwelcome'. As discussed in chapter nine, technologies like the radio and television were also more highly integrated into activities and temporal routines in the home, including embodied routines of waking up and going to bed. Therefore, ten years on from Haddon and Silverstone's (1996) research, computers and the Internet are beginning to find a place

in the homes and everyday lives of retirees. However, these technologies still remain not fully trusted or domesticated, in contrast to those used earlier on in life.

The importance of formative experiences in shaping current practices of technology use suggests stability and continuity with early experiences, and technologies such as the radio were experienced by participants as 'natural' and 'normal' because they had always been there (Lunt and Livingstone 1992: 132). However, the concepts of 'cohort' or 'generation' also highlight social change, reflected in differences between cohorts. As discussed in chapters six and seven, participants described how their formative experiences of technology use differed from those of their children, and particularly grandchildren. This younger generation was described as 'growing up' with using computers and the Internet, in the same way that participants had grown up with the radio, and computer skills therefore came 'naturally' to them, reflecting descriptions of the 'net' or 'digital generation' (Buckingham 2006, Tapscott 1998). Participants also described change among retirees in chapter six, as younger cohorts entered retirement, bringing greater experience of computing with them. Even among participants in this study, those in younger cohorts were more likely to have computing experience in work, and to have a higher number of computer users among their peers. The changing nature of generational and intergenerational relations around technology was also illustrated through discussion of contrasts between participants and their parents' generation. Some participants described how their parents had been more hesitant to adopt 'new' technologies such as the television, and they had been instrumental in encouraging their parents to acquire them. This is similar to the way that younger family members such as grandchildren and children are now important in encouraging engagement with computer technologies among older generations (Selwyn 2004). This illustrates how as argued by Bolin and Westlund (2009), definitions of 'new technology' are relative to each generation or cohort, and are constantly shifting.

Therefore, while capturing the unique experiences of a particular cohort or cohorts of individuals, these findings also have more broadly generalizable implications regarding the relation between older age groups and the use of computers and the Internet. The findings support more recent claims that the generation gap between 'young' and 'old' reflects the different formative experiences of age cohorts (Rama et al 2001), rather than being simply a product of deterioration in capacities with age. Although the small scale of this study may limit the generalizability of these findings to the experiences of all 'older people',

comparison with other quantitative literature in this area, including survey (Bolin and Westlund 2009, Gilleard and Higgs 2008) and experimental studies (Rama et al 2001), also supports the conclusion that the age division is shaped by generational or cohort experiences. This suggests that the relation between older people and technology is a changing relation, and as future cohorts move into retirement, they will have different biographical experiences of technology use, and generally greater levels of experience with computing. As a result, it is expected that this will lead to greater levels of computer use in later life, and quantitative research is already showing shifting patterns as younger cohorts enter retirement (Fox 2006). Selwyn (2004) has refuted this argument, as many participants in his study who had used computers in work still gave them up after retirement. However, my thesis suggests that it is not simply more recent work experiences with computers that are important, but experiences throughout the life-course, particularly those during the formative period.

These findings therefore support theories of 'media generations', in which it is argued that technologies experienced during the formative period, remain important throughout the life-course (Bolin and Westlund 2009). Defining the specific boundaries of 'media generations' is a complex issue though, and while the 'radio generation' has been defined as those born during the 1920's (Volkmer 2006 cited in Bolin and Westlund 2009) or 1930's (Bolin and Westlund 2009), the significance of 'growing up' with this technology spanned across different cohorts in my research. Previous research has generally defined 'media generations' based on those born during the period when these technologies became widely diffused into homes, and were most popular or influential. However, my thesis has illustrated how the influence of these technologies remains important for subsequent generations, who continue to experience them in their formative period. While the baby boomers have often been described as the 'TV generation' (e.g. Tapscott 1998), participants among this cohort still experienced the radio before acquiring a TV, and the radio continued to retain a particular significance above the television. The similarities between cohorts may support broader definitions of the boundaries of media generations, such as the distinction between the 'electro mechanical generation' born before 1960, and the 'software generation' born afterwards (Rama et al 2001). However, despite such issues, the importance of formative experiences in shaping technology use remains clear, although it is not only formative experiences shared by cohorts that are important, but also experiences accumulated throughout the life-course.

## **‘Embodied technobiographies’: conceptualising technology use as an embodied practice**

As well as arguing for the importance of addressing biographical experiences of technology use or ‘technobiographies’, a key argument made in this thesis is that these biographies are embodied (Buse forthcoming). In seeking to analyse the embodied nature of these biographical experiences, this thesis has brought together Henwood et al’s (2001) concept of ‘technobiographies’, with Williams (2000) idea of ‘embodied biographies’. The concept of ‘embodied biographies’ has been used in studying biographical experiences of health and illness (Sinding and Wierikowski 2008, Williams 2000a, Williams 2000b), but not in relation to experiences of technology use. In turn, the concept of ‘technobiographies’ has been used to grasp the technological aspects of life-histories (Henwood et al 2001), but has not been applied to understanding the embodied nature of these experiences. Therefore by bringing together these two ideas, the novel concept of ‘embodied technobiographies’ was created. By this I mean the embodied experiences of using technologies which form part of an individual’s biography, and the embodied technological skills and competencies acquired over a life-time. The wider implications of this unique concept as a framework for further research will be returned to in the concluding discussion.

As argued in chapter seven, in contrast to early views of computer and Internet use as disembodied, computing skills can be understood as a ‘body technique’, involving tacit, practical knowledge which can only be ‘learned by doing’, and becomes automatic with practice (Crossley 2007). This chapter also showed how technological change throughout participants’ life-times prompted changes in bodily practices (Hayles 1999). It illustrates how as with other embodied practices, in learning to use ICTs, new techniques could ‘mutate out of old’ (Crossley 2007:92) and earlier competencies such as keyboard skills and touch typing learned through using type-writers were important in learning computing. However, other aspects of computer use did not relate so easily to older technologies, and the ingrained nature of competencies learned early on meant that they were difficult to replace (Mauss 1979).

These findings therefore provide a unique perspective for academics and policy makers seeking to understand the experiences of older computer and Internet users. The struggles in adopting these technologies experienced by many older people can be understood as a reflection of difficulties in applying embodied skills and knowledge acquired over a life-



time to new technologies encountered later in life, and adapting to the changes in physicality they require. This may also explain why technologies such as the mobile phone are used more frequently than the Internet among older age groups (National Statistics Online 2005), as they bear greater similarity to competencies involved in using landline phones. This embodied approach also illustrates how the differences between 'young' and 'old' reflect differences in the 'technological habitus' (Zevenbergen 2007) or embodied practices of different generations, prompted by different technological experiences. While many participants reached a level of embodied competency at which computing skills became automatic, they contrasted their experiences with those of 'young people' who had grown up with computer technologies, and for whom this embodied competency was seen as a generalized capacity

Another level of embodied competency involves the ability to adapt to ongoing changes in computer technologies. While many participants had reached a level of embodied competency with computing, the rapid changes in computer hardware and software meant that this competency was often disrupted. These ongoing changes also reflect the increasing demand in various areas of modern life for 'flexible bodies and persons' (Martin 1994, Shilling and Mellor 2007). Only younger generations and the more 'expert' users among participants were able to easily adapt to these changes. This fits with the finding in research on memory that "the greater a knowledge base on a certain topic, the easier it will be to encode, understand, integrate, and remember new relevant information" (Rama et al 2001: 27). This suggests a further dimension to understandings of digital divisions, as not only involving divisions in access and diversity of practices, but also the ability to adapt to ongoing changes in computer hardware and software.

This difference in the ability to adapt to ongoing changes may also reflect another aspect of the generational location and 'technological habitus' of participants, in contrast to that of younger generations. It is argued that in contemporary society, some individuals are developing a habitual reflexivity or a 'reflexive habitus', in response to constant changes and the demand for reflexivity (Sweetman 2003). Perhaps as with other aspects social life, due to the constant changes in computer and digital technologies which have been a part of their lives from a young age, the 'digital generation' is characterised by a reflexive or flexible 'technological habitus'. It is suggested by Sweetman (2003:545), that while current instability in contemporary life produces this reflexive habitus, "the middle-aged or elderly can be presumed to be more likely to display the quasi traditional habitus

characteristic of Bourdieu's understanding of the term." Although Sweetman (2003) does not explore issues around age and generation in any detail, he argues that more traditional forms of habitus reflect the more stable conditions in the earlier part of the 20<sup>th</sup> century. Therefore, as such rapid change and flexibility was not a part of participants' early experiences, it is not embedded in their embodied dispositions. Furthermore, older technologies like television and radio have reflected a greater stability than the constant speed of change in computer technologies. In discussions of 'reflexive modernity' it has been argued that while there is flexibility in social identities, those aspects of identity which form part of the habitus, present pre-reflexive, embodied, ingrained dispositions which are less susceptible to change (McNay 1999). Therefore, due to their embodied and tacit nature, the technological skills participants have acquired over a life-time appear similarly ingrained, and difficult to replace.

The examination of the embodied nature of these biographical experiences also lends particularly unique insight to literatures of both embodiment and ICT use. As we saw in chapter two, theorisations in the fields of sociology and human-computer interaction have begun to move away from constructions of Internet use as a disembodied practice, recognising the embodied nature of using these technologies. Theorists in the sociology of embodiment (e.g. Shilling 2005, Shilling and Mellor 2007) have also considered the implications of technological changes for embodiment. However, I could not locate any empirical research examining the process of acquiring computing skills as a 'body technique', or exploring lived experiences of changes in body techniques in relation to technological change. Furthermore, while Shilling and Mellor (2007) discuss more general changes in experiences of embodiment in 'technological culture', this thesis documents more specific embodied changes experienced by individuals in their life-times, in relation to developments in ICTs during the 20<sup>th</sup> century. By documenting this process in relation to computer technologies, this addresses the call for research to make explicit the tacit process of acquiring 'body techniques' and embodied knowledge (Crossley 2007). It demonstrates that like other more 'physical' body techniques such as sporting activities, computing is also learned by doing, and becomes automatic with practice. However, while other embodied practices such as those involved in sport undergo change over time, these may be less rapid than the constant adaptations in computers and the Internet technologies, which therefore demand greater flexibility in embodied competencies.

## **Practical implications for policy makers and designers**

Taking an embodied approach also has practical implications for those seeking to engage older people with computers and the Internet, and design more suitable technologies. If computing can only be learned through practical experience, this may help explain why older computer users both in this research, and in previous studies, have often found computer training courses or manuals unhelpful (e.g. Dickinson and Hill 2007, Richardson et al 2005, Saunders 2004). It also supports the finding in experimental studies that practical 'hands on' training was most helpful for older computer learners (see Czaja and Lee 2008 for review). However, such 'hands on' methods of learning have also been found to be most effective among younger age groups (Czaja and Lee 2008), reflecting how an understanding of computing skills as a form of embodied knowledge has practical implications for new learners among all age groups. In terms of design, as we saw in chapter two, difficulties using computer hardware such as the mouse are generally attributed to a deterioration of motor functions in later life (see Czaja and Lee 2008 for review). However, while physical constraints were sometimes an issue in my research, as highlighted in chapter nine, such problems using a mouse reflected the difficulties adapting to the new embodied knowledge and skills this hardware requires. Unlike keyboard skills learned from using typewriters or word processors, using a mouse did not build on older competencies. The practical nature of learning computing suggests that experience is the key to overcoming such difficulties, which is supported by the finding that problems using the mouse are generally overcome after time spent practicing (Alm et al 2002). However, it also supports arguments for the design of computer systems and appliances which map more easily onto more familiar technological practices (Dickinson and Hill 2008).

Locating computer technologies in relation to familiar skills and competencies is also important for policy makers seeking to encourage engagement among older age groups (Brabazon 2008a). As Brabazon suggests, this has particular significance for older women, whose skills in using a type writer are highly relevant for computing, but remain undervalued. As discussed in chapters seven and nine, women like Carol were initially intimidated by computers because she 'felt they required more skills than the actually do', but once she realized they were merely a 'glorified type writer', they became less daunting. Therefore by reconceptualising older competencies as relevant to computers, this may make them less intimidating, more relevant and more accessible, and address gender as well as age divisions. The practices of computer and Internet use which participants enjoyed

also reflected life-long interests and biographical experiences. As discussed above, due to initial experiences of computing in a work context, many participants used computers to continue 'work-like' activities after retiring, and were less likely to use them for leisure activities such as online gaming. We also saw in chapter eleven how the use of computers for tracing family histories and rekindling old connections through sites like 'Friends Reunited', illustrates their relation to life-long social and family connections, and biographical contexts. Furthermore, use of computer and Internet technologies could be adapted to fit with practices of using older technologies, and the use of the Internet to look up radio programmes, or view television programmes on iPlayer, was also something that several participants engaged in.

This detailed examination of Internet and computer use within the context of domestic space also produced insights which have practical implications for policy makers seeking to engage older people with these technologies. Policy literatures have often focused on the benefits of online services such as shopping and banking for older age groups (Tatnall and Lepa 2003), as such facilities may compensate for physical difficulties and mobility restrictions in later life. However, use of these facilities was often rejected by participants due to the perceived risks they created, enabling personal information to leave the security of the home, and get into the wrong hands (Frolich et al 2003). Reassurance regarding these security issues is something to be addressed by those seeking to promote the benefits of such applications. However, many participants deliberately resisted the idea of being 'stuck at home' on the computer, and going out to the shops or bank was important to 'keeping active' and also for social interactions, as argued by Hardey et al (2009:7-8).

Instead, the computer and Internet applications which participants did engage with during retirement were those which related to their everyday offline hobbies, interests and relationships. As discussed in chapters eight and eleven, the main use of the Internet was for email, which often became particularly important as children had moved out of home, and as family members moved to more distant locations. Many older people had also taken up computing in retirement in relation to hobbies such as genealogy. Other key uses were in relation to organising offline travel, outings and holiday booking. Discussions in chapters seven and eight illustrate how while many participants disliked using the 'machine itself', they felt that computers and the Internet could be utilised 'as a tool' for the purpose of these activities. Selwyn (2004) has argued that one of the key issues to be addressed in encouraging the take up of computer and Internet use among older age groups

is the perceived lack of relevance of these technologies to their everyday lives. This suggests, as argued in relation to divisions among young people (Holloway and Valentine 2003), engagement with these technologies is best encouraged in relation to specific practices, like email and genealogy, which are of interest and relevance to this age group. However, this thesis also illustrates that this should include interests located within biographical experiences, as well as current everyday life activities in retirement.

### **Understanding differences and diversity *within* older people in the context of 'embodied technobiographies' and everyday spaces**

This discussion has so far focused on general patterns among older people, however, this thesis also sought to extend understandings of heterogeneity and differences within older people. It must be noted that generational shifts in technologies and embodied practices did not affect participants equally, but they responded to these changes in different ways. Learning how to use these new technologies was instrumental, and participants only adapted to those functions that they found necessary or desirable, as we saw in chapter seven. In chapter six different 'ideal types' of participants were identified, including 'enthusiasts' who embraced the possibilities of the Internet for leisure and communication, and 'sceptics' who disliked the use of computers and the Internet, and tried to restrict their usage (Horning et al 1999). These different participants constructed different narratives in terms of whether technological change was presented as progress, or as creating a decline in relationships and morality in contrast to a previous 'golden age' (Lunt and Livingstone 1992). Those participants adopting sceptical views of technological change often viewed the constant adaptations in technologies as wasteful and resisted buying the latest models. This supports the need for more complex notions of the digital divide discussed in chapter two, which taken into account deliberate resistance to technological change (Wyatt et al 2005). However, there was a sense of having to keep up with technological change or risk being excluded from society, which again suggests limitations to agency.

Through combining biographical approaches with a focus on everyday practices in domestic space, it was possible to unpack differences between older people, in relation to gender and class. As we saw in chapter two, quantitative surveys have found divisions within older Internet users based on class, gender, occupational status and health, which were also found in my quantitative analysis in chapter four. However, as was argued in this chapter, there remains a lack of qualitative research exploring the reasons for these

differences. This thesis illustrates how class differences were grounded in biographical experiences, as a smaller proportion of participants from working class backgrounds had experienced computers in the work place. In contrast to findings in Selwyn's (2004) research, a lack of use in work seemed to be important in shaping continuing divisions in retirement, and those in this sample who had not taken up computing often attributed this to a lack of experience in the workplace. Spatial constraints on the location of technologies were also more prominent among working class households, as we saw in chapter ten, and there were also greater financial constraints on outdoor leisure and mobilities among working class couples, which were discussed in chapter eleven. Class could also shape practices and meanings of ICT use in retirement, and as discussed in chapter six, anti-technology discourses or 'sceptical' attitudes seemed to be more prominent among middle class households. Therefore 'generational technological habitus' also intersects with class, in shaping dispositions and competencies with technologies.

In particular, this study has sought to explore gender differences within older people, and the gendering of technology use in retirement was again situated within both current spatial context, and gendered biographies. The findings illustrated how divisions in access and competency are constructed within the micro-level settings of household relations (Lim and Tan 2005). As found in Brabazon's (2008a) case study, we saw in chapter ten how these divisions are self-reinforcing, and if one partner was able to deal with technologies, the other person did not try to acquire the skills themselves. Divisions in competency and access did not follow traditional gender patterns however, and there were mixed patterns of competency between households. This supports arguments for more complex and unpredictable patterns in the gender-technology relation (Gill and Grint 1995), which has been found in studies of younger households (e.g. Silva 2002). These household divisions around competency generally reflected work biographies, and the extent to which each partner had used computers in work. The complex gender patterns in the households in this study therefore reflect the fairly even number of men and women who had used computers in the workplace. While women who were previously employed in caring professions such as teaching or nursing lacked work experience with computers, a number of women were previously employed in administrative or clerical occupations which provided experience of using typewriters and computers.

Nevertheless, while illustrating such fluidity in relations around gender and technology, this study also illustrates how gender relations around technology use in retirement were

shaped by the influence of structural inequalities throughout the life-course, particularly those around the division of labour. While there were not clear gender differences in access to and practices of using computer technologies, there were gendered constraints on time spent using these technologies and other ICTs, particularly the *quality* rather than the *quantity* of time. These differences reflect gendered biographies in home life, and as discussed in chapters eight and nine, traditional divisions of labour often 'continued after retirement', and in the majority of households women still took primary responsibility for housework. As a result, work and leisure boundaries were less clear cut for women, and they were more likely to combine leisure activities like television viewing or radio listening with housework (Buse 2009). Due to these continuing gender divisions, as we saw in chapter ten, several women in the study described time to use computers as being restricted by the schedules of domestic and caring activities, while no men described their activities being restricted in this way. These qualitative findings support my quantitative analysis presented in chapter four, which found that those who care a high number of hours are far less likely to use the Internet.

The tensions between older gendered divisions around technologies and household routines, and more fluid patterns, has also emerged in studies of younger age groups, and has been argued to reflect the slower diffusion of broader social changes into everyday life (Silva 2004, Gauntlett and Hill 1999). However, the domestic divisions in my research appear more pronounced than those among younger households (e.g. Silva 2004). In order to understand to the durability of traditional divisions alongside changing patterns, McNay (1999) argues that we need to attend to the 'embodied' aspects of gender identities. As discussed above, and in chapter seven, we have seen how technology use involves embodied competencies and tacit knowledge, which exist on a pre-reflexive level. The gendered work histories of participants produced differences in embodied practices of technology use, and embodied competencies with typing were found mainly among women in the study. However, such divisions did not only exist on a pre-reflexive level, but also related to the symbolic construction of skills and technologies in discussions (Cockburn and Omrod 1993). As argued in chapter eight, continuation in gender divisions also reflects the high investment in more traditional gender identities among many women in the sample.

The ingrained nature of these divisions, despite social change, may again suggest their location in the 'generational habitus' of these cohorts. For instance as we saw in chapter

eight, gender divisions around domestic labour were often described as the continuation of 'traditional roles' which had 'always been' that way in households. In chapter six, participants described how societal changes in gender roles took place at a later stage in their lives, and as a result these changes did not 'come naturally' to them as to younger generations. In contrast to women of the 'baby boomer' generation (Edmunds and Turner 2002) the majority of participants experienced the cultural changes during the 1960's at a later stage of their lives, and their dispositions and values are therefore located primarily within an earlier form of modernity and more traditional social divisions (Gilleard and Higgs 2005). Indeed, among the few participants in the 'baby boomer generation (see table in chapter six), there do appear to be more equal relations around domestic divisions. Therefore such gender divisions and constraints on technology use may not be the same for future cohorts of retirees.

As well as implications for understanding the specific experiences of retirees, these findings are also of importance for understanding and expanding literatures on the relation between gender and technology. This thesis illustrates the importance of situating gender-technology relations within biographical experiences, as has been previously argued by Henwood et al (2001), but still remains a relatively underdeveloped area. It also highlights the importance of attending the 'embodied' dimensions of these biographies. As we have seen, drawing on biographical, embodied and generational approaches may be useful in addressing one of the key theoretical problems in this area: how to account for change and diversity, while addressing structural inequalities (Gill and Grint 1994). By exploring biographies of technology use, this thesis illustrates the interplay between changing gender roles and continuing structural constraints as experienced in individual lives, and shared with members of the same cohort. Like the relation between age and technology, the relation between gender and technology is a moving target, reflecting broader societal changes in gender roles. However, if formative experiences are particularly important in shaping values and practices throughout the life-course, this may explain why in many of these retired households more traditional domestic divisions persist. The importance of generational patterns in shaping experiences of social change is a key issue, which will now be further explored in the following section.



## **Change and continuity in embodied technobiographies: Evaluating theories of social and technological change**

In the introductory chapter, it was argued that while this thesis has aimed for a micro-analysis of everyday life and biographical experiences of technology use, it also acknowledges the location of these experiences within a broader backdrop of social change. While sociological theorists have documented social changes during the 20<sup>th</sup> century, and the transition to a new era known as 'reflexive modernization' (Beck et al 1994) or 'liquid modernity' (Bauman 2000), it was argued that there is a lack of empirical material exploring the everyday experiences of such changes. This thesis therefore adds to a growing body of research seeking to evaluate the impact of such changes within everyday life (e.g. Green 2002, Silva 2004, Wajeman & Martin 2002, Webb 2004). It also extends this research by exploring such experiences biographically, and documenting lived experiences of broader social and technological change.

To some extent, the biographical experiences discussed in chapter six support theoretical discussions of a shift from stability in social relations, to an increasing fluidity in social identities, family-life, and life-course transitions. For instance, participants described how in 'their day' there was a 'job for life', in contrast to the flexibility and contract work in current employment relations. Biographies also reflected broader social changes in the organisation of the life-course, and while technology use was situated within particular life-course stages, these transitions were less rigidly fixed, reflecting increasing fluidity in the divisions of work/leisure/retirement (Blaikie 1999). As discussed in chapter eight, the transition to retirement was more fluid, particularly among younger respondents, with many taking on early retirement, or returning to part time work or studying. Such social changes were also evident in discussions of gender relations. For instance, in chapter six we saw how most women in the study had initially given up work in accordance with gendered norms at the time, as 'in those days you didn't work if you had children'. However, participants discussed changes in gender roles during their life-times, with an increased number of women entering the work force, and changing expectations about the 'place of women' in the home.

Nonetheless, one of the key findings of this study is the continuity of earlier generational patterns into later life. For instance, while there was greater flexibility in gender-technology relations, we have seen how domestic divisions of labour experienced early on

often continued throughout the life-course, and constrained experiences of using technologies in retirement. In terms of changing experiences of time and space, to some extent findings do support the view that new ICTs contribute to increasing speed and flexibility in communications, and the blurring of temporal and spatial boundaries (Castells 2000, Green 2002, Lee and Liebaneau 2000). However, as was illustrated in chapters eight and ten, the temporal experiences of these technologies were more complex, and not only related to everyday household rhythms and relationships, but the biographical and generational experiences of participants. As discussed chapter eight, economic time and traditional divisions of work and leisure were still prominent in shaping the use of ICTs, as was the strong 'work ethic' found among older generations.

This suggests the importance of bringing together theories of social and technological change, with an analysis of generation and biography. As we saw in the introduction, research has demonstrated the complexity of broader social transformations in everyday life (e.g. Green 2002, Silva 2004, Wajcman and Martin 2002). It has been argued that the changes documented by sociologists do not affect society as evenly or as dramatically as such theories suggest. The uneven distribution of transformations in reflexive modernity has been related to differential access to resources according to class and gender (e.g. Adkins 2002, Lash 1994, Savage 2000, Skeggs 2002). However, this thesis also suggests that in examining diversity in the diffusion of these social changes, generation is an important issue to address. While experiencing the same societal transformations, these are not encountered at the same time by different generations, and as we have seen, the period of the life-course in which they are located is particularly important. Therefore while participants described the changes documented by sociologists, the practices and values established earlier on in their lives retained a particular significance in shaping experiences of contemporary trends, as argued in theories of 'social generations' (Mannheim 1952). As discussed above, the specific generational location of most of these participants means that their dispositions and practices or 'generational habitus' (Edmunds and Turner 2002, Gilleard and Higgs 2005) are associated with older forms of modernity, rather than the trends of 'reflexive modernization'. This is contrary to Gilleard and Higgs (2005:98) argument that the generational field associated with reflexive modernity spans across cohorts born after the 1930's, and is not "defined by any particular cohort" or shaped by "a particular habitus being formed in adolescence which then colonizes the rest of life." Instead it supports theories which emphasise the importance of formative experiences,

shared by members of the same cohort. As was argued in chapter seven, attending to the embodied nature of generational experiences and habitus is important in understanding generational differences in technological competencies acquired during the life-course, and the persistence of earlier practices and dispositions. Such findings therefore illustrate the importance of bringing together theories of social change, embodiment, technology and generation, and further extend empirical research seeking to understand to complexity of social change in everyday life.

### **Personal experiences of ageing and their relation to technobiographies**

Issues of continuity and change in discussions of technobiographies not only related to broader social changes, but also personal experiences of growing older. As discussed in chapter two, there is a tension in biographical approaches to ageing between the changes individuals experience throughout their life-course, and the maintenance of a continuous sense of self (Kaufman 1986). Stories of technological and social change in the 20<sup>th</sup> century were embedded within biographical experiences of 'growing older', and moving through life-course transitions. Memories of older technologies lead to reflections on the difference between 'then' and 'now' (Hockey and James 2003), and the outdating of technologies of one's youth and the pace of technological change, prompted a sense of growing older. Experiences of using new technologies like computers and the Internet at a later stage of life meant that they were tied to participants' identities as 'older people', and situated within contemporary discourses surrounding later life. However, despite such experiences of growing older, we have seen throughout this thesis how technology use related to continuity in generational values associated with gender, work, and consumption. We also saw in chapter nine how technological competencies in retirement were situated within a life-long sense of oneself as a technological or non-technological person. Hockey and James (2003) have argued that objects such as photographs or household ornaments can prompt reflection on the process of ageing, and the passage of time. This study illustrates how ICTs may similarly promote such reflections. Therefore understandings of experiences of ageing and growing old, and biographical approaches to ageing, may benefit from being brought together with an analysis of ICTs. In turn, studies of technology use may benefit from connection to literatures on ageing, and meanings of particular age categories in certain periods (Haddon 2004), as well as personal experiences of growing older.

This approach also has implications for understandings of ageing bodies, as previous literatures have generally focused on change in abilities and appearance in old age which bring the body to the fore, and may disrupt a continuous sense of self (Featherstone and Hepworth 1991, 1993, Hockey and James 2003). Despite some changes in embodiment associated with growing older, as well as technological change and demand for 'flexible bodies', we have seen how there was continuity in embodied practices and competencies of technology use. Such continuities have also been noted in relation to experiences of illness in later life (Sinding and Wierikowski 2008), disability (Grenier 2004) and physical activity (e.g. Laz 2003). This thesis therefore illustrates the importance of biographically situating experiences of ageing bodies in relation to skills and experiences acquired over a life time, and attending to continuity as well as change in bodies and identities. Such an approach would also help move accounts of the ageing body beyond the focus on disability and decline (Twigg 2004). It also demonstrates how such understandings may be developed in relation to examination of technologies and technological change, as well as experiences such as health, illness and physical activity.

### **Summary**

This discussion chapter has illustrated the conceptual contribution of this thesis to academic and policy literatures, in relation to the central argument that experiences of technology use in later life needs to be situated within the embodied technobiographies of individuals and cohorts. The examination of the embodied nature of these biographical experiences lends particularly unique insight to both the specific field of Internet and computer use in later life, and wider sociological literatures on embodiment, technology use, gender, and ageing. It extends sociological literatures seeking to 'embody' everyday experiences (Nettleton and Watson 1998), by demonstrating how computing skills are acquired as an embodied competency, while additionally illustrating how cultural changes in technologies lead to both personal and generational shifts in embodied practices. This research has also been used to evaluate theories of contemporary society and social change. As has been argued by other theorists, such changes cannot be viewed as effecting society in a straightforward manner, but reflect more complex patterns when examined in the context of everyday life. This chapter also extends such discussions by illustrating the role of generation in adding to diversity in experiences of such changes. As well as these theoretical contributions, understanding technology use as an embodied practice also has practical implications for policy makers seeking to engage older age groups with computer

technologies, and those trying to design computer and Internet applications better suited to this age group. It supports claims that perhaps the most useable designs are those that map onto older practices. This thesis also illustrates the importance of practical methods of learning computing, both for older and younger age groups. While this chapter has focused on such implications, the following chapter draws together final conclusions from these findings, and suggests directions for future research

## Chapter thirteen

### **‘One hundred years from now we wouldn’t even recognise a computer if we saw it’: Conclusions, future predictions and future directions**

This thesis began by problematising the concepts of ‘old people’ and ‘new technology’, with a quotation in which a young man who had written about the inability of anyone over 30 to use a VCR, must now be surprised to find that he has reached that age, and this technological ability has not left him! While such issues may seem obvious, they are often left unarticulated in discussions of ‘older people’ and their exclusion from the Internet revolution, in which difficulties using new technologies are often presented as the result of material or physiological changes in later life (Gilleard and Higgs 2008). In this thesis I have sought to unpack the concepts of ‘older people’ and ‘new technology’, and to better understand age/generational divisions, through situating the use of these technologies within everyday time-spaces, and biographical experiences. It has been argued that current use of the computers and the Internet at home during later life reflects the ‘embodied technobiographies’ of these cohorts, rather than being merely the effects of ageing. This means that the current age division in Internet use is a changing relation, which will be expected to alter as future cohorts enter retirement. The shifting nature of age relations and technological innovations raises questions regarding the shelf life of this study, and may suggest that the findings will soon become outdated. However, these findings have value in capturing unique experiences of this particular cohort or cohorts of retirees, which will not be the same for future generations.

In addition, the findings of this study are also generalizable and applicable on a wider scale, and can be applied to understand any technological innovation, and used to anticipate and research future developments. For instance, the cohorts of retirees I have studied particularly enjoyed using the radio, as it was experienced during their formative years, and ingrained into their everyday lives. Even the younger ‘baby boomers’ among this sample had not had a television in their earliest years, and therefore the radio remained their favourite technology. However, the generation of retirees below these will have experienced the television in a similar way to these experiences of the radio, as something which has ‘always been there’. Whether they bring a preference for using the television

with them into later life remains to be seen. Similarly, whether technologies like the Internet and mobile phone that today's 'digital generation' have grown up with will remain similarly important throughout their lives, is a topic for future investigation (Haddon 2004). This thesis has also highlighted the intersection of generation with gender and class in shaping 'embodied technobiographies', and the intersection of these elements also remains an issue to explore in addressing the future technology use of younger cohorts. However, as with age divisions, gender and class relations are similarly shifting, and whether the technobiographies of younger generations will be similarly gendered is open to exploration.

The concept of 'embodied technobiographies' is a unique framework developed in this thesis, which can be applied to researching these developments. This thesis has shown how acquiring technological skills is an embodied process, which can only be 'learned by doing' (Crossley 2007, Wacquant 2004). It has also illustrated how embodied competencies with technologies are acquired over a life-time, and difficulties learning to use new technologies may reflect difficulties in adapting older competencies to these new practices. An understanding of how technological changes are adapted to, and embodied over a life-time, is particularly important in the light of the fast pace of change in contemporary society (Giddens 1992). As discussed in the previous chapter, the constant changes and updating of technologies can disrupt embodied competencies, and the domestication of technologies. Although there were 'enduring technological dispositions' among older generations, it was argued that perhaps another characteristic of the 'digital generation' is the ability to adapt flexibly to such ongoing changes, and a 'flexible technological habitus'. If this is the case, will there still be long term cohort patterns among younger generations, or will they be characterised by this flexible habitus, rather than durable embodied dispositions?

While it is impossible to fully predict future technological innovations, and their role in everyday life, it is possible to record how such technological changes are experienced in the life-times of individuals and generations. Such issues could be examined retrospectively through biographical approaches as I have done in this research. However, a longitudinal approach could also be used to trace these developments over time. By examining the experiences of new learners, a longitudinal approach could also be applied to further understanding the process of acquiring embodied technological competencies as

it occurs. Throughout this thesis the importance of embedding these embodied biographical experiences within everyday spaces has been advocated. My research has focused on the context of the home; however, future research could focus on the location of these experiences other everyday spaces, or explore the interconnection of different spaces. This research has also focused on embodied technobiographies located in a British context, but examination in other socio-cultural locations may produce very different experiences. For instance, emerging unpublished research examining the use of new technologies in Chile (Bacchiddu 2009), illustrates very different relations around their diffusion, which has only taken place in recent years, and also differences in the temporal and spatial location of these technologies in the home.

An understanding of 'generational embodied competencies' is something which can also be applied beyond researching technology use, to understanding various aspects of social life. For instance, ongoing research on arts and crafts activities during later life has demonstrated that while these activities are often taken up after retirement, they also reflect the skills acquired over a life-time, and passed down through families (Reynolds 2009). These skills are also generational, and it is predicted that as participation in craft activities like knitting or sewing becomes less popular among younger generations, they will not bring these skills through into later life in the same way. Such traditions may 'die out' among younger generations, in the same way as participants in this study described the tradition of letter writing dying out among their children and grandchildren. However, younger generations will also bring new hobbies and activities with them into later life, although the nature of these as yet remains unknown. The embodied dimensions of such experiences was not examined by Reynolds, however it would be interesting to explore the embodied process of acquiring these arts and craft skills over a life-time, and whether there are changes in embodied competencies in relation to personal and social change. Such exploration of skills and activities in later life in relation to embodied competencies and resources acquired over a life-time, and situated within generational location, could also be applied to various activities and practices, including those around health, exercise, and the management of appearance. This approach therefore contributes an innovative dimension to arguments that future research on ageing and old age should pay greater attention to the influence of cohort and generational experiences (Gilleard and Higgs 2000: 196-197).



**Appendix A**  
**SPSS output for multivariate analysis of demographic variables and**  
**Internet use**

**Table A-1: Omnibus Tests of Model Coefficients**

	Chi-square	df	Sig.
Step 1 Step	2205.443	15	.000
Block	2205.443	15	.000
Model	2205.443	15	.000

**TableA-2: Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	8027.341	.251	.340

**Table A-3: Classification table**

Observed			Predicted		Percentage Correct
			Respondent uses the internet and/or email		
			No	Yes	
Step 1	Respondent uses the internet and/or email	No	3865	792	83.0
		Yes	1173	1816	60.8
	Overall Percentage				74.3



**Table A-5: Logistic analysis summary of socio-demographic predictors of Internet use**

Predictor	B	S.E.	Wald	df	Sig.	Exp(B)
Social class			621.138	2	.000	
Managerial/Professional occupations	1.637	.066	620.490	1	.000	5.141
Intermediate occupations	.869	.070	152.571	1	.000	2.384
Age group			348.200	3	.000	
50-59 years	2.275	.144	248.511	1	.000	9.728
60-69 years	1.645	.132	155.307	1	.000	5.182
70-79 years	.829	.137	36.850	1	.000	2.291
Male	.421	.058	53.066	1	.000	1.523
Self reported health			83.372	4	.000	
Excellent health	.949	.148	40.813	1	.000	2.582
Very good health	.655	.138	22.604	1	.000	1.926
Good health	.430	.136	9.993	1	.002	1.538
Fair health	.165	.140	1.388	1	.239	1.180
Current work status			80.227	5	.000	
Retired	-.360	.354	1.036	1	.309	.697
Employed	.192	.356	.290	1	.590	1.212
Unemployed	-.304	.465	.428	1	.513	.738
Permanently sick or disabled	-.765	.379	4.074	1	.044	.465
Looking after home and family	-.369	.364	1.027	1	.311	.691
Constant	-3.325	.399	69.319	1	.000	.036

## Appendix B

### SPSS output for multivariate analysis of organisational membership and Internet use

**Table B-1: Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	736.105	7	.000
	Block	736.105	7	.000
	Model	736.105	7	.000

**Table B-2: Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	9448.891	.093	.125

**Table B-3: Classification table**

Observed			Predicted		
			Respondent uses the internet and/or email		Percentage Correct
			No	Yes	
Step 1	Respondent uses the internet and/or email	No	3775	715	84.1
		Yes	1895	1160	38.0
	Overall Percentage				65.4



**Table B-5: Summary of organizational predictors of Internet use**

Predictors	B	S.E.	Wald	df	Sig.	Exp(B)
Membership of a political party/ trade union/ environmental group	-.779	.070	122.941	1	.000	.459
Membership of a Tenant/ residents group or neighbourhood watch	-.251	.062	16.157	1	.000	.778
Membership of a Church or other religious group	.084	.062	1.850	1	.174	1.088
Membership of a Charitable association	-.371	.067	31.058	1	.000	.690
Membership of an education, arts or music group or evening class	-.795	.075	113.305	1	.000	.452
Membership of a social club	.326	.062	27.204	1	.000	1.385
Membership of a sports clubs, gym, or exercise class	-.877	.061	205.934	1	.000	.416
Constant	1.824	.116	245.453	1	.000	6.198

## Appendix C

### Multivariate analysis of organisational membership, leisure activities and Internet use

**Table C-1: Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	1442.695	9	.000
	Block	1442.695	9	.000
	Model	1442.695	9	.000

**Table C-2: Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	7255.206(a)	.201	.271

**Table C-3: Classification table**

			Predicted		Percentage Correct
			Respondent uses the internet and/or email		
	Observed		No	Yes	
Step 1	Respondent uses the internet and/or email	No	2950	833	78.0
		Yes	1079	1560	59.1
	Overall Percentage				70.2





**Table C-5: Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Respondent has a hobby or pastime	-.496	.070	49.718	1	.000	.609
Respondent has taken a holiday abroad in the last 12 months	-.806	.059	185.248	1	.000	.447
How often respondent attends the cinema			85.584	2	.000	
Regularly attends the cinema	.793	.088	80.968	1	.000	2.210
Rarely attends the cinema	.471	.070	44.662	1	.000	1.601
How regularly respondent visits an art gallery or museum			98.142	2	.000	
Regularly visits a museum or gallery	.874	.096	82.365	1	.000	2.397
Rarely visits an art gallery/museum	.573	.070	66.307	1	.000	1.773
Membership of a sports clubs, gym, or exercise class	-.492	.072	47.174	1	.000	.612
Membership of a political party/ trade union/ environmental group	-.613	.079	59.541	1	.000	.542
Respondent has taken part in formal education or training in past 12 months (wpdec1)	.931	.099	88.606	1	.000	2.536
Constant	.181	.110	2.715	1	.099	1.198

## **Appendix D**

### **Interview guide (couples)**

#### **Ethics/intro**

The interview will explore how computers and the Internet are used within daily life following retirement.

Interview will begin by discussing a bit of brief background information about yourself and your household.

Then four main areas;

- History of how you began using computers and Internet and acquired them at home.
- How you use computers and the Internet in your home today
- Other activities technologies that you use at home, and their relation to computer and Internet use.
- Anything you say in the interview will be kept confidential and your name will be made anonymous when the study is written up.

If there are any questions you don't feel comfortable answering during the interview, you can refuse to answer them, and you can stop the interview at any time.

Would you be comfortable with the interview being recorded?

Is there anything you would like to ask or clarify before the interview?

#### **Background information**

Are you and your partner both retired from paid work?

When did you retire?

Why did you decide to stop working?

Feelings about retirement? Future plans?

Previous occupation(s)?

#### **Biography of computer Internet use**

Did you use computers or the Internet in your work? Typewriters in work/school?

When did you first use a computer?

e.g; home/work/course

When did you first use the Internet?

Initial feelings toward computers/Internet

Learning to use/sources of help

Any training/courses?

#### **Home computer**

When was first computer in home acquired? Why/for whom/who bought and set up?

Was the Internet acquired at the same time? If not, when was the Internet first acquired?

Why/for whom/who bought and set up?

How many computers are there currently in the household? When was it acquired?

Why/for whom/who bought and set up?

Whose is it?

Where are they? What made you chose location? Are you happy with it?

### **Current use**

Do both partners currently use the computer or the Internet at home?

*If doesn't currently use computer/Internet-Can I ask why? Ever tried to learn?*

If so...

How often does respondent use computers? How often do they use the Internet?

What do you use the Internet and computer for? (e.g; email, information, news, hobby information, health, shopping, banking, genealogy, holiday/travel booking, chatrooms/message boards/social networking, games)

What are main uses?

Aspects of Internet or computers liked most/least

Restrictions on use?

Has amount of time spent using computers or the Internet changed over time (e.g since retirement, children moving out)?

Do you ever access the Internet or use computers anywhere other than in your home? Do you use laptops or phone based Internet connections to do this?

### **Other members of household/wider connections**

Who in household uses the computer most? Who uses the Internet most?

Are there any differences between household members in what they use the Internet or computer for?

Are there are ever times when you need to use the computer at the same time for different activities? If so...how do you deal with this?

Feelings about other household members use?

Who is most competent?

Who provides technical help? Outside help? Specialist language?

Involvement of other family members/friends? Use to communicate with friends and/or family

\*Have you noticed any generational or age differences in the use computer technologies?

\*Examining issue of generation- Would you identify yourself as part of a generation?

What does this mean to you?

### **Use of other technologies**

What other technologies do you currently own? (e.g television, telephone, radio, CD player, mobile phone, ipod)

Explore inclusions/exclusions-are domestic appliances technologies?

Why are certain things seen/not seen as technology?

(When did you first get some of these technologies at home? Can you remember why you first got them? Initial feelings?)

Where do you keep them?

Do you use different technologies at particular times? Do you have a routine in terms of when you use them?

Which do you use the most? Is there any difference between you in how much you use different things?

Domestic appliances: Who uses domestic appliances the most? Has the balance changed since retirement?

Differences between household members in choice of television programmes  
Who normally chooses which TV programme to watch if you are watching TV together?  
Who is more competent? Who fixes/sets up?

### **Work and leisure**

Which of the technologies you own do you enjoy using the most? Would you see using any of these technologies as a leisure activity?

Is using any of these technologies work?

Are particular computer based or Internet activities enjoyable/leisure? Are any work?

What is it about an activity that makes it work or leisure?

Any constraints on time for leisure activities?

Is there anything else you would like to add regarding your experience of using computers at home?

Thank you for taking part.

## **Appendix E**

### **Interview guide (single person households)**

#### **Ethics/intro**

The interview will explore how computers and the Internet are used within daily life following retirement.

Interview will begin by discussing a bit of brief background information about yourself and your household.

Then four main areas;

- History of how you began using computers and Internet and acquired them at home.
- How you use computers and the Internet in your home today
- Other activities technologies that you use at home, and their relation to computer and Internet use.
- Anything you say in the interview will be kept confidential and your name will be made anonymous when the study is written up.

If there are any questions you don't feel comfortable answering during the interview, you can refuse to answer them, and you can stop the interview at any time.

Would you be comfortable with the interview being recorded?

Is there anything you would like to ask or clarify before the interview?

#### **Background information**

Are you retired from full-time paid work?

Engagement in any p/t paid work/voluntary work?

When respondent retired/left work

What made them decide to stop working?

Feelings about retirement? Future plans?

Previous occupation(s)?

How long have you lived at this address? What prompted the decision to move?

#### **Biography of computer Internet use**

Did you use computers or the Internet in your work? Typewriters in work/school?

When did you first use a computer?

e.g; home/work/course

When did you first use the Internet?

Initial feelings toward computers/Internet-feelings about them now? How confident do you feel about using computers?

Learning to use/sources of help

Any training/courses?

#### **Home computer**

When was first computer in home acquired?

Was the Internet acquired at the same time? If not, when was the Internet first acquired?

Did you set up them up?

When was current computer(s) in home acquired? Where from? Did you set it up?

How many computers are there currently in the household?

Where are they? What made you chose the current location? Are you happy with it?

### **Current use**

How often do you currently use your computer? How often do they use the Internet?

What do you use it for? (e.g; email, information, news, hobby information, health, shopping, banking, genealogy, holiday/travel booking, chatrooms/message boards/social networking, games)

What are main uses?

Aspects of Internet or computers liked most/least

Restrictions on use?

Has amount of time spent using computers or the Internet changed over time (e.g since retirement, children moving out)?

Do you ever access the Internet or use computers anywhere other than in your home? Do you use laptops or phone based Internet connections to do this?

### **Involvement of others/Wider connections**

Do you ever have any technical problems with the computer/Internet? Would you deal with these yourself?

Do you ever get outside help? Who from?

Specialist language?

Involvement of other family members/friends? Use to communicate with friends and/or family?

\*Have you noticed any generational or age differences in the use computer technologies?

\*Examining issue of generation- Would you identify yourself as part of a generation?

What does this mean to you?

### **Use of other technologies**

What other technologies do you currently own? (e.g television, telephone, radio, CD player, mobile phone, ipod)

Explore inclusions/exclusions-are domestic appliances technologies?

Why are certain things seen/not seen as technology?

(When did you first get some of these technologies at home? Can you remember why you first got them? Initial feelings?)

Where do you keep them?

Do you use different technologies at particular times? Do you have a routine in terms of when you use them?

Which do you use the most?

Did you set up these technologies yourself? Do you ever have technical problems?

Is there anyone you ask for help?

### **Work and leisure**

Which of the technologies you own do you enjoy using the most? Would you see using any of these technologies as a leisure activity?

Is using any of these technologies work?

Are particular computer based or Internet activities enjoyable/leisure? Are any work?

What is it about an activity that makes it work or leisure?

Any constraints on time for leisure activities?

Is there anything else you would like to add regarding your experience of using computers at home?

Thank you for taking part.

### Background information data sheet (couples)

Date of birth?	
When did you retire?	
What was your occupation before retiring?	
If not retired, how would you describe your current situation?	
At what age did you finish full-time education?	
Ethnicity?	
Are you a member of any organisations? If so, which ones?	
How many people live in this household?	
What is your relationship to them?	
Do you have any children outside the household?	
How long have you and your partner been married or living together?	
How many computers do you have in your household?	
What is your postcode?	



## Appendix G

### Background information data sheet (single person households)

Date of birth:	
When did you retire?	
What was your occupation before retiring?	
If not retired, how would you describe your current situation?	
Marital status:	
Do you have any children?	
At what age did you finish full-time education?	
Ethnicity:	
Are you a member of any organisations? If so, which ones?	
Are there any other members of this household? If so what is your relationship to them?	
How many computers do you have in your household?	
What is your postcode?	

**APPENDIX H: Time use diary (cover, instructions, and sample of one day)**

**Diary of computer and Internet activities**

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## **Time use diary**

The aim of this diary is to record your Internet and computer use over the next week alongside other activities, in order to better understand how these technologies are used in daily life. To help you remember activities accurately, it would be best if you fill in the diary on a daily basis. If you have any queries about the diary, please feel free to contact me via the details given on the information sheet.

### **How to complete the diary**

- This diary has four pages for each day of the next week, divided into morning, late morning, afternoon, evening, and night time.
- At the beginning of every day, please fill out the date in the space at the top of the page.
- On each page, there are a number of different activities listed on the side of the page, and at the top are the hours of day, with each hour divided into fifteen minute slots
- Please record your activities throughout the day by placing a tick in the fifteen-minute slot in which an activity takes place. If the activity carries on beyond the fifteen minute slot, please use a series of ticks to indicate this.
- If an activity does not fit into any of the existing categories, please use the 'other' category, and write down the name of the activity in the dotted space.

**Thank you for your time and co-operation.**

Original in colour

Morning	DAY 1				Date				Day of the week															
	6:00am				7:00am				8:00am				9:00am				10:00am				11:00am			
	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-
Home computer and Internet use:																								
Checking/responding to emails (from.....)																								
Sending emails (to.....)																								
Booking holidays/travel information																								
News																								
Genealogy																								
Health information																								
Researching a hobby																								
Searching for other information.....																								
Games																								
Online shopping																								
Downloading music																								
Message boards/chatrooms																								
Online Banking																								
Word processing																								
Other.....																								
Other home activities																								
Sleeping																								
Personal care/hygiene																								
Eating																								
Housework/cooking																								
Other household/personal																								
DIY/Gardening																								
Work/study																								
Reading																								
Watching TV																								
Listening to music/radio																								
Watching DVDs/videos																								
Telephone conversation																								
Other.....																								
Out of home activities																								
Seeing friends/family																								
Voluntary work/caring																								
Paid work																								
Study/courses																								
Pubs/cafes/restaurants																								
Appointments																								
Hobbies/clubs/societies																								
Theatre/cinema/concerts																								
Outings/events																								



Original in colour

Appointments																				
Hobbies/clubs/societies																				
Theatre/cinema/concerts																				
Outings/events																				
Shopping																				
Other.....																				

**Evening DAY 1**

	6:00 pm				7:00pm				8:00pm				9:00pm				10:00pm				11:00pm			
	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-
<b>Home computer and Internet use:</b>																								
Checking/responding to emails (from.....)																								
Sending emails (to.....)																								
Booking holidays/travel information																								
News																								
Genealogy																								
Health information																								
Researching a hobby																								
Searching for other information.....																								
Games																								
Online shopping																								
Downloading music																								
Message boards/chatrooms																								
Online Banking																								
Word processing																								
Other.....																								
<b>Other home activities</b>																								
Sleeping																								
Personal care/hygiene																								
Eating																								
Housework/cooking																								
Other household/personal																								
DIY/Gardening																								
Work/study																								
Reading																								
Watching TV																								
Listening to music/radio																								
Watching DVDs/videos																								
Telephone conversation																								
Other.....																								
<b>Out of home activities</b>																								
Seeing friends/family																								

Original in colour

Voluntary work/caring																				
Paid work																				
Study/courses																				
Pubs/cafes/restaurants																				
Appointments																				
Hobbies/clubs/societies																				
Theatre/cinema/concerts																				
Outings/events																				
Shopping																				
Other.....																				

**Night DAY 1**

	12:00pm				1:00am				2:00am				3:00am				4:00am				5:00 am				
	00-	15-	30-	45-	00-	00-	15-	30-	45-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	00-	15-	30-	45-	
<b>Home computer and Internet use:</b>																									
Checking/responding to emails (from.....)																									
Sending emails (to.....)																									
Booking holidays/travel information																									
News																									
Genealogy																									
Health information																									
Researching a hobby																									
Searching for other information.....																									
Games																									
Online shopping																									
Downloading music																									
Message boards/chatrooms																									
Online Banking																									
Word processing																									
Telephone conversation																									
Other.....																									
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Eating																									
Housework/cooking																									
Other household/personal																									
DIY/Gardening																									
Work/study																									
Reading																									
Watching TV																									
Listening to music/radio																									
Watching DVDs/videos																									





## **Appendix I: Information sheet (couples)**

**THE UNIVERSITY** *of York*

**Department of Sociology**  
Heslington

York  
YO10 5DD  
Tel (01904) 433044  
Fax (01904) 433043

### **Information Sheet: Computer and Internet use in retirement**

You are invited to take part in a research study. Before you take part it is important to understand why the research is being done and what it will involve. Feel free to contact me if anything is unclear or for further information.

#### **Who is conducting the study?**

My name is Christina Buse and I am a student at the University of York. This research is being carried out as part of my PhD thesis.

#### **Who is funding the research?**

The White Rose Studentship Scheme, which funds research at the Universities of York, Leeds, and Sheffield.

#### **What is the purpose of the study?**

The purpose of this study is to understand how people make use of computer and Internet technologies in their homes following retirement. It will explore how technology use relates to daily activities and routines, and to previous work experiences.

#### **Why have I been chosen?**

I am looking for retired couples who have a computer and Internet connection in their household, and at least one partner uses them on a regular basis.

#### **What will happen to me if I take part?**

- An initial interview with both yourself and your partner together will be arranged at a time and place to suit you.
- Following this interview, you will be asked to keep a time-use diary for a week recording your Internet and computer use, alongside other daily activities.
- This will be followed by a further individual interview, following up themes that emerge during the diary keeping.

**Will my taking part in the study be completely confidential?**

Anything you say will be kept completely confidential, and only myself and my supervisor will have access to information from the study. Interview data will be stored securely and destroyed once the research is complete. In writing up the thesis and any subsequent reports, the names of participants and any identifying details will be changed.

**To participate in the study or request further information please contact:**  
Christina Buse, Department of Sociology, University of York, Heslington, York,  
YO10 5DD, Tel: (01904) 432631, Email: ceb506@york.ac.uk.

## **Appendix J: Information sheet (single person households)**

**THE UNIVERSITY** *of York*

**Department of Sociology**  
Heslington  
York  
YO10 5DD  
Tel (01904) 433044  
Fax (01904) 433043

### **Information Sheet: Computer and Internet use in retirement**

You are invited to take part in a research study. Before you take part it is important to understand why the research is being done and what it will involve. Feel free to contact me if anything is unclear or for further information.

#### **Who is conducting the study?**

My name is Christina Buse and I am a student at the University of York. This research is being carried out as part of my PhD thesis.

#### **Who is funding the research?**

The White Rose Studentship Scheme, which funds research at the Universities of York, Leeds, and Sheffield.

#### **What is the purpose of the study?**

The purpose of this study is to understand how people make use of computer and Internet technologies in their homes following retirement. It will explore how technology use relates to daily activities and routines, and to previous work experiences.

#### **Why have I been chosen?**

I am looking for retired people who have a computer and Internet connection in their household.

#### **What will happen to me if I take part?**

- An initial interview will be arranged at a time and place to suit you.
- Following this interview, you will be asked to keep a time-use diary for a week recording your Internet and computer use, alongside other daily activities.
- This will be followed by a further interview, following up themes that emerge during the diary keeping.

**Will my taking part in the study be completely confidential?**

Anything you say will be kept completely confidential, and only myself and my supervisor will have access to information from the study. Interview data will be stored securely and destroyed once the research is complete. In writing up the thesis and any subsequent reports, the names of participants and any identifying details will be changed.

**To participate in the study or request further information please contact:**

Christina Buse, Department of Sociology, University of York, Heslington, York, YO10 5DD, Tel: (01904) 432631, Email: [ceb506@york.ac.uk](mailto:ceb506@york.ac.uk).

**APPENDIX K**



**Department of Sociology**  
Heslington  
York  
YO10 5DD  
Tel (01904) 433044  
Fax (01904) 433043

**CONSENT FORM**

---

The study: Computer and Internet use in retirement  
Researcher: Christina Buse  
Address: Department of Sociology, University of York, York, Heslington,  
YO10 5DD. Tel: (01904) 432631, Email: ceb506@york.ac.uk.

---

This form is to check that you are happy with the information you have received about the study and are aware of your rights as a participant.

1. Have you read the information sheet?	Yes/No
2. Have you had the opportunity to discuss further questions with the researcher?	Yes/No
3. Have you received enough information about the study to take part?	Yes/No
4. Do you understand that you may withdraw from the study at any time without giving your reasons?	Yes/No
5. Do you understand that all information will be treated as confidential?	Yes/No
6. Do you agree to be interviewed?	Yes/No
7. Do you give consent for the interview to be tape recorded?	Yes/No

Signature(s)..... Date.....

Name(s) in block letters.....

---

I confirm that the purpose and nature of the study have been fully explained

Signature of researcher ..... Date.....

Name in block letters.....

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