

Internet Non-Use: A Comparative Study of Great Britain and Sweden

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Abstract

Digital inequalities continue to concern researchers across highly technologised countries. In recent years, however, most research on digital inequalities has focused on distinguishing different patterns of Internet use rather than examining Internet non-users. The few quantitative studies of non-use and reasons for non-use often stay on a descriptive level, while qualitative studies mostly investigate subpopulations, such as those living in specific neighbourhoods. Although there are a number of studies of digital inequalities among young people and the elderly, a systematic literature search finds no research focusing on middle-aged individuals, who might face specific problems with being offline, as they are of working age and more likely than other age groups to have children living in the household.

On the basis of a mixed-methods research design that compares non-users in Great Britain and Sweden, the overarching research question for this study sheds light on the mechanisms contributing to Internet non-use, as it examines the socio-economic backgrounds, attitudes, perceptions, and everyday life experiences of non-users with a focus on 25 to 55 year-olds. It applies advanced statistical analyses of secondary nationally representative survey data as well as in-depth analysis of qualitative interviews with 10 middle-aged non-users from each country.

The analysis of these combined data shows that while socio-economic variables still play an important role in influencing who is on- and offline, general attitudes towards technologies are even more influential. The study finds that there is a lack of life-fit (Selwyn 2006) of ICTs for a number of non-users and a potentially negative impact of warm experts (Bakardjeva 2005) who have previously been regarded as a positive influence. Moreover, vulnerable groups (e.g. immigrants) are facing more substantial problems, such as issues with literacy and language, which need to be tackled first.

The deliberation of similarities and differences between Britain and Sweden against the backdrop of policy interventions and cultural values shows that being offline is not problematic for all Internet non-users; some of them thrive in highly technologised societies. The conclusion offers proposals for both future research and policy interventions for those, currently offline mainly due to socio-economic reasons, who would like to go online in the future.

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For Marie

1 Introduction

Use of the Internet on a variety of devices has become a prevailing and common picture in the media and everyday life in Western Europe, Northern America, and other highly developed areas across the world. According to the latest data from the Oxford Internet Surveys 2011 (Dutton & Blank 2011: 9) 73 per cent of Britons are currently using the Internet. The data are even more striking for Scandinavian countries such as Sweden, where 86 per cent were using the Internet in 2011 (Findahl 2011: 11). In developed countries, such as these, people are largely expected to have at least basic knowledge of computer-based technologies and non-use of these technologies might even be regarded as abnormal by large parts of the society (Wyatt 2003). In television advertisements companies provide the URL of their homepage instead of phone numbers, and information and communication technologies (ICTs) are frequently presented as normal everyday life objects in TV series, documentaries, movies, etc. Governments, banks, and companies across all economic sectors are moving their services online, and are in some cases even considering offering certain services only online. Some companies only have online platforms and no offline stores, such as the shopping site Amazon or the online auction page eBay. Most people in developed societies have mobiles and email addresses. All is well in the all-digital developed world, but is it?

In reports on Internet use and non-use in Great Britain¹ and Sweden, the so-called digital divide(s) (e.g. Hoffman et al. 2000; Latimer 2001) or digital inequalities (e.g. DiMaggio et al. 2001), i.e. uneven use of the Internet by people with different socio-economic backgrounds, have been pushed into the background by researchers in recent years. Most British and Swedish quantitative reports that were found mainly focus on Internet users, their behaviour online, social networking and other recent online phenomena. Only a minor section of these reports address ex- and non-users of the Internet (Dutton & Blank

¹ As the quantitative datasets include Scotland, Wales, and England, but not Northern Ireland, this is not a study conducted for the United Kingdom, but Great Britain only. The terms Great Britain and Britain will be used synonymously throughout this thesis.

2011; Findahl 2011). In Great Britain, however, more than a quarter of the population is not using the Internet, and in Sweden 14 per cent of the population are currently non-users. A critical discussion of works on Internet use and non-use (Chapter 2) shows that we find shortcomings in research on Internet non-use.

This thesis focuses on exactly this: Internet non-users. On the basis of secondary quantitative and primary qualitative data it describes characteristics of different types of non-users, their socio-economic backgrounds, their reasons for staying offline, their attitudes towards technologies, and everyday life in two highly technologised² European societies: Great Britain and Sweden.

1.1 A Preliminary Definition of Non-Use

Traditionally, there are many definitions of Internet non-use in the area of digital inequality research. While some researchers define three distinctly separated types mainly due to operational reasons – users (currently using), ex-users (have used before, but currently not using) and non-users (have never used) –, the general development moves toward a more gradual definition of Internet users and non-users that includes mostly various different types of users. Wyatt et al. (2002) differentiate four types of non-users: (1) resisters, who do not want to use the Internet; (2) rejecters, who stopped using the Internet voluntarily; (3) the excluded, who never used the Internet involuntarily; and (4) the expelled, who stopped using the Internet involuntarily (ibid.: 36). One of the questions is, whether one should include low users who rarely use the Internet into the general non-user category, because low users might be more similar to non-users than frequent users, as it is the notion in some works that look specifically at non-use and low use at the same time (e.g. Selwyn 2006). A contributing factor to the various different non-user definitions are perceptions of Internet users and non-users themselves: A number of respondents in

² The terms highly developed and highly technologised will be used synonymously throughout this study to describe the general state of development in Great Britain and Sweden.

the surveys used in the quantitative analyses as well as the qualitative interviews conducted in Great Britain and Sweden described themselves as Internet non-users, when they were in fact using the Internet on their mobile phone. For many people Internet use still seems to be distinctly connected to sitting in front of a computer or laptop (see Section 5.1.1).

For operational reasons, in this study, non-users are understood as individuals who have never used the Internet themselves on any device or only tried it a few times³. This includes using the Internet on mobile phones, tablets, digital TV, or other devices. The literature review will show that most non-users are not completely disconnected from technologies (see Section 2.2.2). However, those who have never tried these ICTs or only a few times lack essential skills needed to use the Internet. Ex-users are defined as individuals who have used the Internet before at least occasionally but are not using it any longer. Both non- and ex-users could have other people using the Internet for them, which would make them proxy users. This, however, does not exclude them from the categories of ex- and non-users that shall be used as the underlying operational definitions for this study.

1.2 Background of This Research

This study looks at Internet non-use of middle-aged⁴ Britons and Swedes. The country comparison and the specific focus on the age group of 25 to 55 year-olds contributes to the field of non-user research by providing a new angle on an under-researched group of people. A systematic search⁵ of non-user literature showed that no publication has so far fo-

³ Some of the interviewees in the qualitative study defined themselves as non-users, but were ex-users or had access at home and had occasionally tried using the Internet before (see Chapter 5 and for a more detailed discussion of non-user definitions Section 7.5).

⁴ While the term middle-aged is often commonly used for individuals around the middle of their lifespan (i.e. roughly 40 to 45 years in Western European countries), in this study this term will be used to describe the broad age group that is situated in between children and young people and older individuals. In this work, this term includes anyone aged between 25 and 55 years.

⁵ This systematic search included searches on several library catalogues and journal catalogues across the University of Oxford and Chalmers University of Technology (Gothenburg), searches on JStor, Wiley, Taylor & Francis, the Web of Knowledge, Google Scholar, and other search engines. The key words used in this search included 'Internet non-use', 'non-use', 'low use', 'non-user', 'ex-user',

cused on the age group 'in between' children and young people and the elderly. Moreover, there are only very few publications on Internet non-use in Sweden and previous studies show that a cross-country comparison can add a new layer of detail to research that would otherwise be hard to detect (e.g. Hasebrink-Paus et al. 2009: 44).

Middle-aged Non-Users

The study at hand focuses on middle-aged Britons and Swedes, who are 25 to 55 years old. This group is of working age and hence either employed, unemployed, at home looking after children, or in early retirement due to health problems or disabilities. They are expected by society to possess a certain set of skills that they can utilise in their jobs and everyday lives, such as at least basic levels of literacy. In recent years politicians in developed countries also regard basic computer and Internet skills as part of this necessary skill set (Selwyn 2004a: 99). In theory, most individuals in this age group should have encountered and used computers and the Internet in some type of institutional setting, such as schools, universities, or at work.

There is a large body of research on Internet use and non-use of young people and children – a group of great concern, as the literature agrees that children should get the opportunity to utilise the Internet and increase their technological skills. They are often regarded as so-called 'digital natives' who naturally grow into ICT use and thus have naturally better skills (e.g. Prensky 2001). Similar to the digital divide, this simplistic notion was soon discarded and replaced by a more nuanced understanding of ICT use of young people (e.g. Helsper & Eynon 2009; Selwyn 2009a, 2009b). A number of publications study digital literacy among children and young people, how it can create opportunities (e.g. Livingstone et al. 2005) but also risks for children (e.g. Livingstone et al. 2012). A relatively

'digital divide', 'digital inequality', 'digital inequalities', 'offline', 'icke användare', 'Internet UK', 'Internet Britain', 'Internet Sweden', 'Internet Sverige', 'information society', 'informationssamhället'. The publications were first scanned for their titles; subsequently the abstracts were examined for relevance for this study. If they were relevant, they were included.

large strand of research has recently also focused on digital inequalities among young people (e.g. Eynon & Malmberg 2012; Hargittai & Hinnant 2008; Livingstone & Helsper 2007) often with a specific focus on learning opportunities (e.g. Eynon 2009; Eynon & Malmberg 2011). The examination of this specific age group shows that younger Internet (non-)users face different challenges than other age groups. In terms of non-use, a lack of access and economic means seems to be more prominent among young people than a lack of interest (Geniets & Eynon 2011).

Another branch of Internet research examines the elderly, mostly stating that elderly non-users miss out on societal participation and could use the Internet to decrease social isolation. In his paper on digital divides and the elderly, Kiel (2005) points out that older citizens are much less likely to have a computer in the household than those aged younger than 60 years. He asserts that they could “[...] enhance their independence as they can now shop, pay bills, bank, learn, and engage in chat groups, such as the popular SeniorNet link” (ibid.: 21). Selwyn et al. (2003) agree with the potential benefits of ICT use for the elderly but find that many older adults do not make use of the Internet because ICTs seem to be irrelevant to their lives (ibid.: 577). Selwyn’s follow-up study (2004b) confirms these findings and emphasises that non-use does not mean a complete disconnection from technologies and the Internet. In their review on older people and the Internet, Milligan & Passey (2011) point out that with an ageing society a focus on ICT use among this growing group should be of major concern to policy makers in the UK and the EU. Their findings agree with Selwyn’s: Older people’s Internet use needs to fit into their life circumstances. A focus away from a mere provision of access and towards a user-oriented approach is thus important to encourage the elderly to go online.

As seen above, each age group has their very specific characteristics. Most quantitative works on Internet use and non-use employ age as one of the key variables in descriptive and higher level analyses to explain different types of use as well as general ex- and non-use. Despite these apparent differences between different age groups, middle-

aged non-users have not been researched in the past. In contrast to young and old age groups, non-use of the group 'in between' does not seem to be concerning to most researchers. Considering that the 25 to 55 year-olds will stay part of the work force for 10 to 40 further years, not to mention the fact that the average life expectancy in highly developed countries lies around 80 years right now (OECD 2011), this seems to be a decision not well thought through. Moreover, this age group is more likely than any other investigated group to have children living in the household. If we assume that Internet use among children and young people is important for their development and future careers (see above), policy makers should pay more attention to their parents, who will for the most part fall into the category of 25 to 55 year-olds. Another factor important for this age group is their participation in work. The number of occupations that require IT skills, including the use of computers and the Internet, is increasing, while the number of occupations that are purely manual are going down. According to the data from the British government's Labour Force Survey Employment status by occupation from 2001 and 2011, the percentage of jobs that require no or very few IT skills went down from approximately 45 to 40 per cent (Labour Force Survey 2012). As the data in both years were collected between April and June they are moreover skewed towards more unskilled labour, as manual jobs, such as building and farm work, are on a seasonal high during that time of the year. It is thus likely that the actual percentage of jobs that require IT skills is even higher than the 60 per cent measured in spring 2011.

On the other hand, this age group in itself is diverse as 25 year-olds potentially face very different living circumstances from 50 year-olds. These differences will be considered in the qualitative analysis of middle-aged non-users (Chapter 5) and discussed in the conclusion (Chapter 8).

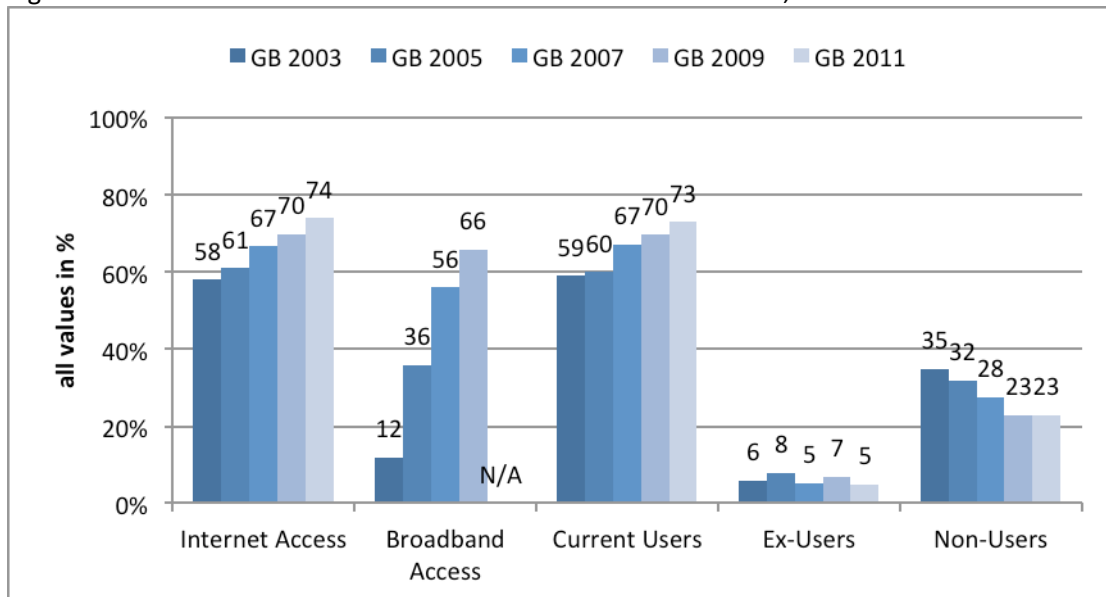
Comparison of Great Britain and Sweden

The two countries investigated and compared in this study are Great Britain and Sweden. The choice of these two countries was fuelled by several factors.

Both countries represent highly developed 'first world' societies, in which technologies are ubiquitous and embedded into everyday life; at the same time, they represent two different types of welfare states. Their political systems and social structures differ, as do their levels of inequalities. According to Esping-Andersen's (1990) classification of welfare regimes Great Britain could be characterised as a liberal welfare state, which "[...] seeks to provide a 'decent' minimum standard of living for households unable to generate adequate income in the labor market" (Headey et al. 1997: 332). The rules for receiving welfare are strict and benefits rather low (Esping-Andersen 1990: 26). Liberal welfare regimes do not actively promote equality nor do they actively diminish relative inequalities. The aim is to relieve acute poverty and enable individuals to 'survive'. Sweden represents a social democratic welfare state, which explicitly aims to promote equality and social solidarity. "Rather than tolerate a dualism between state and market, between working class and middle class, the social democrats pursued a welfare state that would promote an equality of the highest standards, not an equality of minimal needs as was pursued elsewhere" (ibid.: 27). Policies embedded in taxes, benefits, wage solidarity and labour market programmes are designed to promote income equality.

A second reason for comparing Great Britain and Sweden is that both countries started out at similar levels of Internet usage in the early 2000s (see bars situated in the middle of Figures 1 and 2; 59 per cent Internet users in Great Britain and 60 per cent in Sweden) but show a very different picture today. A descriptive analysis of Internet access and use between 2003 and 2011 shows a slow but steady increase of users for Britain (Figure 1) and a more distinctive increase of use in Sweden (Figure 2). Figure 1 shows that in 2011 three quarters of the British population had Internet access in their households and almost all of them used it. This equals an increase of 14 percentage points since 2003.

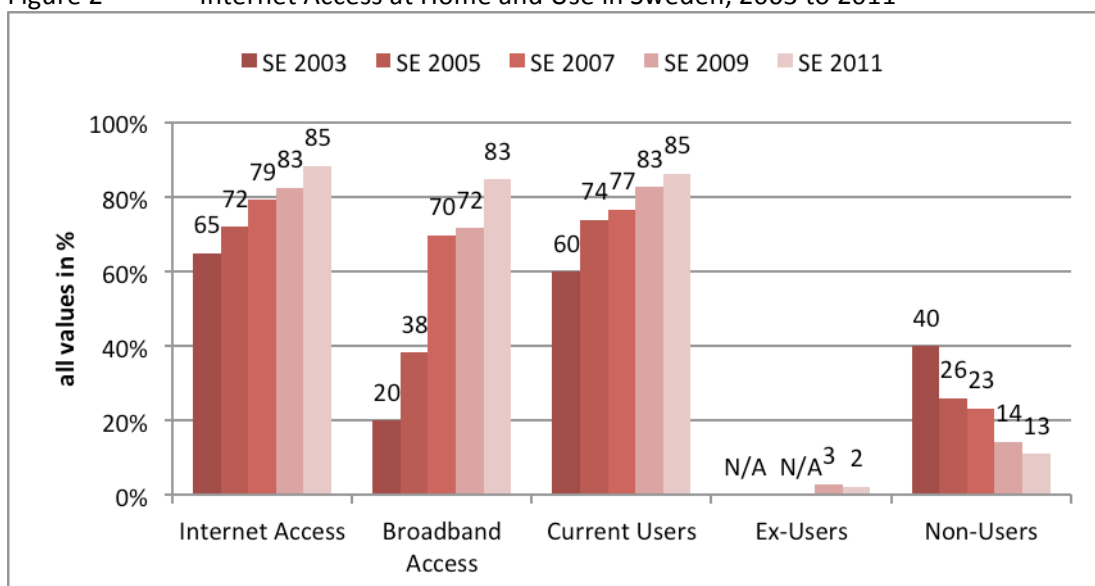
Figure 1 Internet Access at Home and Use in Great Britain, 2003 to 2011



Source: All Respondents, OxiS. 2003: 2,029; 2005: 2,185; 2007: 2,350; 2009: 2,013; 2011: 2,057.

However, the numbers of non- and ex-users of the Internet have stayed relatively stable over the past years. The number of non-users dropped from 28 per cent in 2007 to 23 per cent in 2009 and has since remained stable. The slight rise in the number of current users in 2011 results from a drop in ex-users from 2009 (7 per cent) to 2011 (5 per cent) rather than a drop in non-users. In Sweden, on the other hand, 85 per cent were Internet users in 2011.

Figure 2 Internet Access at Home and Use in Sweden, 2003 to 2011



Source: All Respondents, WII. 2003: N=2,000; 2005: N=961; 2007: N=2,016; 2009: N=2,063; 2011: N=2,671.

While both countries started out with roughly 60 per cent of Internet users in 2003, use of the Internet has increased immensely in Sweden over the last eight years. Only a minority did not use the Internet in 2011⁶.

On the basis of considering the structural, societal, and cultural differences between the two investigated countries as well as considering individual level factors, this study seeks to uncover the mechanisms that contribute to various kinds of middle-aged non-users in Britain and Sweden.

1.3 Aims and Objectives

To enhance already existing research in the field, this thesis seeks to provide a new angle for understanding Internet non-use and shed light on different types of non-users by investigating influential macro- and micro-factors. On the background of discussions regarding choice versus exclusion as reasons for Internet non-use (Sections 2.3 and 2.4), this work addresses the following overarching question:

What kinds of mechanisms lead to different types of non-users and how do they negotiate their offline lives in highly technologised societies?

Following from this question, the specific research questions address one communal aim – to develop different non-user profiles on the basis of several macro- and micro-factors, such as socio-economic characteristics as well as individual perceptions, feelings, and attitudes.

1.4 Research Design

As the literature review (Chapter 2) will show, Internet non-use is an under-researched topic – especially in Sweden. Only a few publications concerning digital inequalities apply

⁶ The World Internet Institute only collected data on ex-use from 2009 on, but not before. The data thus only indicate ‘drop-outs’ in recent times, which remained low with 3 and 2 per cent respectively.

a mixed methods approach (e.g. Ferlander & Timms 2006; Trémenbert 2010; Verdegem & Verhoest 2009). A systematic literature research in February and March 2012 only produced one mixed methods study that considered underlying reasons for non-use (Selwyn 2006). Moreover, most research on non-use and specifically reasons for non-use looks at either the whole population of a country from a macro perspective only or focuses on a very specific group of people (e.g. Klecun 2008; Selwyn 2003b).

To shed light on the research questions addressing both macro- and micro-factors influencing Internet non-use, this study is based on a mixed methods approach that applies both advanced statistical analysis of secondary survey data and analysis of primary qualitative data from Britain and Sweden. The use of secondary survey data from the World Internet Project (WIP) for both countries makes a comparison of the quantitative data possible. The semi-structured interviews with middle-aged non-users of the Internet were conducted with the same – translated – interview guides in and around the second-largest cities in the two examined countries: Birmingham (Britain) and Gothenburg (Sweden).

While the quantitative data were examined through statistical strategies including descriptive analyses, logistic regressions, and principal components analyses, the qualitative interviews were analysed using coding and categorisation strategies that were partly informed by the quantitative results, partly by the research questions and partly by the qualitative data themselves. The resulting non-user descriptions were based on attitudes towards technologies and the Internet, everyday life experiences with Internet non-use and underlying reasons for being offline. These newly found features of Internet non-users were then considered in a third analytical phase consisting of a more detailed quantitative analysis, which included newly chosen variables from the British dataset for both the complete sample and the middle-aged subsample. The addition of these new variables led to a more comprehensive quantitative analysis of non-user populations. It was not possible to do the same type of analysis for the Swedish middle-aged subpopulation but only

the complete sample, as the number of middle-aged non-users in the Swedish dataset was too small to conduct advanced statistical analyses.

1.5 Overview

The research design and the new angle of the work at hand contribute to digital inequality and non-user research both theoretically and empirically. Instead of assuming Internet use to be something inherently positive and desirable for every single member of developed societies, this study discusses whether this notion, which is popular in research and policies alike, is useful and helpful. The critical review of literature shows that a neutral position towards Internet non-use leaves more room for the analysis and interpretation of non-user experiences and underlying reasons for being offline. The comparative nature of this study provides a new layer of detail that has thus far rarely been provided in mixed methods research on non-use. This will equally add to the theoretical understanding of non-use as well as the empirical findings in this field.

Structure of this Dissertation

This dissertation is structured into eight chapters. Following the introduction, Chapter 2 critically examines literature regarding digital divides, digital inequalities and specifically non-user research internationally and in Britain and Sweden. The review of previous research concludes with the proposal of how to address the topics that have thus far not been studied satisfactorily or not at all. The final part of chapter 2 formulates the research questions that guide this study.

Chapter 3 describes the research design with specific focus on why a mixed methods approach is appropriate for this study and the advantages and challenges of comparative research. This chapter moreover explains the data collection and analysis methods of the quantitative and qualitative research phases.

Chapters 4 through 6 represent the empirical part of this study. The first of these three chapters presents quantitative results for Great Britain and Sweden, describing the general relationship between and development of Internet non-use and socio-economic characteristics between 2007 and 2011. These more sophisticated analyses show that we find different groups of non-users with similar socio-economic characteristics. All analyses are presented for the general (non-user) populations and the middle-aged subpopulations. The Swedish dataset did not allow advanced analyses for 25 to 55 year-old non-users, as the number of respondents in this group was too low (see Section 4.1.2). Chapter 4 also presents data on reasons for non-use. The qualitative work is presented in Chapter 5 in form of the analysis and interpretation of the interview study that was conducted in Birmingham and Gothenburg with middle-aged non-users, one ex-user in Britain and a handful of Britons and Swedes who had just started to learn how to use computers. The results from these analyses show that non-use is a complex phenomenon that includes an interplay of a number of macro- and micro-factors, in other words living circumstances, that non-users find themselves in. The interviews show moreover that while there are different types of non-users that can be grouped according to different socio-economic backgrounds, the consideration of micro-factors makes the individual non-use cases so complex that an attempt at grouping these cases was considered as not recommendable. However, on the basis of these much more detailed insights into non-user attitudes, feelings, experiences and other important factors that mediate non-use, Chapter 6 represents a second quantitative phase that repeats logistic regressions for British and Swedish non-users with newly added variables. The second part of the quantitative analyses paints a much more detailed picture of factors contributing to non-use and confirms and generalises the findings from the qualitative work.

Chapter 7 combines the results found in the quantitative and qualitative phases and interprets these against the background of cultural and policy differences in Britain and Sweden. The key focus lies on depicting the differences and similarities between the

two investigated countries and situating these within the settings in which British and Swedish non-users find themselves.

The concluding chapter (Chapter 8) critically discusses the results found in this study, the shortcomings and limitations of the analyses and their potential meaning for policies in both countries.

2 Literature Review

With constantly increasing numbers of Internet users all over the world, Internet adoption and use is a well-researched topic across several disciplines, reaching from media studies, and sociology, to psychology and geography.

A specific field of interest, the so-called digital divide, which is mostly understood as the gap between those who have Internet access and those who do not, has been continuously investigated ever since the Internet started to be adopted by vast parts of the populations of developed countries from the mid-1990s onwards (e.g. Hoffmann 2000; Katz & Aspden 1997; Latimer 2001; Rogers 2001; Servon & Nelson 2001). This branch of research focuses on divides within (mostly developed) countries and those between developing and developed countries (Norris 2001). Over time, digital divides research started moving away from simple access divides to more refined divides and inequalities in skills and quality of access (e.g. DiMaggio et al. 2004; Dutton et al. 2007; Selwyn 2004; Van Dijk 2005; Warschauer 2003). In recent years, studies within developed countries have shifted their focus to more subtle types of digital inequalities. They mainly deal with different types of Internet usage, e.g. frequent and versatile use versus intermittent and narrow use (e.g. Hargittai & Hinnant 2008; Hargittai & Walejko 2008; Helsper 2008, 2011; Wong et al. 2009). Non-use of the Internet is partly considered by these studies, but over the past five years only a few publications put specific emphasis on non-users. Most of this research is qualitative (e.g. Cushman & Klecun 2006; Klecun 2008) or uses mixed methods (e.g. Trémenbert 2010; Van Aerschot & Rodousakis 2008; Verdegem & Verhoest 2009).

This chapter discusses previous research on digital inequalities and specifically Internet non-use. It is designed as a critical deliberation of previous works that points out shortcomings, which inform the research questions (Section 2.7) and methodology (Chapter 3) of the work at hand.

The first section will deal with international research on digital divides, how this concept was developed into digital inequalities, and comparative studies (2.1). User and specifically non-user research related to more detailed conceptions and theories of digital inequalities globally, with an extra focus on Great Britain and Sweden, are examined in section 2.2. The third section investigates reasons for non-use (2.3). In the context of previous research, section 2.4 inquires whether Internet non-use is per se negative and a disadvantage, like the majority of research and policymakers assume. Section 2.5 examines policymaking regarding digital divides and inequalities in Great Britain and Sweden. Section 2.6 demonstrates how this study has the potential to provide a new angle and how it contributes to the theoretical and empirical understanding of non-users and their underlying reasons to stay offline (2.6). The concluding part of this chapter formulates the research questions (2.7), which guided the methodology and the empirical phases.

2.1 Digital Divides and Inequalities

The Digital Divide

Many authors define the digital divide as the difference between those who have access to or use ICTs, and specifically the Internet, and those who do not (e.g. Hoffman et al. 2000; Latimer 2001; Servon & Nelson 2001; Warren 2001), or as “[...] the gap that exists between individuals advantaged by the internet and those individuals relatively disadvantaged by the internet” (Rogers 2001: 100). In the early stages of Internet diffusion in the late 1990s and beyond, this dichotomous definition was one of the first concepts used to grasp and measure potential implications of this new technology. The core literature differentiates between several types of divides, amongst others the *global* digital divide – the differences in Internet access between developed and developing countries – versus the digital divide *within* countries (Norris 2001: 4). However, with ever increasing diffusion of

Internet access all over the world, the differentiation of individuals who have physical access to the Internet and those who do not becomes less and less adequate.

In developed countries, we have reached the point where almost everyone has the possibility to use the Internet somewhere: At work, a friend's house, the local library, community centres, Internet cafés, and other potentially cost-free access points. Moreover, simple 'divides' across classic demographic factors, such as income, education, gender, age, and ethnicity that were found to be significant factors in determining who has access to the Internet and who does not in early research (e.g. Katz & Aspden 1997) have become more nuanced and give way to more subtle differences.

Digital Divides and Inequalities

Accordingly, most scholars moved away from the dichotomous differentiation and towards a more nuanced understanding of digital *inequalities*. It should be noted that a number of authors retained the original term and simply renamed 'the' digital divide into several digital *divides*. Some of the first authors moving beyond this dichotomous concept were DiMaggio et al. (2001) who renamed digital divides into inequalities on the basis that there is more than one divide and inequality has several layers in sociological studies. In his study 'Technology and social inclusion' Mark Warschauer (2003) describes a multidimensional theory of global digital inclusion based on case studies from several developed and developing countries. Van Dijk and Hacker (2003) develop a similar multifaceted concept of digital divides that goes beyond mere *physical* access. They identify four kinds of barriers: lack of digital experience (mental access), lack of computers or network (material access), lack of digital skills (skills access), and lack of significant usage opportunities (usage access) (ibid.: 315 et seq.). Their article notes that in previous research "[...] there is a strong material or 'hardware orientation' approaching access to digital technology" (ibid.: 316). Building on this, Van Dijk's (2005, 2009) fourfold model of Internet 'access'

encompasses four hierarchical steps of Internet adoption: motivation, physical access, digital skills, and usage (2009: 288).

Another major theory in this area was formulated by DiMaggio et al. (2004), who promote a model of digital *inequalities* that moves away from any binary definition regarding access to and use of the Internet and towards understanding differences in Internet usage (ibid.: 362 et seqq.). With ever increasing proportions of the population being online, we find many examples of studies and research that focus on digital inequalities and in particular on differences in Internet use (e.g. Hargittai & Walejko 2008; Livingstone et al. 2005; Schradie 2011; Van Deursen et al. 2011; Wong et al. 2009; Zillien & Hargittai 2009). These approaches emphasise quality and location of access, skills, motivation, and frequency and breadth of use. All of the above studies find inequalities in patterns of Internet use, with those individuals with higher incomes, higher educational qualifications, and those being employed using the Internet more regularly, and in a broader way than those from less fortunate backgrounds. Most studies regard these differences in Internet use as problematic: “Overall, we find that a user’s social status is significantly related to various types of capital-enhancing uses of the Internet, suggesting that those already in more privileged positions are reaping the benefits of their time spent online more than users from lower socioeconomic backgrounds” (Zillien & Hargittai 2009: 287). In a recent publication, Helsper (2011a) confirms these findings for Great Britain. Her policy brief focuses on users of the Internet and points out the appearance of a ‘digital underclass’ that has “[...] incorporated the internet into fewer aspects of their everyday lives over the years and, while their use has increased, they are becoming relatively more disadvantaged compared to other internet users” (ibid.: 14).

Comparative Research

Comparative and cross-national studies have mostly focused on digital divides and inequalities with regards to differences and similarities between developed and developing countries (e.g. Chen & Wellman 2004; Huang et al. 2003; Notten et al. 2008), as well as between developed countries, such as those in the European Union (e.g. Demunter 2005; DiMaggio et al. 2004; Dutton et al., 2007; Eurostat 2010; Livingstone et al., in press; Reisdorf 2011; Van Dijk 2009). While these studies have different focuses, such as access, use, or specific age groups, all of them have one thing in common: They work with quantitative data only.

In their recent survey study 'Understanding the new digital divide – A typology of Internet users in Europe' Brandtzæg et al. (2011) investigate different types of Internet use in five European countries: Norway, Sweden, Austria, the UK, and Spain. They differentiate five types: Non-users, sporadic users, instrumental users, entertainment users, and advanced users. Despite finding a large digital divide with 60 per cent of the complete sample being non-users or sporadic users, they focus on different *user* types, which are supposed to help "[...] public authorities develop strategies for overcoming the new digital divide by identifying predictors that are crucial to developing certain types of Internet usage and by identifying certain user groups that need special support when using the Internet" (ibid.: 124). However, the data used are relatively dated (2004-2006) and the 44 per cent large group of non-users is described as one homogenous group with similar socioeconomic characteristics. Although the country comparison adds to the understanding of different user types, the comparison of non-users across the countries falls short and it does not become quite clear in how far differentiating different types of *users* will help to tackle one of the biggest of the digital divides: the divide between 44 per cent *non-users* and 56 per cent different types of users across the five investigated countries.

Ono & Zavodny's (2007) five-country comparison of Singapore, Japan, South Korea, Sweden, and the US uses quantitative data and relates digital inequalities to general inequalities within and across the investigated countries. Their findings show that "[...] the results are consistent with our hypothesis that gaps in IT usage reflect pre-existent social and economic inequalities" (ibid.: 1152). They suggest that rather than providing access to computers, which is not found to be a strong predictor of Internet use, policies should tackle these general inequalities. The study's largest shortcoming, however, are the out-dated data from 1997-2001. A similar study with recent data would help to clarify whether this relationship between general inequalities and digital inequalities is still valid more than a decade later and with significantly higher Internet penetration across all investigated countries. For the study at hand it is especially interesting that general inequalities are mirrored in digital inequalities. Related to the countries investigated here, this would lead us to expect higher digital inequalities in Great Britain than Sweden.

Only a small number of studies apply both quantitative and qualitative methods (e.g. Van Aerschot & Rodousakis 2008; Warschauer 2003). In their comparative study of Internet users and non-users in Germany, France, Bulgaria, Finland, and Israel, Van Aerschot & Rodousakis (2008) found, for example, that despite equal levels of Internet usage and access the composition of user and non-user populations can vary immensely in terms of not only socio-economic characteristics, but also regarding attitudes towards the Internet. They found that government policies, especially those regarding education, and general cultural values in a country, such as proneness to technologies, could influence both factors. While policies regarding general inequalities and digital inequalities can contribute to the socio-economic background of user and non-user populations to a certain extent, perceptions of the Internet's security, privacy issues, its general usefulness, etc. are partly influenced by cultural settings, but also by personal preferences. In the focus groups, Van Aerschot & Rodousakis's study looked specifically at attitudes towards online government services and found immense differences between the countries that partly

resulted from generally negative attitudes towards government, for example from French and Israeli focus group participants (ibid.: 333) who tended to be more critical of their respective governments than other focus groups. This shows that differences in policy settings, nuances in cultural values and perceptions of state initiatives all influence Internet non-use.

The examples above show that comparative studies are extremely valuable and that the picture of digital inequalities is more complex than one might be led to believe when focusing on one country only. The examination of differences in digital inequalities in equally developed countries paves the way for a better understanding of characteristics of Internet use and non-use, the role of macro-settings, cultural values and perceptions, and stimulate more thorough and in-depth research.⁷

The move towards studying different types of users on a national or comparative basis has led to a more nuanced understanding of digital inequalities than the earlier dichotomous approach of Internet access versus no access. At the same time and despite the general agreement that low use could be a disadvantage in technologised societies, the recent direction of research has led to a neglect of research that specifically addresses complete non-users. The discussion of non-user research below will show that there are few studies focusing on this group and even fewer studies applying a mixed methods approach and cross-national comparison.

2.2 Internet Non-Use

Building on the research presented above, complete Internet non-use can be regarded as an extreme case of digital inequalities. If low, occasional, or unskilled use of the Internet is largely viewed as problematic (e.g. Helsper 2011a; Zillien & Hargittai 2009), Internet non-use and non-users themselves should be closely examined regarding their characteristics,

⁷ The advantages and possible challenges of comparative research will be further discussed in the Research Design (Section 3.2).

reasons for non-use and possible ‘coping’ strategies of using alternative information, entertainment, and communication resources.

2.2.1 Theoretical Approaches

Internet use and non-use have been approached theoretically by a number of scholars over the past decade. These approaches try to conceptualise non-use on the basis of psychological, sociological, or economical constructs. The paragraphs below provide a critical review of the most prominent approaches: diffusion theory, domestication, capabilities and Bourdieu’s theory of different types of capital. Bourdieu’s capital approach as conceptualised by Selwyn (2004) is regarded as an especially fruitful theoretical approach as it considers both macro- and micro-factors relating to Internet non-use.

One of the most popular theories applied to digital divides and Internet non-use is Rogers’s theory of the diffusion of innovations (Rogers 2003). Diffusion is defined as “[...] the process by which an innovation is communicated through certain channels over time among the members of a social system” (ibid.: 5). Rogers’ theory differentiates between innovators, early adopters, early majority, late majority, and laggards who adopt very late after the innovation got introduced (ibid.: 281). However, this characterisation stays at a descriptive level. Rogers does not formulate a thorough theory as to *why* certain people are laggards or innovators. Another weak point of this theory is that it assumes that eventually 100 per cent of a population will adopt innovations. Nonetheless, this concept is applied in a number of projects (e.g. Atkin et al. 1998; Chew et al. 2004; Hilbert 2011; LaRose et al. 2007; LaRose & Hoag 1996; Rogers 2001).

Another approach common mainly in qualitative work examines the domestication of ICTs into households and individual lives. Much of the work using this theory focuses on the period of the initial acquisition of ICTs and their adoption into everyday life. Another topic examined through this approach is engagement and disengagement with specific

technologies (Haddon 2000, 2006, 2007; Haddon & Silverstone 1996). This framework has been used to research non-adoption of technologies and reasons for non-adoption (Haddon 2006: 197). In one of these studies Haddon and Silverstone (1996) examined (non-)adoption of ICTs with specific focus on the young elderly, who mostly formulated generational views of technologies not being for them. In another publication, Haddon (2000) paid special attention to single parents and the young elderly, who mentioned lack of money and support from social networks as major reasons for non-use of the Internet. The main methodologies used for this type of research are of qualitative nature. They seek to explain “[...] the meaning and significance of ICTs to people, as well as their ambiguities and contradictions” (Haddon 2006: 199). This approach contrasts quantitative approaches to researching non-adoption. Whilst quantitative approaches tend only marginally to consider individual factors, the domestication framework does not give much room to macro-factors, such as state policies.

The capabilities approach has been formulated for Internet use and non-use first by Mansell (2002) and later again by Zheng & Walsham (2008). Both papers criticise the focus on access in policy programs aiming at e-Inclusion. They formulate a theory in which the aim of policies should be to enable citizens “[...] to strengthen their abilities to make choices about alternative ways of living their lives” (Mansell 2002: 4). Zheng & Walsham state that individuals can be excluded and thus deprived in their capabilities on several levels: “One could be excluded from taking advantage of information online by being deprived of access to the Internet. At another level, one can also be excluded from participating in political and public affairs by being denied certain information [...] despite available access to the communication channels” (2008: 238). Accordingly, both publications emphasise a move away from purely physical access in digital inequality research and towards more detailed meso- and micro-perspectives.

A sociological approach often applied to research regarding Internet use and non-use is Bourdieu’s concept of social capital that he defines in his 1983 work on different

forms of capital: economic capital, cultural capital, and social capital. Capital is defined as accumulated work in objectified or incorporated form, which can be transformed into social energy that produces or reproduces more capital, and hence stabilises the social order. "It is the principle underlying the immanent regularities of the social world. It is what makes the games of society something other than simple games of chance" (Bourdieu 1997: 46). Bourdieu understands social capital as the accumulation of actual and potential resources within a stable network of more or less institutionalised relationships of mutual knowledge or recognition. These resources depend on being part of a social group or network (Bourdieu 1983: 190 et seq.). A number of works examine the interrelations of social capital and Internet use (e.g. Shah et al. 2001; Wellman et al. 2001) and specifically social networking sites, such as facebook or MySpace (e.g. Ellison et al. 2007; Pfeil et al. 2009; Steinfeld et al. 2008; Valenzuela 2009).

Selwyn (2004a) utilises the theoretical concept of different types of capital to describe factors that mediate differences in and consequences of engagement with ICTs. In his model, all three types of capital influence use and non-use of the Internet: Economic capital enables individuals to acquire and maintain the hardware and software needed; embodied cultural capital in the form of technological skills and socialisation in a technologised world facilitates the use of ICTs; social capital in the form of significant individuals or networks influences abilities and motivation to use ICTs. He applies this theoretical approach in his 2006 study of non- and low use of ICTs by asking a set of research questions related to both macro- and micro-factors:

"What social and economic factors are correlated with non-use of computers [...] ? Which factors can be considered salient in terms of confounding factors?

What are the circumstances, rationales and motivations underlying individuals' non-use of computers? How do non-users make sense of computers and get by in a technologically mediated world?" (ibid.: 276).

Selwyn concludes that social capital in form of friends and family is not only important for the appropriation of computers and the Internet but also for proxy use, which almost all

non-users reported (2006: 288). He asserts that all considered factors and types of capital play a role in determining people's relationships with technologies: "Whilst the opportunities to access and use computers are undeniably structured and mediated by factors relating to the household, family, workplace as well as age, class and gender, we cannot deny individual agency in contributing to the fluidity of people's relationships with technology" (ibid.:289).

Selwyn's theoretical approach to non-use is especially fruitful as it considers the complete set of factors that are examined in different non-user studies as described in the next section. In the study at hand, economic and cultural capital are taken into account in the quantitative and qualitative phases in form of questions regarding socio-economic background, e.g. employment, education, and income; social capital is mainly considered in the qualitative phase in form of questions regarding friends, family, and social networks (see Appendix B, I.a. and I.b.).

2.2.2 Empirical Research

A number of projects deal with non-use in the Anglophone literature on Internet research. Some of the works mentioned in the section above also look at non-use empirically, but mostly from a very specific perspective. Selwyn (2003b) for example focuses on computer non-use amongst university students, while Satchell & Dourish (2009) only look at non-systematic data that were "[...] drawn from a range of studies, including one of blogging and smoking cessation, and another of public displays for environmental sustainability, as well as from conversations and interviews with people exhibiting some of the behaviors that we describe" (ibid.: 9).

In a US survey project Robinson & Martin (2009) investigate the difference in political attitudes between users and non-users. They find that users are more tolerant in regards to openness. However, the differences were not found for all topics, and some pat-

terns did not easily fit with standard political labels, such as liberal or conservative. Moreover, they found that many differences in opinion could be explained by socio-economic factors.

In their Belgian mixed-methods study on 'Profiling the non-user', Verdegem & Verhoest (2009) conducted a survey with 184 respondents, focus groups and in-depth interviews with 42 respondents, and a second survey with 110 respondents for the validation study. They conclude that non-users cannot be regarded as one generic group. "The relative utility of a product is seen as the perceived increase of utility obtained by appropriating a product in relation to all emotional, cognitive and material resources available to an individual. ICT adoption/usage can be explained through the relation of perceived cost of ICT and the perceived utility" (ibid.: 650). This notion of individual choice will be picked up again in section 2.4, which critically discusses the popular depiction of non-use as a disadvantage per se.

In her study on French non-users Trémenbert (2010) also applied a mixed methods approach that included interviews, focus groups, and a local quantitative survey (ibid.: 5). The aim was to identify certain types of non-users and provide an overview on justifications of non-use. She finds that socio-economic characteristics play a significant role in predicting who is using the Internet and who is not. Social isolation was another factor found to be correlated to Internet non-use: "We found that the probability that an individual with a high social life score proves to be internet user is high (5 times more likely). Conversely, 71% of people with the less developed social score are non-users. While 61% of Internet users are in the upper category of social life, it is the case of only 29% of non-users" (ibid.: 8). The typology established on the basis of these findings includes three well informed groups of non-users and two less informed groups: (1) unwilling non-users who know about the Internet but don't want to use it; (2) potential users who lack a certain degree of motivation; (3) future users, who are very motivated and very knowledgeable; (4) excluded non-users, who know little about the Internet and are excluded for objective

or subjective reasons; and (5) somewhat motivated and little informed non-users, who are still refractory (ibid.: 9). This more detailed categorisation of non-users gives some indication on the complexity of Internet non-use and reasons thereof. It shows that a mixed methods approach brings much more detailed results that paint a more complete picture of a social phenomenon.

Great Britain

A number of studies deal with differences in use and non-use of the Internet in Great Britain. Several large institutions conduct surveys including questions on Internet use on a regular basis: amongst others, the British Household Survey, the Oxford Internet Surveys (OxIS⁸), or surveys conducted by Ofcom, the independent regulator and competition authority for the UK communications industries. The latter two specifically address Internet use with different focuses. Both surveys contain a section dealing with digital inequalities and non-use of the Internet (Dutton et al. 2009). However, in line with the recent shift in research interests, the focus lies on Internet *use* and differences between different types of users and less on non-use (e.g. Dutton & Blank 2011).

One of the earliest quantitative studies looking at Internet use and non-use was Anderson and Tracey's (2001) Digital Living Project, which collected panel data over a few years. The study found that Internet use is not a linear process, but that people drop out and start using the Internet again in accordance with current life circumstances (Anderson & Tracey 2001). Based on data from three waves of the OxIS, Eynon (2009) explores factors shaping Internet use and non-use, with specific focus on online learning. Her results confirm previous findings that "[p]ositive attitudes towards ICTs, having a higher level of education and income and being younger are all positively related to being an internet user" (ibid.: 289). In her government report 'Digital Inclusion: An Analysis of Social Disad-

⁸ For a detailed description of the OxIS, please refer to chapter 3.3.1.1.1.

vantage and the Information Society', Helsper's (2008) quantitative results find that we cannot simply distinguish between 'the' users and 'the' non-users. She finds a number of groups of users and non-users, who show different levels of engagement with the Internet as well as different socio-economic characteristics. Although the findings show a strong correlation between socio-economic background and different types of Internet use and non-use, Helsper warns about oversimplifying the issues, and points out a number of 'unexpected' user and non-user groups. Reisdorf's (2011) quantitative analysis of non-users in Great Britain and Sweden reports similar findings. She points out that a mixed methods approach is needed to give satisfactory answers to questions that have not been sufficiently addressed by previous works: "Only the combination of quantitative and qualitative methods allows [...] a detailed analysis of specific non-user populations, their living circumstances, their attitudes towards technologies, how they approach everyday tasks without using the Internet, and how they experience life without the Internet" (ibid.: 418).

Non-use is rarely the focus of recent Internet research (Cushman & Klecun 2006: 11). Moreover, qualitative methods or a mixed methods approach were only applied in a small number of studies. Although Haddon's (2000) qualitative study on ICT use and non-use focuses on television and the telephone, it shows that a use of rich qualitative data leads to a better understanding as to why a relatively large proportion of the population do not use certain technologies. A qualitative study of ICT non-use in domestic environments showed that this is a complex phenomenon that needs further in-depth research (Cushman & Klecun 2006: 11 et seqq.).

Selwyn (2006) applies a mixed methods approach, consisting of quantitative survey data and follow-up interviews with absolute non-users and low users of computers and hence indirectly the Internet. The results show again that a quantitative-only approach does not give an adequate picture of non-use: "[T]his paper provides empirical confirmation for the contention that non-use of computers is not a simple dichotomous matter of either being 'a user' or being 'a non-user'. This is highlighted by the prevalent

sense from the interview data that ‘non-use’ of computers certainly does not equate with non-contact with computers” (ibid.: 288). The supplementation with qualitative data shows a complexity of non-use that quantitative analyses cannot provide.

In summary, previous research on Internet non-use in Great Britain shows that it is a complex phenomenon that cannot be described through a user vs. non-user dichotomy. Non-users tend to be older, have lower education, lower incomes, and less positive attitudes towards technologies. Moreover, non-use does not mean that those who are offline do not get in touch with computers or the Internet.

Sweden

Survey projects across Sweden examine Internet use and non-use. One of the biggest surveys are the ‘Svenskarna och Internet’ reports that are based on data from a panel study carried out by the World Internet Institute (WII⁹) since 2000. With increasingly high numbers of Internet users in Sweden, the reports find that age is the most important factor for being an Internet non-user in Sweden (Findahl 2010: 9). In the most recent report, digital exclusion in the sense of complete non-use is, however, only mentioned in a short paragraph (Findahl 2011: 10) and only followed up for Internet users throughout the rest of the report. This trend can also be observed in other publications on Internet use in Sweden, such as the yearly reports from the Central Bureau of Statistics (e.g. Statistiska Centralbyrån 2004, 2011). Based on data from the World Internet Project (WIP¹⁰), Findahl (2009) compares non-use in Sweden, the US, the Czech Republic, and Hungary. He finds that Swedish Internet non-users are mainly from older groups with lower income and education (ibid.: 7). Reisdorf’s (2011) quantitative comparison of non-users in Great Britain and Sweden confirms these results, concluding that those who are older, unemployed, and

⁹ For a detailed description of the WII survey, please refer to chapter 3.3.1.1.2.

¹⁰ For a detailed description of the WIP, please refer to chapter 3.3.1.1.

have lower educational qualifications and incomes are significantly more likely to be Internet non-users (ibid.: 410).

From a systematic literature search with both English and Swedish key words in February and March 2012 there appears to be only one mixed methods study considering digital divides and hence Internet non-use. In their paper 'Bridging the dual digital divide' Ferlander & Timms (2006) apply a mix of quantitative and qualitative methods to assess the impact of two local projects in suburban Stockholm that aimed to provide Internet access and support of Internet skills. They find that the 'Local Net' project, which focused on subsidising Internet access to disadvantaged groups in a Stockholm neighbourhood was less successful than the IT-café project that provided not only cheap access to the Internet, but also informal help with usage. The provision of support rather than mere access was regarded as more helpful by most of the interviewees. While the qualitative results provide an interesting and detailed picture of how the two initiatives were perceived and utilised, the validity of the quantitative work is questionable due to the small number of respondents for the survey (N=177). A similar study with a larger number of respondents in the quantitative part would be very fruitful.

Other than the above, there appears to be no qualitative or mixed methods research on computer or Internet *non-use* in Sweden, very few studies that look at Internet use, and only one qualitative study on Internet domestication that applies case studies (Hektor 2001). This shows a research gap in an already under-researched topic and emphasises the need for more in-depth research on Internet non-use in Sweden. In summary, what we know about Swedish non-users thus far is that they are mostly older, have lower educational qualifications, lower incomes, and many of them are unemployed.

The above review of research on Internet non-use shows that there are no comparative studies including Great Britain and Sweden that apply a mixed methods approach to cover macro- and micro-factors related to not using the Internet. As discussed in the

introduction (Section 1.2) the comparison of two economically equally developed countries with strong differences in proportions of Internet non-users is specifically interesting as it sheds light on the importance of individual, cultural and socio-economic factors, policies, and other mediating variables.

2.3 Reasons for Non-Use

The examination of the literature regarding digital divides and digital inequalities shows a detailed picture of different types of Internet users. A smaller amount of research describes characteristics of absolute Internet non-users. One of the main questions in non-user research is *why* they are offline. This chapter shows that there is still a lack of understanding the underlying reasons for being offline, when the majority of the population is online.

Early on, Katz & Aspden (1997) investigated reasons for stopping Internet use as well as Internet non-adoption in the US by means of survey research. At a time when adoption rates were still fairly low, physical barriers such as cost and access were predominant. Moreover, many individuals reported a lack of skills, and a small number mentioned discomfort using computers (ibid.: 101). In their 2003 paper, Rice & Katz claim that “Precisely because access and usage differs by socioeconomic status, *and not because of personal preferences*, and because many crucial social and economic benefits may accrue from greater access to and usage of communication technologies, such communication disparities constitute a serious ‘divide’ between segments of society” (ibid.: 598; emphasis added). However, with increasing proportions of Internet users, reasons for non-use have shifted from lack of access and high costs towards lack of skills, but also a lack of motivation. Findahl (2009) finds that in wealthier countries lack of access or high costs are not predominant reasons for staying offline. Instead, most non-users report a lack of interest in the Internet (ibid.: 6).

Reisdorf (2011) reports similar findings, but points out that “[w]hile non-users themselves claim that they are not interested in using the Internet, the data show a strong correlation of non-use with socio-economic variables, especially in Britain” (ibid.: 418). In accordance with this evaluation, Dutton et al. (2007) and Eynon & Helsper (2010), emphasise that staying offline is always a combination of socio-economic factors and choice. “While it is difficult, if not impossible, to disentangle exclusion and choice, [...] it is valuable to try to better understand these two concepts (and how they relate) to examine the reasons why people [dis-]engage with the internet” (Eynon & Helsper 2010: 547). The combination of these two concepts is best achievable with a mixed methods approach that includes quantitative socio-economic data, and qualitative perceptions and experiences of Internet non-users.

In Britain, a small number of qualitative studies examine reasons for Internet non-use. Apart from Haddon’s (2000) study of computer non-use, Cushman & Klecun (2006) used qualitative data from the ‘Penceil’ project, which studies ‘How People Encounter E-Illiteracy and how they can Take Action to Overcome It’. They conducted qualitative in-depth interviews with non-users and highly unconfident occasional users in a social housing estate in South London. Their findings show that instead of physical access, skills and confidence are the key barriers that keep non-users offline. Computers are perceived as complicated and “[...] offer a challenge that other domestic electronics did not” (ibid.: 9 et seq.). These findings, however, are limited, as the data were collected in a specific neighbourhood in London.

Selwyn (2003a) investigates reasons for non-use of and re-considers existing explanations, which included (1) material and economic deficiency, (2) cognitive deficiency, (3) technophobia, (4) ideological refusal, and (5) diffusion theory (ibid.: 102 et seqq.). He asserts that ICT use is widely “[...] assumed to be an inherently desirable and beneficial activity for all individuals. [...] it is therefore considered ‘normal’ to use ICT and, conversely, non-use of technology is considered an abnormality” (Selwyn 2003b: 12). With an ap-

proach that puts choice at the heart of the non-use debate he explains the occurrence of non-use as a phenomenon that can be shaped by structural circumstances, but can also be a consciously or unconsciously made choice.

In his study 'Digital division or digital decision? A study of non-users and low-users of computers' (described in Section 2.2.1), Selwyn (2006) finds that although "[...] negative attitudes towards computers, health problems and general fears about technology were raised by some of our interviewees the most prominent rationales cited as underlying interviewees' continued non-engagement with computers involved a lack of relevance or 'life-fit' of computers" (ibid.: 284). This shows that non-use cannot simply be attributed to socio-economic factors *or* purely motivational factors. Thus far, we know that non-use in both countries is related to age, income, education, occupational status, and negative attitudes towards technologies. However, we do not know what these combinations exactly look like.

Depending on the research design this research came up with different reasons, such as age, socio-economic background, lack of access, high cost, lack of skills, but also lack of motivation and life-fit, which were mainly found in qualitatively focused studies.

2.4 Non-Use – A Disadvantage?

Most work on digital inequalities, low use, and non-use of the Internet assumes that not being able to use the Internet is a disadvantage per se. It is agreed that opportunities are missed, and that it indirectly costs non-users money to be offline (Dunleavy et al., 2011). As Selwyn (2004a) puts it: "The ability to use information and communications technology (ICT) is now assumed by most commentators to be a prerequisite to living and working in the 'information society'" (ibid.: 99). Policy initiatives aim to 'get' people to go online and some even see the need for the whole nation to be online, as is the case with the British Race Online 2012 initiative, which coins the slogan 'We're all better off when everyone's

online' (Race Online 2012). This notion, which is very popular with policy makers and programmes for 'e-Inclusion', leaves the impression of non-users being 'left behind' and having to 'catch up' with the rest of society (Klecun 2008: 267 et seq.).

But is this the case? Does everyone *have* to be online? What about those who do not *want* to be online? Wyatt (2003) asks the same question: "[...] is the policy assumption that all non-users of a particular technology wish to become users appropriate?" (ibid.: 68). It is very likely the case that non-use is not in all cases linked to digital inequalities, and not all non-use must be a disadvantage (ibid.: 68 et seq.). Accordingly, Wyatt et al. (2002) categorised four different types of non-users: (1) resisters, who do not want to use the Internet; (2) rejecters, who stopped using the Internet voluntarily; (3) excluded people, who have never used the Internet because they cannot get access for various reasons; and (4) expelled people, who stopped using the Internet involuntarily due to socio-economic circumstances and lack of access (ibid.: 36). This taxonomy incorporates both factors: socio-economic circumstances and individual preferences. However, this seems a bit too simplistic in the light of choice being affected by socio-economic backgrounds, skills, knowledge, etc. A more detailed identification of different types of non-users and their reasons for staying offline would help formulate more targeted policy recommendations where necessary.

Dutton et al. (2007) also question whether the assumption that all people would benefit from being online is in fact true. They argue that "[...] people will not feel they are being excluded if they are unable to do something that they do not actually want to do" (ibid.: 37). According to the authors, however, making an empowered 'digital choice' of being online or offline would require individuals to have sufficient economic resources to afford ICTs, if they wanted them; secondly, they would need to have sufficient technical skills or the opportunity to acquire these skills (ibid.: 37). These choices are thus, at least partly, shaped by socio-economic circumstances as well as the social networks of non-users. The digital choice concept is hence designed as an addition to research on digital

inequalities and not as a replacement. Eynon & Helsper (2010) discuss this concept in the light of disengagement with the Internet and in particular disengagement with online learning opportunities. They find that the interplay between socio-economic status and digital choice is more complicated than indicated by Dutton et al. “[B]oth social exclusion and choice play a part in understanding non-use of the Internet, but the significance of these factors may differ for different segments of the population. Thus, distinguishing different types of users and non-users and understanding how these are different is important” (Eynon & Helsper 2010: 546).

Considering only social exclusion or personal choice as the main reason for non-use is certainly easier and quicker, as it means only one set of hypotheses has to be examined. However, the research above shows that questions regarding potential problems of non-use are as legitimate as questions regarding free will and choice of being online or offline. Klecun (2008) and Selwyn (2006) both agree with the abovementioned works in saying that non-users have to be able to make an informed choice about whether they want to use the Internet or not. They propose an experience-oriented IT curriculum to give non-users the chance to make meaningful use of the Internet. The uses currently taught in IT courses “[...] might not be part of their daily life, and hence they might not see a reason to invest time, emotional effort and money in learning new skills required to use ICT” (Klecun 2008: 269). Moreover, the current notion of non-users being ‘outsiders’ might not be helpful, and rather create attitudes of resistance. Selwyn (2003b) supports this notion and explains that “[...] viewing non-use of technology in terms of a deficit framework denies the individual any rational choice and free-will” (ibid.: 12).

The complexity of findings and arguments regarding the discourse about potential disadvantages of being offline versus digital choice shows that more research needs to be done in this area. There still seems to be very little connection between research on macro- and micro- factors, reasons and everyday lives of non-users, which makes it hard to determine for which non-users being offline might be an actual disadvantage. Accordingly,

policies regarding non-users generally aim at one homogeneous, disadvantaged group of non-users. The debate of choice versus exclusion will be picked up again in the discussion (Section 7.1) and examined in light of the combination of quantitative and qualitative findings presented in the empirical chapters.

2.5 Policies

Another factor influencing general inequalities and digital inequalities within countries that needs to be considered in the formulation of research questions as well as in the discussion on a macro- and micro-level are policies regarding inequalities and ICTs, which will be briefly described and discussed for Britain and Sweden in the paragraphs below. These policies will be recaptured in the discussion of results (Chapter 7) and conclusion and policy recommendations (Chapter 8).

In 2009 the British government published the Digital Britain White Paper (Department for Culture, Media and Sport & Department for Business Innovation and Skills 2009), which sets out “[...] an ambition to secure the UK’s position as one of the world’s leading digital knowledge economies” (Department for Business Innovation and Skills 2010: 5). The paper explicates how a better infrastructure of broadband Internet, more skills support, and awareness of how the Internet could potentially be beneficial to those who are currently not using it would have a positive impact on an individual and national level alike. “The use of information and communications technology (ICT) is seen by many commentators to be a primary influencing factor on the continued social cohesion and economic expansion of nation-states throughout the early twenty-first century” (Selwyn 2002: 1 et seq.). As outlined earlier, digital inequalities can also exacerbate already existing inequalities. Accordingly, policy agendas in the early 2000s aimed at using ICTs for socially inclusive purposes (ibid.: 2). Most of the UK policies, however, do not tackle general inequalities, but mainly infrastructures. This conception would assume that inequalities

and social exclusion are solely linked to income inequality and poverty. According to Giddens (1998) we cannot adopt this narrow concept but need to regard social exclusion “[...] as the mechanisms that act to detach groups of people” (ibid.: 104). This connotation is also reflected in the move away from the binary digital divide to more subtle digital inequalities as explicated earlier this chapter. In their review on digital inequalities in the UK between 2002 and 2010 White & Selwyn (2011) come to the following conclusion:

“Internet access and Internet use continue to be related to social inequality. It is important to remember that the patterns of Internet use highlighted in this paper are set against a decade of sustained public-policy efforts by successive UK administrations to support disadvantaged groups in engaging with, and benefiting from, Internet access. [...] if these patterns are considered alongside a timeline of the UK government digital inclusions policy programme of the 2000s, then there are few noticeable changes that could be attributed to a ‘delayed effect’ of any particular policy or intervention. Certainly in terms of the current Government’s ambitions, it would seem that state efforts to subsidize computer equipment and Internet connectivity and to promote citizen engagement with Internet services are by no means guaranteed (sic) of success” (ibid.: 19).

Helsper (2011) comes to a similar conclusion and points out that accessibility of the Internet is not the main issue for low and non-users, but rather skills and engagement. Nonetheless, UK policies continue to focus on (broadband) access (ibid.: 15; see above). A recent report from Martha Lane Fox encourages providing more government services online to “[...] deliver simpler and more effective digital services to users, particularly to disadvantaged groups who are some of the heaviest users of government services” (Lane Fox 2010). Considering that previous research found that exactly these groups are likely to be offline (see Section 2.2.2) this move could mean that current non-users might be facing even more difficulties or could be ‘forced’ to learn how to use the Internet.

A review of Swedish policies by Olsson (2006) finds that the early efforts of the Swedish government to facilitate buying computers for individuals through tax discounts and provision of financial support to municipalities to develop their ICT infrastructure in the 1990s, has vastly helped the spread of the Internet (ibid.: 612). While the ICT policies of the early 1990s were shaped by the larger goal of economic growth for the country, the

policies of the late 1990s aimed at increasing democratic participation among the Swedish citizens (ibid.: 612). The 'An Information Society for All' programme by the Swedish government promotes the wide spread of ICTs and has been the guideline for ICT policies since its publication in spring 2000 (ibid.: 613). The government proposed to focus on three main areas: ICT infrastructure, IT skills and confidence, and the availability of services online (Regeringens proposition 2000: 1). The policy bill explicates how broadband access should be provided to all households and especially in rural areas. This move towards high transmission networks was pushed a lot earlier than in other European countries. However, similar to other governments, "[...] Swedish politicians seem to have made imprudent assumptions about [...] the user and society" (ibid.: 622) by basing their initiatives on the notion that ICTs will promote democratisation and participation in society. Olsson's study shows that computers and the Internet were acquired by most households because their social networks encouraged them and they felt the necessity for 1) their children's development, 2) their own development, and 3) to keep up with contemporary society (ibid.: 618). He points out that the most important factor for Sweden's role as one of the leading countries regarding Internet access and use is the generally friendly attitude of Swedes towards new technologies: "All social institutions from labour unions to educational bodies show a positive attitude toward technological advances (Frykman and Löfgren, 1985)" (ibid.: 624). A recent project fostering Internet is the 'Digidel 2013' campaign that aims to get 500,000 of the 1.5 million Swedish non-users online by 2013. Similar to the British RaceOnline 2012 campaign, it encourages Internet users to 'donate' time to non-users to support their first steps online. As in the British case, libraries and the third sector play a large role in the facilitation of this project. It is questionable whether this project will consider individual interests and reasons for being offline.

Both countries appear to focus their policy efforts mainly on access and skills, which of course explain parts of non-use. However, they do not consider the personal perspectives of non-users and fail to ask why else non-users might be offline or whether they

even wish to be online. It is widely assumed that Internet use is a desirable activity for everyone. Selwyn (2006) concludes that “[while] governments are keen to react in policy terms to the economic notion of the information age [...], its relevance to the day-to-day lives of individual citizens often appears to be more tenuous. Thus, the underlying premise of the digital divide debate – i.e. the perceived ‘need’ for all citizens to engage with ICTs in order to survive and thrive in the current information age – could therefore be considered erroneous in light of the many people in our study who were surviving (and often thriving) without it” (ibid.: 289 et seq.). A re-focus on the actually ‘targeted’ group – Internet non-users – will provide this perspective and can enable more efficient policies where desirable.

2.6 The Way Forward

The previous pages have shown that much work has been done on digital divides and inequalities in developed countries. However, most of this research focuses on Internet users and does not deal with non-use specifically, or only marginally. Despite the efforts of a few studies, there is little research on Internet non-use. In the light of Western societies being more and more digitalised, this seems to be a mistake. Policy makers across the European Union design agendas to ‘get people online’ without questioning the usefulness of these, or stopping to scrutinise why non-users are offline in the first place. Based on mainly quantitative studies, many still assume that physical access or a lack of skills are the main barriers, so that most policies in both investigated countries are infrastructure-driven.

Surveys asking for reasons of non-use show that most non-users are not interested in going online. However, we are not able to tell what the underlying reasons for this non-interest are, unless we take a closer look at non-user experiences and opinions. Although previous studies have a relatively clear idea of socio-economic backgrounds of non-users, much research falsely assumes that non-users are one homogeneous group. Accordingly,

e-Inclusion policies disregard differences in characteristics of non-users and their reasons to stay offline. The studies that find several groups of non-users on basis of quantitative or qualitative data use mainly simplistic taxonomies (e.g. Wyatt et al. 2002). Mixed methods categorisations (e.g. Selwyn 2006; Trémenbert 2010) of non-users showed that socio-economic factors, individual preferences, attitudes, and choices all play a role in determining whether someone uses the Internet or not. These works show that although many non-users come from lower socio-economic backgrounds and are older, this does not paint the complete picture. Personal preferences, a lifestyle that does not fit well with computers, fear of computers, or reservations about the Internet are all possible motivators that could keep non-users offline.

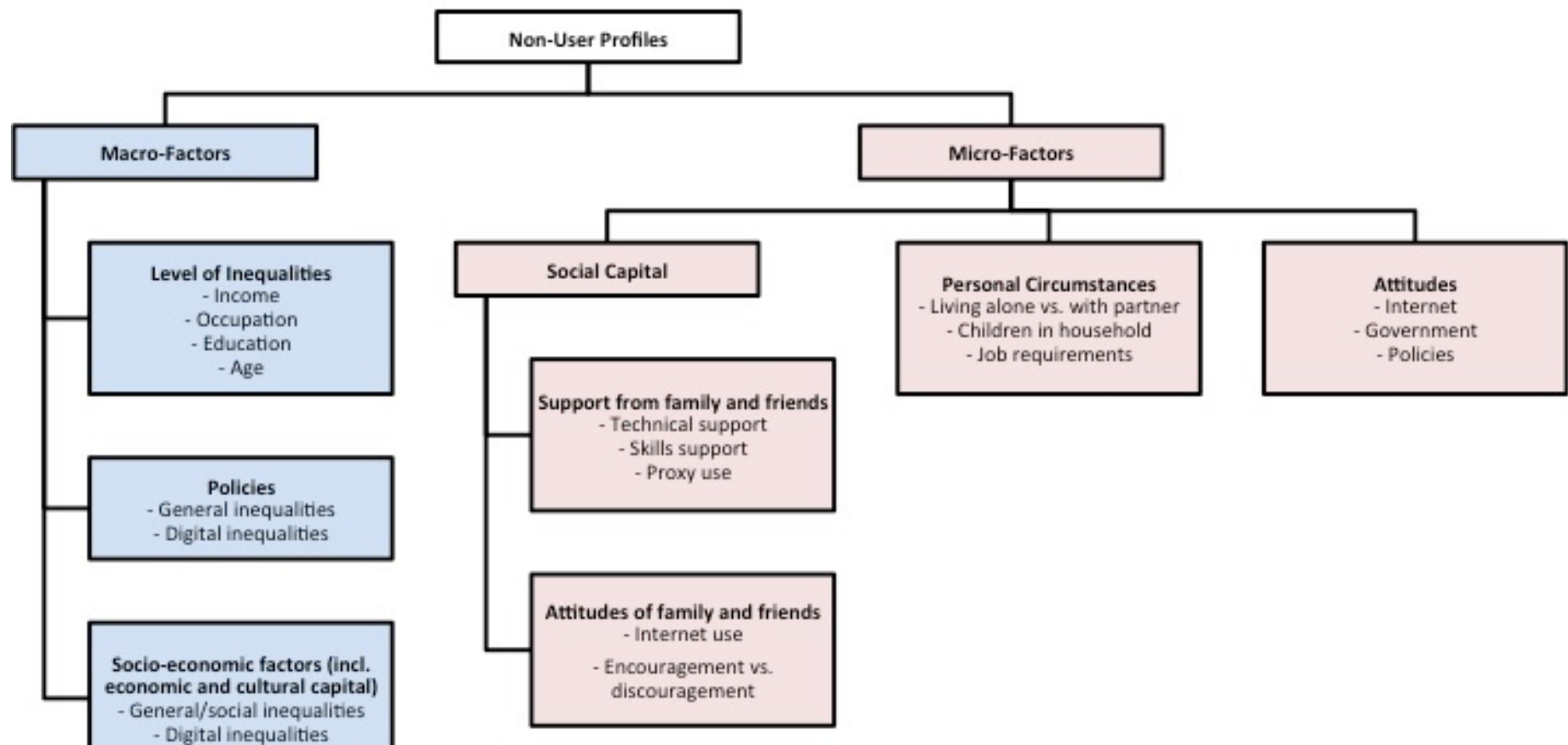
The above discourse of previous research on Internet non-use in developed countries shows a need for further research – especially mixed methods research that is able to cover the breadth *and* the depth of non-user characteristics and experiences. A second component that is essential to painting a comprehensive picture of Internet non-use is a comparison between two equally developed countries. As discussed above this new dimension opens up new viewpoints and angles that do not become apparent in a single country study; these include looking into less expected reasons for non-use, taking a step back to examine the lives and perceptions of non-users in highly technologised countries, comparing the influence of different factors and mechanisms and comparing these against the background of different policies and cultural values. The study at hand thus applies a combination of these two crucial research designs – mixed methods and cross-country comparison – to tackle under-researched questions regarding different middle-aged non-user groups and macro- as well as micro-mechanisms influencing non-use.

2.7 Research Questions

As outlined above, Internet non-use in developed countries has mostly been looked at from a very broad angle and mainly quantitatively. Qualitative studies focus on very specific non-user groups. The research questions that guide this thesis formulate a different research angle and aim to produce non-users profiles that provide a detailed picture of characteristics, experiences, attitudes, and reasons for staying offline. All macro- and micro-factors contribute to mechanisms that influence non-use and different types of non-users.

Figure 3 shows a chart of different macro- and micro-factors that influence profiles of Internet non-use. Depending on the individual characteristics of non-users regarding these various factors and their own perceptions of and attitudes towards e.g. the Internet itself, ICT policies or their socio-economic position within society they can be ascribed to different non-user profiles. As shown in the diagram macro- and micro-factors should not be regarded as independent from each other (e.g. Eynon & Helsper 2010). Both sets of factors influence who is online and offline, and their reasons for it.

Figure 3 Factors Influencing Profiles of Non-Users



Considering all the factors mentioned above the research questions revolve around three broader topics concerning profiles of Internet non-users in Great Britain and Sweden, and specifically 25 to 55 year-old non-users: 1) Socio-economic characteristics; 2) perceptions, experiences, attitudes, and underlying reasons for Internet non-use; 3) differences and similarities between Great Britain and Sweden. In the past, non-users were often categorised as one homogeneous group with similar socio-economic backgrounds, reasons for staying offline, and accordingly only one direction in terms of policies. Some studies on digital inequalities raised this issue (e.g. Selwyn 2004a; Warschauer 2003), which led to a rise in more differentiated analyses of non-users populations (e.g. Helsper 2008) and a few different categorisations, most of which are oversimplified (e.g. Wyatt et al. 2002). To further the understanding of different of non-users the overarching question driving this research is:

What kinds of mechanisms lead to different types of non-users and how do they negotiate their offline lives in highly technologised societies?

These mechanisms include macro- and micro-factors alike. They mediate types of non-users and to what extent their non-use is voluntary or involuntary. The combination of individual level data, attitudes, and perceptions gives an idea, for example, about whether non-users would go online straight away, if they were given the technological means and support in skills, or whether their non-use might be rooted in personal preferences and attitudes towards technologies. Accordingly, policies could be addressed to these different types of mechanisms that generate different non-users. This also tackles the question whether *all* non-users should be encouraged to become Internet users because of potential disadvantages, as is the aim of most policy agendas regarding digital inequalities.

All research questions are asked for both Great Britain and Sweden. The comparison of the two countries is implicitly assumed in the background and was explicitly ad-

dressed in the analyses. The questions start off with macro-factors and develop towards more detailed micro-factors.

Socio-economic Characteristics

As pointed out in the introduction, a large number of studies have been conducted on young people (e.g. Hargittai & Hinnant 2008; Livingstone & Helsper 2007) and the elderly (e.g. Kiel 2005; Selwyn 2004b; Milligan & Passey 2011). The age group ‘in between’, however, has not been sufficiently examined so far. This group is especially interesting as they are most likely to have children living in the household who might need computers and the Internet for their schoolwork. Middle-aged Britons and Swedes are moreover very likely to remain in the work force for a while.¹¹ This work thus focuses on non-users aged 25 to 55 years. To distinguish this group from the rest of the populations this study investigates in how far middle-aged non-users are different.

1. Are the relationships between socio-economic resources and digital (dis-) engagement the same for the age group 25 to 55 years as for the population?

Perceptions, Experiences, Attitudes, and Reasons

To consider the second set of important factors that influence non-use, i.e. micro factors, a new set of questions and methods need to be applied. Over the last decade governments in Europe have recognised the link between socio-economic inequalities and digital disengagement reported in research (e.g. Helsper 2011b: 1). Accordingly, lack of economic resources and access is what policies focus on in their efforts to tackle digital inequalities (see Section 2.5). Several policy programmes providing more broadband access, laptops for school children (UK), or cheaper access to computers through governmental tax-

¹¹ For a detailed explanation regarding the choice of age group, please refer to the Introduction (Chapter 1).

reductions (Sweden) tried to overcome the 'digital divide' described earlier. These schemes mainly focus on physical access, and neglect other issues such as lack of knowledge about technologies, attitudes towards technologies, lack of skills or interest in the Internet because individuals cannot see how they would benefit from it, etc. Even the schemes that offer free skills training such as UK Online Centres aim at providing a general set of skills that are not tailored to individual interests but rather to basic skills for employment (Klecun 2008: 269). To know how to motivate Internet non-users to become Internet users, the first step needs to be a thorough understanding of why they do not use the Internet in the first place. In light of a quantitatively dominated research agenda, digital inequality studies only rarely focused on underlying reasons for Internet non-use. To be able to develop a theoretical and practical understanding of non-use, it is essential to do this first step.

2. What reasons do non-users give for staying offline?

Closely related to underlying reasons and motivations for non-use are general attitudes towards technologies, perceptions, and experiences of non-users. The conscious or unconscious decision not to use the Internet can be fuelled by many reasons, such as economic constraints, discomfort in using technologies, or simply not seeing any benefit of using the Internet in their current everyday lives. The widely assumed negativity of Internet non-use makes offliners seem 'left behind' and perceived as outsiders (Klecun 2008: 267). Many policy makers aim for 100 per cent Internet penetration and usage (e.g. Race Online 2012) without considering that not using the Internet might be the right choice for some. To understand whether Internet non-use actually is a problem in today's highly technologised societies of developed countries – and if yes, for whom – the analysis of attitudes, perceptions, and experiences of non-users themselves is key. Only then can useful and sensible policy agendas regarding e-Inclusion be designed.

3. How do non-users themselves perceive technologies and their offline lives, and how do they negotiate this in a highly technologised world?

The above research questions aim to shed light on issues that have thus far not been studied in their completion. The investigation of a combination of the different factors contributing to Internet non-use together with perceptions and experiences of non-users paints a complete picture, instead of providing only fragments. Answering these questions in a comparison of two highly developed countries will provide a holistic view of Internet non-use, its reasons, its background, and its potential impacts on different non-users, who may require different types of ICT policies.

3 Research Design

To examine the above formulated research questions regarding Internet non-users in Great Britain and Sweden with specific focus on the age group 25 to 55 year-olds, a set of mixed methods, i.e. quantitative and qualitative methods of data collection and analysis strategies, were applied. The first part of this chapter explains the necessity of a mixed methods approach for this study, the reasoning behind this, how quantitative and qualitative approaches complement each other, and how the study was designed (3.1). The second section discusses the advantages and challenges of cross-national comparative research (3.2). The data collection methods based on survey data from Great Britain and Sweden and qualitative semi-structured interviews with non-users of the Internet in both countries are described in the third part of this chapter (3.3). The survey data were analysed using various quantitative approaches, reaching from broader descriptive statistics to detailed logistic regressions and principal components analyses. Additionally, the in-depth interviews were coded, analysed and interpreted using an approach inspired by grounded theory to paint a detailed picture of attitudes and everyday life of Internet non-users (3.4). The concluding part of this chapter discusses ethical considerations of quantitative and qualitative research (3.5).

3.1 Mixed Methods Approach

In the past, there have been many debates in various disciplines about the 'right' methodology, as well as the 'right' epistemology and research paradigm, also called the 'paradigm wars', which often consisted of two opposing positions who both claimed to do the 'right' way of social science research: for example positivist versus constructivist worldviews, and quantitative versus qualitative methods (see e.g. Brannen 1992: 4; Creswell 2009: 5; Tashakkori & Teddlie 2003: 5). "The positivist paradigm [worldviews that guide researchers] underlies what are called *quantitative methods*, while the constructivist paradigm un-

derlies *qualitative methods*” (Tashakkori & Teddlie 1998: 3; emphasis in original)¹². While the earlier one was mainly used to test theories, the latter one was used to construct theories on the basis of (social) phenomena. With the ever-increasing application of mixed methods approaches in the social sciences over the last few decades, the relatively new paradigm of pragmatism has gained in strength (ibid.: 3 et seqq.). This pragmatically oriented position puts emphasis on the most effective methods to answer the research questions of a study. Brewer and Hunter (1989) declare that researchers should “[...] attack a research problem with an arsenal of methods that have nonoverlapping weaknesses in addition to their complementary strengths” (ibid.: 17).

Mixed method approaches “[...] are interested in both types of data” (Tashakkori & Teddlie 2003: 4), quantitative and qualitative, and both types of analysis, numerical and the analysis of narrative data. A discussion of the benefits of a mixed methods approach with specific regards to the design of this study is described below.

3.1.1 Mixed Methods Design and Its Benefits

This thesis positions itself in an interdisciplinary realm that includes questions inspired by sociology, social psychology, and communication studies. The combination of these different viewpoints and approaches allows for a much more thorough and complete understanding of a certain phenomenon than a single-discipline or –method approach. Especially questions about individual Internet use or non-use seem to virtually *demand* a mixed methods approach. Accordingly, this work adopts the position of methodological pragmatism, which emphasises choosing those methods most effective to address the issue at hand:

“[Tashakkori and Teddlie (1998)] believe that pragmatists consider the research question to be more important than either the method they use or the worldview that is supposed to underlie the method. Most good re-

¹² For a detailed description of the history of the ‘paradigm wars’ see Tashakkori & Teddlie (1998), pp. 3-13 or Tashakkori & Teddlie (2003), pp. 5-7.

searchers prefer addressing their research questions with any methodological tool available, using the pragmatist credo of ‘what works’” (ibid.: 21; see also Howe 1988: n.p.; Rescher 1977: 3).

Inspired by a dialectic approach to epistemologies, this research design is based on the assumption that both the quantitative and qualitative paradigms and methods are of value and add to the understanding of the research topic (Greene & Caracelli 2003: 96 et seqq.).

The scope and aim of this project as well as the posed research questions necessitated an approach that uses quantitative and qualitative methods. The questions of who ‘the non-users’ are exactly, how this specific group is composed, what their reasons and motives are for not using the Internet, how this may affect their everyday lives, and what their attitudes towards the Internet and other ICTs are could only be answered by using mixed methods.

Quantitative methods give research results generalisability and give information about the general composition of populations and their characteristics (Brannen 1992: 8). They give the analysis breadth. However, they have a strict limit as to the depth and detail of the assertions that can be made on the basis of quantified data. In this study the results given by some of the most thorough quantitative methods were not able to give a satisfactory answer to some of the research questions. Thus, while the quantitative methods gave a general overview over characteristics of non-users and their reasons for not being online – breadth –, only the qualitative methods were able to shed light on the everyday lives of non-users, as well as attitudes towards and underlying reasons for non-use of the Internet – depth (Tashakkori & Teddlie 1998: 16). Moreover, there is still very little research about reasons for Internet non-use. Here, “[qualitative] methods can be used to explore substantive areas about which little is known or about which much is known to gain novel understandings” (Strauss & Corbin 1998: 11).

Many different types of research design have been applied in mixed methods research, with some of them being especially prominent. This study applied a sequential research design with three stages of data analysis: quantitative, qualitative, and a second stage of quantitative analysis. None of the methods was regarded as superior to the other method, but they were regarded as complementary and utilised to inform each other to produce stronger results (Creswell 2009: 122).

On the basis of secondary data analysis the first quantitative step described the general development of Internet use and non-use in Great Britain and Sweden, the characteristics of their general populations, their non-user populations and the 25 to 55 year-old non-user populations over time. The second step consisted of conducting and analysing qualitative depth-interviews with middle-aged Internet non-users in both countries. At this stage the previous quantitative characterisation of non-user populations in Britain and Sweden helped to choose subjects for a more thorough qualitative investigation (Bryman 1992: 60; see Section 3.3.2.2). At the same time the qualitative analysis informed the second phase of the quantitative analysis: The detailed examination of life worlds, and attitudes of non-users painted a clearer and more complete picture of the phenomenon that is at the heart of this study. On the basis of the results from the qualitative analysis some of the more detailed quantitative analytical strategies were repeated with newly added variables that were chosen from the quantitative data set on the basis of the qualitatively established characteristics of non-users (see Sections 3.4.2.2 and 3.4.2.3.). The repeated quantitative analyses were thus able to give a clearer indication on specific characteristics of non-users and middle-aged non-users.

This combination of quantitative and qualitative results made it possible to examine the topic of interest in breadth as well as in depth, and thus paint a comprehensive picture of the characteristics, experiences, and attitudes of middle-aged non-users in Britain and Sweden.

3.2 Comparative Research

One of the goals of this study was a comparison of non-user populations in Great Britain and Sweden. Quantitatively oriented comparative and in particular cross-national¹³ research designs have increased in popularity since the 1980s, especially in Europe (Hantrais & Mangen 1996: xv). The approach used in this study is explicitly meant to be a cross-national comparison by using the same research instruments both “[...] to carry out secondary analysis of national data [and] to conduct new empirical work” (ibid.: 1) as described in this chapter. This type of comparative design can bring advantages but also practical problems with it, which will be described below in general and specifically for the project in hand.

3.2.1 Benefits of Comparative Research

Cross-country research can give new insight into a research topic that has thus far mainly been examined within a national research frame (Hasebrink-Paus et al. 2009: 44). In the case of non-user research, previous studies have either focussed on very specific groups within a country or only conducted basic statistical analyses to compare users and non-users internationally, especially with regards to ‘digital divides’ research (see Chapter 2). The comparison of non-users and their characteristics in two highly developed countries within this study “[...] can lead to fresh, exciting insights and a deeper understanding of issues” (Hantrais & Mangen 1996: 3). Moreover, comparing similar issues and groups of people in two different macro-sociological backgrounds takes the analysis into a broader context and opens up the question of which national policies might be applied in other countries as well (Smith et al. 2003: 232).

With regards to this project, it is of specific interest how it was possible for Sweden to eradicate the group of middle-aged non-users almost completely within the last

¹³ The term cross-national research will be used synonymously with cross-country research. For a discussion of the synonymous and differing uses of the various terms used for this type of research see Hantrais & Mangen 1996, p. 2, or Øyen 1990, p. 7.

eight years. Moreover, the implications of this phenomenon will be investigated for the few remaining members of this shrinking group of Swedish middle-aged non-users, and it will be scrutinised what this could imply for the much larger group of middle-aged non-users in Great Britain. The international World Internet Project (see Section 3.3.1.1) had exactly this type of cross-country comparison of Internet (non-) use in mind. It thus represented an appropriate source of survey data for this study. The cultural and societal settings in which Internet (non-)use has developed in Britain and Sweden over the last ten years will be a topic discussed in this work, in which quantitative and qualitative results will be combined and discussed within the larger context of the country-specific backgrounds (Chapter 7).

3.2.2 Challenges of Comparative Research

As many possibilities and advantages as comparative cross-national research offers, it brings many problems with it as well. These problems reach from varying degrees of investigation into a topic within the country-specific questionnaires, through item comparability, cultural differences in the interpretation of questions, and differences in sample design (Kiecolt & Nathan 1985: 56, 61, 62; Hasebrink-Paus et al. 2009: 43), up to simple translation issues between the data sets that are being compared (Verba 1973: 311 et seq.). Another common problem of cross-country research are “[...] variations in professional academic cultures and standards of writing and communication (Livingstone, 2003) – although they can also have serious methodological implications” (Hasebrink-Paus et al. 2009: 44). This problem was not an issue in this study, as one single author conducted all analyses and interpretations. A research collaboration was established for the completion of the qualitative interviews in Sweden; however, the analyses and interpretations were done by the single author and the collaboration was asked to confirm that the notions detected in the interviews were not falsely assumed through translation or interpretation mistakes. Regarding the potential pitfalls for this specific study, some examples of the

problems from the quantitative data sets from Great Britain and Sweden that were used in this project are described below.

One of the problems described above is the difference in sample design. While both data sets are part of an international project that is specifically designed to be comparable, Great Britain conducted face-to-face interviews, while Sweden did telephone interviews. Both surveys collected data of a nationally representative sample with similar response rates. However, a check for one of the most sensitive questions, household income, showed that the non-response was higher in the Swedish telephone survey than the British face-to-face survey across the last three waves. In 2011 21 per cent of Britons refused to answer this questions, in 2011 27 per cent of Swedes did not give an answer. Different focuses within the questionnaires and item comparability were other issues despite the explicit aim of the data to be comparable. The World Internet Institute (WII) in Sweden asked some questions that the Oxford Internet Surveys (OxIS) in Great Britain did not ask, so that a direct comparison of these items is not possible. Moreover, similar questions were sometimes specified differently. Two examples are the question for children in the household, which were defined as under 18 years of age in Britain and under 21 years of age in Sweden, as well as the question for disability, which was asked for general disabilities in Britain, and disabilities preventing the respondents from computer or Internet use in Sweden (see Appendix A, Tables I.a. and I.b.).

A problem that was more relevant for the qualitative data collection was the translation of the Swedish interviews into English. The necessary translation of codes for the comparison of the findings from Great Britain and Sweden might have caused a loss of underlying cultural differences in some cases, especially with regards to sensitive topics. A collaboration with Swedish scholars during the process of qualitative data collection and coding was applied to try to counteract these possible issues.

3.3 Methods

The subsequent pages will explain the choice of methods and the data collection procedures involved in this thesis, ranging from the pre-collected survey data to the collection of qualitative interview data in Great Britain and Sweden. The focus will lie on the design of the surveys and their comparability, and the methods applied to conduct the interviews. The quantitative and qualitative analytical strategies to interpret the data will be elaborated in the next section.

3.3.1 Survey Data

The collection of survey data is a prevalent way of gaining generalisable information on large-scale populations, such as a representative sample of a nation, or a specific population within a country. They enable the analysis of general demographic characteristics, and often involve data on opinions on specific matters of interest (Fowler 2002: 2) - in this case Internet use and non-use.

The survey data used in this study were not collected specifically for this thesis, but within the context of bigger pre-existing projects that deal with Internet use in several countries of the world. The choice of using these existing surveys was based on reaching a national sample at high quality, which would be virtually impossible for a single researcher to conduct due to monetary and temporal constraints (Kiecolt & Nathan 1985: 10 et seq.). Moreover, the surveys used here focus on a wide range of questions and issues on the topic of Internet use and non-use, which is the subject matter of this thesis.

3.3.1.1 The WIP

Two renowned institutions in Great Britain and Sweden collected the quantitative data used in this study: The Oxford Internet Surveys (OxIS) are being conducted by the Oxford Internet Institute, which is part of the University of Oxford. The World Internet Institute

(WII) is conducting the Swedish survey. Both projects are part of the international World Internet Project (WIP), a pool of institutions from more than 30 different countries¹⁴ researching Internet use and non-use (World Internet Project 2011, online). Almost all of these countries conduct surveys in relatively regular intervals, some countries yearly, others biennially.

These data are especially appropriate for this project for two reasons: WIP members ask a standard battery of questions so that Internet use in different countries can be compared using common variables. The individual-level surveys include questions on reasons for dropping out of Internet usage as well as reasons for not trying the Internet. At annual meetings the project partners discuss data and questionnaires, and adjust the latter to the newest issues and developments in different societies. A specific issue is how to keep the questions comparable across different cultures. Moreover, the special sections of the questionnaires on digital and social inclusion and exclusion allow for analyses of the relationships between socio-economic characteristics and non-use as well as attitudes towards the Internet and technologies in general.

A comparison of the datasets from Great Britain and Sweden shows that both countries put a strong emphasis on similar topics, amongst others attitudes towards technologies, and how technologies are implemented in different realms of everyday life. A comprehensive list of variables used, difficulties due to differing wording and other practical problems in comparing the British and Swedish dataset are provided in Appendix A.

3.3.1.1.1 Oxford Internet Surveys (Great Britain)

The OxIS supply data on British Internet users and non-users; the Oxford Internet Institute (OII) conducts them biennially. Since 2003 the surveys aim to reach a nationally repre-

¹⁴ The following countries are participating in the project: Brazil, Canada, Cape Verde, Chile, China, Colombia, Cyprus, Czech Republic, Ecuador, France, Germany, Hungary, India, Iran, Israel, Italy, Japan, Macao, Mexico, New Zealand, Poland, Portugal, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates, United Kingdom, Uruguay, USA.

sentative random sample of more than 2,000 individuals aged 14 and older in England, Scotland, and Wales. Due to logistical and financial reasons, Northern Ireland is not included in the survey. In face-to-face interviews an independent market research company surveys the respondents on several topics concerning the interrelationships between society and the Internet (Oxford Internet Surveys 2011, online). The latest data were collected in spring 2011 and form the basis of the quantitative analyses described in the Analytical Strategies (Section 3.4). The other waves were only used to describe general changes over time.

The OxIS used random multi-stage sampling stratified by region, which is a common approach for nationally representative samples (Fowler 2002: 16). “First a random sample of 175 areas is selected, stratified by region. Then, within each selected area, a random sample of 10 addresses is selected from the Postal Address File. This allows for comparisons based on socio-economic grade using Acorn measures” (Oxford Internet Surveys 2011, online). As the questionnaires ask for individual level information, another stage of sampling was necessary within households with more than one person living in them. OxIS interviewed respondents aged 14 years and older and used the ‘next birthday’ approach to choose interviewees within households (Dutton et al. 2009: 71), which is commonly used as it is a “[...] probability technique that is based on the premise that the assignment of birthdate is a random process (Frey 1989: 112 et seqq.).

Table 1 gives an overview over the survey design of the OxIS over the last eight years. The respondent number has stayed stable over most years, while the response rate has gone down. The reasons for this are unknown, but will not affect the analysis, as a nationally representative sample was obtained by the end of the data collection process.

Table 1 Survey Design Oxford Internet Survey 2003-2011

	Survey Type	Fielded in	Interview form	N of respondents	Response rate	Age of respondents
2003	Cross-sectional	June-July	Face-to-face	2, 030	66%	14+ years
2005	Cross-sectional	February-March	Face-to-face	2,185	72%	14+ years
2007	Cross-sectional	March-April	Face-to-face	2,350	77%	14+ years
2009	Cross-sectional	February-March	Face-to-face	2,013	62%	14+ years
2011	Cross-sectional	February-March	Face-to-face	2,057	49%	14+ years

The survey consists of four different questionnaires, one general questionnaire that all respondents answer: It contains questions on ICTs in the household, attitudes towards technologies, politics, society, and demographics. This questionnaire also asks whether the respondent is currently using the Internet (user) or not (non-user) and whether they have used the Internet before (ex-user). According to the reply to this question the respondents then answer a specific questionnaire on how they use the Internet, what for and how much time they spend on specific activities (user questionnaire), what they used the Internet for when they used it in the past, why they stopped using the Internet, and how that affects their everyday lives (ex-user questionnaire), or why they never started using the Internet, and how this affects their everyday lives (non-user questionnaire).

This large set of different variables (550-600 per wave) allowed for a very detailed and comprehensive analysis of British Internet users and non-users. Appendix A provides a comprehensive list of the variables used, the wording of questions, and how this has changed over the years.

“The data are then weighted based on gender, age, socio-economic grade, region and Acorn¹⁵” (Oxford Internet Surveys 2011, online) to make sure that the samples represent the general socio-economic characteristics of the British population. This procedure

¹⁵ Acorn is a classification of regions, neighbourhoods and households into categories that display how well-off these neighbourhoods in general are. A complete list of these classifications can be found here: http://www.caci.co.uk/acorn2009/acornmap_ext.asp.

is commonly used to produce “sample-population consistency” (Marsden & Wright 2010: 122). “Their basic purpose is to correct for biases in the data [...] that end up producing ‘too many’ sample elements from one population segment, and ‘not enough’ from some other segments” (ibid.: 163).

3.3.1.1.2 World Internet Institute (Sweden)

The WII has been conducting a panel study of Swedish Internet users and non-users since 2000. The base was a panel of individuals who were interviewed repeatedly every year. Panels are the only survey designs that “[...] permit the study of changes among respondents rather than simply among populations or subpopulations” (Kiecolt & Nathan 1985: 50).

The first wave of the Swedish panel encompassed around 2,000 telephone interviews chosen from a national telephone directory (Zimic et al. 2010: 2). The selection of interviewees was based on a random nationally representative sample of Swedish inhabitants with regards to gender, income, education, and size of household (ibid.: 5). The respondents were aged 18 years and older between 2000 and 2005, 16 and older in 2007, and 12 years and older from 2008 onwards. Individuals aged younger than 18 were only interviewed with the consent of a parent or legal guardian. For those interviewees who had been in the study at least once before, there was the possibility of filling in the questionnaires online from 2007 onwards (ibid.: 2).

Table 2 shows the exact numbers of respondents and new respondents for each year. As the response rate for the Swedish panel was unavailable at the time of the composition of this work, it is missing in the table. Similar to the OxIS, the Swedish datasets were weighted by gender and age of the respondents (Zimic et al. 2010) for the quantitative analyses.

Table 2 Survey Design World Internet Institute 2000-2011

	Survey Type	Fielded in	Interview form	N of re-spondents	N of new respondents	Age of re-spondents
2000	Panel	February-May	Telephone	2, 078	2,078	18+ years
2002	Panel	February-May	Telephone	2,049	1,148	18+ years
2003	Panel	May-September	Telephone	2,001	655	18+ years
2004	Panel	September-October	Telephone	2,002	720	18+ years
2005	Panel	September-October	Telephone	961	0	18+ years
2007	Panel	February-March	Telephone	2,017	775	16+ years
2008	Panel	February-May	Telephone	2,266	976	12+ years
2009	Panel	February-May	Telephone	2,353	944	12+ years
2010	Panel	February-May	Telephone	2,106	622	12+ years
2011	Panel	April-May	Telephone	2,670	1585	12+ years

Some participants drop out of panel studies for various reasons, such as losing interest in the study, moving house or country, or changing the telephone number without letting the survey researchers know, illness, death, and various others. In the Swedish case, between roughly 650 and 1,000 new individuals were recruited every year to compensate for individuals who no longer wanted to participate in the study. The new panel members were chosen through a stratified selection, so that the panel remains representative by age and gender (ibid.).

Table 3 Number of Returning Respondents 2000-2011

	2000	2002	2003	2004	2005	2007	2008	2009	2010	2011
2000	2,078	930	648	461	343	336	250	200	152	104
2002		1,148	698	442	315	302	222	170	124	98
2003			655	379	125	241	153	114	82	53
2004				720	178	362	242	165	121	71
2005						0	0	0	0	0
2007						755	423	261	153	96
2008							976	499	267	150
2009								944	585	272
2010									622	242
2011										1585
Total	2,078	2,078	2,001	2,002	961	2,016	2,266	2,353	2,106	2,670

*This table is based on the Ns reported in 'Metodbeskrivning' in Zimic et al. (2010) up to the year 2009. The 2010 and 2011 data are based on confidential reports by the WII organizers.

Table 3 shows the number of returning respondents in each wave. The columns describe the composition of the sample in the regarding wave: In 2003, for example, the sample was composed of 648 respondents who had been in the panel since 2000, 698 respondents who joined the panel in 2002 and 655 new respondents. The rows describe how many of the respondents of the respective wave remain throughout the year. In 2011 only 104 respondents from the first wave remained.

The panel design represented a slight issue as the datasets used were treated like cross-sectional independent datasets. However, the panel design implies that a number of respondents stay on throughout the waves. This could cause a slight bias of the data in terms of Internet adoption. The data were kept representative through the newly recruited respondents in each wave (Zimic et al. 2010). The high number of new cases in each wave diminishes these issues of a certain lack of independence of the datasets.

Longitudinal analyses could give insight into the dynamics of Internet use and non-use, it could follow individuals through their transitions from non-use to use, and where applicable back into non-use (Anderson 2005). These transitions could then be linked to other events in the lives of individuals, such as becoming employed or unemployed, having children, or other important transitions in life. Unfortunately, the large number of new respondents each year made panel analysis practically impossible, unless it involved only two waves as the number of returning respondents became too small for statistically significant analyses. The use of only two panel-waves at a time, however, would not give much insight on important events that might have triggered going online or offline. Despite the theoretical possibilities and advantages of longitudinal analyses, this study thus abstained from conducting these types of analyses and treats the Swedish data sets as cross-sectional surveys. The types of analyses include descriptives, logistic regressions and principal components, as described in section 3.4.1.

3.3.2 Qualitative Interviews

The second stage of data gathering involved conducting qualitative semi-structured face-to-face interviews with 25 to 55 year-old Internet non-users¹⁶ in Great Britain and Sweden. These interviews were audio-recorded, transcribed, and analysed. The paragraphs below describe why interviews were the most appropriate approach of qualitative data collection, as well as how and where the data were collected. The methods used to analyse and interpret these interviews are described in section 3.4.2.¹⁷

3.3.2.1 Semi-Structured Interviews – Why

For the examination of some of the research questions (Section 2.7) semi-structured interviews were chosen as the most appropriate method as they allow exploring “the personal worldview of the interviewee [...] in detail” (Gaskel 2000: 46). This project investigates personal experiences with and reasons for Internet non-use of middle-aged Britons and Swedes. A one-on-one conversation about this topic guided by a semi-structured interview guide encourages interviewees to talk about these topics and present their personal opinions in their time and in their own terms (ibid.: 45). The semi-structured model was chosen due to the possibility of guiding the interviewees along specific research topics at the same time as allowing further investigation of interesting topics and issues raised by the interviewees themselves (Bariball & While 1994: 331).

3.3.2.2 Semi-Structured Interviews – How

Semi-structured interviews locate themselves between completely open narrative interviews and very rigid questionnaires that provide no or only very limited room for open-ended responses (Fontana & Frey 2005: 695 et seqq.). The interview-guide in this study

¹⁶ Despite the preliminary attempt of defining non-use in the introductory chapter, this was not an easy task in the actual fieldwork. A detailed discussion will be provided in Section 7.5.

¹⁷ The specifications of the recruitment process will be described in Chapter 5, as the process itself and the reactions of potential interviewees allow some reflection on the nature of non-use and societal perceptions of non-use.

was informed by results of and open questions brought up through the first set of quantitative analyses (Chapter 4) to be able to go into more detail regarding reasons of Internet non-use, attitudes towards technologies, and everyday life experiences without the Internet. It consisted of similar questions and probes for all respondents in both countries to secure comparability and making the analysis more straightforward. The complete interview guides in English and Swedish as well as the participant information sheets and consent forms are provided in Appendix B. The interviews lasted between 25 and 45 minutes, depending on the talkativeness of the interviewee. They were held in the recruitment locations, such as libraries, cafés, and community centres, and by telephone.

The interviewees were selected through purposive sampling (Miles & Huberman 1994: 27 et seq.; Patton 2002: 230) of 25 to 55 year-old Internet non-users. This approach was inspired by the concept of theoretical sampling by Glaser and Strauss (1967), which aims “[...] at that material that promises the greatest insights, viewed in the light of the material already used, and the knowledge drawn from it” (Flick 2009: 118). In this project, the selection was informed by the specific research questions on middle-aged non-users (Section 2.7) as well as the results from the first quantitative analyses (Chapter 4). Interviewees were chosen on basis of their socio-economic background; the goal was to try and find non-users from various backgrounds. However, this was not fully achieved in Britain in terms of age (see Section 5.1), as it was not possible to recruit non-users younger than 48 years despite various different recruitment strategies. The number of interviews in both countries was dependent on the amount of new data that derive from each new interview (ibid.: 119; Gaskel 2000: 43). The first lot of data were coded together after the first five interviews had been conducted. Each subsequent interview was coded immediately after the transcription. Once the collected data did not provide any new topics relevant to the research questions, the analysis reached a theoretical saturation, also called redundancy, and the interviewing process was stopped (Flick 2009: 119; Kvale 1994: 101 et seq; Patton 2002: 246; Strauss & Corbin 1976: 61). In this study this saturation was

achieved after ten interviews in each country, because interviewees were giving the same topics and notions, however with a varying emphasis on the different factors they mentioned.

3.3.2.3 Data Gathering - Birmingham

The British phase of qualitative interviews was mainly conducted in and around Birmingham, in the West Midlands of England. Birmingham is after London the most populous British city with roughly 1 million inhabitants. While London displays an unusually high proportion of households with Internet access with 83 per cent (Office for National Statistics 2010: 7) in contrast to 74 per cent averaged across Great Britain (OxIS 2011, analysis see Chapter 5), the West Midlands and Birmingham are an area much more similar to the British 'average' with 73 per cent of all households having access to the Internet (Office for National Statistics 2010: 7).

The interviewees were recruited through several different mechanisms:

1) UK online and community centres provided a great recruitment site as they offer beginner courses for computer use. The participants of these courses have not used computers before and are thus unlikely to be users of the Internet. The fact that they are interested in learning how to use computers – and thus probably the Internet – was considered as a slightly positively skewed attitude towards the Internet in the analysis. However, many of the respondents had been sent to these courses by the employment agencies to improve their skillsets for potential employment. Four interviewees were recruited here.

2) Previous research shows that Internet non-users are more likely to have a network of friends that is not using the Internet either. The snowball effect, i.e. asking interviewees, if they know of anyone else who might be interested to take part in the study,

thus provided more interview opportunities (Patton 2002: 237). Two participants were recruited through this method.

3) A smaller number of participants were recruited via word-of-mouth among colleagues, acquaintances and friends. Usually a family member of these knew a neighbour or another friend, who was not using the Internet. These connections provided four of the British interviewees.

An attempt at re-recruiting non-users who had participated in the OxIS 2011 survey was unfortunately unsuccessful. As the first seven interviews had been done by that time and the average age of the interviewees was relatively high, younger non-users were targeted first, then gradually the older ones. However, of the 60 telephone numbers that non-users had provided roughly half of them were not working or wrong connections; another quarter did not answer the phone; the final quarter did not agree to participate in a short follow-up telephone interview although they said they were still not using the Internet.

3.3.2.4 Data Gathering - Gothenburg

As in the British case, most interviews with Swedish Internet non-users were conducted in the second-largest city in Sweden: Gothenburg. As capitals are typically more developed and at the centre of development they tend to display a larger percentage of households with Internet access and Internet users than national average. Although there are currently no regional statistics available for Sweden, this study refrained from conducting interviews in Stockholm due to the aforementioned specific characteristics.

Similar to the approach for the British interviews, participants were recruited via: 1) Swedish community and online centres (three interviews), 2) approaching people in and around libraries (two interviews), and 3) the use of personal connections (five interviews).

All interviews were conducted in Swedish to keep the interviewees as comfortable as possible and avoid issues of ambiguity and miscommunication (Marshall & While 1994). Although most Swedes speak fluent English, it is more useful to conduct the interviews in the language that the subjects live their everyday life in. Moreover, many of the interviewees come from lower educational backgrounds and were thus facing difficulties with the English language. Due to the limited Swedish skills of the principal investigator of this project, the interviews were held by a Swedish native speaker in collaboration with the Chalmers University of Technology in Gothenburg to secure the quality of the data. The principal investigator was present during the majority of the interviews to capture emotions and facial expressions throughout and to ask the collaborator to prompt the interviewees on topics that were of specific interest. The data were transcribed in Swedish and summarised, coded, and interpreted in English.

3.4 Analytical Strategies

The following section describes how the quantitative and qualitative data were analysed to address the research questions described in section 2.7. The quantitative methods will be illustrated first, including a short discussion on the advantages and disadvantages of secondary data analysis. After this, simple descriptive statistical procedures and more complex in-depth models, such as logistic regressions and principal component analysis, will be explained. The second part describes the analysis and interpretation of the data collected from the qualitative interviews.

3.4.1 Quantitative – Who

In research regarding Internet use and non-use, quantitative methods are commonly used to examine general relationships within societies between individuals' characteristics and their use of ICTs (e.g. Anderson 2001; Anderson 2005; Demunter 2005; Van Dijk 2005).

They allow a representative overview of characteristics of populations as well as trends on a societal level and for subpopulations. Secondary analysis of survey data from Great Britain and Sweden were thus used to provide a description of users and different groups of non-users as well as their socio-economic backgrounds. The following pages will explain which exact quantitative methods were applied for which purposes and why they were chosen over other methods.

3.4.1.1 Secondary Data Analysis

As described above, the use of existing data bears some advantages that speak in favour of their use. On the other hand, secondary data analysis involves a limitation of possible analyses and findings, as the researcher using these existing data is not able to add questions that might be crucial for their project due to differing research objectives in the primary and secondary research (Kiecolt & Nathan 1985: 12 et seq.). In this study, some questions in the original surveys were not asked in a way favourable to the research questions. Reasons for Internet non-use were, for example, only examined in terms of most important reasons in the Swedish survey (see Section 4.2.2; Appendix A, Tables I.a. and I.b.), which only allows for a very limited and insufficient depiction of reasons for non-use. Another item of interest would be whether individuals not using the Internet find any advantages or disadvantages from their non-use; this was only asked in the Swedish questionnaire and only with regards to negative effects.

Moreover, this study is interested in a relatively small subpopulation that was not the focus of the nationally representative OxIS and WII surveys, which aimed at presenting an accurate picture of the complete populations in both countries. This is a problem as there are too few cases of middle-aged non-users in the latest Swedish data sets (2009: N=21, 2011: N=14) to conduct the desired statistical analyses (Kiecolt & Nathan 1985: 13). For the Swedish middle-aged subsample, it was thus only possible to describe them on basis of the actual numbers, not percentages (see Section 4.1.2.1). No further statistical

analysis were conducted for this Swedish subsample, but only for the complete sample and non-users regardless of age group.

3.4.1.2 Descriptive Methods

As the name suggests descriptive methods stay on a very basic level of analysis. They are mainly used to give an overview of the topic and the general characteristics of the populations examined. In this research descriptive statistics were used to (1) give indications about the development of Internet use in Great Britain and Sweden over the past eight years (see Section 1.2), (2) describe the general socio-economic characteristics of non-user populations across Britain and Sweden, (3) compare the age groups 25 to 55 year-olds to the rest of the samples, (4) compare these populations and inter-state differences, and (5) give an indication of the reasons non-users state for being offline.

The descriptive methods applied here included simple frequencies for the increase of Internet use over the last few years using the data sets from 2007 to 2011 from OxIS and WII. Frequencies were also applied to describe patterns of reasons for Internet non-use for the general and middle-aged non-user populations, using the latest data sets from 2011. Cross-tabulations gave more detailed information on socio-economic characteristics of the general populations in contrast to the non-user populations (using waves 2007, 2009 and 2011) as well as differences of the general middle-aged populations in contrast to the middle-aged non-user populations (using the OxIS waves 2007, 2009 and 2011 only). Although datasets were available for 2003 and 2005 for both countries, this thesis will not conduct analyses of these for two reasons: 1) The differences between the different waves as well as between the British and Swedish data sets were too big to allow for a comparison for these two waves; 2) general data analyses for both countries have been published almost every year the surveys were conducted (e.g. Dutton & di Gennaro 2005; Findahl 2004).

These preliminary analyses led into more detailed analyses of specific research questions and (sub)populations through more in-depth methods described below.

3.4.1.3 Logistic Regressions

Any type of regression aims to explain relationships between one variable (dependent) and one other or a set of other factors (independent variables). These independent variables are expected to be related to or influence the dependent variable in some way (Meyers et al. 2006: 127 et seq.) In the case of this study, the interest lay on finding out which factors influence Internet non-use in Great Britain and Sweden, with a special focus on middle-aged subpopulations. It was of great interest if the patterns look different between the two countries, and moreover whether they look different for 25 to 55 year-old Britons than for the general population. As mentioned before, this analysis could not be conducted for Sweden due to the small subsample of middle-aged non-users.

As the dependent variable in this case is dichotomous – Internet use vs. non-use – normal multivariate regressions could not be applied, as they are designed for continuous dependent variables. Instead, logistic regressions were selected for this project (Meyers et al. 2006: 221). A distinctive feature of this type of regression is that the dependent variable in the model is dichotomous, but one or more predictors are continuous or quasi-continuous (educational qualification is for example treated as a quasi-continuous predictor of Internet usage) (ibid.: 222). Similar to a linear regression, logistic regressions calculate the prediction of the outcome variable, in this case: “Are you currently using the Internet?” yes vs. no. The output includes the so-called odds ratios, which present the increased or decreased likelihood of the outcome yes vs. no on basis of the reference category of the independent variable in question.¹⁸

¹⁸ As this thesis is not aiming at an audience that is extensively statistically or mathematically schooled, the underlying mathematical assumptions of logistic regressions will not be explained in this methodology. For a comprehensive explanation of these see Meyers et al. 2006, pp. 221-241 or

The analyses were conducted for the complete 2011 samples in both countries to describe the relationships between socio-economic factors and Internet (non-)use. The exact same analyses were then conducted again for a middle-aged subsample, aged 25 to 55 years, with the data from Great Britain, but not Sweden (see Section 3.4.1.1).

The validity of the entire model and the contributions of the individual independent variables were measured through different statistical tests, such as the Hosmer-Lemeshow test, which tests the goodness of fit for the complete model and pseudo R^2 , which mimics the R^2 of ordinary least squares (OLS) regressions and explains the percentage of variability explained by the entirety of all independent variables (Meyers et al. 2006: 239). Both tests will be explained in more detail in the quantitative results chapter.

Logistic regressions require a larger sample than linear regressions to allow for a valid interpretation of the results (ibid.: 222). However, this was not an issue for this study as the samples provided more than 2,000 respondents in each wave. The British middle-aged subsamples used in the logistic regressions moreover consisted of at least 700 valid cases.

These regressions gave detailed indications on the factors that influence Internet use and non-use for the general population in Great Britain and Sweden as well as for the British middle-aged subsample. However, questions regarding the characteristics of non-users and the compilation of subgroups remain. For this purpose other statistical data reduction methods were applied that aim to categorise variables or cases into correlating groups.

3.4.1.4 Principal Components

The goal of applying principal components analysis (PCA) was to find subgroups of non-users within the general non-user population in Great Britain and Sweden and for the

Peng et al. 2002. For a shorter explanation of this analytical method see Rindskopf 2004, pp. 141-144.

middle-aged non-user population in Great Britain. It was of interest to see whether middle-aged non-users show different subgroups and whether different variables were of importance. Moreover, the groups of non-users in Sweden were much smaller, so it was a second aim to see whether a considerably smaller group shows more homogeneity than a larger group.

PCA was used as a data reduction method to categorise variables into groups based on their correlations (Ehrenberg 1982, p. 206 et seqq.). “Their general purpose is to identify a relatively small number of themes, dimensions, components or factors underlying a relatively large set of variables. The way they do this is by distinguishing sets of variables that have more in common with each other than with the other variables in the analysis” (Meyers et al. 2006: 465). In the PCA the dimension that accounts for most of the variance of the data within the variables included in the analysis builds the first so-called component. The second component explains the second greatest amount of variance, given that it is independent of the first component, and so forth (Wilkinson et al. 1996: 641). “A component is a weighted linear combination of the variables analysed – a variate. [...] Each variable is weighted based on its contribution or relationship to the principal component in much the same way as is done in multiple regression. This variate is analogous to the dependent variable in a multiple regression analysis” (Meyers et al. 2006: 479). The variables are associated with the extracted components according to their distance from or correlation to the component (ibid.: 485)¹⁹.

A large set of variables was used to conduct the PCAs for British and Swedish non-users and British middle-aged non-users. Most of the variables used in the PCAs were similar to those used in the logistic regressions, and covered socio-economic characteristics.

¹⁹ As for the logistic regression, this methodology will abstain from explaining the underlying mathematical assumption of PCAs. A detailed explanation can be found in Meyers et al. 2006, Kaplan 2004, or Abdi & Williams 2010.

The PCAs were conducted with the same set of variables for both countries to ensure comparability. Due to the specific composition of the middle-aged non-users in Great Britain, the included variables had to be adjusted. The exact specifications of these adjustments and the results of these analyses are discussed in Chapter 4.

3.4.2 Qualitative – In-depth Data

Despite the various detailed quantitative analyses, some of the research questions (Section 2.7) could not be answered satisfactorily. Questions about experiences, feelings, and opinions required a more in-depth approach than quantitative analyses would allow for. Qualitative analyses also enabled the exploration of additional issues, normally not investigated in non-user research (see Chapter 2), which enhanced the second quantitative analysis phase. The second part of the data collection involved conducting qualitative in-depth interviews with middle-aged Internet non-users in Great Britain and Sweden to find out more about their specific characteristics and to shed light on their everyday lives, feelings, and attitudes towards technologies as well as their underlying reasons for not using the Internet, when the majority of their countrymen in the same age group are using it.

The analysis of the qualitative interviews did not follow one specific predetermined method or tradition, such as grounded theory (Glaser & Strauss 1967), or realist versus narrative concepts (Silverman 2000: 823; Holstein & Gubrium 1995), but was informed by findings from the first set of quantitative analyses (Chapter 4), the resulting interview guides, and most importantly by the qualitative data themselves. “The quest is for common content themes and the functions of these themes” (Gaskell 2000: 53) to understand meanings and conceptions. Referring to Gaskell, there is no one best way of analysing qualitative interviews, but the process includes several modes of analysis, reaching from reading and rereading to thematic coding and categorisation (ibid.: 53 et seq.). “[Qualitative data analysis] is custom-built, revised, and ‘choreographed’” (Creswell 1998: 142).

The procedure of analysis that was applied to the qualitative data in this thesis started from a relatively broad description of the interviews and worked its way into a more detailed process of coding the interviews and categorisation of different important topics within the data. This process worked in “analytic circles” (Creswell 1998: 142 et seq.), which included the repetition of certain analytical methods. As this approach was inspired by ideas from grounded theory, “[...] the analysis is gradually moved from descriptive to more theoretical levels, leading to a ‘saturation’ of the material by the coding process, when no new insights and interpretations seem to emerge from further codings” (Kvale & Brinkmann 2009: 202). The aim was to gain a better understanding of reasons for non-use and experiences and attitudes linked to staying offline and hence take the first steps towards building a theory of non-use. The exact mode of analysis is described below.

3.4.2.1 Description

The first step consisted of describing the contents of each interview and general characteristics of the interviewees, including their socio-economic background. Although this first description is regarded as the basis for more thorough analyses, it “[...] already embodies concepts [a selective and specified set of properties and their dimensions], at least implicitly” (Strauss & Corbin 1998). General themes were summarised, including specific notions and attitudes of the interviewees. Due to the previous structuring of the interviews (see 3.3.2.2 and Appendix B, I.a. and I.b.) the description of topics was infinitely easier than for a completely open narrative interview, which could produce any number of topics. This initial basic analysis was followed by more fine-grained analyses that included the coding and finally the categorisation and conceptualisation of data.

3.4.2.2 Coding

Coding is a specific method of qualitative data analysis, first developed by Strauss and Corbin in their development of the technique of grounded theory. It “[...] involves attach-

ing one or more keywords to a text segment in order to permit later identification of a statement” (Kvale & Brinkmann 2009: 201 et seq.). The specific procedure of coding that was used in this work was informed by the quantitative findings, interview guide and purposive sampling, but also oriented at recurring themes within the data.

After the initial description of the interviews, the singular documents were pursued in their entirety and compared to the other interviews, which is the reason why the first step of coding was only started after the first few interviews and not directly after the first one. The question that this procedure is trying to answer is “What makes this document the same as, or different from, the previous ones that I coded?” (Strauss & Corbin 1998: 120). In the next step these first few interviews transcriptions were again more thoroughly analysed for those similarities and differences. The following interviews were then coded according to the previous coding, unless completely new topics occurred, which were newly coded, and previous interviews were re-examined for these new topics in a spiral process. Moreover, codes had to be reviewed, renamed and replaced in the process of finding new themes within the new data (Miles & Huberman 1994: 61 et seq.). These processes were applied for both the British and the Swedish interviews.

3.4.2.3 Categorisation

The next step of analysis involved grouping some the found concepts under a more abstract concept, a category. Strauss & Corbin (1998) used the example of categorising birds, planes, and kites under the concept of flying (ibid.: 113). This categorisation limited the amounts of data to a manageable size and allowed a more thorough analysis. “[Categories] have analytic power because they have the potential to explain and predict” (ibid.: 113) due to common properties and concepts within these. Similar to the process of coding, this procedure was used on all interviews to find similarities and differences in themes, attitudes, and notions regarding (non-)use of the Internet and other ICTs.

These categories were used to build a concept of different non-user experiences within Great Britain and Sweden, and compare the data from both countries for similarities and differences. Moreover, this procedure allowed a grouping of various different reasons for non-use, attitudes towards ICTs, and everyday life experiences with non-use (Chapter 5).

Based on these detailed analyses of middle-aged non-users, it was then possible to refine the initial quantitative analyses. The logistic regressions were reproduced with the original set of variables and additional attitudinal variables that were derived from the qualitative analysis. These variables included attitudes on new technologies in general and the Internet in particular. The results of these refined analyses are presented in Chapter 6.

3.5 Ethical Considerations

Any research including the participation of human beings must protect individuals' rights, privacy, health, and psychological wellbeing. Research councils and universities all over the world established ethics committees that check any research conducted at these institutions for a certain set of ethical codes that prevail in the discipline in question (Flick 2009: 36 et seqq.). For social sciences, the following five themes have been prevalent within the codes of ethics:

- "1. The researcher must always strive to protect the confidentiality of information obtained from respondents and their identity.
2. Participation in research by a respondent must be voluntary.
3. Research should infringe on the respondent's privacy to as little degree as possible.
4. Respondents must be protected from any harm that could result from the study.
5. The purpose and sponsor of the research must be identified to the respondent. Deceit should not be used." (Frey 1989: 244).

The secondary survey data as well as the self-collected interview data used in this project follow the code of ethics developed for the social sciences and the guidelines established

by the University of Oxford's Central University Research Ethics Committee (CUREC)²⁰. This committee provides an ethics review of research involving human participants. It stipulates the importance of informing participants, protecting their privacy, and secured data storage.

3.5.1 Welfare of Participants

The welfare of research participants entails that no participants may get harmed physically or psychologically in the process of research (Flick 2009: 40). In the specific case of this project, this means that questions regarding sensitive and personal topics, such as personal attitudes, private information on household income, or reasons for not using the Internet, which might well include reasons such as illiteracy, had to be handled carefully, as to not upset anyone.

3.5.2 Voluntary Participation

This presumption leads to another important point of ethically correct research under the human subjects model. Participants must be able to decide whether they want to take part in a study or not, and they must be able to opt out at any point within the study, without giving reasons. The participation in any part of this study was voluntary.

3.5.3 Informed Consent

Participants should be fully informed about the scope and aim of the project, the way their data will be used, analysed and stored, as well as the risks and benefits involved for them (Fowler 2002: 148 et seq.; Kvale & Brinkmann 2009: 70 et seqq.). In the case of the face-to-face survey interviews and qualitative interviews, participants were asked to sign a

²⁰ The Swedish survey research from the World Internet Institute (WII) was bound by the Swedish laws to comply with the codes of ethics mentioned above. As the WII is not part of any other institution, they did not have to have their research reviewed by an ethics committee. All other data collections were approved by the CUREC.

consent form after reading an information sheet. In the case of telephone surveys, which were the mode of data collection for the Swedish surveys and a small number of the qualitative interviews, this was not possible. “As a result, telephone survey researchers can only assume that the respondent is a responsible, mature individual who, given the relevant information, can make an informed decision” (Frey 1989: 249).

The institutions that collected the survey data used in this study followed these common procedures of signed consent forms in the case of the OxIS and verbal consent in the case of the telephone interviews conducted by the WII. Before the qualitative interviews took place the participants were asked to sign a consent form that allows for the use of the collected data for this thesis. As the research did not invade the privacy of participants beyond what they mention in interviews, all participants were aware of data collected from them. In addition, participants were informed about the usage and storage of their data. The British and Swedish consent forms and participant information sheets used in the qualitative study were constructed according to the CUREC guidelines and are attached in Appendix B.

3.5.4 Data Storage and Anonymity

The survey data received from the OxIS and WII as well as the data collected in the qualitative interviews are stored on private and password-secured hard-drives. No third parties have access to these data. Names and other private details that might reveal an interviewees’ identity were anonymised.

4 Quantitative Results I

On the basis of the findings from previous research and the research questions discussed in section 2.7, this first analytic section deals with non-user populations in Great Britain and Sweden and their specific characteristics. The description of general characteristics and changes over time will be followed by logistic regressions that identify the most important factors that influence Internet non-use in both countries. To get a more detailed picture and to find out about characteristics of several different groups of Internet non-users, the data from both countries will be analysed using Principal Components Analysis.

All results will be presented firstly for Great Britain and secondly for Sweden. These will be compared in the third part of this chapter (4.3). Moreover, this chapter is separated into two parts: 4.1 Who is offline? (examines characteristics and different types of non-users) and 4.2 Reasons for Internet Non-Use (describes self-reported reasons for not using the Internet). The concluding part of this chapter (4.4) explains how the qualitative analysis in Chapter 5 will complement the statistical analyses.

4.1 Who is offline?

The first part of this chapter is concerned with the characteristics of Internet non-users in both Great Britain and Sweden. First, developments over time will be considered, followed by a closer look at the most recent data from 2011 for both countries, which describes socio-economic backgrounds of non-users with a specific focus on the age group 25 to 55 year-olds. The analysis of British data will precede that of the Swedish equivalent.

4.1.1 Great Britain

4.1.1.1 Descriptives

While the size of the non-user population has stayed relatively stable over the past seven years, one of the most important questions this thesis seeks to answer is the composition

of this group. Who are 'the' non-users? Has the population changed over the past years? Has it become more homogeneous? Further descriptive analyses and more detailed logistic regressions will show which socio-economic variables are important in influencing who is not using the Internet, how this has changed since 2007, and what the different groups of non-users looked like in 2011.

For operational reasons the descriptive analyses compare the general populations to non-users only, i.e. individuals reported in the surveys that they have never used the Internet themselves before and are currently not using it. As it is not possible to distinguish more subtle differences between use, ex-use and non-use due to the nature of the survey questions (see Appendix A, Tables I.a. and I.b.) the quantitative analysis works with this simplistic definition of non-users. They might be so-called proxy users, i.e. they have other people do things online for them, but have never used the Internet on any device themselves. This distinction is important because, in contrast to ex-users, non-users have no Internet-related skills that they could utilise in their professional or personal lives. Ex-users were excluded from all analyses that were specifically conducted for non-user populations.

As this thesis is concerned with specific characteristics of Internet non-users in comparison to the general British population, the following cross tabulations compare characteristics of non-users with those of the complete population, which is made up of Internet users, ex-users, *and* non-users. This means that it is not possible to do a test for the significance of differences, as the subsample is incorporated in the complete sample.

Table 4 shows the socio-economic composition of the complete OxlS samples and the non-user subsamples for the years 2007, 2009, and 2011²¹. The comparison of the

²¹ A comprehensive list of the exact wording of all questions used in the quantitative analyses from the concerned OxlS waves can be seen in Appendix A – Specifics of Quantitative Methodology, Table I.a. Wording of Questions Asked in Great Britain 2007-2011.

complete samples with the subsamples shows the different composition of the non-user groups in contrast to the complete populations.

Table 4 Composition of the British (Non-User) Population over Time (%)

	All 2007	Non-Users 2007	All 2009	Non-Users 2009	All 2011	Non-Users 2011
Internet Use						
User	67.1		69.6		72.8	
Ex-User	5.3		7.0		4.5	
Non-User	27.6		23.4		22.7	
Age Group						
24 years and younger	14.5	3.2	16.2	4.1	17.6	6.0
25-55 years	54.2	33.4	53.7	26.3	52.1	26.9
56 years and older	31.3	63.4	30.1	69.5	30.3	67.1
Gender*						
Male	48.0	44.9	48.0	44.2	48.0	45.5
Female	52.0	55.1	52.0	55.8	52.0	54.5
Disabilities						
Disability/Health Problem(s)	13.2	28.7	14.8	33.1	14.7	32.1
No disability	86.8	71.3	85.2	66.9	85.3	67.9
Marital Status						
Single/Divorced/Widowed	55.1	52.3	45.3	44.2	46.7	61.4
Married/Living w Partner	44.9	47.7	54.7	55.8	53.3	39.6
Children						
No children in household	63.2	82.0	63.7	85.3	65.7	89.0
Children in household	36.8	18.0	36.3	14.7	34.3	11.0
Educational Qualifications ²²						
No qualifications	N/A ^a	N/A ^a	23.2	60.1	26.4	65.9
Basic	29.1	22.5	17.8	12.7	17.4	8.0
Secondary	34.8	56.6	16.5	9.1	19.1	10.5
Further	16.6	16.3	14.5	8.0	11.7	3.5
Higher	19.6	4.6	28.0	10.0	25.3	6.7
Occupational Status						
Student	8.6	1.1	8.8	0.0	8.7	0.0
Employed	53.9	30.1	49.2	18.7	49.1	22.5
Unemployed	15.7	18.3	19.1	22.8	18.5	17.0
Retired	21.6	50.5	22.9	58.6	23.8	60.5
N	2,350	649	2,013	471	2,057	466

¹ Source: All respondents, OxiS.

*The gender composition of the total sample was weighted to match the proportions in the British population, and is thus 48 per cent men and 52 per cent women in all waves.

^a Education was reported on a different scale in 2007 that did not include 'no qualifications'. For the recoding of educational qualifications see Appendix A, Table II.a.

Note: Ex-Users were excluded from the Non-User analysis, but included in the general population.

²² The coding for educational qualifications changed slightly between 2007 and 2009 and again between 2009 and 2011. However, with help from experts from the Department of Education at the University in Oxford, it was possible to recode the variables into four and five values respectively that allow for a comparison within the British data as well as a comparison between the British and the Swedish data. The recoding is reported in Appendix A, Table II.a.

The general characteristics of the populations remained relatively stable between 2007 and 2011 across all socio-economic factors. Use of the Internet increased by 5.7 percentage points, while non-use decreased by 4.9 percentage points. However, cross tabulations of non-use with several socio-economic variables show distinct changes in the characteristics of non-users in Great Britain in many aspects within the last four years.²³

Age stayed relatively stable over the past four years, with two thirds of British non-users being 56 years old or older, in contrast to making up only roughly 30 per cent of the population. Roughly a quarter of the British non-user population was between 25 and 55 years old – half of the percentage that this age group occupied within the population. Only a minority of non-users were younger than 25 years.

While gender did not have a strong impact on Internet non-use over the past four years, being disabled was a factor for Internet non-use across all waves. Both the proportion of individuals with a disability within the general population and the non-user population remained relatively stable with around 14 per cent of disabled individuals in the general population and around one third in the non-user population.

Marital status has become slightly more important since 2007, with individuals living alone making up a larger proportion of the non-user population in 2011. This is a recent change; in the past marital status did not have any influence on Internet use. Living with children younger than 18 years in one household made a strong difference to being a user or non-user in Britain in all waves.

Educational qualifications have remained an important factor influencing non-use over the past four years. Only a small proportion of non-users obtained qualifications in further or higher education, while this was the case for more than a third of the general population. The numbers suggest that the influence has become stronger, with only 10 per

²³ For operational reasons the descriptives will not include household income. As the scales have changed over the several waves, it is not practical to include this variable in the cross tabulations. It will be added to the analysis in the linear regressions and PCAs, as these analyses are conducted on basis of ratios rather than exact numbers.

cent of the non-users having qualifications in further or higher education in 2011, which is a dramatic drop from 18 per cent in 2009 and 21 per cent in 2007. Two thirds of all non-users did not have any educational qualifications in 2011, a number that was much smaller for the general population.

Occupational status was an equally strong and stable factor for non-use, with virtually no students being non-users and the majority of non-users being in retirement. This number has risen by 10 percentage points within the last four years. While in 2011 a rough quarter of the general population was retired, this was the case for 61 per cent of the non-users.

Non-users aged 25 to 55 years

The analysis presented above shows that in 2011 more than a quarter of the British non-user population was made up of middle-aged individuals. But what does it look like the other way around? What proportion of 25 to 55 year old Britons has not used the Internet before? As elaborated in the previous chapters, use of computers and the Internet are relevant qualifications for the job market and can bring advantages for professional and private life alike (Van Dijk & Hacker 2003: 321). Thus, one of the key issues examined here are the relationships between socio-economic factors and non-use for individuals aged 25 to 55 years. The first specific research question asks 'Are the relationships between socio-economic resources and digital (dis-)engagement the same for the age group 25 to 55 years as for the population?'

Table 5 Composition of the British 25-55 year-old (Non-User) Population over Time (%)

	All 2007	Non-users 2007	All 2009	Non-users 2009	All 2011	Non-users 2011
Internet Use						
User	77.3		81.6		84.3	
Ex-User	5.7		6.9		4.0	
Non-User	17.0		11.5		11.7	
Age Group						
25-34 years	32.3	30.6	33.9	22.8	34.4	29.9
35-44 years	34.4	29.6	33.9	26.8	33.9	27.6
45-55 years	33.4	39.8	32.3	50.4	31.7	42.6
Gender						
Male	46.6	43.3	45.2	45.2	45.8	44.8
Female	53.4	56.7	54.8	54.8	54.2	55.2
Disabilities						
Disability/Health Problem(s)	7.2	12.9	10.2	18.2	9.3	16.3
No disability	92.8	87.1	89.8	81.8	90.7	83.7
Marital Status						
Single/Divorced/Widowed	35.4	41.2	33.7	52.7	36.9	53.2
Married/Living w Partner	64.6	58.8	66.3	47.2	64.1	46.8
Children						
No children in household	51.5	56.7	49.7	57.3	52.0	66.4
Children in household	48.5	43.3	50.3	42.7	48.0	33.6
Educational Qualifications						
No qualifications	N/A ^a	N/A ^a	13.9	46.2	15.2	49.6
Basic	31.0	33.2	21.0	18.5	21.1	16.8
Secondary	27.8	43.0	18.4	15.1	20.0	22.7
Further	19.1	20.1	14.2	9.2	12.3	2.5
Higher	23.1	3.7	32.6	10.9	31.4	8.4
Occupational Status						
Student	2.5	0.5	2.2	0.0	1.8	0.0
Employed	74.9	56.9	71.1	43.0	73.3	59.7
Unemployed	20.7	36.6	25.2	52.1	23.6	37.9
Retired	2.0	6.0	1.4	5.0	1.4	2.4
N	1,273	216	1,081	123	1,072	127

Source: 25-55 year-old respondents, OxiS.

^a Education was reported on a different scale in 2007 that did not include 'no qualifications'. For the re-coding of educational qualifications see Appendix A, Table II.a.

Note: Ex-Users were excluded from the Non-User analysis, but included in the general population.

Looking only at middle-aged non-users in Great Britain shows a different picture from that encompassing all age groups. Table 5 shows that the number of non-users in this age group dropped after 2007 and then remained stable. Surprisingly, however, non-use was less distinctly spread across the three cohorts within the 25 to 55 year-olds than expected. One would expect the vast majority to be in the oldest cohort; nonetheless, the numbers show that in 2009 only around half of the non-users in the middle-aged subgroup were 45

years of age or older and in 2011 only 43 per cent. In 2011, the youngest cohort within the subsample represented 30 per cent of the non-users.

Similar to the general population, gender played only a small role for Internet non-use and remained relatively stable over time. Having a disability was a factor influencing non-use for middle-aged individuals, albeit not as distinctly as for the general population. However, this is mostly due to the correlation of disability with higher age. Cross tabulations showed that while less than 10 per cent of middle-aged Britons reported a disability in 2011, this proportion doubled for respondents older than 55 years (20 per cent).

Marital status seemed to be a stronger indicator for Internet non-use for middle-aged Britons. While only a third of this age group was single, divorced, or widowed, more than half of the non-users fell into this category. Having children living in the household was a less important factor for middle-aged non-users than for the complete non-user population. This effect was partly strengthened by taking out the older age groups, who are less likely to have children younger than 18 years living in their household, and who made up the majority of the British non-user population (see Table 4).

Educational qualifications were similarly important for middle-aged Britons as for the general population. The vast majority of non-users received none or basic educational qualifications. The effects got stronger over the years with only 11 per cent of middle-aged non-users having obtained further or higher educational qualifications in 2011, 9 percentage points less than in 2009, and 13 less than in 2007. While well-educated middle-aged non-users caught up, those with lower education were left behind – a trend similar to the one observed for the general non-user population (see Table 4).

Examining a middle-aged subsample filtered out almost all students and retired respondents, which changed the numbers for occupational status vastly. While less than a quarter of the middle-aged population was unemployed, this group made up almost 40 per cent of the non-users in 2011 and more than half in 2009.

4.1.1.2 Logistic Regressions

To be able to paint a more detailed picture the following logistic regressions explore the interrelations between Internet non-use and the socio-economic factors of age, gender, disability, marital status, children in the household, level of educational qualifications, occupational status, and household income. Table 7 describes these relationships for Great Britain for the years 2007, 2009, and 2011.

The dependent variable is coded into ‘0 – current user of the Internet’ and ‘1 – never used the Internet’. The small proportion of ex-users was left out of the analysis for operational and theoretical reasons (see Section 1.1). In contrast to most works, this analysis is focussing on the factors that increase the likelihood of being an Internet non-user. The odds ratios in Table 7 describe the strength of an increase (values higher than 1) or decrease (values lower than 1) of the likelihood of being a non-user on basis of the reference category of the factor in question. Additionally to the dependent binary variable Table 6 shows the eight independent variables that were used in these regressions.

Table 6 Variables Used in Logistic Regressions

Variable	Coding	Values
Age	Nominal	3 categories (14-24, 25-55, 56+); middle-aged 3 categories (25-24, 35-44, 45-55)
Gender	Binary	Male, Female
Disability	Binary	Disability, No disability
Marital status	Binary	Single, Partner
Children in household	Binary	Yes, No
Educational qualifications	Ordinal	(None; GB only), Basic, Secondary, Further, Higher
Occupational status	Nominal	Student, Employed, Unemployed, Retired
Household income	Ordinal	Great Britain: three steps from >£12,500/year to >£30,000/year; Sweden: three steps from >SKR200,000/year to >SKR400,000/year ²⁴

The reference categories were chosen in relation to findings from previous research regarding factors that increase the likelihood of being an Internet *user*, i.e. being younger, male, without disability, living with a partner, children in the household, having high edu-

²⁴ A detailed description of the variables, the wording of questions and the exact scaling of ordinal variables are provided in Appendix A.

cational qualifications, and having a high household income (e.g. Demunter 2005: 3 et seq.; Norris 2001: 80 et seq.). A different reference category was chosen for occupational status due to the low number of students who would be the most likely ones to be Internet users. Instead, the least likely group, retired individuals, was chosen.

The general goodness of fit of the applied model is represented by the 'Model Fit' value on basis of the Hosmer-Lemeshow test. This test shows in how far the model including the chosen predictors provides a better fit than a null model without any predictors. A lower value with no significance on a .05 level reports a better model. A second measure of the goodness-of-fit is the commonly reported pseudo R^2 value. These aim to mimic the R^2 of ordinary least squares (OLS) regressions, which indicate the percentage of variance in the dependent variable explained by the model. The pseudo R^2 used in this logistic regression is Nagelkerke, which calculates the proportion of unexplained variability that is reduced by adding variables to the model. It is based on Cox and Snell's pseudo R^2 , but adjusts the values to a 0 to 1 scale²⁵. The 2011 model in Table 7, for example, explains 61 per cent of the variability.

²⁵ Cox and Snell's Pseudo R^2 measures the likelihood of the unconditional, so called "null", model against the likelihood of the fitted (current) model. The highest value is, however, not 1. Nagelkerke adjusts for this so that the value lies between 0 and 1 (Cox & Snell 1989).

Table 7 Logistic Regression Predicting the Likelihood of Being an Internet Non-User, Great Britain, 2007 to 2011

Variable (reference category)	2007 Odds Ratios	2009 Odds Ratios	2011 Odds Ratios
Constant	.020	.031	.010
Age (Under 25 years)			
25 to 55 years	2.448*	1.525	2.411*
Over 55 years	6.492**	4.439**	4.170**
Gender (Male)	1.060	.933	.823
Disability (No)	1.381	1.437	2.297**
Marital Status (Partner)	1.099	2.030**	2.088**
Children in Household (Yes)	1.471*	1.675*	1.800*
Educational Qualifications (Higher)			
None	^a	8.237**	13.657**
Basic	4.205**	2.901**	2.270*
Secondary	7.124**	2.357*	2.804**
Further	4.559**	2.241*	1.573
Occupational Status (Retired)			
Student	.120**	.000	.000
Employed	.407**	.316**	.353**
Unemployed	.635*	.516*	.260**
Annual Household In- come (>£30,000)			
<£12,500	3.378**	3.325**	5.624**
>£12,5-30,000	2.380**	1.375	2.613**
Model Fit (Hosmer- Lemeshow Test)	3.195 (p= .922)	25.343 (p= .001)	7.629 (p= .471)
Pseudo R ² (Nagelkerke)	.445	.556	.606
Valid N (Non-Users)	1,824 (533)	1,387 (333)	1,476 (338)

Source: All respondents, OxlS. 2007: N=2,226; 2009: N=1,872, 2011: N=1,964.

*Significant on a 0.05 level; **Significant on a .001 level.

^a Education was reported on a different scale in 2007 that did not include 'no qualifications'. For the re-coding of educational qualifications see Appendix A, Table II.a.

Note: Ex-Users were excluded from the analysis.

The regressions confirm the findings from the descriptive analysis. Age was one of the most important factors influencing who was online and who was not. It has, however, become less important over the last four years. While individuals aged older than 55 years were 6.5 times more likely to be non-users than individuals younger than 25 years in 2007, in 2011 older individuals were 4 times more likely.

Gender was not an important factor for Internet use in any of the waves. Disability, however, became a significant factor in 2011 with disabled individuals being 2.3 times more likely to belong to the non-user groups than individuals without a disability.

The odds ratios confirm that marital status has become a significant factor since 2007. In 2009 and 2011, Britons living on their own were two times more likely to be non-users than Britons living with a partner. The numbers also suggest an influence of having children aged younger than 18 years living in the household. This effect became slightly stronger between 2007 and 2011. In 2007, individuals living without children in their household were 47 per cent more likely to be non-users, and in 2011 this influence had increased to 80 per cent.

Education was the strongest indicator of Internet non-use in all waves and has become more important over the last four years. In 2011, Britons without educational qualifications were 13.7 times more likely to be non-users than someone with higher education. The influence was still strong and significant for basic and secondary education, with both groups being more than twice as likely to be non-users. The higher a person's educational qualification, the less likely they were to be an Internet non-user.

The influence of occupational status has remained significant and strong over the years with individuals who were not retired being much less likely to be Internet non-users. As being retired is strongly related to being old, it is more interesting to look at the difference between being employed and being unemployed. While unemployed individuals were more likely to be non-users in 2007 and 2009, this influence has disappeared in 2011 with employed and unemployed individuals being similarly likely to be non-users.

One of the strongest and increasingly important factors of non-use was household income, with lower and middle income groups being more likely to be non-users than higher income groups earning more than £30,000 a year. In 2011, the lowest income group was 5.6 times more likely, and the mid-income group 2.6 times more likely to be part of the non-user groups than the high-income group.

It seems that some factors keep gaining in influence and narrow down the subsample of non-users to individuals who are already disadvantaged within society: older

people, those having a disability, those with lower educational qualifications and those with a low household income are increasingly likely to be Internet non-users. This can be problematic as those groups of individuals are already disadvantaged within society. Internet non-use might exclude many of them further (Chen & Wellman 2004: 44; Helsper 2008: 58).

Non-users aged 25 to 55 years

Table 8 shows the same type of logistic regressions for British non-users aged between 25 and 55 years. These data show differences from the data presented for the complete sample. Many variables that had a significant influence on using or not using the Internet for the complete sample were not significant or less influential for the middle-aged subsample.

Age did not play a significant role in determining non-use, except for 2009, when the oldest cohort (45 to 55 years) was 2.4 times more likely to belong to the non-user group than the youngest cohort (25 to 34 years).

While gender did not play a role for non-use in the middle-aged subsample, having a disability increased the likelihood of being a non-user by 86 per cent in 2007 and 116 per cent in 2011. Disabled Britons were thus more than twice as likely to be non-users as Britons without disabilities.

Marital status only had an influence on non-use of middle-aged Britons in 2009, with those living on their own being twice as likely to be non-users as those living with a partner. Having children living in the same household, however, had no significant influence on Internet (non-)use for the middle-aged subsample.

Table 8 Logistic Regression Predicting the Likelihood of Being an Internet Non-User, 25-55 year-olds, Great Britain, 2007 to 2011

Variable (reference category)	2007 Odds-Ratios	2009 Odds-Ratios	2011 Odds-Ratios
Constant	.051	.078	.013
Age (under 35 years)			
35 to 44 years	1.061	1.160	1.254
Over 45 years	1.071	2.414*	1.751
Gender (Male)	1.104	.828	.645
Disability (No)	1.863*	1.205	2.159*
Marital Status (Partner)	.847	2.131*	1.154
Children in Household (Yes)	1.383	1.296	1.685
Educational Qualifications (Higher)			
None	^a	9.800**	10.938**
Basic	5.309**	2.812*	2.021
Secondary	6.726**	2.272	3.651*
Further	5.349**	2.434	.735
Occupational Status (retired)			
Student	.000	.000	.000
Employed	.306*	.191	.746
Unemployed	.451	.285	.393
Annual Household Income (>£30,000)			
<£12,500	4.467**	3.256*	13.004**
>£12,5-30,000	3.159**	.818	2.844*
Model Fit (Hosmer-Lemeshow Test)	6.543 (p= .587)	15.477 (p= .051)	13.927 (p= .102)
Pseudo R ² (Nagelkerke)	.241	.353	.373
Valid N (Non-Users)	1,102 (192)	765 (62)	716 (64)

Source: 25-55 year-old respondents, OxIS. 2007: N=1,200; 2009: N=1,005; 2011: N=1,031.

*Significant on a 0.05 level; **Significant on a .001 level.

^a Education was reported on a different scale in 2007 that did not include 'no qualifications'. For the recoding of educational qualifications see Appendix A, Table II.a.

Note: Ex-Users were excluded from the analysis.

The influence of educational attainment is only slightly lower for middle-aged Britons than for the complete sample and increased vastly between 2007 and 2011. In 2009, middle-aged Britons without educational qualifications were 9.8 times more likely to be non-users than those with a degree from a higher education institution. This number increased to almost 11 times higher likelihood for those without qualifications in 2011. Those with qualifications in secondary education were still 3.7 times more likely to be non-users than those with a higher education degree. Having a certificate from an institution offering further education does not seem to make a difference.

Occupational status was not important for the middle-aged subsample in 2009 and 2011. Being employed had a significant impact in 2007, with those in employment being less likely to be Internet non-users.

The strongest factor for middle-aged Britons was household income, which was more important than for the complete population across all waves. Those individuals who belonged to the lowest income group were 13 times more likely to be non-users than those from high-income groups. Those from mid-income groups were still almost 3 times more likely to be non-users.

As for the general population, the results suggest an increase of the importance of a few critical factors over the last few years. In contrast to the complete British sample, only disability, education, and household income seem to be significant indicators of Internet non-use for middle-aged Britons.

4.1.1.3 Principal Components

It is not only important to know the general relationships between socio-economic variables and Internet use, but it is also of interest to know whether non-users can be grouped homogeneously – as has been done in most research in the past – or if we should distinguish between different subgroups of non-users as has been done by a few (e.g. Helsper 2008). Principal components analysis (PCA) of British non-users will show which variables we might be able to use to distinguish different subgroups within the non-user populations.

The table below shows the rotated component loadings for the first four components, which explain most of the variance within the variables (Wilkinson *et al.* 1996: 641). These components were chosen based on having an Eigenvalue higher than 1.3. This cut-off was chosen as it displayed an ‘elbow’ within the scree plot, “[...] a point at which the plot changes from a steep to a flat slope, which shows only marginally more explained

variance for each additional component retained” (ibid.: 640). As the scree plot for this PCA showed two possible ‘elbows’ after two and five components, I chose the compromise and retained four dimensions. Together these four components explain 65.1 per cent of the variance. The method used to extract these components was principal components. Varimax rotation with Kaiser normalisation of the matrix was applied, which is a standard procedure used for PCAs to enable an easier interpretation of results as it rotates the correlation matrix until the first component lies on the orthogonal axis²⁶. Missing data were deleted casewise, which means that cases with missing values in any of the variables used in the PCA were excluded from the analysis. In the case of binary variables, only one of the two was included in the analysis, as the other one merely mirrors the first one and changes the loadings as the same variable is accounted for twice within the analysis. This is, for example, the case for ‘living with or without children in the household’ or ‘living with or without a partner’.

Table 9 Rotated Component Loadings, Great Britain, 2011

Variable	Loadings, Component 1	Loadings, Component 2	Loadings, Component 3	Loadings, Component 4
Eigenvalue	3.257	2.425	1.443	1.342
% Explained Variance	25.1	18.7	11.1	10.3
Occupational Status: Retired	.946	.064	.004	.054
Age	.883	.010	-.135	.044
Occupational Status: Employed	-.584	-.445	.186	-.170
Occupational Status: Unemployed	-.563	.414	-.213	.121
No Children in Household	.553	-.047	-.100	.276
Mid-range Income	.024	-.927	.117	.195
Low Income	.018	.903	-.143	.185
No Qualifications	.126	.035	-.905	.103
Secondary Qualifications	-.215	-.050	.703	-.070
Higher Qualifications	.102	-.112	.482	.050
High Income	-.089	.018	.061	-.814
No Household Internet Access	.113	.055	-.050	.749
Living Alone	.042	.511	.099	.511
Valid N	321			

Source: Non-Users, OxIS. 2011: N=559.

Loadings with values higher than .5 and lower than -.5 were shaded in grey and considered in the interpretation of the components; unshaded loadings were not considered in

²⁶ For more information on this procedure see Abdi 2003.

the interpretation, as the correlations were too low. These four components can be interpreted as representing four different types of non-users that group around specific variables. The first group is older, retired and has no children living in the household. Those who are employed or unemployed and accordingly younger than those who are retired oppose this group. A second group consists of non-users with low incomes who live alone. They are opposed by those with a mid-range income. The third group is characterised by having no educational qualifications, while the fourth group consists mainly of singles who have no Internet access at home.

Non-users aged 25 to 55 years

Following the research questions on the composition of middle-aged groups of non-users, the following table examines whether the groups found for the complete sample of Internet non-users in Britain are also applicable for the age group 25 to 55 years. The preceding analyses found that Internet (non-)use of middle-aged populations was correlated differently with socio-economic variables.

Similar to the analysis for the complete sample, Table 10 shows the rotated factor loadings for the components that explain most of the variance within the variables used in the analysis. The same extraction method was used as for the complete sample. The three components displayed below all have Eigenvalues larger than 1.7. As in the above PCA, the three dimensions were chosen on basis of a distinct break in the scree plot that suggests that the dimensions following this break do not contribute largely to explaining the variance within the data. Together, the three extracted components explain 57.9 per cent of the variance within the data.

Table 10 Rotated Component Loadings, 25-55 Year-Olds, Great Britain, 2011

Variable	Loadings, Component 1	Loadings, Component 2	Loadings, Component 3
Eigenvalue	3.467	1.769	1.713
% Explained Variance	28.9	14.7	14.3
Mid-range Income	.845	.314	.072
Low Income	-.840	.212	-.118
Occupational Status: Employed	.816	-.243	-.202
Occupational Status: Unemployed	-.799	.226	.228
Higher Qualifications	.258	.017	-.027
High Income	.027	-.804	.076
No Internet Household Access	-.058	.767	-.028
Living Alone	-.413	.503	-.073
No Children in Household	.017	.458	.246
No Qualifications	-.220	.132	.804
Secondary Qualifications	.172	-.083	-.777
Age	.225	-.199	.638
Valid N	91		

Source: 25-55 year-old Non-Users, OxiS. 2011: N=127.

As above, only component loadings higher than .5 and lower than -.5 (shaded in grey) were considered in the interpretation. The components represent three different groups of middle-aged Internet non-users in Britain who display different characteristics. The first group has a low income and is unemployed. Those who are employed and have a mid-range income oppose this group. Similar to the complete non-user population, a second group of non-users lives alone and has no Internet access at home. Having no educational qualifications and being older mark the third group.

The PCA shows that, congruent with the preceding analysis, we find slightly different groups of non-users for middle-aged Britons than for the complete sample. Most surprisingly, having children living in the household or not does not make a difference for middle-aged non-users. A check for numbers showed that one third of middle-aged non-users had children living in the household. In contrast to this, 51 per cent of middle-aged Internet users have children living at home. More detailed qualitative analyses of non-users (Chapter 5) will give insight into important characteristics, experiences, and attitudes of middle-aged non-users.

4.1.2 Sweden

To be able to point out differences and similarities between British and Swedish Internet non-users, the following analyses will display the characteristics of Swedish non-users and middle-aged non-users.

4.1.2.1 Descriptives

Table 11 shows the development of the socio-economic composition of Swedish non-user populations over the past four years. The numbers show that the influence of different variables changed with the decreasing numbers of non-users.

The analysis shows a strong influence of age group on Internet use that vastly increased between 2007 and 2011. While in 2007 30 per cent of the non-users were aged younger than 56 years, in 2011 less than five per cent of all non-users were up to 55 years old – that represents a drop of 25 percentage points within three years. In 2011 there were no non-users at all in the youngest age group.

Gender and disability did not have any detectable effect on being an Internet user or non-user for the Swedish population in any wave. Marital status and having children living in the household did seem to have influence on non-use. Fewer individuals living with their partner or children in one household were Internet non-users. This influence increased for living without children in the household between 2007 and 2011.

Table 11 Composition of the (Non-User) Population in Sweden over Time (%)

	All 2007	Non-users 2007	All 2009	Non-users 2009	All 2011	Non-users 2011
Internet Use						
User	73.7		82.6		86.2	
Ex-User	N/A		3.0		2.4	
Non-User	26.3		14.4		11.1	
Age Group						
24 years and younger	16.4	4.5	18.0	1.3	16.5	0.0
25-55 years	48.0	24.9	44.8	7.1	43.9	4.8
56 years and older	35.7	70.6	37.1	91.6	39.5	95.2
Gender						
Male	48.5	45.2	49.2	41.2	50.2	41.0
Female	51.5	54.8	50.8	58.8	49.8	59.0
Disabilities ²⁷						
Disability/Health Problem(s)	13.4	20.0	N/A	N/A	3.4	9.0
No disability	86.6	80.0	N/A	N/A	96.6	91.0
Marital Status						
Single/Divorced/Widowed	60.6	71.0	45.0	61.9	34.0	56.5
Married/Living w Partner	39.4	29.0	55.0	38.1	66.0	43.5
Children ²⁸						
No children in Household	72.6	84.7	72.5	97.0	60.1	95.6
Children in Household	27.4	15.3	27.5	3.0	39.9	4.4
Educational Qualifications ²⁹						
Basic	14.1	34.5	23.6	51.1	13.3	45.5
Secondary	10.4	13.3	11.9	13.0	9.7	7.5
Further	39.3	32.6	32.4	24.4	34.6	28.1
Higher	36.1	19.7	32.1	11.6	42.4	18.8
Occupational Status						
Student	11.4	2.5	18.2	0.3	15.8	0.0
Employed	56.3	32.6	49.3	13.1	52.5	13.6
Unemployed	10.2	9.3	9.6	9.0	6.0	1.7
Retired	22.2	55.7	22.8	78.8	25.6	84.7
N	2,016	530	2,063	297	2,671	297

Source: All respondents, WII.

Note: Ex-Users were excluded from the Non-User analysis in 2009 and 2010 but included in the general population in all waves. As the 2007 data do not distinguish between non- and ex-users, the latter group is here included in the non-user population.

The data show that educational qualifications were relatively equally spread across all four categories, with the majority of Swedes (around 70 per cent across all waves) having attended at least a further education institution. Around one third of the

²⁷ Disability was not examined in 2009. The enquiry in 2007 was for general disability, the enquiry in 2011 for disabilities that may influence use of computers and the Internet. The exact wording of all Swedish questions can be found in Appendix A – Specifics of Quantitative Methodology: Table I.b. Wording of Questions Asked in Sweden 2007-2011.

²⁸ In contrast to the OxlS children were defined as under 21-year-olds in the Swedish study. Moreover, the wording changed between 2007 and 2009 (see Appendix A).

²⁹ The Swedish survey did not record 'no qualifications' for educational qualifications.

respondents went to university and in 2011 40 per cent. Only 13 per cent of Swedes received basic education. However, 46 per cent of non-users fell into that category in 2011.

Occupational status was equally important, with being a student or employed having a strong positive influence on Internet use and being retired having a strong negative influence. The latter goes in line with the influence of age. Retired individuals make up the vast majority of non-users in Sweden.

Non-users aged 25 to 55 years

Sweden represents a very specific case, as the preceding analysis showed; within the last four years almost all non-users younger than 56 years have been 'converted' to become users. In 2009, the subsample of middle-aged non-users contained only 21 individuals and in 2011 only 14. The rest of the non-user group consisted of individuals older than 55 years, 91.6 per cent (N=274) in 2009, and 95.2 per cent (N=280) in 2011.

With a subsample that small, it is impossible to conduct inferential statistical analysis, especially considering that the original sample consists of more than 2,500 respondents. The group of middle-aged Swedes consisted of 1,157 respondents in 2011; only 1.2 per cent of this group were non-users and another 1.2 per cent were ex-users. Within the last four years Sweden managed to virtually 'wipe out' the 'issue' of Internet non-use within the middle-aged population. This phenomenon, its implications for this work, and the potential reasons for this interesting and dramatic development in the last few years will be further discussed in the last part of this chapter and the detailed discussion of the quantitative and qualitative analyses (Chapter 7).

For this chapter, the small number of middle-aged non-users means that no statistical analyses will be conducted with this subsample. This paragraph will, however, briefly describe their characteristics on the basis of the sample from 2011. 9 of the 14 Swedish middle-aged non-users were older than 45 years, three were 35 to 44, and two were be-

tween 25 and 34. Half of them were men, and none of them reported a disability. Half of the middle-aged non-users were living alone. Only three of them had children aged younger than 21 years living in their household. As expected, only three of the 14 respondents had higher educational qualifications, and two had basic qualifications. However, nine middle-aged non-users had further educational qualifications. Another surprising result was that 13 of the non-users were employed and only one retired. A check for their occupation, however, showed that all of them were working in jobs that do not require the handling of computers or use of the Internet, such as lorry driver, factory worker, or janitor.

This exceptionally small group of middle-aged non-users shared some interesting characteristics: They were mostly older, lived without children in the household, and worked in skilled trades. However, most of the respondents in this group had further educational qualifications. Especially for this group of Swedish middle-aged non-users, detailed qualitative data will be crucial to examine their specific characteristics, opinions on technologies and the Internet, and their reasons for being offline, when 97.6 per cent of that same age group is using the Internet.

4.1.2.2 Logistic Regressions

Table 12 shows logistic regression for the influence of socio-economic factors on non-use in Sweden. The same model as for the British data was applied for the Swedish data from 2007, 2009 and 2011 to enable a comparison of the countries.

The odds ratios in the table below do not show a significant influence of age on Internet non-use. However, this can be ascribed to the low number of young and middle-aged non-users in the analysis, which means that the reference category is too small to allow significant results. However, the virtually non-existent group of younger and middle-aged non-users in the population has sufficiently proved the influence of age.

Table 12 Logistic Regression Predicting the Likelihood of Being an Internet Non-User, Sweden, 2007 to 2011

Variable (reference category)	2007 Odds Ratios	2009 Odds Ratios	2011 Odds Ratios
Constant	.054	.000	.000
Age (Under 25 years)			
25 to 55 years	1.915	7.981E6	19616916.7
Over 55 years	5.791**	9.006E7	12360959.7
Gender (Male)	1.119	1.400	1.428
Disability (No)	1.126	N/A	3.493*
Marital Status (Partner)	.892	.783	2.001
Children in Household (Yes)	1.046	.905	1.689
Educational Qualifications (Higher)			
Basic	3.558**	4.105**	6.431**
Secondary	1.578	2.157	1.942
Further	1.566*	1.624	2.606*
Occupational Status (Retired)			
Student	.074**	.000	.000
Employed	.321**	.113**	.372**
Unemployed	.336**	.321	.044**
Annual Household Income (>SKR400,000)			
<SKR200,000	5.913**	2.426	6.148**
>SKR200,-400,000	2.075*	2.205*	3.531**
Model Fit (Hosmer-Lemeshow Test)	6.780 (p= .561)	3.735 (p= .880)	1.301 (p= 1.301)
Pseudo R ² (Nagelkerke)	.461	.494	.455
Valid N (Non-Users)	1,607 (396)	866 (97)	1277 (92)

Source: All respondents, WII. 2007: N=2,016; 2009: N=2,002; 2011: N=2,671.

*Significant on a 0.05 level; **Significant on a .001 level.

Note: Ex-Users were excluded from the Non-User analysis in 2009 and 2011, but included in the general population in all waves. As the 2007 data do not distinguish between non- and ex-users, the latter group is here included in the non-user population.

As expected from the cross tabulations, the logistic regressions show that gender, marital status, and having children living in the household did not have an influence on Internet non-use in any wave.

Education played an increasing role for Internet non-use in Sweden. In 2011, individuals with only basic qualifications were 6.4 times more likely to be non-users, than those with higher educational qualifications. The likelihood was still 2.6 times higher for individuals with further educational qualifications. These influences increased over the last four years with a rapidly shrinking non-user population.

Occupational status played a significant role in all waves, with employed individuals being significantly less likely to be Internet non-users. Students who were non-users were virtually non-existent in 2009 and 2011. The small sample size is in this case the reason for non-significant results. Being out of work was still an advantage over being retired in 2007 and 2011. This shows again the high importance of age group for Internet non-use in Sweden.

Household income played a significant role for Swedish non-users across all waves and increased over the years. In 2011, individuals with a household income of less than SKR 200,000³⁰ per year (approximately £19,500) were 6.2 times more likely to be non-users and individuals from mid-income households (approximately £19,500 to £38,600) 3.5 times more likely than Swedes from high-income households.

4.1.2.3 Principal Components

Similar to the Principal Components Analysis for Great Britain, the analysis for Sweden was conducted with a number of pre-established crucial variables that were previously shown to be associated with Internet use and non-use. To enable a comparison of the British and Swedish data the same extraction method was used as for the British data, and subsequently rotated with Varimax rotation and Kaiser normalisation to enable an easier interpretation of the data.

Table 13 shows the rotated component loadings for the three components with an Eigenvalue larger than 1.5. As for the analysis of the British data, the choice of the number of components was based on the breaking point of the explained variance as seen in the scree plot. Together, the three chosen components explain 59.2 per cent of the variance

³⁰ Household income was measured on a different scale in Sweden than in Great Britain. It was split into SKR100,000/year steps. As the household income is in general higher in Sweden, the splits into lower, middle and higher income households are slightly higher than for the UK. The exact steps and percentages of respondents who fall into these splits are displayed in Appendix A, Tables III.a. and III.b..

within the data. Correlations with values higher than .5 and lower than -.5 were shaded in grey and considered in the interpretation.

Table 13 Rotated Component Loadings, Sweden, 2011

Variable	Loadings, Component 1	Loadings, Component 2	Loadings, Component 3
Eigenvalue	3.258	1.661	1.590
% Explained Variance	29.6	15.1	14.5
Occupational Status: Retired	.925	.113	.039
Occupational Status: Employed	-.923	-.140	-.055
Age	.806	.116	.168
Living Alone	-.539	.162	.377
No children in Household	.452	.236	.231
Mid-range Income	.086	.958	.022
Low Income	-.038	-.701	.531
No Household Internet Access	.257	.377	.152
Basic Qualifications	.125	-.022	.676
High Income	-.068	-.441	-.644
Higher Qualifications	-.035	.066	-.528
Valid N	92		

Source: Non-Users, WII. 2011: N=297.

The first group of non-users consists of retired individuals who are accordingly older. The factor score for not having children living in the household is just below the value that would still be considered in the analysis and will hence be disregarded. A second group of non-users has a low income and is opposed by those with a mid-range income. The third group consists of non-users with only basic education and low incomes. Surprisingly, not having household access to the Internet does not seem to be an important factor for any of the non-user groups. This is also an interesting difference to the British case, where living alone is strongly associated with not having Internet at home (see Table 8). Having no children living in the household is only loosely associated with being older and retired, but not with any other groups of nonusers.

Due to the low number of middle-aged non-users in the Swedish sample, it was not possible to find any groups of non-users within that specific subsample.

4.2 Reasons for Internet Non-Use

To shed more light on who the non-users are and what keeps them from using the Internet the second specific research question investigates reasons that non-users give for being offline. The British and Swedish questionnaires both ask current non-users for their reasons for staying offline. These questions include several predefined answers, e.g. no interest, too expensive, too complicated, takes up too much time, no access, and other related reasons.

However, Sweden only provided five previously combined reasons for non-use, while the OxIS provided 14 possible items. To make the data sets from both countries comparable, the British reasons for non-use had to be combined according to the Swedish data and some items were taken out of the analysis. If an item was asked in two different ways in Great Britain, the average of those items was used as an indicator in this work for the reasons mentioned, which allowed for multiple responses. For the most important reasons those items were totalised. “No Interest” (see Figures 4, 5, and 6) was for example investigated through two different questions: “There's nothing of interest on the Internet” and “I’m just not interested”, which were averaged for Figure 4 and totalised for Figures 5 and 6 (see also Appendix A, table IV). It is important here to note that these two items ask about different types of interest: interest in online content and interest in the Internet itself. These different connotations of interest will be further investigated in the qualitative phase. For the purpose of giving a broader overview and keeping the items from the OxIS and the Swedish survey comparable, these two connotations will be combined here.

The British questionnaires for 2009 and 2011 asked generally for reasons for Internet non-use, which allowed for multiple answers *and* for the most important reason. The Swedish questionnaires *only* asked for the most important reason. As discussed in Helsper & Reisdorf (forthcoming), using only the most important reason limits the analysis to a large extent. Using the multiple-response items of ‘reasons mentioned’ gives a much more detailed picture of the variety and combination of reasons that influence In-

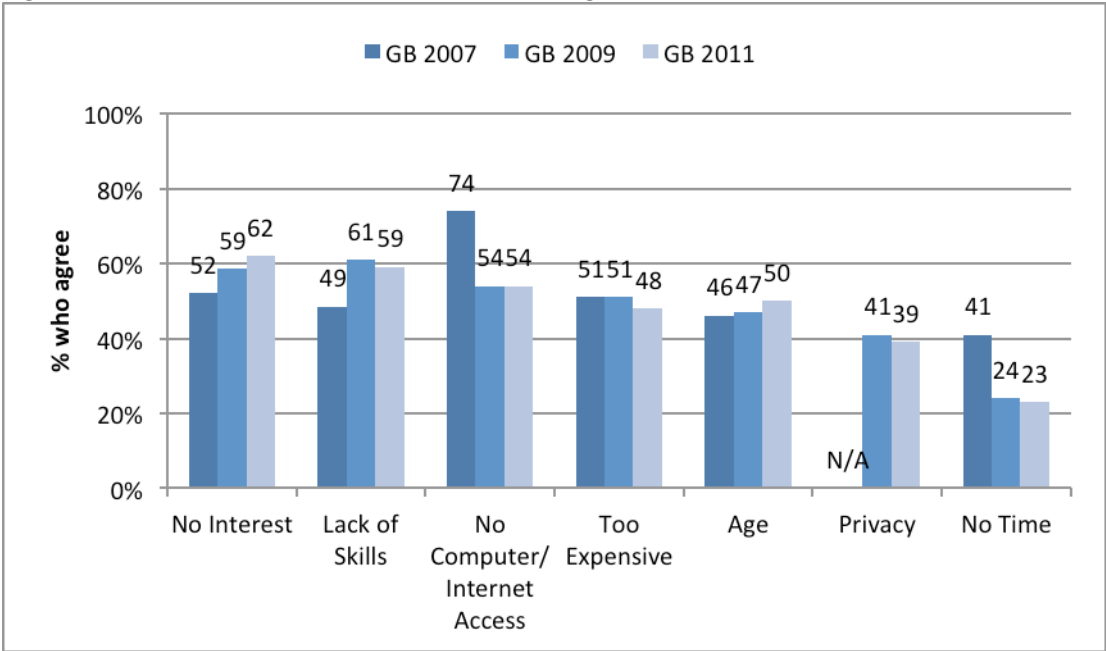
ternet non-use and will thus be presented for Great Britain. There is never just *one* reason for someone to do or not do something. However, the most important reason will be presented as well to enable a comparison between the two countries.

The data will again first be presented for Great Britain, followed by Sweden.

4.2.1 Great Britain

Figure 4 displays the reasons mentioned by non-users for being offline between 2007 and 2011. The numbers show that lack of interest in the Internet and its contents has become more important over the last four years and was the reason most mentioned in 2011, followed closely by lack of skills, which have increasingly been mentioned as reasons for non-use over the past four years as well.

Figure 4 Reasons Mentioned for Not Using the Internet, Great Britain, 2007 to 2011

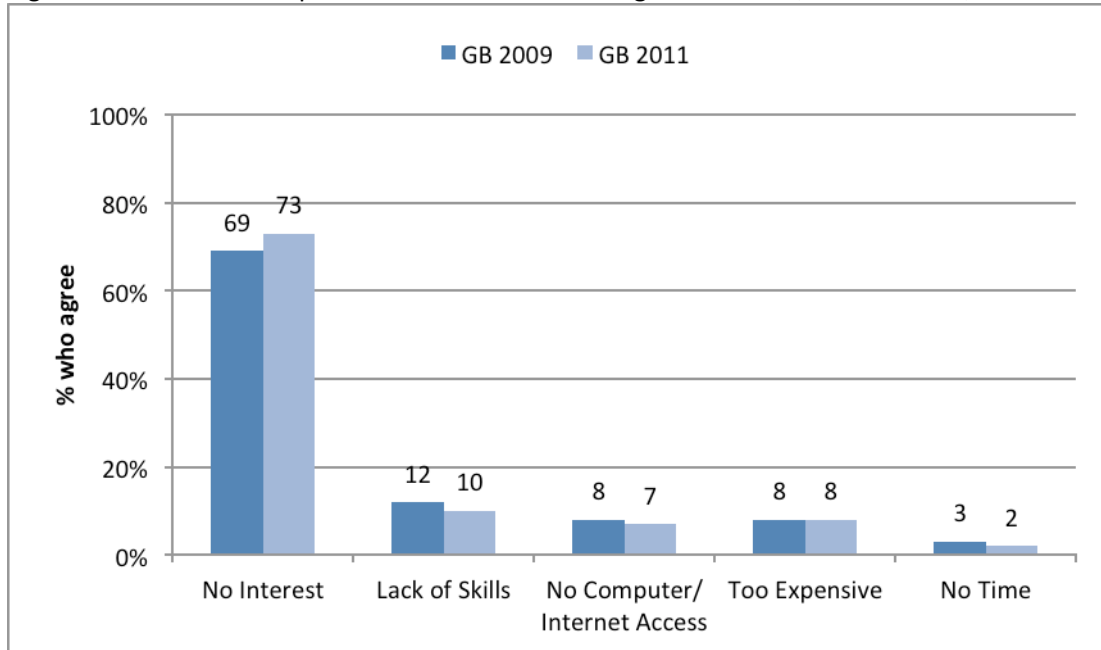


Source: Non-Users, OxiS. 2007: Valid N=636; 2009: Valid N=417; 2011: Valid N=459.

Regarding the Internet, getting access to it, and buying the hardware as too expensive has stayed a relatively stable and strong reason for Internet non-use. Confirming the influence of age for non-use established in the analyses above, half of the British non-user population felt that they were too old for the Internet.

A stable and relatively large proportion of non-users also mentioned being worried about their privacy as a reason to stay offline. The only thing that did not seem to keep non-users offline were time-constraints. Only a minority of non-users mentioned having not enough time or thinking that using the Internet might take up too much time as a reason.

Figure 5 Most Important Reason for Not Using the Internet, Great Britain, 2009 to 2011



Source: Non-Users, OxlS. 2009: Valid N=417; 2011: Valid N=402.

Note: The OxlS did not ask for most important reason in 2007.

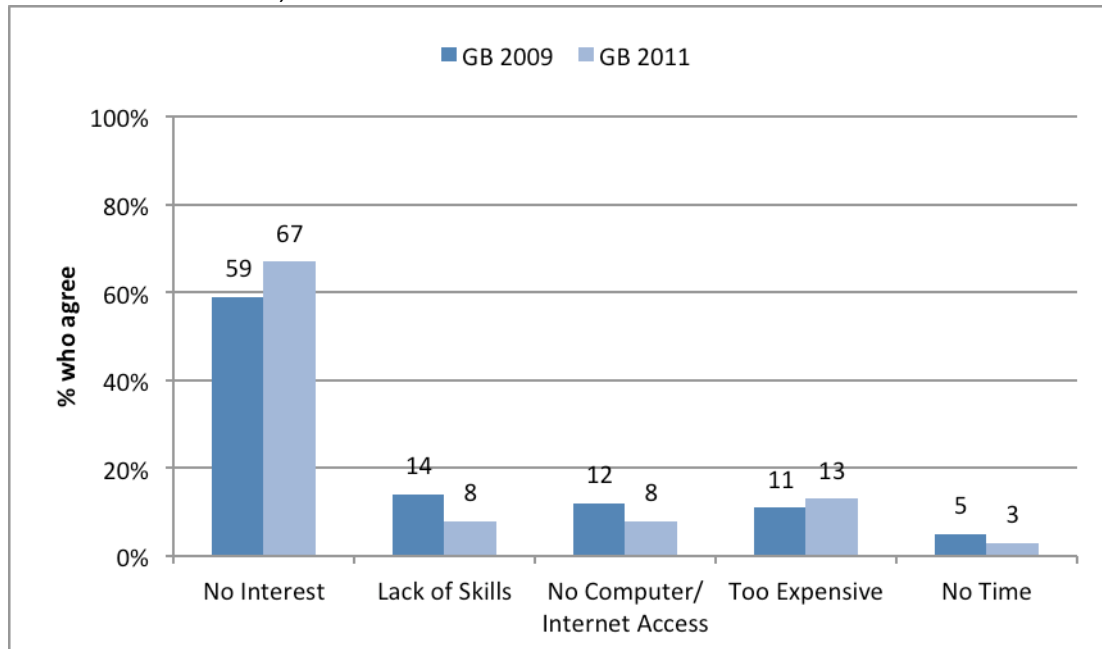
An analysis of the most important reason (Figure 5) shows that the non-users themselves largely saw lack of interest as the most important reason for not using the Internet. Only roughly 10 per cent named lack of skills as the most important reason. The numbers were equally small for all other reasons.

Non-users aged 25 to 55 years

The picture looks very similar for 25 to 55 year-old British non-users (Figure 6). The majority said that not being interested in the Internet kept them from going online. Only a

small group of people thought that lack of skills, access or money was the main reason for them.

Figure 6 Most Important Reason for Not Using the Internet, 25-55 year-olds, Great Britain, 2009 to 2011



Source: 25-55 year-old Non-Users, OxlS. 2009: Valid N=119; 2011: Valid N=120.

Note: The OxlS did not ask for most important reason in 2007.

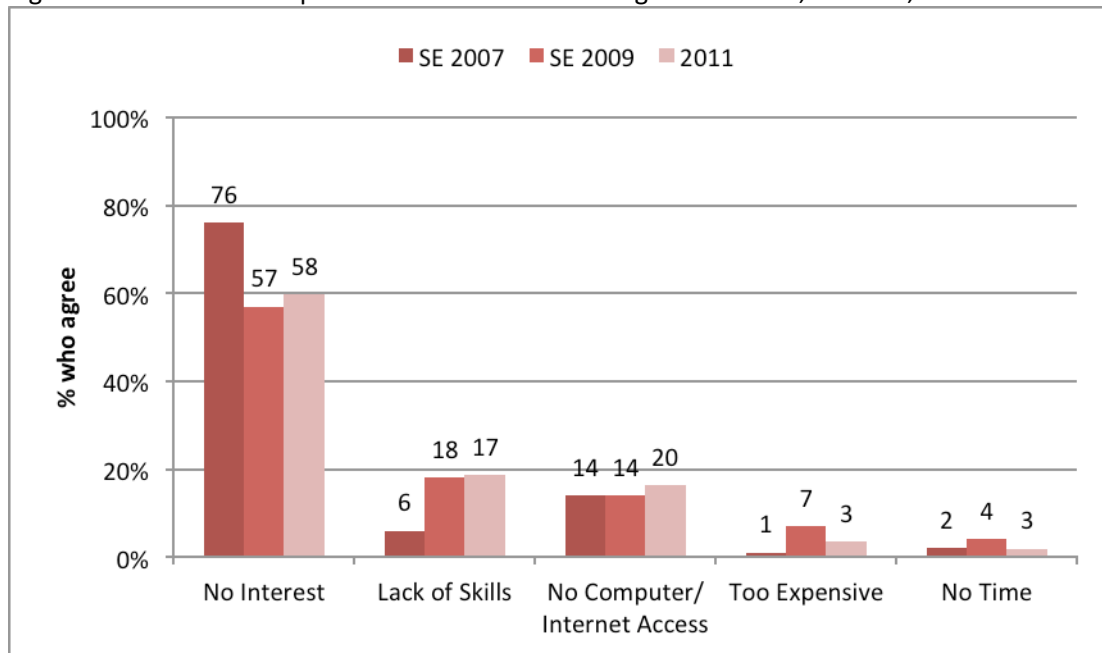
4.2.2 Sweden

Interestingly, the Swedish case looks quite different to the British case. The most important reason for non-use displayed in Figure 7 shows that lack of interest was still the most important reason, but the importance decreased between 2007 and 2011.

In 2011, when 73 per cent of the British non-users³¹ named lack of interest as the most important reason, only 58 per cent of the Swedish non-users did so. About one fifth each named lack of skills and lack of access as the most important reasons for staying offline. Money or time did not seem to be important for staying offline for many non-users.

³¹ 2011 data for Great Britain see Figure 5.

Figure 7 Most Important Reason for Not Using the Internet, Sweden, 2007 to 2011



Source: Non-Users, WII. 2007: Valid N=264; 2009: Valid N=298; 2011: Valid N=258.

With a steadily shrinking proportion of non-users in Sweden, it seems that more fundamental issues, i.e. lack of access or skills, kept people from going online rather than a lack of interest. This is especially intriguing with regards to the older group of non-users, who are often said to be less interested in the Internet and new technologies. In Great Britain, where the group of non-users was more diverse with regards to socio-economic backgrounds, lack of interest was a lot more important than lack of skills or access.

4.3 Similarities and Differences in Great Britain and Sweden

The preceding analyses paint a clear picture of the (middle-aged) non-user populations in Great Britain and Sweden, their development over time, their detailed socio-economic characteristics, and the grouping of specific variables within the non-user populations. Moreover, an analysis of self-reported reasons for Internet non-use showed that the most mentioned and most important reasons changed over the years.

The results also show that the non-user populations in Great Britain and Sweden are not only of different sizes, they also look different in terms of socio-economic characteristics, living circumstances, and reasons for non-use.

Socio-Economic Characteristics

The significantly smaller number of non-users in Sweden seems to have an impact on the composition of the non-user populations.

Age plays a much larger role in Sweden, with 95 per cent of all non-users aged 56 years and older, while this is only true for 67 per cent of the British non-user population (see Tables 4 and 11). However, the logistic regressions (see Tables 7 and 12) showed that age has a strong and significant influence in Great Britain as well. The results were not significant for Sweden in 2009 and 2011 due to the small number of non-users in the reference category.

Gender did not have a significant influence on Internet non-use in either country. Disabilities, however, gained in influence in Great Britain, with a larger proportion of disabled individuals being non-users. Disability only had an influence on non-use in Sweden in 2011, with disabled individuals being more likely to be non-users than those without any disability.

Marital status only recently gained more influence on Internet (non-)use in Great Britain, whereas the logistic regressions suggest that it did not have any influence in Sweden. Having children living in the household gained influence throughout the years in Great Britain and did not have any significant effect in Sweden.

Different educational qualifications make a big difference for the likelihood of being a non-user in both countries: The lower the educational qualifications of an individual the higher the likelihood of that individual to be a non-user. The influence has stayed strong and even increased over the years in both countries.

Occupational status, with the categories student, employed, unemployed, retired, was an important factor in both countries across all waves. This is largely due to the high inter-correlation between age and occupational status. Being in retirement has an extremely negative influence on Internet use in Sweden, where 84 per cent of the non-user

population was in retirement. This was the case for 'only' 61 per cent of the British non-user population, 23 percentage points less than for Sweden.

High income had a significant positive influence on Internet use in both countries and across all waves. In comparison to individuals from high-income households, those from mid- and low-income households were much more likely to be non-users.

The PCAs show that the groups of non-users look slightly different in Great Britain and Sweden. The results (see Tables 9 and 13) suggest that we can distinguish four groups of non-users in Great Britain and three in Sweden. The first group looks similar in both countries: Older and retired. However, not having children live in the household is part of the characteristics of this group in Great Britain, but not in Sweden. The second group in both countries consists of those who have low incomes. However, in Great Britain this is paired with living alone. This factor is not part of any non-user group in Sweden. The third group in Great Britain consists of those with no educational qualifications, while the fourth group is characterised by non-users who live on their own and do not have Internet household access. In Sweden, the third and last distinct group of non-users consists of those with only basic educational qualifications and low income.

Socio-Economic Characteristics of the Middle-Aged Sample

The middle-aged non-user population in Great Britain cannot be properly compared to that in Sweden. This is due to the very small number of non-users in the age group 25 to 55 in Sweden (N=14 in 2011). While this age group made up 27 per cent of the non-user population in Great Britain, they only made up 5 per cent of the Swedish non-users. Of 916 middle-aged Swedes, only 14 were non-users in 2011, which represents 1.2 per cent of this age group. It was thus not possible to conduct statistical analyses with this subsample. A comparison of the middle-aged subsamples thus cannot be provided at this point in the analysis and will instead be provided in the qualitative analysis (Chapter 5).

Reasons for Non-Use

Congruent with the findings regarding socio-economic characteristics, British and Swedish non-users placed a different importance on specific reasons for non-use. Comparing the most important self-reported reasons for staying offline, the British non-user population seemed to put a stronger emphasis on not being interested in the Internet. Skills, access, finances, or time did not seem to play a big role for British non-users. While Swedish non-users also emphasised their lack of interest in the Internet and its contents, they gave more importance to lack of skills and access.

4.4 The Qualitative Analysis to Follow

The preceding analyses of non-users, their characteristics, and their reasons to stay offline have reached their limit at this point. While it was possible to give a relatively detailed description of the complete and middle-aged non-user populations of Great Britain, it was for example not possible to describe middle-aged non-users in Sweden. Moreover, the data were not rich enough to give enlightenment about who exactly ‘the non-users’ are, how many distinct types or groups of non-users there are, or what their specific patterns of reasons are for being offline. Despite detailed analyses and the application of different approaches and procedures, the quantitative results provide only a rough, albeit generalisable, description that has thus far not been able to come up with many new aspects about non-users and their experiences in an ever-connected world.

Quantitative analysis will not be able to get any further into the details of non-user populations at this point. It is thus crucial to take the analysis one step further *into* the everyday lives of non-users to be able to fully describe their varied characteristics, attitudes, experiences, and reasons for non-use. The analysis of qualitative in-depth interviews with middle-aged non-users from Great Britain and Sweden in Chapter 5 will do exactly this.

Moreover, the phenomenon of virtually non-existent middle-aged Internet non-users in Sweden will be examined in Chapter 7 (Discussion), where possible reasons for this development will be scrutinised. While Britain and Sweden both had 60 per cent Internet users in 2003, the numbers rapidly increased in Sweden with a jump of 14 percentage points between 2003 and 2005, and another increase of 6 percentage points between 2007 and 2009. Great Britain, on the other hand, had a much slower increase of Internet usage in the same amount of time. In 2011, Britain had just about reached the proportion of Internet users that Sweden had in 2007. It will be of great interest to discuss how this completely different development came about and what the implications of this might be for policies and access schemes in Great Britain.

5 Interview study

To tackle research questions regarding the specific characteristics of middle-aged non-users, their reasons for being offline, and their perceptions of everyday life in highly technologised societies (Section 2.7) this chapter examines the qualitative data collected during the semi-structured interviews with 25 to 55 year-old non-users in Great Britain and Sweden. They were conducted mainly in and around Birmingham and Gothenburg. However, some interviewees were recruited through snowball sampling and are from other parts of Britain and Sweden.

The analysis on basis of all cases will be presented first for Britain and afterwards for Sweden. The initial description will involve recruitment issues in both countries and the implications drawn from this. The structure of the analysis will revolve around reasons for Internet non-use, which correlate with general feelings and attitudes about the Internet and computers and the likelihood of future use. Some specifically interesting cases will be described in depth as examples of the complexity of non-use and its reasons. The analysis will also give a first idea of the complications revolving around the definition of Internet non-use that has been found in earlier research (e.g. Selwyn 2003a). As Selwyn pointed out in his (2006) study, Internet non-use rarely means that non-users are completely disconnected and out of touch with computers and the Internet. The problems around a definition of the term 'non-user' will be deliberated more in the discussion chapter (7).

5.1 Great Britain

All interviewees in Britain were older than 47 years³². It was difficult to find people who were willing to talk about their non-use – especially in the younger age groups and among

³² Due to their higher average age, the British sample did not pick up perceptions and attitudes of younger non-users within the investigated age group. Those who were children and teenagers during the wider introduction of ICTs within the British society might have provided different answers than those who were already older at that time.

male respondents. An attempt at re-recruiting respondents from the OxIS wave 2011 did unfortunately not work out, with many telephone numbers being wrong, respondents declining calls, and other respondents saying that they were not willing to do a telephone interview. Other approaches in Civil Advice Bureaus and libraries in Oxford and Birmingham were difficult, as some managers considered their clients to be part of vulnerable groups and they did not feel comfortable with them being asked to participate in the study. Especially health-related research encounters these issues on a regular basis, as it often examines patients with serious or even terminal illnesses (e.g. James & Platzer 1999). Gatekeepers, such as doctors and nurses, play an important role in gaining field access to these vulnerable groups (Owen 2001). Previous research regarding Internet non-use and digital divides found that many non-users find themselves in disadvantaged positions already (see Section 2.1). Mirroring these findings, the managers of potential interviewee recruitment sites perceived some of their clientele to be disadvantaged and hence part of a vulnerable group. Recruiting interviewees through IT beginner courses and snowball sampling was more successful, although most course participants were older, as many institutions gave those older than 55 spots on the courses over younger participants. Managers and teachers of these courses were gatekeepers that supported this research and gave potential interviewees reassurance by encouraging them to take part in this study. The interviewees who were recruited through IT beginner courses got in touch with the Internet during their courses. They were shown how to use popular search engines and some of them had the course instructors set up an email address for them. This represents a slight bias in that these non-users were not completely oblivious to how computers and the Internet work³³. However, a considerable number of them were still not sure whether they would use the Internet in future. Additionally, a large number of

³³ Due to the difficulties of finding non-users in various other locations and situations, the IT beginner courses offered a feasible way to recruit interviewees. The fact that a number of them were not interested in using computers and the Internet after this course shows that the bias of those who were very interested in continuing to use computers and the Internet is not as big as anticipated. Moreover, a few of the course participants had been sent to attend these IT courses as a prerequisite of improving their CVs instead of choosing to participate themselves.

interviewees in general had gotten into touch with computers at some point. As Selwyn (2006) pointed out, being a non-user does not necessarily mean being disconnected from technologies.

Reflecting the reluctance of especially male respondents, one of the female interviewees mentioned that her husband was not using computers and the Internet, but said that he would not want to participate in the study as he struggled to admit to his non-use:

*BR*³⁴: So he's not using computers?

*Rita*³⁵: No, he'll ask other people to. He thinks it's fascinating, but he won't even try.

BR: Do you think you could take a little information sheet and maybe ask him, if he would be happy to talk to me?

Rita: He probably won't because he won't admit that he can't do computers. He's a man, you know.

Already in the stage of recruitment it became clear that Internet non-use was something that many people did not like to talk about. The social desirability of Internet use as promoted by media and policies (e.g. Race Online 2012) was an underlying notion in most of the attitudes and feelings that the interviewees mentioned. It also influenced the willingness of (potential) interviewees to talk about their non-use. During the interviews it seemed that the majority of the respondents felt like they 'should' be using the Internet, that they were expected to use it.

BR: So, when you think about everyone around you using the Internet, how do you feel about that?

Gail: I do feel a little bit out of it, actually. Because I know it's something I should be doing more, but I will. [...]

BR: And when you say you think you should be using it more, why do you think so?

Gail: Well, because I'm missing out on- I haven't kept up with the times. It's an essential part of live these days, isn't it?!

Many of them also mentioned a feeling of being different or even 'dumb', such as Georgina:

³⁴ BR= Bianca Reisdorf (interviewer for the British interviews).

³⁵ All names were altered for the sake of anonymity of the participants. The given names were randomly assigned by gender.

BR: Do you know anyone else, apart from your friends in the class, who is not using the Internet, in your circle of friends, or-

Georgina: No, no. It's me. I'm the dummy. I go with it. I'm the one that said 'Oh, I don't really want to do it' and they're going 'Yes, yes, do it. Try and do it', so, you know.

Another general trend was the notion of the Internet and computers being a 'different generation' and the apparent ease with which younger people use computers and the Internet. Half of the interviewees felt that it was due to their age that they were struggling to become Internet users.

Georgina: I'm beginning to use Internet and computers, beginning to. Haven't been brought up- I'm not the computer generation, so- and it's been quite frightening for my generation, I think.

This is somewhat surprising as the interviewees were previously classed into the middle-aged groups and not the older age groups. Considering that the Internet started to be widely distributed in the early 2000s – when the British interviewees were between 36 and 45 years old – it is interesting to see that they counted themselves towards an older generation that would not naturally 'grow' into the use of these new technologies.

The interviewees differed in terms of reasons for not using the Internet, their specific feelings about it, and their desire to use the Internet in future. A considerable number of them were learning to use the Internet at the time of the interview, or were about to sign up for courses to do so. Some of them felt they had to be able to use computers and the Internet to be able to find a job; some were very enthusiastic about the Internet and the prospect of using it.

To give an overview over the sample that participated in this study, Table 14 describes the socio-economic characteristics of interviewees in Britain. The majority of the British participants were older, worked in low skilled trades or were unemployed. Despite the efforts to find younger non-users within this age group, it was not possible to recruit non-users younger than 48 years. A look at the Swedish case (5.2) will show that this was achieved for the Swedish sample, which shows in general a higher variability within the

sample not only with regards to age, but also with regards to other characteristics, reasons and feelings towards non-use.

Table 14 Socio-economic Characteristics of British Interviewees

No	Name in Study	Age	Gender	Nationality	School Qualifications	Occupation	Living Situation
1	Paul	53	Male	English	None	Machine Operator	Wife, daughter (16)
2	Lisa	55	Female	English	None	Unemployed	Alone
3	Martin	50	Male	English	GCSEs	Unemployed	Alone
4	Tom	54	Male	English	O-levels (now GCSEs)	Unemployed	Alone
5	Georgina	53	Female	English	GCSEs	Unemployed	Alone
6	Rita	52	Female	English	GCSEs, NVQ2, NVQ3	Care Assistant	Husband, daughters (21, 25)
7	David	49	Male	English	None	Self-employed all-rounder	Alone
8	Barbara	48	Female	English	A-levels	Lorry driver	Alone
9	Gail	55	Female	Welsh	Bachelor's degree	Out of work for health reasons	Husband
10	Sandra	56	Female	English	None	Self-employed (greeting card business)	Husband, son, daughter-in-law

5.1.1 Reasons for Non-Use

After the quantitative analysis of reasons for non-use only provided a basic picture, one of the main goals of the qualitative phase was to find out about the detailed picture of reasons for non-use. It was clear that 'no interest' was fuelled by other underlying mechanisms that could not be grasped in questionnaires with a set of predefined answers. As Internet use is widely spread and omnipresent in media and everyday life, not doing something that the majority of a population does, such as not driving a car (Wyatt 2003), is likely to have more behind it than 'no interest'. The reasons for non-use deriving from the interview study are manifold and intertwined. The representation of these in the sections below does not rank them in terms of importance, as all reasons are regarded as contributing to non-use for different people.

No interest and no need

A number of respondents mentioned that they did not see a need to use the Internet in their lives. This notion became especially clear for those interviewees who had jobs that did not require any work with computers and the Internet and those who had relatives who were regularly using the Internet for them.

Martin and David were both professional footballers when they were younger. They did not need to use the Internet or computers for their occupation. Accordingly, neither of them concerned themselves with these technologies until recently. Both of them say they were simply not interested in it:

Martin: I was only interested in football when I was a kid, and I went on to play football for Coventry, Man United, Man City, Hong Kong. [...] I wasn't interested; I was just wantin' to be a footballer.

David reported similar reasons and added that he did not need technologies for his later work or in his spare time, as he did mainly manual labour after his career as a sportsman ended. As his main hobby was still sports after the end of his professional career, he found information on what he was interested in in offline settings, such as books, magazines, and TV. Gail, who was working as a music teacher before a major operation that now prevented her from leaving the house, said she did not need the Internet for her job either. Paul worked as a machine operator in a composting firm at the time of the interview and told a similar story:

Paul: Computer wise we've got a normal fixed computer, plus my daughter's got a laptop and iPod and teen things that she's got but I've to be quite honest I don't really mess with them but I'm quite happy to say to my daughter or my wife I need to look up something such and such, can we have a look on the computer and see what's what and, you know, if it's my daughter she'll find it and she'll say to me there's x amount of pages and just keep pressing that button there to go up or that one there to go down. And ... but they're quite happy with that and I'm quite happy with that. I don't have to use the Internet, you know, in the work place. And I'm quite happy with that as far as that goes.

Looking deeper into these cases, however, it also became obvious that most of those who said they did not need the Internet were additionally lacking essential skills to do so and did not know what kinds of things people might use the Internet for. Paul, for example, also reported problems with the technology and problems with typing. He explained how it was much easier for him to ask his family to do things on the Internet for him:

Paul: I'm just there looking for, where is d {laughs}, you know, one finger here and then two and you know... it's not worth it. It's 2 seconds and they've done it, they found it, they got what I want and that's it, and so I just sit there and read it through and say 'right, I finished' and they just come and knock it off or do whatever, you know. And that's it {laughs}.

Other parts of the interview showed that Paul had a general and more basic problem with reading and writing. He dropped out of school when he was 15 years old and worked on a farm for more than 25 years before he started work in his current company. When talking about his mobile phone, he mentioned only using it for calls, as it was too difficult for him to type in text messages. This points towards more basic issues that some non-users have to deal with on a daily basis. The analysis of other cases and especially of some of the Swedish non-users will show that IT literacy might not be the key issue for many non-users, but basic literacy and other problems might be more important for parts of the ever decreasing non-user populations (see Sections 5.2.1 and 5.2.2).

Other interviewees told similar stories about their difficulties, such as Lisa:

BR: Ok. So, so what do you find difficult for example with computers?

Lisa: I mean, it's all the... it's just, just looking at the – I mean, 'cos years ago I used to be a typist, thirty-odd years ago, and everything was all ... But it's, it's ... I don't know. I don't know what it is. There's a lot of keys that you kinda get right and everything. 'Cos can you imagine, if you're sending something to someone, and I get it all wrong. It's just worrying about gettin' it all wrong.

A number of non-users mentioned this notion: the worry of breaking the computer, 'messing up', or 'getting it all wrong'. They were concerned that if they tried using the Internet, they would break the computer or send information to the wrong people.

Discomfort with technologies: A different generation

A small number of interviewees said that they were scared of technologies, but a few mentioned that they found specific aspects scary, such as criminals being able to steal credit card details, worries about privacy, or the molesting of children via the Internet. Lisa described her concerns about the negative aspects of Internet use:

Lisa: Sometimes, when you hear on the news, or read in the paper about, a child has been abused through the Internet, and, you know it's quite, it's quite frightening really, and sickening really, I think.

Georgina reported similar feelings about other issues:

BR: And is there any particular technology that you do not like to use?

Georgina: Yeah, I wouldn't like to go on the sites that man went on [conspiracy theories] I gotta admit, you know. And I think that would be quite scary. I think there's too much ... ooh, how can I put it ... privately, you know, there's- people put very private things on the computer, which I think is a bit too- it's very scary that is.

Rita was learning to use computers and the Internet at the time of the interview. She described her extremely negative feelings towards the Internet that she had until recently:

Rita: Hated computers, thought they were a waste of time, didn't want to know them, thought they were taking over the world. Um, but my two daughters obviously, they're, they're, you know, they're brought up with it, they're – one's 25, one's 21, they both use computers and easy peasy for 'em. So, we've got one in the house, and I've just been sort of determined to try to come to grips with it, and not be scared of it – it's only a machine.

Like many other respondents she related to the Internet as being something that her generation had not grown up with. She explained that her age group was not as technology-prone as young people and that it was harder for them to accept them and learn how to use them. However, she admitted that she did not really understand what they were about, or why she was scared of them before she learned how to use them. She reported similar feelings about mobile phones, which she only started using 5 years ago.

Rita: I use my mobile phone, which I only started using about 5 years ago, and I hated mobile phones before that. I thought they were a waste of time, didn't like 'em, nev-

er would have one, but now I love it and won't be without it, always texting and playing games.

Complexity and complication

Difficulties in using technologies and discomfort with them are often related to the general feeling that using computers and the Internet was too complicated, especially for the 'older' generation, which most interviewees thought they were part of. All those interviewees who had only tried using the Internet a few times or who had just started learning how to use it reported feelings of frustration and finding it hard to deal with all the different aspects included in being able to use the Internet. It started with 'simple' things, such as the design of the keyboard, which was generally perceived as being complicated. David started using the Internet on his smartphone recently and struggled with using computers:

BR: So, when you think about computers instead of your phone how do you feel about all the keys, the keyboard, the mouse and stuff like that?

David: Well, yeah, yes, I mean, I, I must admit, I've, sometimes I can get distracted with the mouse ... with the laptop with the screen. It can be sometimes too much for me. So, that was a problem at first. I did have that problem. [...] That's why I've been doing most of the things on my own phone, on my own time.

Martin explained that apart from the basic technical problems with computers, there were a lot of things he would have to consider if he decided to go online:

Martin: Cos it's some'ow, 'specially when I was lookin' at the viruses and stuff, I found that difficult. And I thought, oh, even if you do get a computer you've got to get all these viruses and everything to stop people, you know, latchin' on to your stuff.

This is only one of many examples where non-users got confused with terminology. The majority of them were generally not sure of how the Internet 'works'. This is exemplary of how complex the technology and all the components that are needed for it to function properly are. For non-users it might be even more complicated to become users today than five or ten years ago. On the other hand, devices such as smartphones and tablets might overcome some of these technological hurdles as the quote from David shows.

Physical barriers

Sandra had vision impairment and was thus struggling to use ICTs of any type. While she acknowledged that there were possibilities for her to use computers and the Internet, she found them too complicated. Her husband and family were using the Internet for her on a regular basis. Sandra felt that in this era of technologies, she would be stuck without the help of her husband.

Sandra: I mean if I didn't have my husband, you know, I wouldn't be in this job. You know, because although I do my fair share of work, he's the one that does all the technical side of it with the computer. So without him, I would be stuck.

She described how the Royal National Institute of Blind People offers computer courses for visually impaired people, but that she would also have to buy a completely new computer set, which is expensive and hard to set up. For her, having her husband use the Internet instead of her was a much better solution. However, Sandra also mentioned that it was frustrating for her to not be able to use these technologies herself.

Sandra: I do feel that I miss out. And also, what I also find is that I have friends and relatives that just want to communicate on the Internet, you know, send emails, facebook. So that's all sort of closed to me really.

Refusal

Barbara had higher school qualifications, two adult sons, and worked as a lorry driver. She was not a non-user but an ex-user. She stopped using the Internet and all other 'modern' technologies four years ago and was the only British non-user who explicitly refused to use the Internet. After her divorce from her previous husband, she made a conscious decision to ban all things from her life that used to annoy her within the marriage. Technologies, such as TV, stereo, a landline, computers, and the Internet were not part of her current lifestyle.

Barbara: Everything that came with the marriage I've left behind and I have basically made a conscious decision not to reintroduce the technological things that used to annoy me ... until I'm personally ready for them.

As a lorry driver, she did not need any of these technologies for her work, and she did not feel like she was experiencing any major disadvantages from it that would make her become an Internet user again.

BR: So, you used to use the Internet back then. [B: Yes.] And when you used it, what would you use it for?

Barbara: I did my insurance online and searching for information online ... umm ... it's so long ago I can't remember what else I did. But I know I did things – I remember doing things online. But now I go the local insurance shop that's got a High Street's branch that I can walk in and speak to a real person rather than do it online, simply because I personally am not quite ready to go back to doing it online. I know I pay a bit extra ... doing things on the Internet is often cheaper nowadays. ... but I'm still rebuilding my life.

The only ICT present in her life was her mobile phone, with which she kept in touch with her adult sons, who used the Internet for her every now and then.

For her the negative association of the Internet and similar technologies with her previous life was a decisive reason to live without them until she felt ready to use them again. This example shows that there are cases of non-use that have nothing or only very little to do with socio-economic background or lack of access and skills. It shows the importance of individual and psychological factors for the use of technologies. Barbara had the financial means as well as the skills to be online, but made a conscious decision to stay offline. In her current lifestyle, she did not see the need for technologies. However, she was eager to clarify that she was not against them:

BR: So, right now, is there any particular technology that you really like using and that you don't want to cut out right now, or do you in general rather think 'Ok, I've had enough of technologies for a while'?

Barbara: Well, I did just go out and buy myself a new car because um I decided I didn't want to keep throwing money at my old car. So I looked at a car that was going to be a little bit more comfortable and it's got a few little technological advantages on the old one as well. So, I'm not ANTI technology. I'm just a bit choosy about how and where and when.

Barbara also emphasised that she thought non-users should be able to make a conscious decision about whether they want to use the Internet or not, which is what she felt she did. She had strong opinions about teaching everyone the skills to use the Internet and providing access, especially to the elderly and those with disabilities, as she thought it was a good way for them to connect to the outside world.

Social networks

A more subtle reason for non-use is the influence that close friends and family have on other people. If friends and family were reluctant about using the Internet and their scope of use was narrow or sceptical, non-users were likely to display similar opinions. A prime example for this was Paul, who was not using the Internet himself, but said that his wife was. However, she would not buy things online due to worries about credit cards and privacy:

BR: And what do you think about holidays. You said earlier that your wife sometimes looks up holidays with you on the Internet.

Paul: Yeah, we've looked on there at different holidays, yeah, it's good in that way, and we have actually booked holidays from there ... mainly in this country. We took it off the, the Internet and then talked to normal people direct, and done it that way, because that's one thing that my wife doesn't like doing, perhaps fair enough, there's a lot of spies, you know. She won't give her card details out over travel on the Internet. Don't do any banking or [...] anything like that. She just does it direct over the phone.

Similar to his wife, Paul reported sceptical feelings towards the Internet and did not use it or want to try it. He preferred using telephone, mobile or face-to-face contacts for his private life and purchasing products.

Paul: As far as money saving is concerned with it, I wouldn't say there's a great deal to save there with it. It's ... yes. But I wouldn't say there was a great deal. You know, when, sometimes when you look at ... say if you went into pc world then, and you're looking at the price of ... com- laptops and then you look up on the Internet, and, the same thing, and there's really not that much difference in price. Not in a big amount,

not that I would worry about. You know, if it was full of a ten pounds cheaper by doing it on the Internet, I can't be bothered, it's just down the road in a shop.

As the likelihood of future use (see Section 5.1.3) will show, attitudes of and support by social networks play a role in the decision to either stay offline or starting to use the Internet. Some non-users stay offline because it is more convenient for them to have other people use the Internet for them. While the support of their social networks means they can use the Internet by proxy, it might also mean that they lack the incentives to learn Internet use themselves. On the other hand, many non-users mentioned being the only ones in their circle of friends who were not using the Internet. A number of those who did mention this were determined to start using it. Moreover, the availability of warm experts (Bakardjeva 2005; Selwyn et al. 2005) provides a support network that makes the move towards using technologies, which are being perceived as complicated and hard to pick up, easier.

5.1.2 Feelings about Non-Use

The main reasons for being offline are related to the feelings that non-users have about their own non-use. For those who have encountered computers or the Internet before feelings about their progress with learning how to use computers is another important factor that needs to be considered in non-user research. The different cases described below show that some non-users were content with being offline while others felt different from their peers or even 'dumb', which often led to a feeling of needing to learn how to use it.

I'm happy with it

As one of very few respondents Paul said that he was happy with the proxy use through his wife and daughter and his own non-use:

Paul: And ... but they're quite happy with that and I'm quite happy with that. Um... you know, I don't have to use the Internet ... you know... in the work place. And ... you know, I'm quite happy with that ... as far as that goes.

His feelings about his non-use were positive, because he had no need to use computers or the Internet in any part of his life. He did not need them to be more successful in his work life and his family used the Internet for him, when he saw a need for it. Although their main reasons for non-use differ, Barbara and Paul are very similar in terms of their feelings about their own non-use. Barbara too did not see any need for computer or Internet use in her current life, as neither would improve her work or her private life. Similar to Paul, if Barbara saw the need to get information from the Internet, she would ask one of her sons to look it up for her. Neither of them mentioned feelings of being different or pressured by the outside world to use the Internet.

Being different

Other non-users mentioned a feeling of being different as well as a certain degree of pressure from their surroundings to use technologies, such as the Internet.

Lisa: I mean they use the Internet all the – they're using it in their work business, and they, they're great. I'm the only one really, an' I'm the oldest. {laughing} But they, they're very good at things, like, pick up things quick like that. An' I, I don't, I never have done that. I'm a book worm. I'm, I read. I just read and read and read and read. So {laughing} that's where I am. Well, we all can't be the same. But there you go.

Lisa also reported a certain lack of understanding from her nieces and nephews, who all used technologies and helped her with her mobile phone on a regular basis. With them having grown up with these technologies, they did not understand why it was hard for her to deal with them:

Lisa: 'Cos even my li'l niece, ma n - she's 6 and she knows how to use the c[omputer] – you know. So, I'm the only one really in my family. [...] And ... I mean, there was a photo of my son that I wanted on my phone, and my nephew was staying with me at the time. He was ten at the time, he's eleven now. He says 'Oh, it's so easy, aunty Lisa', and he put the, and he sho –he was doin' this, I said 'Oh, just do it' {laughing}

‘Honestly, aunty Lisa, get with it, get with it’. I said ‘Oh ...’. But ... they do it with their eyes closed, though. But there you go, that’s it. It’s just me, I’m old-school.

Rita told a similar story about her daughters’ perceptions of her difficulties and her request for proxy use:

BR: And would you ask your family to do it for you sometimes as well on the Internet?

Rita: Yeah, I do do that.

BR: Ok, so you do that now as well?

Rita: Yeah.

BR: And how do they feel about that? Do you know that?

Rita: No no, they don’t mind. I think sometimes they get a bit irritated with their mom {laughing}. Mom, you really gotta do this, you really gotta do that. Yeah, but will you do it?

Like Lisa and Rita, many non-users reported being the only ones in their family or circle of friends who were offline. They mentioned feeling left out in conversations about things ‘happening’ on the Internet and were uncomfortable with not being able to join in.

Martin: I’m probably the last one. It’s probably the reason why I’ve done it, ‘cos they’re talkin’ about it and I’m like ‘Right ...’ you know ...

For many of those non-users who did not explicitly express being happy with their non-use, the interviews carried a general notion of feeling behind, mirrored by a number of them saying that learning it now was a case of ‘better late than never’ or that not learning it before was a mistake:

Martin: Well, it’s just silly because I remember distinctly as ... You know, I’m, I played in Hong Kong when I was about 24, so it’s 25 years ago. Mean, there were no computers, were all just startin’ an’ everythin’. Um, an’ I remember people talking the odd things. Just int’rested in football and goin’ out, ‘n ‘avin’ a drink an’ messin’ about. And I had luck. But I mean I trained, and trained, an’ I’d come for an hour, three days a week, four days a week, the rest of me time was me own. Apart from match day, an’ I think in all that time I coulda, and I know then I’d picked it up a lot quicker. But ... oh, we all make mistakes, don’t we.

In other cases this feeling went a step further to not only feeling left out, but also feeling stupid, such as mentioned by Georgina:

Georgina: No, no. It's me. I'm the dummy.

5.1.3 Future Use

Judging from their feelings about technologies and particularly the Internet, experiences with using or not it and their attitudes towards it, it was possible to differentiate the likelihood of using the Internet in the near future for most interviewees, some of whom were already in the first stages of learning.

Unlikely

Those who were unlikely to use the Internet in the near future were happy and content with their current situation and genuinely did not see the need to learn how to use computers or the Internet. Both Paul and Barbara could not improve their working lives through Internet use and benefited enough through their proxy use within the family that they did not have to (re)start using it themselves.

BR: Ok, are you not curious what you could do with it maybe?

Paul: No, not really, no I don't think so. I mean, I do... you know, I know that you can get any number of other things on the Internet, you can get anything these days, you know. All the information's there, if you can be bothered to go on there and find it. Well, I can be bothered, but not myself, you know. Like I said, I just tell them what I want, 2 seconds, they found it.

Lisa, on the other hand, could potentially improve her professional situation and private life through computer and Internet use. However, she said that she did not want to use the Internet after having done a one-day crash course at one of the UK Online Centres, because she found it too complicated and had 'enough on her plate' already. At the time of the interview, Lisa was going through a divorce, her son was imprisoned, and she was waiting for a knee surgery, so she was not looking for work. For her current needs, she did not find the potential benefits to outweigh the effort it would take to learn using these technologies.

BR: And does it – do you worry about that, or does it make you feel being left behind, for example, sometimes?

Lisa: No, not really. I'm not that bothered. I'm just, just go with the flow. 'Cos I really can't afford to let things get me down, because I'm going through enough anyway already, so I just try and just get on with everything, the best I can, so.

Although Lisa has a strong support network in form of her family, and although she can handle the keyboard because she worked as a typist a number of years ago, and even attended an IT crash course, she remained a non-user. This shows that Internet use is not necessarily about skills or support network, but similar to Barbara, psychological factors play a bigger role here. For Lisa, the learning of a new technology would take too much energy, which she felt she needed to get on with her normal everyday life. More basic issues than Internet non-use were more important at the time.

Likely

Some of the interviewees who were in the process of learning computer and Internet use were more likely to use them in the future. Some felt they had to use it, if they wanted to be able to improve their working and potentially also their private lives. Martin, for example, felt like he needed at least basic computer and Internet skills to be able to find a job.

Martin: Obviously, I'm lookin' for work in the railway industry, so the dole office, the job centre said to me, well, it helps if they can help me on the computer. Lot of the jobs now, you have to go online to get the job, well, to get the interview and everythin' and, so, I said, well I like to learn, so they sent me here. [...] When you go into a job it sounds a bit silly nowadays. I mean you might be on great old-fashioned wise timekeeping, turning up, everything. But not using the computer as the kids nowadays- are all a bit late and things like that, and you think well ahh... you know, but they can use a computer, so they might get the job before you.

Tom stated similar feelings about the job market.

BR: So you're happy to try new things.

Tom: Yeah, I'm happy to try out anything, you know, like ... because I'm unemployed now it's very hard for me to find jobs, you know, at me age.

However, both of them also said that they thought future Internet use might improve their private lives and especially their connections with friends and other people. This became very explicit in Tom's case. He had lost his long-term partner to a disease recently and was hoping to be able to get in touch with people who had a similar experience to help him cope with the loss. He did not feel that his offline network of friends was able to give him this support and saw a chance in improving his life by using the Internet for this type of support:

BR: And what do you think you're going to use the Internet for once you're better at it?

Tom: Well, my neighbour helped me set my laptop up 'cos I didn't know where things went and I said 'Well, I don't think I'll use it a lot.' And she said 'You will. You will use it more than you use your telephone and your mobile. You'll be orderin' things and holidays and all. You'll look it up.' [...] But no, I think the more and more I'm gettin' into it the better it will be for me. 'Cos they said you can make a lot of new friends on there, you know. I haven't actually seen a councillor, but, you know, when my partner died, I got a session [...]. The woman says 'Go on the Internet; explain what your partner died of. You'll get people coming on to talk to you and swappin' over phones and numbers, then you'll keep in touch, you know, they'll get you better. That's what I think I'll use it for.

Rita is a different case in that she would mainly like to learn using computers and the Internet to improve her everyday life. She saw her daughters using their home computer and was fascinated about the things and information that were available online.

BR: Ok, and what do you think you're going to use the Internet for mainly?

Rita: To do my shoppin' maybe, not like everyday basic shoppin', but if I want to, if I want to buy something particular, instead of like going 'round different shops for havin' a look, I can have a look on the Internet and get the best price an' and then I'll know exactly where to go to get it.

Despite this focus on her leisure time, she also mentioned that being able to use computers better would have positive implications for her job as a care assistant, as many managerial things have to be done on a computer, such as entering patient information into their electronic files, ordering supplies, etc.

Very likely

One of the most enthusiastic interviewees was Georgina, who enjoyed taking part in an introductory IT course at one of the UK Online Centres. She had not used these technologies before, as she was taking care of her sick husband. After he died a few years ago, she decided to learn how to use computers to work as a self-employed bookkeeper:

BR: So, is there a specific technology that you really like to use?

Georgina: Oh, the computer, definitely.

BR: And why is that?

Georgina: Because I think it's going to open up a career to me and a new world to me. But definitely a career. Because I want to do book-making and all accounts are now on computer, so I think that's- it'll open up a new world to me.

Although she had only recently started to use computers and came across the IT course by coincidence, Georgina displayed an unusually positive and enthusiastic attitude towards using the Internet, not only because of her career plans, but also because of her leisure time. She specifically bought a home computer and an Internet connection for her home with the aim of learning how to use them³⁶.

BR: And apart from the TV that you just mentioned in the morning, do you use any other types of technologies during that day?

Georgina: I'm beginning to use Internet and computers, beginning to. Haven't been brought up- I'm not the computer generation, so- and it's been quite frightening for my generation, I think. So, but it's not frightening.

BR: Can you tell me a bit more about that?

Georgina: About what I use or how I feel?

BR: How you feel about that.

Georgina: How I feel? Actually, I feel liberated to a degree, because there's so much information on there.

³⁶ As Georgina had access to a computer and the Internet at home and had recently started using the Internet, she could be categorised as a 'new user' rather than a non-user. However, her abilities of using computers and the Internet were very limited. The problems in categorising non-users versus users will be further discussed in Section 7.5.

Her extremely positive attitude was accompanied by the prospect of starting a new life after having had a difficult time in the past. She felt that using the Internet would help her to start a new successful phase professionally as well as personally.

Gail was also very likely to start using the Internet in the near future. After her hip operation she was stuck in the house and could not do the grocery shopping on her own anymore. While her husband used the Internet for her in the past and she never needed it for her work and did not have time to learn it, she now felt that she had the time and would gain from using the Internet herself.

Gail: I've never really felt the need to do any more with it until now, when I'm actually stuck at home. {laughing}

BR: So, do you think when you feel better and go back to work you will still use it or do you think it's going to die down again?

Gail: No, I think I will get into it more because I'm not even sure that I'll be going back to work full-time. So I'll probably have more time to get to grips with it then.

Another specifically interesting case in this study was Martin who was a self-employed all-rounder and a professional footballer before that. He was recruited via snowball sampling through one of the earlier interviewees and although he was aware that he was using the Internet on his mobile phone, he talked about himself as essentially being a non-user, because he was not using the Internet on computers and was struggling to handle them. He was very keen on learning how to use computers to improve his Internet use and cut down on the costs of using the Internet on his mobile.

5.2 Sweden

Despite applying the same recruitment strategies in both countries, the samples differ in terms of a variety of socio-economic backgrounds. The characteristics of interviewees in Britain and Sweden are quite different with the Swedish sample being more diverse than the British one. Three respondents were immigrants who had problems reading and writing, which made it extremely hard for them to even try and use the Internet. Some of them

would have liked to use it, but did not see a possibility due to more fundamental issues with literacy. Moreover, they did not speak fluent Swedish or English, but only their original mother tongue despite having lived in Sweden for 3 to 21 years. The other respondents were of very mixed backgrounds with a wide age range (~28 to 56 years) and various different occupations. Table 15 displays some of the basic socio-economic characteristics of the Swedish sample.

Table 15 **Socio-economic Characteristics of Swedish Interviewees**

No	Name in Study	Age	Gender	Nationality	School Qualifications	Occupation	Living Situation
1	Karolina	38	Female	Swedish	Grammar School	Childcare	Husband, children
2	Lina	55	Female	Lebanese	None	Unemployed	Alone
3	Nasan	32	Female	Iraqi	None	Unemployed	Husband, sister, daughter (7)
4	Mai	39	Female	Vietnamese	None	Unemployed	Husband, children (2, 4)
5	Piotr	56	Male	Bosnian	Basic	Unemployed	Children
6	Annika	Late 20s	Female	Swedish	Basic	Handicraft work	Mother
7	Johan	48	Male	Swedish	Grammar School	Contract work	Wife
8	Hanna	34	Female	Swedish	Basic	Unemployed	Husband, children (2, 4)
9	Kerstin	53	Female	Swedish	University	Childcare	Husband
10	Emil	51	Male	Swedish	Basic	Actor	Wife, children (8, 13)

Similar to Britain, the recruitment of interviewees was difficult although it was possible to recruit more people than expected from the lower number of middle-aged Swedish non-users as found in the quantitative data (see Chapter 4). However, a number of people would not reply to phone calls or text messages although they had agreed to do an interview earlier. Another person said he was not using the Internet, but refused to talk to us³⁷ about it. Other interviewees were extremely reluctant about agreeing to talk to us, and many of them thought that we were trying to sell them an Internet connection. This points

³⁷ Ann-Sofie Axelsson conducted the interviews in Sweden as the author's Swedish skills are not sufficient to conduct interviews. The author was present throughout the majority of the interviews and discussed the data, translations, and interpretations with the Swedish collaborator to ensure that there were no misunderstandings on basis of a potential language barrier.

once again towards the social desirability of having an Internet connection and using it but it also points towards a different feeling of pressure, if non-users feel like people would target them in the street to sell them an Internet connection.

5.2.1 Reasons for Non-Use

The range of reasons for non-use was as varied in Sweden as it was in Britain with a bigger focus on more basic issues for many respondents, but also a clearer impression of disinterest in technologies as a whole and in particular computers and the Internet. As the description of many reasons is provided in detail above, these will be shorter in this section, which will focus more on new aspects and reasons as well as underpinning the detected reasons with quotations from the Swedish interviews.

A general notion found with all Swedish interviewees, but not with the British ones was a difficulty with using mobile phones. Almost all respondents had a mobile phone, but none of them used it for more than calling and receiving calls; they perceived sending and receiving text messages as too complicated – some of them due to problems with literacy, but most of them due to problems with the technology.

Literacy and language

A specific issue that was less prominent in the British sample than in the Swedish one were problems with language and literacy³⁸. Four out of the ten Swedish interviewees were immigrants, three of whom had considerable difficulties with the language as well as reading and writing. All three women, Lina, Nasan, and Mai, reported that it was too difficult for them to use computers and the Internet, because they were not able to read Swedish and English and it was too hard for them to find the right keys on the keyboard.

ASA: What is it you find difficult? Is it writing? Or reading?

³⁸ It is important here to note that problems with literacy and language are as prominent with immigrants in Britain as with immigrants in Sweden. Due to the small samples, this phenomenon did not get picked up in the British case. However, it is not a phenomenon exclusive to immigrants in Sweden.

Lina: Yes, writing, or finding the numbers and so. On keyboard is hard to do.

As the Internet is mostly text-based those who have difficulty with language and literacy are automatically excluded from using it. Considering that all three of them had been in Sweden for at least three years, and Lina even for more than 20 years, it is surprising that they faced these issues. However, Lina only started to learn Swedish properly recently, because her husband died. Before that, she was depending on him for information and a connection to the Swedish society. Nasan and Mai were similar cases and depended heavily on their husbands, who were the ones working and earning a living for the family. This points towards a more 'traditional' gender separation in this group of interviewees, which often translates into the husband handling everything involving computers and the Internet too.

Cost

Hanna identified economic constraints as her main reason for not using the Internet. In the light of the strong correlation of income and non-use in both countries (see Chapter 4), it is surprising that she is the only case across both samples where this was highlighted. However, if we consider the high number of missing cases in the quantitative work with regards to household income (see Appendix A, Table IV.b.) it is possible that many people in general do not like to talk about financial issues. Hanna lived in a small village far away from public access to the Internet – in contrast to the majority other interviewees, who lived in larger towns or suburbs where it was easy for them to get access to the Internet in libraries, community centres or through friends and family. Having to live on a tight budget, she and her family identified other things, such as keeping the family car, as more important and hence decided to save on home access to computers and the Internet.

While she was in general not very close to technologies she still thought it would be useful for her to be able to use the Internet. Hanna lived with her husband and children in a small village outside Gothenburg and was unemployed at the time of the interview.

One of her sons was autistic, so Hanna explained that she would like to find information and support groups on this topic online, but could not do so, because they did not have the Internet or a computer at home because of monetary constraints:

ASA: Do you have a computer at home?

Hanna: No, we don't, because it has been too expensive, broadband and all this stuff. And we have tried to save as much as possible on everything right now because I'm unemployed and you never know what the future holds. That's why we don't have a computer. But he [partner] has a computer that is not connected to the Internet; he has a laptop.

ASA: That he uses?

Hanna: Yes. But he can only check the Internet on the job.

Although Hanna and her husband could access the Internet at his workplace or through her sister, they could not do so in the privacy of their home. Previous research has shown that household access provides a different quality and a lower threshold towards trying to use the Internet (e.g. Dutton & Helsper 2007; Hargittai & Hinnant 2008; Helsper 2008). While Hanna reported she could use the Internet at her sister's house, this would mean she would have to travel a considerable distance together with her children.

Hanna: It feels a bit like 'Hello, couldn't you look that up yourself?' but I can't because then I need to travel to my sister with the children and that feels a bit unnecessary.

This points towards a problem that might potentially be disregarded by many policymakers: Some of the most vulnerable groups in advanced societies might be facing more basic issues than Internet non-use, such as literacy or monetary issues. Providing free Internet access and course in libraries and community centres might not be enough to overcome these basic problems for some of the non-users in Britain and Sweden. This notion will be debated further in Chapter 7.

No interest and no need

The Swedish sample included a relatively large number of non-users who were interested in things that did not require any Internet use. These interviewees shared a strong disin-

terest in technologies in general and computers and the Internet in particular. They preferred doing things that did not require sitting inside in front of a computer, such as Kerstin who was working full time as a kindergarten teacher and did a lot of outdoor activities in her free time.

Kerstin: I have always been uninterested, I mean, to sit around, staring at the computer like some people do at work. That I find extremely boring. And also boring to do this at home – I rather go out, take a walk in the woods, do something in the garden, or drive off and do something, like take a daytrip. In fact, I rather do anything else. As it is, the computer comes last.

Actor Emil described that he was never interested in any of the newer technologies and felt that he just did not need them in his life and prefers to live without them:

Emil: I am quite disinterested in technology, I do not think, I know if you look at my relationship with technologies, when it comes to computers, mobile phones, text messages and that stuff, I've never been interested in it. I think it is ... I've never really, it's never- I've never even been struck by the thought that I would use it in fact if I'll be honest. [...] And I've found that it can survive just fine without.

However, even those who had a strong disinterest still thought that the Internet was a useful thing and often had other people doing things online for them, such as accountants, agents, or family members. None of the interviewees were completely disconnected or independent from the Internet:

ASA: She [partner] has a computer at home. Do you like to watch when she does something on your computer or if you ask her to fix something, do you sit with her or-

Johan: No, but I ask if she can find out a thing and then she does it.

Looking deeper into these cases it also became obvious that similar to many of the British interviewees a number of those who said they did not need the Internet or were not interested in it were additionally lacking essential skills to do so and some did not really know what kinds of things people might use the Internet for:

ASA: Have you ever tried using the Internet yourself?

Emil: No, I am totally uninterested in it. But I do realise of course that for many others it is a great source of joy and exhilaration but I've never really had any need to use it and so-

ASA: What do you think that most people do online?

Emil: I never think about what they do online.

A large number of the interviewees had never tried using computers themselves. Hence, their main reason of disinterest was supplemented by lack of skills and lack of knowledge about potential benefits of Internet usage as well as the possibility of not engaging with the technology themselves, because others did it for them when necessary.

Discomfort with technologies

In general, the Swedish interviewees displayed a more critical attitude towards technologies, with many of them mentioning concerns about privacy, children online, and the potential risk of getting addicted to the Internet. Hanna had worries concerning addiction and that children grow up spending too much time online. This is a worry that she shared with Lina, who also worried about 'dangerous' things that can be found by children on the Internet.

Lina: I think that I can't leave him [grandson] alone at the computer all that time. I know that they are very good at finding other pages that are not good and look at that.

Other respondents, such as Johan and Emil, went even a step further and said that they felt society and the government were forcing people to use computers and the Internet more and more and that this had negative effects on people. They felt like this was not a desirable development that they wanted to support:

Emil: I think I was not there when we voted for us to have internet at all times, I was not there, I was obviously sick that day and found myself not in Sweden. And suddenly it's something imposed on us humans. [...] When I see how people get when they use these inventions, how they are engulfed by it, almost get a nervous breakdown "Oh I have not checked my email today," one feels like- in my world it limits

the ability to live a life that is reasonably present in the here and now and it creates all the time a kind of bad conscience - another one.

This is a notion that was not mentioned by any of the British respondents and might be related to the positive and technologically deterministic approach of the Swedish government, which will be further debated in the discussion.

Almost all interviewees displayed a certain discomfort with technologies in general. The majority of them had only basic mobile phones and many mentioned avoiding other technologies besides computers and the Internet.

Complexity and Complication

Sometimes, this general discomfort was also related to the feeling that modern technologies were too complex and complicated. These issues were reported by a number of interviewees, often regardless of their educational background. A specific problem for the Swedish sample was the sending of text messages through their mobile phone, which none of them did. Kerstin is one of many examples for this:

ASA: Do you use your mobile to send text messages?

Kerstin: No.

ASA: Do you receive text messages on it?

Kerstin: No.

ASA: It works as a phone only?

Kerstin: Yes, it is possible to send text messages, it's not that there is no function for it, but no one sends me any because they know that I almost never look at it. Then it has been a few days and then it's too late ... so I'm kind of bad at that.

The feeling that sending a text message was too complicated was mirrored in the reluctance to use computers, which are by comparison even more complicated and easier to 'mess up'. A second aspect related to the complexity of technology was the fear of breaking the computer. This was especially important to some of the interviewees because others used the same computer at work or at home. Karolina was working as a kindergarten

teacher and had to share the work and home computers with their colleagues and family respectively. She was very insecure about computers and was reluctant to try it out, because she did not want to cause problems for others.

Karolina: The anxiety is always there, that something will go wrong so that you destroy someone else's things on the computer.

Another example relating to the complexity of the Internet and the devices involved in using it was Piotr, who said he never used the Internet himself, but got onto his smartphone and showed us the weather forecast for Gothenburg without realising that his phone was connecting to the Internet to do so.

Piotr: For me, I don't know anything, I can't access, I can't find things on my phone, access the Internet, you know, I don't know how. Like, I can check the weather {taps onto a sign on his smartphone and shows the weather forecast} ... and so I don't know how you do... I don't use the phone for... I can't write the numbers from this phone, I have some numbers here {shows second simple phone}, I have to use two phones.

This shows that while new inventions might bring advantages and ease of use for those who are prone to use technologies in the first place, the development of more complicated and breakable technologies might increase the fear of breaking these.

Refusal

A larger number of non-users in Sweden than Britain can be described as refusing to use the Internet, although only one respondent was very direct about it. Annika was in her late 20s, living with her mother and doing handicraft work for employment. She reported disliking all new technology and thought electricity was too complicated.

ASA: Ok, how do you feel in general about using technology?

Annika: I don't like those extremely new technologies at all, it's too complicated.

ASA: What is it that you find complicated?

Annika: Electricity, all that. It's too complicated.

She saw no need for using technologies in her life and reported avoiding them wherever she could. She had no mobile phone and would only watch TV every now and then. Prompted about potential future use of the Internet she said she would never do it. However, Annika was a special case as it turned out that she had a minor mental deficiency.

However, other respondents, such as Emil and Johan, also actively chose to stay away from computers. A lack of interest in ICTs in general gradually developed into a conscious decision to resist computers as long as they could:

Johan: I can see that it gets harder and harder to survive [without using computers]. I've always said that I'll see if I can do before I die without using a computer, but I'm not sure you can do it actually, because it gets more and more in that direction.

Both of them had others do a substantial amount of online work for them and acknowledged that it is getting harder to get on without using the Internet and computers in such a technologised society.

Social Networks

Social networks have a similar influence on non-users in Sweden as they do in Britain. Attitudes of and support by social networks play a role in the decision to stay offline or to start using the Internet. Some Swedish non-users stayed offline because it was more convenient for them to have other people use the Internet for them. While the support of their social networks meant they could use the Internet by proxy, it might also diminish incentives to learn how to use the Internet.

ASA: It seems like there are some things that your partner can do and that you might go to him with a question or task and then they do it for you? How do you feel about that?

Karolina: Well, how do I feel about that? ... It makes you a bit inflexible, because you always need to have someone around to help you, [...] but they are usually very helpful because he enjoys sitting [by the computer] so it works very well.

Other non-users were aware that they were relying on other people doing things online for them as well. However, in contrast to Karolina some of them felt that this was a good position to be in and made the conscious decision to keep it that way:

ASA: Your wife does some things for you sometimes, and all these people you mentioned that are around you. How do you feel about that? Do you feel it is good?

Emil: Wonderful! I have to - so I'm buying these services, and for me it is quite - I wish everyone could do this, but I understand that not everyone can afford to have it this way or live a life like that. [...] I have people who take care of all the difficult things you could say.

In all cases the constant support of the social networks meant that while non-users were kept from being completely excluded from the Internet, they also had no incentives to learn how to use computers themselves.

5.2.2 Feelings about Non-Use

Similar to the British non-users the feelings about being offline ranged from very positive to very negative feelings in the Swedish sample. While more non-users in Sweden were happy with being offline than in British non-users, the number of non-users who reported very negative feelings about being offline was larger in Sweden than in Britain. The feelings of the Swedish sample tended to be at extreme ends of the spectrum, while the British interviewees displayed more moderate feelings towards their lives offline.

I'm happy with it

Several Swedish interviewees reported being happy with their situation as they had family, friends, and sometimes even hired staff (e.g. accountants, agents) doing things online for them so that they did not have to worry about their own non-use.

Piotr: It's good and I say: "I can't do anything, can you help me with this... viruses and such" and they [his children] help me fix it.

Freelance actor Emil and contract worker Johan both had professional help for Internet related issues so that they did not have to deal with it themselves.

Emil: It's wonderful! I buy these services and for me it's perfect – I wish everyone could lead a life like this, but I understand, of course, that everybody cannot afford it or live a life like that.

All of those who were happy with their situation had a big network of people who would do things online for them as they realised that it would be difficult to get on in Sweden, if they were completely 'disconnected'.

Being different

In some cases the feeling of being different, as was prominent in the British sample too, went a step further to not only feeling left out, but also feeling stupid, as was mentioned by several interviewees in both countries. Even some of those who consciously chose to stay offline reported these reactions to being offline:

Johan: And you notice in my kind of profession, it's a question of being available such that customers can reach you, usually via phone. But you notice that if you want to get information, people ask you whether you have email, and no, I haven't, and then it's almost like they think you are a bit stupid.

Hanna described similar experiences with not having a computer at home:

Hanna: If you tell people "I haven't got a computer" they think you are from the Middle Ages. Like, "WHAT, don't you have a computer?"

For her, not having the hardware available entailed negative attitudes from friends and society as well as a feeling of being left out from potentially helpful information about her son's illness.

Dependency

While some Swedish non-users were absolutely happy with asking other people to do things online for them (see above), others reported a negative feeling about having to ask their family or colleagues to help them with using the Internet. Hanna expressed a strong feeling that she ought to learn how to handle computers and the Internet. She felt that she ought to learn so she could relieve her immediate social networks from having to help her:

Hanna: So you always need to ask other people if there is something you would like to look up. [...]

ASA: But sometimes you ask your sister for help to do that for you and then she does that for you and thinks it's okay?

Hanna: Yes, sure, or yes, she doesn't say no, she doesn't do that. But it feels like you are an adult person now and should be able to...

Karolina expressed a feeling of being a burden both to her colleagues in the kindergarten and to her husband and daughter, since they needed to support her in various situations, looking for information, sending out emails, and doing her banking. The constant need for help made Karolina feel left out.

ASA: You said that both at home and at work you are taking part in the work and helping out but you sit with or next to someone else using the computer, how do you feel about that at work?

Karolina: It can be a bit excluding, because I can't do those things on my own, while the other two [colleagues] can just go and do something I always need someone else's help.

Regret

In Sweden a few interviewees explicitly expressed regrets about not knowing how to use the Internet. Similar to Hanna's feeling of being a burden to her sister sometimes, Karolina felt like a burden to her partner and colleagues. She mentioned it would be easier for them, if she could do these things on her own:

Karolina: He [partner] gathers a lot of information as we're renovating a house, so a lot of information on how to do that and such is what he's getting.

ASA: And you think that is positive and useful things?

Karolina: Yes, it is. So maybe because of that you sometimes regret not being more interested in that, in fact. So you'd been able to do all that yourself.

Some other non-users, such as Emil and Johan, also mentioned that their families sometimes got a bit irritated and complained that they had to keep doing things for them. However, some non-users did not feel bad about this or saw it as a reason to regret not having learned it before. They did not perceive themselves as a burden to others.

5.2.3 Future Use

As in Britain, the likelihood of future use of Swedish non-users was closely connected to their reasons for non-use and their feelings about being offline. While some non-users were affected by the negative attitudes expressed from their social networks, others were not. Accordingly, the likelihood of those who were happy with their non-use and had others do things online for them were unlikely to become Internet users in the future, while those who were unhappy with being offline and felt like a burden were more likely to want to learn how to use the Internet themselves.

Unlikely

While Annika, Emil, and Johan all said they would consciously try to avoid using computers, others just did not see any reason to start using computers themselves, Kerstin, Mai, Piotr, and Nasan were not very interested in using the Internet, as it did not represent enough of an added value to their lives. Additionally, all of these non-users had others doing things online for them and were happy with these arrangements, so that they did not feel any pressure to learn it for themselves. In contrast to the British sample those who were unlikely to use the Internet themselves in future represented the majority of the Swedish non-user sample.

Likely

Karolina felt dependent on her husband and colleagues and was frustrated with her fear of technologies. However, the constant help from her social network also kept her from being more 'daring' herself. She, however, considered learning how to use the Internet in future. Lina was similar in the sense that she was aware of the many things one can do online. She was moreover interested to health information online and had no close relative in the household to help her on a daily basis. Her daughters were helping her every now and then. Although Lina would like to learn more, her illiteracy was holding her back:

ASA: Would you like to learn more?

Lina: Maybe. Maybe I need to but first I need to know how to read good Swedish, then I can use it... but cannot read good Swedish – cannot use it, it is difficult.

For Lina and the other immigrants in the Swedish sample learning the Swedish language and basic literacy was a basic obstacle to overcome before they could consider learning how to use computers and the Internet.

Very likely

Hanna mentioned many reasons for learning how to use the Internet. She felt like it was necessary for finding a job and to find information about her son's autism. She did not regard technologies themselves as too complicated, but was mainly facing financial constraints that were combined with a slight disinterest in technologies in general. However, she valued the potentials of being online for her professional and private life enough to include learning how to use the Internet into her future plans.

ASA: What about the Internet? How do you feel about possibly using the Internet?

Hanna: Well, I would of course really have to do that. That I have to do absolutely - I'll see if I might be able to try - because I also want to know more things now. Just when you have children too, and when you are supposed to work - one has to keep up with it a little bit, you can not live like this.

If Hanna managed to overcome the basic problems of being unemployed and not having enough money, she would be likely to buy a computer and use the Internet at home.

5.3 Underlying Mechanisms

The analysis of the rich qualitative data shows that individual factors, such as the influence of close social networks, attitudes, feelings, skills, and reasons are often intertwined with socio-economic background, which is mitigating and influencing individual factors. This was for example the case for Emil and Johan, who were well off and could afford to 'buy' the services of agents and accountants to do the difficult things for them. Another example

at the other end of this spectrum was Hanna, who could not afford an Internet connection at home due to being unemployed. However, the results also show that socio-economic background is not the only factor contributing to non-use, but that a number of underlying mechanisms could be extracted from the interviews.

The middle-aged non-users in Great Britain and Sweden investigated in the interview study differ on a variety of different characteristics – not only with regards to socio-economic background, but also in terms of prominent reasons for being offline. In both countries the reasons included no interest in the Internet, discomfort with computers, the complexity and complication of these ICTs, refusal and being held back by social networks who provide them with the ‘service’ of proxy use. In Britain there was moreover a feeling of ICTs being for a younger generation that was not found in Sweden. In Sweden, on the other hand, some of the interviewees were facing more basic issues, such as problems with literacy and language as well as the high cost of hardware and software. Those non-users who were not offline due to these more basic issues usually had a complex combination of different reasons for not using the Internet that was fuelled by socio-economic backgrounds, such as occupational circumstances, general attitudes towards technologies, help from and attitudes of social networks.

As reported for Great Britain in section 4.2 (Quantitative Results I – Reasons for Internet Non-Use), all non-users in the interview study had a number of different reasons for being offline with some of these being more important than others. Two of the major reasons in both countries were lack of interest in the Internet, which relates to the lack of perceived added value to their current lifestyles, and social networks, which can have a positive influence on the wish to use the Internet, but they can also have an effect of holding non-users back. Both of these reasons will be discussed more below.

Added Value and Social Networks

A theory prominent in economics is the theory of added value. Applying it to information markets, Kuhlen (1995) differentiates a number of different potential added value: organisational, strategic, innovative, macroeconomic, efficiency, effectiveness, aesthetic-emotional and flexible. The latter four are regarded as impacting individuals while the first four impact organisations. Only the individual factors can be related to private Internet use. Efficiency and effectiveness would positively influence the decision to use the Internet, if individuals thought using the Internet would make their lives easier, e.g. that they could get information faster, pay less money, etc. Aesthetic-emotional added value relates to subjective wellbeing or satisfaction with life, and flexibility added value relates to being able to perform daily tasks flexibly, e.g. on laptops, tablets, and smartphones without being bound to one specific location.

For many interviewees in Britain and Sweden using the Internet did not offer enough added value in any of the abovementioned realms to go through the effort of learning a new technology. They find their information easily enough elsewhere and do not feel that Internet use would improve their lives significantly.

This phenomenon is closely related to the availability of proxy use through social networks. Even if they were aware of the benefits that Internet use might bring them, many of those non-users who are not planning to use the Internet themselves in the near future had family and friends who made regular use for them. For these non-users it is simply easier and more efficient, if they do not use the Internet themselves. This was the case for a large number of non-users in both countries and was encapsulated by Gail:

BR: Do you have any idea why, why you just didn't feel like trying it before?

Gail: Well, it's laziness really, because my husband is very, very efficient on the computer and using the Internet and so I'm afraid I've left it to him.

While warm experts could enable and facilitate the learning process of how to handle computers and the Internet, for many respondents this also meant that they did not *have* to learn it.

The number of respondents who were highly likely to start using the Internet was higher in Britain than in Sweden. Often these non-users were facing a radical change in their living circumstances, which led to a change in behaviour. Ajzen (1991, p. 815) described this phenomenon in his 'Theory of Planned Behavior'. If a certain set of factors, and this includes proxy use by tight social networks, "[...] remains unchanged, the behavior also remains stable over time" (ibid., p. 202). Some of the interviewees found themselves in changed circumstances when partners died, they separated from a long-term partner, or their living circumstances had changed due to other factors, such as health. While these major changes in circumstances motivated some non-users to start learning how to use the Internet (e.g. Tom, Georgina, Gail) it led Barbara to stop using the Internet. This is again closely related to social networks. If some of the current proxy users did not have others using the Internet for them, some of them would (have to) overcome their reservations and start using the Internet, as some of them also admit:

Gail: If my husband wasn't doing all these things that involve the Internet, then it would be down to me. And I mean, God forbid that he wasn't around, I'd have to do it, wouldn't I?! Well, I think I would, I think I'd have to learn it then. So, it's important, and I will.

The analysis of the qualitative data showed that it is important to go beyond the 'predefined survey answer' design and find out nuances and combinations of reasons for non-use and everyday lives of non-users that cannot be grasped quantitatively and can help develop new categories for survey research. While some of the above-described reasons could be categorised within the thus far possible answers in both the British and the Swedish surveys, such as 'It's not for people of my age', 'I am not interested', 'I am worried about privacy', etc., the in-depth data revealed a deeper layer beneath these reasons. Supporting Helsper & Reisdorf's (forthcoming) findings, it shows that there is no single 'most im-

portant' reason for the majority of non-users, but a mix of different equally important reasons. Lack of access and high cost might be intertwined with a generally low interest in the Internet and a mix of other more pressing issues such as being able to pay for a car, as it was the case for Hanna. Refusal and disinterest might be related to negative experiences and associations with the Internet and at the same time combined with a genuine lack of need due to a job that does not require computers or the Internet, as it was the case for Barbara. Moreover, the qualitative analysis uncovered a potential negative impact of warm experts that has thus far not been defined in other research. This additional in-depth knowledge will inform into the second quantitative phase as described in the next chapter. The detailed implications of the combination of all quantitative and qualitative data will be discussed in Chapter 7.

6 Quantitative Results II

The qualitative analyses showed a very diverse picture of non-users, their socio-economic characteristics, their attitudes towards technologies and the Internet, their reasons for being offline, and their experiences with non-use. Looking at the complexity of these cases, it became clear that the attempt to group non-users into specific subpopulations that was planned on the basis of previous research (see Section 2.7) and attempted in the first quantitative findings (Chapter 4) was not regarded as the ideal way to proceed as soon as I included more than just the socio-economic characteristics. While a grouping was done, for example, on basis of the likelihood for future use, and might be a useful way forward to develop policy interventions, the main goal of this study was to increase the in-depth knowledge of non-users and start building a theory of non-use. To be able to include the complexity of various notions and attitudes, this second quantitative chapter will not to attempt to produce groups within the data. Instead, the logistic regressions will be repeated with an addition of individual, attitudinal, and psychological factors found in the qualitative work. These very specific attitudinal variables were chosen on the basis of having an effect on the interviewees on an individual level. The logistic regressions will be conducted for the complete and middle-aged British populations as well as the only complete Swedish population as the number of cases in Sweden was too low to conduct these types of analyses for middle-aged Swedish non-users. On the basis of the qualitative results the following set of variables was added to the analyses:

- 1) Agreement: It is a good idea to try new technologies.

This variable was chosen on basis of many interviewees mentioning that they are not comfortable with trying out new technologies, such as exemplified by Lisa's quote:

Lisa: I don't – I'm very what you call old-school. I don't like change. My mom's the same as well, you know. I don't like change too, too much, [I] just like things, certain things the way they are.

It is thus likely that those who do not agree with this statement are more likely to be non-users than those who do agree.

2) Agreement: The use of computers and the Internet threaten privacy.

A great number of interviewees – especially in Sweden – expressed concerns about privacy issues when using the Internet. Rita was one of the British respondents mentioning this concern:

Rita: I'm still not confident about buying anything online. I, I'll go onto the Internet at home, and I'll have a look at things and that, but when it comes to the part about buying stuff online, I'm a bit scared, 'cos I don't want to give my details out there. You don't know who's got what, so I just tend to have a look at what they've got and then go to the shops.

Accordingly, it is likely that those who think they put their privacy at risk, if they go online, are more reluctant to do so.

3) Agreement: I feel uncomfortable using computers and the Internet, because I am worried that I might break something.

In both countries interviewees mentioned that they were worried about breaking computers or 'getting it all wrong' (see e.g. Lisa, Section 5.1.1). Some of them specifically mentioned that this would be disruptive to anyone else who might be using these devices, so they would rather stay away from them and have others use the Internet for them (see e.g. Karolina, Section 5.2.1). Those who agree with the above statement are hence regarded as more likely to be non-users than those who disagree.

4) Agreement: The Internet is frustrating to work with.

Many of those non-users who had tried the Internet in courses or elsewhere expressed a relatively high degree of frustration with the technology and the feeling that it was complicated to handle.

BR: And today when you used a computer was that more frustrating, or was it more rewarding, or ...

Martin: Bit of both. It was frustrating because, you know, when I see younger people doing, they're doing that {taps fingers on desk} and talking, on the keyboard, and

I'm having to do it with one finger at the moment. Plus when you it wrong you have to get someone's attention to get you back to the start. And of course, there's probably what, there was 8 or 9 of us there, and you don't want butt in 'cos they might be lookin' at someone else.

Those who tried it in a private setting reported giving up as soon as they experienced any issues; those who tried it in courses were frustrated that they had to get the attention of the instructor over and again. It is likely that those Britons and Swedes who find the Internet frustrating to work with try to avoid it and are thus non-users.

5) Agreement: The use of the Internet can be addictive.

Non-users in both countries often mentioned that they thought Internet use could be addictive and also harmful to children. They displayed a generally very critical view of the Internet and its features.

Emil: People have the time or opportunity every day all the time to constantly check their email. [...] I would think sometimes that that's - that's probably what scares me too, because when I see how people get when they use these inventions, how they are engulfed by it, almost get a nervous breakdown "Oh, I have not checked my email today!"

The likelihood that very Internet-critical individuals are non-users is hence estimated as relatively high.

All above-described variables were asked for Internet users and non-users in the OxIS but only the first one in the Swedish survey. Unfortunately, there were no other attitudinal variables that were available for both countries. The five items listed above were added to the logistic regressions done with the British data and the first item were added to the logistic regressions conducted with the Swedish data. Moreover another item unique to the Swedish cases was added to the logistic regressions conducted with the WII data: the frequency of sending text messages from a mobile phone. As all Swedish interviewees said they did not do this, because they found it too complicated, the frequency of doing this was added as a variable predicting non-use in Sweden. The additional variables

show that the influence of socio-economic factors on Internet non-use changes when new individual attitudinal factors are added to the analysis.

6.1 Great Britain

The logistic regressions in the tables below follow the same model as before. The dependent variable Internet use versus non-use is coded with 0 (use) and 1 (non-use) and the odds ratios show the influence of the different independent variables on the likelihood of being a non-user. While the middle column displays the values of only socio-economic variables, such as displayed in Chapter 4, the right hand side column shows the odds ratios of the new model, which now includes attitudinal variables that were chosen from the pre-existing datasets on basis of the qualitative results in Chapter 5. The analyses are first presented for the complete British sample and subsequently for the middle-aged subsample.

The goodness of fit as measured through the Hosmer-Lemeshow test and Nagelkerke's Pseudo R^2 show that both the old and the new model provide a good model fit. The addition of new variables does not diminish the goodness of fit. However, they also led to an increase in missing cases, which can be ascribed to the high number of missings in the questions regarding privacy online, frustration with computers and the Internet, and Internet addiction. The new model shows some changes in the influence of specific variables on being an Internet non-user, if we consider attitudinal factors additionally to socio-economic background. While the most important socio-economic factors educational qualifications, age, and household income remain important, the influence of education and income diminish from the first model and other, attitudinal, factors join the ranks of highly influential variables.

In Model 2 the influence of being middle-aged instead of younger increases the likelihood of being a non-user by 3.5 times, while being female diminishes this likelihood. Disabilities have the same significant influence as in Model 1, but the influence of living

alone on being offline increases from a two times to a three times higher likelihood of being a non-user than for people who live with a partner.

Table 16 Logistic Regression Predicting the Likelihood of Being an Internet Non-User, Great Britain, 2011

<i>Variable (reference category)</i>	<i>Model 1 2011 Odds Ratios</i>	<i>Model 2 2011 Odds Ratios</i>
Constant	.010	.000
Age (Under 25 years)		
25 to 55 years	2.411*	3.540*
Over 55 years	4.170**	3.997*
Gender (Male)	.823	.360**
Disability (No)	2.297**	2.268*
Marital Status (Partner)	2.088**	3.055**
Children in Household (Yes)	1.800*	1.307
Educational Qualifications (Higher)		
None	13.657**	7.761**
Basic	2.270*	1.663
Secondary	2.804**	2.988*
Further	1.573	1.200
Occupational Status (Retired)		
Student	.000	.000
Employed	.353**	.473
Unemployed	.260**	.259*
Annual Household Income (>£30,000)		
<£12,500	5.624**	2.771*
>£12,5-30,000	2.613**	1.915
Good Idea to Try New Technologies (Agree)		
Neither Disagree Nor Agree		2.869**
Disagree		5.819**
Computer/Internet Use Threatens Privacy (Disagree)		
Neither Disagree Nor Agree		3.368*
Agree		2.731*
Nervous to Break Things (Disagree)		
Neither Disagree Nor Agree		.888
Agree		3.409**
Internet Frustrating to Work With (Disagree)		
Neither Disagree Nor Agree		7.582**
Agree		7.030**
Use Of Internet Can Be Addictive (Disagree)		
Neither Disagree Nor Agree		2.840*
Agree		1.431
Model Fit (Hosmer-Lemeshow Test)	7.629 (p= .471)	6.705 (p= .569)
Pseudo R ² (Nagelkerke)	.606	.601
Valid N (Non-Users)	1,476 (338)	1,172 (143)

Source: All respondents, OxiS 2011.

*Significant on a 0.05 level; **Significant on a .001 level.

Note: Ex-Users were excluded from the analysis.

The influence of educational qualifications diminishes in the second model, although it remains to be the most influential socio-economic variable with those people who have no

educational qualifications being 7.8 times more likely to be offline than those who have higher qualifications. The influence of occupational status diminishes notably, and the influence of household income diminishes from 5.6 times higher likelihood for those with low incomes to be offline to 2.8 times higher likelihood than those with a high income.

The addition of attitudinal variables in Model 2 shows that these have a stronger influence on being on- or offline than many of the socio-economic variables. The most influential attitudinal variable is the level of frustration with using the Internet with those who were undecided whether to agree or disagree with this statement being 7.6 times more likely to be offline and those who agreed that the Internet is frustrating to work with being 7 times more likely than those who disagreed. This higher likelihood of the undecided can be explained by the factor of having to be in touch with the Internet at some point to be able to judge whether using it is frustrating or not. Having used the Internet in the past increases the likelihood of being an Internet user (e.g. Helsper & Reisdorf, forthcoming). The second most important attitudinal factor was the willingness to try out new technologies. Those who said it was not a good idea to try new technologies were 5.8 times more likely to be non-users than those who thought it was a good idea. Those who were undecided were still 2.9 times more likely to be offline. This confirms the qualitative findings that a general aptitude towards trying new things and especially new technologies, which include ICTs, has a positive influence on Internet use, while a generally reluctant attitude towards new things as displayed by many interviewees in both countries has a negative effect on Internet use. Again confirming the qualitative results, the fear of breaking something when using the Internet has a strong negative influence on being an Internet user. Those who agreed that they were afraid to break things were 3.4 times more likely to be offline than those who disagreed with this statement. Both the notion that Internet use might threaten privacy and could be addictive had a negative influence on being online, especially for those who were undecided on these topics. Similar to the feeling of frustration with the Internet, it takes a certain degree of knowledge to be able to

judge on those issues. Accordingly, those who never got in touch with the technology often have no specific opinion on it, as was found in many of the British interviews who often said that they 'don't mind it'.

This new model with additional variables shows that attitudes have a strong influence on the likelihood of being an Internet non-user in the general British population. The next paragraphs examine whether this is also the case for the middle-aged subsample.

Non-users aged 25 to 55 years

The same analysis was conducted for the middle-aged subsample as for the population. The five new variables were added to the model, displayed as Model 2 in the table below. The model fit for the subsample was improved by these additions as shown through the lower value and lower significance in the Hosmer-Lemeshow test and the higher Nagelkerke Pseudo R^2 value. Confirming my earlier argument and the qualitative results, an analysis with only socio-economic variables in it did not represent a model with a good model fit for the middle-aged subsample.

Similar to the regressions including the population, the influence of the socio-economic variables changes through the addition of attitudinal factors. While household income and educational qualifications remain the most important socio-economic factors with a slight decrease in influence and are more important for this age group than the population, some of the attitudinal factors are, in fact, more important.

Table 17 Logistic Regression Predicting the Likelihood of Being an Internet Non-User, 25-55 year-olds, Great Britain, 2011

<i>Variable (reference category)</i>	<i>Model 1 2011 Odds-Ratios</i>	<i>Model 2 2011 Odds Ratios</i>
Constant	.013	.000
Gender (Male)	.645	.296*
Disability (No)	2.159*	2.996*
Marital Status (Partner)	1.154	2.235
Children in Household (Yes)	1.685	1.698
Educational Qualifications (Higher)		
None	10.938**	7.722**
Basic	2.021	1.437
Secondary	3.651*	4.260*
Further	.735	.385
Occupational Status (Retired)		
Student	.000	.00
Employed	.746	.965
Unemployed	.393	.219
Annual Household Income (>£30,000)		
<£12,500	13.004**	8.920**
>£12,5-30,000	2.844*	2.715*
Good Idea to Try New Technologies (Agree)		
Neither disagree nor agree		6.541**
Disagree		10.266**
Computer/Internet Use Threatens Privacy (Disagree)		
Neither disagree nor agree		5.401*
Agree		3.935*
Nervous to Break Things (Disagree)		
Neither disagree nor agree		1.830
Agree		2.144
Internet Frustrating to Work With (Disagree)		
Neither disagree nor agree		5.597*
Agree		7.752**
Use Of Internet Can Be Addictive (Disagree)		
Neither disagree nor agree		.800
Agree		.812
Model Fit (Hosmer-Lemeshow Test)	13.927 (p= .102)	2.884 (p= .941)
Pseudo R ² (Nagelkerke)	.373	.513
Valid N (Non-Users)	716 (64)	665 (59)

Source: 25-55 year-old respondents, OxIS 2011.

*Significant on a 0.05 level; **Significant on a .001 level.

Note: Ex-Users were excluded from the analysis.

The most important factor in this model is the aptitude to try new technologies. Those middle-aged Britons who disagreed with the statement that trying out new technologies was a good idea were 10.3 times more likely to be offline than those who agreed. Those who were undecided about this statement were still 6.5 times more likely to be non-users. The second most important attitudinal factor was the level of frustration about use of the

Internet. Those who agreed that the Internet was frustrating to work with were 7.8 times more likely to be offline than those who disagreed. Those who were undecided were 5.6 times more likely. This is a reverse from the population, where being undecided had a stronger influence than agreeing with this statement. This can be explained by the higher likelihood of middle-aged Britons to have been in touch with the Internet in institutional settings than older Britons. Similar to the population being undecided about the potentially harmful effects of Internet use on privacy had a strong influence on being a non-user in the middle-aged subsample. Undecided Britons were 5.4 times more likely to be offline and those who agreed 3.9 times more likely to be offline than those who disagreed with this statement. The fear of breaking things and the notion that use of the Internet could be addictive did not have a significant influence on being on- or offline in the 25 to 55 year-old age group.

6.2 Sweden

The Swedish dataset did, unfortunately, not provide the same attitudinal variables as the British dataset. Instead, the Swedish survey focused more on political views that had little to do with Internet use, but investigated politically motivated Internet use instead. Only one of the five items could be added to the Swedish logistic regressions: agreement with the statement that it was a good idea to try new technologies. However, a feature unique to the Swedish non-users was a strong sense of being uncomfortable with sending text-messages from their mobile phones. All Swedish non-users said they found this feature too complicated and used it either very rarely or not at all. As this was not reported as widely in the British sample of the qualitative interviews, this variable was only added to the Swedish regressions.

Table 18 shows Model 1 as displayed in Chapter 4 and the new Model 2. The model fit according to Nagelkerke's Pseudo R^2 was slightly improved through the addition of the new variables.

Table 18 Logistic Regression Predicting the Likelihood of Being an Internet Non-User, Sweden, 2011

<i>Variable (reference category)</i>	<i>Model 1 2011 Odds Ratios</i>	<i>Model 2 2011 Odds Ratios</i>
Constant	.000	.000
Age (Under 25 years)		
25 to 55 years	19616916.7E	13849641.0E
Over 55 years	12360959.7E	51804606.1E
Gender (Male)	1.428	1.170
Disability (No)	3.493*	2.328
Marital Status (Partner)	2.001	2.616
Children in Household (Yes)	1.689	2.414
Educational Qualifications (Higher)		
Basic	6.431**	4.671**
Secondary	1.942	.611
Further	2.606*	2.757*
Occupational Status (Retired)		
Student	.000	.000
Employed	.372**	.514
Unemployed	.044**	.046*
Annual Household Income (>SKR400,000)		
<SKR200,000	6.148**	5.117**
>SKR200,-400,000	3.531**	3.068*
Good Idea to Try New Technologies (Agree)		
Neither disagree nor agree		4.678**
Disagree		1.425
Sending Text-Messages on Mobile (Often)		
Sometimes		.409
Rarely/Never		2.783*
Model Fit (Hosmer-Lemeshow Test)	1.301 (p= 1.301)	5.159 (p= .740)
Pseudo R ² (Nagelkerke)	.455	.512
Valid N (Non-Users)	1,277 (92)	1,237 (72)

Source: All respondents, WII 2011.

*Significant on a 0.05 level; **Significant on a .001 level.

Note: Ex-Users were excluded from the analysis.

Similar to the enhanced British model the second Swedish model shows altered values for the influence of socio-economic factors through the addition of the new variables. The influence of educational qualifications is still significant and high with those with basic qualifications being 4.7 times more likely to be non-users than those with higher qualifications. However, this influence has gone down from 6.4 times in the first model. The negative influence of further qualifications in contrast to higher has slightly increased in the second model. Similarly, there is a decrease in the negative influence of lower household income on Internet non-use in the second model. Those with a low household income were 5.1 times more likely to be offline than those with a high household income.

Like the British sample, the general aptitude towards trying new technologies had a strong influence on being an Internet non-user in Sweden. Those Swedes who said they disagreed with the statement that using new technologies was a good idea were 4.7 times more likely to be Internet non-users than those who agreed with this statement. After low household income and together with basic educational qualifications this factor has the strongest negative impact on Internet use. Related to this general comfortableness with (new) technologies is the sending of text-messages from mobile phones that was perceived as very complicated by many Swedish non-users in the interview study. Confirming the qualitative results, those Swedes who sent text messages never or very rarely were 2.8 times more likely to be non-users than those who sent text messages often (daily or more).

As was the case in the previous quantitative analyses presented in Chapter 4, these logistic regressions could unfortunately not be conducted with the Swedish middle-aged subsample, as the N was too small to conduct any statistical analyses. However, the qualitative results gave a detailed description of the characteristics and attitudes of Swedish middle-aged non-users.

6.3 Added Value of Attitudinal Variables

The above analyses for Great Britain and Sweden show that adding important attitudinal factors as identified in qualitative research changes the picture of Internet non-use considerably. It shows that the previous focus on socio-economic background paints a picture that is overly simplistic and needs to be supplemented by individual-level variables. As discussed in previous research Internet non-use is influenced by a combination of several factors relating to exclusion and choice (e.g. Dutton et al. 2007; Eynon & Helsper 2010). While socio-economic and individual factors, such as attitudes, are intertwined, overlooking the individual factors represents a flaw in the theoretical and practical approach towards researching Internet non-use. The oversimplification of non-user research could

lead to the oversimplification of policies regarding digital inequalities as has been shown by White & Selwyn (2011).

On basis of the qualitative analysis presented in the interview study a set of additional items would have been useful in the analyses presented in the sections above and are suggested to be added to the surveys. While the OxIS questionnaire asked for reasons mentioned for Internet non-use, of which the respondents could choose as many as they liked. This option provides a more adequate representation of reasons for non-use than the 'most important' reason as most non-users had a variety of reasons that were contributing to being offline. Moreover, it would have been extremely useful to have the same attitudinal variables available in the Swedish dataset as in the British one. Additionally, a number of other variables were not available in either dataset, such as the influence of social networks on being offline as well as the potentially negative influence of proxy use on personal Internet use. Potential questions could be: "Agreement: If I had support from a friend/family/instructor, I'd rather do things online myself than asking other people" for non- and ex-users or "Agreement: I feel dependent on others to do things online" for users, ex- and non-users alike. Other useful questions could include the perceived usefulness of ICTs for work (e.g. "Agreement: Computers and the Internet make work easier/faster"), or the perception of being expected to be online (e.g. "Agreement: People should be able to use computers and the Internet nowadays"), which would give an indication whether users and non-users alike perceive a certain degree of social desirability as regards being online.

7 Discussion

The discussions and analyses of the previous chapters sought to shed light on issues regarding Internet non-use in Great Britain and Sweden with a specific focus on the middle-aged subpopulations. The combination of three empirical phases that built on and supplemented each other leads to a detailed picture of Internet non-users in both countries that will be interpreted below against the background of a number of important topics. The first section aims to enhance the pre-existing discussion of Internet non-use in light of choice versus exclusion (7.1). A second section will compare the results from Great Britain and Sweden on the background of the ever-decreasing number of non-users in Sweden and the comparatively large number of non-users in Great Britain, specifically regarding the virtually non-existent group of middle-aged non-users in Sweden, who could only be investigated qualitatively (7.2). This section will discuss differences (7.2.1) and similarities (7.2.2) and will frame them with regards to the cultural settings (7.2.3) and the policies regarding digital inequalities (7.2.4) that we find in these two countries. The concluding part of this section (7.2.5) will critically review the consequences of these settings for non-users in both countries, with a specific focus on the Swedish sample. The third part of this chapter (7.3) will deliberate the opportunities and obstacles that non-users in both countries face, if they want to go online. Section 7.4 will summarise the findings on basis of the conclusions drawn from sections 7.1, 7.2, and 7.3. The concluding part of the discussion (7.5) will be dedicated to the subject of defining Internet non-use in light of the findings in this study and previous discussions on this topic.

7.1 Choice vs. Exclusion

An important topic related to mechanisms that contribute to Internet non-use (main research question) and reasons for being offline (research question number 2) is the discussion about exclusion versus choice that was deliberated in the literature review (Section

2.4). Wyatt et al. (2002) and other scholars in the field differentiated those who could not use the Internet (exclusion) and those who refused to do so (choice). This notion has been picked up by a number of other scholars, who pointed out that both factors play a role in Internet non-use in advance societies “[...] but the significance of these factors may differ for different segments of the population” (Eynon & Helsper 2010: 546). This differentiated understanding of non-use was confirmed by the findings in chapters 4 through 6 and will be presented below. However, while Eynon & Helsper proposed a description of different *types* of non-users, the complexity of qualitative results led to the decision not to develop a typology of different Internet non-users in this study. Instead, the discussion below seeks to combine the quantitative and qualitative results to paint a comprehensive picture of non-use and its complexity. It also debates the assumption that Internet non-use is per se problematic for all offliners. It is of specific interest which aspects of life need to be considered in the non-user debate and whether and how these relate to disadvantage and exclusion. This notion is based on Haddon’s (2004) findings that “[...] those on the wrong side of the digital divide, are not disadvantaged in every aspect of their life simply because of their lack of access to particular information and communication technologies (ICTs). They may be disadvantaged in certain respects, but not in others” (ibid.: 21).

The combination of the results presented in chapters 4 through 6 confirms a mix of factors that are related to both, choice and exclusion. As remarked in previous research (see above and Section 2.4), Internet non-use is in the majority of cases motivated by a combination of both types of factors. However, one of these types might be dominating or influencing the other. The first quantitative chapter considered socio-economic factors that were previously identified as contributing to Internet use and non-use to see in how far the influence of these factors changed between 2007 and 2011 and in how far they have importance for non-users in Sweden and Britain. It was also of interest to find out whether some of these factors were more important for middle-aged non-users than for

the complete non-user populations. The qualitative results give more information on both, socio-economic (excluding) and attitudinal (choice-related) factors.

The analysis of socio-economic, i.e. potentially excluding, factors showed that age, disability, educational qualifications, occupational status, and income were important influences contributing to Internet non-use in both countries with educational qualifications and income being the most important barriers to Internet use. Educational qualifications and income were also the most important factors contributing to Internet non-use in the middle-aged British population. Looking at the middle-aged subsamples of the interview study, the influence of socio-economic factors can be confirmed to a certain degree. The majority of the middle-aged British non-users were unemployed and had lower educational qualifications. Many of them had to get along on low incomes or unemployment benefits. The sample in Sweden was more diverse than the one in Britain. However, a number of respondents mentioned that essential issues, such as educational background and low income, were keeping them from going online. Issues with literacy and language as well as the cost of hard- and software were excluding factors for four of the Swedish interviewees, hence confirming a degree of exclusion and decreasing the degree of choice.

Nonetheless, the majority of respondents across both countries also identified factors related to choice as reasons for staying offline. A large number of non-users had a genuine disinterest in technologies and the Internet. Many of them did not need the Internet in their work lives and did not see any added value for their private lives either. This was especially true for those interviewees who were currently employed. Accordingly, they were happy with their situations and did not see any need to go online themselves – especially in light of having other people do things online for them. A smaller number of non-users specifically explicated that they were actively choosing to stay offline as long as they could ‘get away with it’. All of these non-users, however, were in socio-economically beneficial positions and could afford the hard- and software, if they wanted to. The availability of proxy use through family, friends, and professional services meant for them a

simplification of their lives that they felt privileged about (Section 5.2.2). According to Dutton et al. (2007) these non-users could fall into the category of those who made an 'empowered digital choice' as they could be Internet users, if they wanted to, in terms of economic resources. The provision of warm experts (Bakardjeva 2005; Selwyn et al. 2005) in their close network of friends would moreover mean that they have the resources to acquire the necessary technical skills as well. However, in adopting this dichotomy between those who can make this 'empowered digital choice' and those who cannot due to lack of economic and technical skills or the availability of resources to learn these skills, all other non-users in the interview study would automatically fall into the category of being excluded.

As explicated in section 2.4 and shown in the results presented above, both sets of factors – choice and exclusion – play a role in explaining Internet non-use across different segments of the population (e.g. Eynon & Helsper 2010). The majority of cases, even those where the most dominant reasons were related to exclusion, entailed an element of choice at the same time. For the Swedish immigrants, who struggled with the Swedish and English language as well as reading and writing in any other language, the text-based technology provided a high barrier that was hard for them to overcome. Nonetheless, while all of them were keen to improve their language and literacy skills only one of them mentioned an explicit interest in learning how to use the Internet and computers in the future. The other two mentioned that they did not have a need for the Internet as their close networks were in the same neighbourhood, they were not looking for work that would include ICTs, they did not see a benefit from using it for any part relating to their interests or lives. For them, Internet use did not provide an added value of any kind. They chose to stay offline in the future, despite having the opportunity to use and learn how to use computers at the school where they learned the Swedish language. The lines between choice and exclusion were blurry in most cases. While, according to Dutton et al.'s definition, those with limited economic resources would automatically belong to the excluded group, many of them

were mainly staying offline because they did not see a need or life-fit of ICTs in their current circumstances. Almost all of the non-users were using the Internet by proxy and had access to the Internet either at their home, a friend's or relative's home, or at their local library. Only one non-user in the complete qualitative sample explicitly mentioned that she felt excluded, because she could not afford Internet access in her home (Section 5.2.2).

The results found in the third empirical phase moreover supports the notion that attitudes have an equally strong impact on being on- or offline as socio-economic backgrounds. The influence and significance of various socio-economic factors decreased when attitudinal variables that were found to be of importance in the qualitative phase were added to the logistic regressions (see Tables 16 through 18). Attitudes towards technologies were found to have a strong importance for middle-aged non-users in Great Britain. In fact, the most important factor determining non-use of the Internet was the perception that trying out new technologies was not a good idea, closely followed by a strong influence of having a low income. The second most important factors were the notion that working with the Internet was frustrating, followed by having no educational qualifications. The equally strong importance of these socio-economic and attitudinal factors shows that their disentanglement is practically impossible. Socio-economic backgrounds might play a role in determining these attitudes, but they are certainly not the reason. A large number of well-off respondents in the interview study held the notion that it was not a good idea to try out new technologies. Regardless of their monetary situation and educational backgrounds several interviewees in both countries supported this view and reported encounters with computers and the Internet as frustrating. This points towards a complex combination of subtle reasons contributing to the conscious or subconscious decision to stay offline when the majority of the same age group is online.

While this work is by no means claiming that there are no digital inequalities in Great Britain and Sweden – as the data show that there clearly are – it is overly simplistic to conclude that socio-economic characteristics are the major factor influencing Internet

non-use. However, similarly to Selwyn's (2006) findings, the results found in this study suggest that "[the Internet's] relevance to the day-to-day lives of individual citizens often appears to be more tenuous. Thus, the underlying premise of the digital divide debate – i.e. the perceived 'need' for all citizens to engage with ICTs in order to survive and thrive in the current information age – could therefore be considered erroneous in light of the many people in our study who were surviving (and often thriving) without it" (ibid.: 289 et seq.). The findings of the interview study support this notion, as some non-users were thriving in their offline lives, while others felt they could only thrive, if they started using the Internet in future. Despite the application of advanced quantitative and qualitative analytical methods, it is difficult, if not impossible, to determine which factor has the highest influence or whether socio-economic factors are more important than individual and attitudinal factors (which are again influenced by socio-economic background and social networks).

A complex combination of different opinions, attitudes, influences from the outside, and other factors contribute to being offline. On a sample level, it is not feasible to speculate whether choice or exclusion is more important. However, this needs to be determined on an individual level. While the results showed that for some interviewees being offline was a conscious choice and they did not feel disadvantaged in any part of their lives, some interviewees felt left out and excluded – especially socially (Sections 5.1.2 and 5.2.2). It is rather the individual perceptions of non-users that should be considered as equally important as objectively disadvantageous factors, such as low incomes or lack of skills. For those non-users who feel excluded and would like to go online it would be advisable to develop a support programme that encourages and enables non-users to make this move. Additionally, for those non-users who have to overcome obstacles to be able to use the Internet, these obstacles should be lowered or ideally removed so that they can make an informed decision about potential Internet use instead of not even considering it, because they have more basic issues to tackle first. Such obstacles may be (but are not lim-

ited to) literacy and language problems, lack of home access due to cost, little knowledge about the Internet and how it could potentially benefit them, and the lack of technological skills. Policy recommendations for different groups of people will be debated in the conclusion (Section 8.2).

7.2 *Getting to Sweden?*

Previous research (e.g. Findahl 2011) and the first quantitative results (Chapter 4) showed that the number of middle-aged Internet non-users was extremely low in Sweden. Only 1.2 per cent of the middle-aged Swedish subsample had never used the Internet before, while this was the case for 11.7 per cent of the middle-aged British subsample.

One of the questions many comparative social researchers ask is how to get certain countries to similar levels as other countries in terms of education (e.g. OECD 2010), social (in)equality (e.g. Milanovic 2005) and other societal topics of interest. In his book ‘The Origins of Political Order’ (2011) Fukuyama coined the phrase ‘Getting to Denmark’, which was first mentioned by Pritchett & Woolcock (2004). In agreement with their idea, Fukuyama describes it as a fictional ideal state that is “[...] stable, democratic, peaceful, prosperous, inclusive, and has extremely low levels of political corruption. Everyone would like to figure out how to transform Somalia, Haiti, Nigeria, Iraq, or Afghanistan into ‘Denmark’ and the international development community has long lists of presumed Denmark-like attributes that they are trying to help failed states achieve” (ibid.: 14). His idea sparked the discussion below which asks the question of how to ‘get to Sweden’ regarding the spread of Internet use among the British population. It will deliberate which results and factors found in the study at hand are similar in both countries and which ones differ. Which specific circumstances are found in Sweden that led to a much higher number of Internet users than in Britain? “To what extent might various factors, including cultural differences (but also the national histories of markets, the socio-demographic distribution of population, etc.) mean that findings are more or less likely to be replicated elsewhere?”

(Thomas & Haddon 2011: 27 et seq.). The last part of this section moreover discusses whether it is actually desirable to set up one country as an ideal to aspire to.

The paragraphs below will first consider the differences found between Britain and Sweden, then the similarities and will subsequently put these results into the wider context of cultural settings and policies. The concluding section of 'Getting to Sweden' will consider the consequences of these findings for current non-users in both countries with a specific focus on Sweden.

7.2.1 Differences

Apart from the very different proportions of middle-aged non-users in Great Britain and Sweden, the results uncovered other important differences in terms of factors contributing to non-use and the feelings and perceptions of non-users.

In terms of socio-economic factors the biggest difference was the extremely strong influence of age on non-use in Sweden. Almost all non-users were older than 55 years, which made statistical analyses with the middle-aged subsample impossible. While age had a strong influence in Britain as well, the middle-aged subsample was only 2.4 times more likely to be offline than those younger than 25 years and the 56+ year-olds only 4.2 times more likely. This is a vast difference to Sweden where older individuals made up 95.2 per cent of all Swedish non-users (in contrast to 67.1 per cent in Britain). Moreover, living with a partner was an important factor in Britain (e.g. Van Rompaey et al. 2002), but not in Sweden. These differences prevailed in the second stage of the quantitative analysis, which contained additional attitudinal variables. Additionally, not having children living in the household was influential in the first British model, but not in any of the Swedish models. This difference is closely related to the virtually non-existent non-users aged younger than 56 years. It should be noted that the influence of having children in the household vanished for the British sample with the addition of attitudinal variables. This might indicate a connection between attitudes towards technologies in general and having

children and young people (i.e. the 'net generation' (e.g. Tapscott 2009)) living in the household.

The statistics for the middle-aged British subsample show that low income and educational qualifications are even more important for this age group than for the complete sample. Since no statistics could be produced for the Swedish middle-aged subsample, the qualitative results will describe differences between these groups in both countries. The samples recruited for the interview study varied between the two investigated countries. Despite applying the same recruitment strategies the British interviewees were more homogeneous in terms of socio-economic backgrounds and age than the Swedish ones. All of the British interviewees were older than 47 years, whereas a number of the Swedish interviewees were in their late twenties and mid-thirties. Moreover, a large number of British non-users was unemployed or in low-skilled employment, whereas the occupations of the Swedish sample were varied and the general level of educational qualifications was higher. However, these differences between the two samples might be a product of the relatively low number of interviewees. The variety in the Swedish sample cannot be related to a greater variety in the Swedish non-user population per se. The British sample, for example, did not include ethnic minorities and immigrants with language issues. Accordingly, any results have to be treated with caution.

The biggest difference between the British and Swedish interviewees was the notion mentioned by all British middle-aged non-users that these new technologies were not for their generation. While this result might be partly related to the generally higher age within the British sample, none of the 50+ year-olds in the Swedish sample mentioned this as a reason for their disengagement with ICTs. The reason that this is a prominent notion in Britain but not Sweden, might be related to the general proximity of the Swedish society to technologies and the ever-active encouragement by the Swedish government to try out new technologies. This point will be further discussed in sections 7.2.3 (Cultural Settings) and 7.2.4 (Policies). A second big difference was found for very basic socio-economic is-

sues that were more prominent in the Swedish sample. The high costs of hardware, software, and household Internet access was specifically mentioned by one of the Swedish respondents as her main reason for being offline. Moreover, those interviewees with an immigration background also struggled with literacy and other basic issues. For two out of the three women who struggled with the Swedish and English languages the question whether they were considering learning how to use the Internet was not even something they had thought about before. For them, basic issues, such as learning to read, write, and speak Swedish was an obstacle they had to overcome first. A third difference between the two samples was the perception and use of mobile phones. While all interviewees across both countries had mobile phones the scope of usage was different. None of the Swedish non-users would use their mobiles for sending text-messages. All of the Swedish interviewees would only use their mobile phones for calls and many of them only in emergencies. This was especially the case with those interviewees who made a conscious choice to stay away from computers and the Internet. However, all of them explained they found it too complicated and would rather call someone as it was easier and quicker. This is a phenomenon that was less prominent in Britain. While most British non-users did not report a wide use of their mobile phones, only a few did not send text-messages at all. Some of them, however, did mention that they were struggling whenever they would have to learn how to handle a new mobile phone. One interviewee said she was always buying the same model, if her phone broke, so she would avoid having to learn how to handle it again.

7.2.2 Similarities

While we find some differences between British and Swedish middle-aged non-users, they were fewer than expected. Surprisingly, the similarities in factors contributing to non-use were numerous – more numerous than expected from the very different proportions of non-users and specifically middle-aged non-users in the two examined countries.

The agreement or disagreement with the statement that trying out new technologies is good idea had the strongest statistical influence on Internet non-use in both countries (see Tables 16 through 18). Looking at the influence of socio-economic factors on Internet use and non-use, age, disability, educational qualifications, and income were important factors in both countries. While educational qualifications were the most important factors influencing British non-use followed by the influence of income, these factors were equally important in Sweden.

A large number of interviewees in both countries mentioned that they did not have an interest in using the Internet, as it did not add any value to their personal or professional lives. This notion was especially popular with interviewees who had jobs, which did not require the use of ICTs, such as lorry drivers, kindergarten teachers, actors, machine operators, and music teachers. They did not need ICT skills in their work life and all of them had friends or family who would use the Internet for them, if they felt they needed information from the Internet. None of these interviewees perceived themselves as being left out or feeling disadvantaged. Some of them even said they would try to avoid using ICTs as long as they could 'get away with it'. This notion was slightly stronger in Sweden than in Britain, which will be discussed in section 7.2.5. Coupled with the lack of interest and need of Internet use, the majority of the interviewees in both countries displayed a lack of IT skills and a degree of discomfort with technologies and computers in general. The Internet was generally perceived as something complex and complicated that caused confusion and was hard to handle. This notion was popular with all non-users, even or especially those who had only tried using the Internet a few times. In both countries, a low number of interviewees specifically mentioned that they were refusing the Internet, although it should be said that in general the attitudes towards technologies were more extreme in Sweden than in Britain. This will be discussed further in sections 7.2.3 and 7.2.5. Another shared finding – and in general the most surprising one – that the interviews in Britain and Sweden revealed was the potentially negative impact of warm experts (Ba-

kardjeva 2005) on Internet use. While it makes sense that these close relationships who use the Internet could provide help and support when non-users start going online, it was surprising to find that they were also holding non-users back from going online themselves – albeit involuntarily. The majority of all interviewed non-users had other people using the Internet for them on a regular basis. Hence, they did not see the need to learn using ICTs themselves, as they were happy with the situation. For them it represented a convenient way to benefit from the Internet, when they wanted to or felt the need for it and stay away from the complications otherwise. Only a small number of interviewees felt that they were depending on others too much and that it would be better, if they could use ICTs themselves.

Depending on their general socio-economic backgrounds, other issues they had to deal with, their experiences with being offline and proxy use as well as their experiences with reactions from their surroundings, non-users in both countries displayed a wide range of feelings about being offline. The spectrum reached from those who were (extremely) happy and comfortable with their situation (mostly those who were well-off financially and had others using the Internet for them on a regular basis) to those who were (extremely) unhappy with their situation and wanted to change it (mostly those who were from disadvantaged backgrounds or felt they were being too dependent on others or felt left out). While both samples had non-users within that range, Swedish non-users were more often than not found at the extreme ends of this spectrum, while the majority of British non-users was somewhere ‘in between’. This slight difference will be revisited in section 7.2.5.

7.2.3 Cultural Settings

Cultural settings influence the adoption of ICTs. The definition of culture is manifold and varies across and within disciplines. For this work the simplified understanding of this term as used by Thomas & Haddon (2011) will be adopted: “[W]e shall understand by ‘cul-

ture' some kind of commonly shared symbols, values, beliefs, and attitudes, as well as their translation into everyday social perceptions, behaviour and material artefacts" (ibid.: 17). For operational reasons this discussion will mainly consider national cultural factors to frame the above-discussed similarities and differences between British and Swedish non-users and their lives as offliners within their societies.

According to international reports, income inequalities are lower in Sweden than in Great Britain. As a general level of income inequality the gini-coefficient³⁹, points to larger inequalities in the UK (gini: 0.36) and a rather equal distribution of incomes in Sweden (gini: 0.25) (United Nations Development Programme 2008). Moreover, educational inequalities are slightly lower in Sweden than in the UK (OECD 2010). This points towards a socially more homogeneous society in Sweden, which "[...] may well facilitate the diffusion of ICTs" (Thomas & Haddon 2011: 19) as formulated by Rogers (2003) in his theory on the diffusion of innovations. The general level of education is higher in Sweden with more Swedes obtaining degrees from higher educational institutions than Britons. Among other factors, this explains the high degree of Internet adoption and usage in Sweden. "Several studies show that educational attainment [...] is actually one of the major influences explaining levels of internet adoption and drop-out rates (Rainie, 2003)" (Thomas & Haddon 2011: 20).

Another important factor relating to culture is the general 'openness to technological innovation'. Sweden – and in general Scandinavia – is renowned for their openness toward technologies, which is traditionally fostered by a strong emphasis of governments and policies on technological development (Frykman & Löfgren 1985) as was pointed out earlier (Section 2.5). Statistics show that in both countries 91 per cent of all children aged 6 to 17 years used the Internet in 2008 (Tsatsou et al. 2009: 111). Moreover, according to education statistics 99 per cent of the schools in both countries do now have access to the

³⁹ The gini-coefficient of inequality is a commonly used measure of inequality. "It varies between 0, which reflects complete equality and 1, which indicates complete inequality" (World Bank 2009), i.e. one person has all the income, and all others have none. Accordingly, a lower gini value points towards lower income inequalities within a country.

Internet (NationMaster 2012). However, the number of children who share one computer with Internet access is lower in Sweden than in Britain (Hasebrink et al. 2009: 222). Findahl's 2011 report on Internet use in Sweden finds that already half of the Swedish children aged 4 years use the Internet occasionally and every fifth of them on a daily basis (Findahl 2011: 41). The numbers rise the older the children get. The analysis in Chapter 4 showed that there were virtually no Swedish non-users younger than 25 years old, whereas 6 per cent of the British non-user population was younger than 25. With these numbers, the governmental support of technology acquisition and the general Swedish technology-affinity in mind, it becomes clear why most Swedes have household Internet access: they felt the necessity for their children's development and to keep up with contemporary society (Olsson 2006: 618).

Against the background of these considerations – Sweden represents a more homogeneous and technology-friendly culture than Britain – it is understandable that the number of Internet non-users has decreased dramatically in Sweden over the past five years, whereas it has remained relatively stable in Great Britain during the same time period. Moreover, these differences might also explain why non-users in Great Britain had less pronounced feelings about their non-use. The feelings of non-users about being offline in Sweden were mostly located at the extreme ends of the happy vs. unhappy scale. Those who wanted to go online but were not able to due to socio-economic or other constraints were very unhappy with their situation, whereas those who consciously chose to stay offline were very happy about their choice and could almost be described as 'proud', so that they could be categorised as resisters (e.g. Wyatt et al. 2002). In Britain the majority of non-users had very tempered views about their lives offline. This could be the case due to the lower pressure of society to be online. While there is a clear notion of social desirability of Internet usage apparent in the British interviews too, this notion becomes extremely evident in the Swedish interviews, where some non-users reported extreme reactions

from their surroundings. The reactions of friends and family towards British non-users were reported to be much more moderated (Sections 5.1.2 and 5.2.2).

With regards to the above discussion of cultural differences between Britain and Sweden, it should be noted that they are not based on systematic data. The argument is based on results found in this study, policies from both countries, and evaluations of other authors (e.g. Olsson 2006). They should hence be regarded as preliminary evaluations on the basis of a set of data that need to be further investigated in future research.

7.2.4 Policies

Policies regarding ICTs are a second important influence on the differences in proportions of Internet users and differences in their experiences with and feelings about their own non-use between Great Britain and Sweden. As explicated in the literature review (Section 2.5) both countries emphasise the potentially positive impact of Internet use on an individual but also on a country level. Both governments hold that all or at least most of the society needs to be online for the nation to be able to establish itself in the worldwide information based economy (e.g. Department for Business Innovation and Skills 2010: 5). Both countries focused on providing a strong broadband infrastructure early on - however, Sweden made this move a lot earlier (1990s; e.g. Olsson 2006) than Britain (early 2000s; e.g. White & Selwyn 2011). Additionally, Sweden implemented a temporary governmental tax-refund for the acquisition of computers in the mid-2000s, which contributed to a jump in computer and Internet access in Swedish homes between 2003 and 2007 coupled with a high increase in broadband connections, which are almost equivalent to Internet access in Sweden but not in Britain (see Section 1.2, Figures 1 and 2).

Both countries' governments aim to achieve ubiquitous Internet access and use of their complete populations with Sweden seemingly approaching a more achievable goal than Great Britain. The numbers of non-users in the population in Sweden are extremely low for those aged 55 or younger, so that they find themselves in a position of being able

to classify Internet non-use as a phenomenon that might die out with the next few generations. Judging from the statistics in section 4.1, the recruitment of middle-aged interviewees in Sweden was expected to be accordingly difficult. However, we recruited an equal number of non-users in Sweden and Britain with similar levels of difficulty. It appears that specific groups are underrepresented in the survey data, i.e. immigrants and those from very low socio-economic backgrounds so that it can be estimated that the actual number of Swedish non-users is higher than indicated in the quantitative results. Hanna, for example, who was offline mainly due to monetary constraints, did not have a landline phone connection in her house, which automatically excluded her from participating in the Swedish survey (Section 3.3.1.1.2). Those who were struggling with the Swedish language were also excluded from the survey, which would be the case for a large number of immigrants – especially those living in very poor neighbourhoods. Both groups were identified as vulnerable in the interview study and should be focused on more in future policies specifically in Sweden but also in Great Britain (Section 8.2). While the language barrier was also an issue in the British survey, a telephone landline was not an excluding factor due to the face-to-face design of the data collection. The British data showed a larger proportion of non-users across all age groups, but the government seems to be refocusing their policies into the direction of infrastructures, which is certainly the first step, but does not tackle issues regarding digital inequalities or lack of skills or motivation that were found in previous research (e.g. Helsper 2011a) and confirmed in this study.

Although in both countries bodies, such as the UK Online Centres, adult learning centres, and libraries, provide free-of-charge IT courses, which teach basic computer and Internet skills, such as using mouse and keyboard, writing emails and looking for information, those courses do not run continuously but only at specific times during the year. Information on them might be hard to find for the most vulnerable groups, such as immigrants and those who are financially worst-off. Those who were offline mainly due to excluding factors and not due to a conscious choice to stay offline often found themselves in

disadvantaged positions and many immigrants were isolated from groups other than their immediate social networks that mostly consisted of their families.

The differences in early policies regarding the spread of ICTs in Britain and Sweden in combination with the differences in cultural settings regarding the technology-proneness of Scandinavian countries has led to a much lower proportion of Internet non-users in Sweden than in Britain. Especially the cultural settings may play a role that cannot be overcome merely by providing more and faster access to the Internet in Britain. The attempt of the Race Online 2012 campaign to get 'everyone' in Britain online, which was recently replaced by the Go ON UK campaign (Go On UK 2012) that aims to to "[...] bring the benefits of the internet to every individual and every organisation in every community across the UK" (ibid.), might help to increase the numbers of Internet users over the next years. Nonetheless, it is questionable whether this effort will be enough to close the gap between an extremely well connected Sweden and Britain, where the numbers of non-users have stagnated or only marginally decreased over the last years.

7.2.5 Consequences for Non-Users

A question specifically related to the discussion below is the third research question: How do non-users themselves perceive technologies and their offline lives, and how do they 'get on' in a highly technologised world? The extremely low number of Swedish Internet non-users was related to some specific notions found for the middle-aged interviewees from Sweden. A large number of them displayed more extreme reactions and perceptions regarding their own non-use as well as more negative opinions on technologies. A number of them felt it was too hard, if not impossible, to get on in Sweden without using the Internet. All of them had others doing things for them online, such as banking, finding information, or dealing with the tax office. Those who were in fortunate socio-economic positions and consciously chose to stay offline mentioned that the top-down approach of the government 'prescribing' the use of technologies to everyone and being reachable all the

time was not a good thing. Many non-users agreed with this notion – albeit more subtly. This notion was not as strong in Great Britain, where it is becoming more difficult to do many things offline, but the disadvantages are smaller than in Sweden. While offline banking transactions in Great Britain are still free of charge, Swedish non-users have to pay a fee at their bank every time they want to transfer money. Some tax services are only available online, so that those non-users who were running a business had to hire accountants to do their tax work for them. If they were not in a financial position to do so, they would have to learn how to do this online themselves.

Hence, while the Swedish government mostly succeeded in its plan to get most of their countrymen online and become one of the leading countries in the information economy, those who did not get on board with this plan – whether due to excluding or choice-related mechanisms – find themselves in a position where it is hard to get by in everyday life without being in one way connected to the Internet. All Swedish non-users were online by proxy to a bigger or smaller extent, depending on their interest and their occupations. On an individual level the technological advance of the Swedish society as a whole has left some people behind and some trying to avoid having to use ICTs as they partly feel ‘forced’ and want to resist technologies as long as possible (Section 5.2.2).

It seems to be more important to overcome digital inequalities as pointed out by recent research (e.g. Zillien & Hargittai 2009; Helsper 2011a, 2011b; White & Selwyn 2011) and facilitate easy and low cost (home) access to those who want to go online than aiming to ‘get’ everyone to be Internet users. The assumption that digital inequalities would automatically decrease with higher proportions of Internet users has been proven wrong in this work and other studies (e.g. Helsper 2011a).

7.3 Going online

A number of non-users in both countries were considering learning how to use the Internet in future, whereas some were not considering this option at all. One factor contrib-

uting to non-users staying offline was, in fact, found to be the availability of warm experts, who were previously mainly considered to have a positive influence on potential future Internet use, as they could encourage and support non-users in their learning process (e.g. Barkadjeva 2005; Selwyn et al. 2005). The other side of this coin, however, is that these warm experts could potentially represent a convenient way for non-users to stay offline, as it is 'easier for everyone', if these experts use the Internet for them. A large number of non-users reported that it was the better option for both parties, because it was faster. This might have two consequences: 1) The incentives for non-users for going online decrease, because they have someone available who could do things online at any given time; 2) The perceived support for going online, which includes asking warm experts a lot of questions (which will take up more time than them 'just doing it quickly') might be getting lower with the ever increasing numbers of devices that might make things easier for expert users, but increase the perceived complication of things for non-users. For both involved parties proxy use is – in the short term – the 'easier' solution. Swedish non-user Karolina, for example, reported not only feeling dependent on others using the Internet for her, but almost worse, whenever she tried to do something on the computer herself, because she would always have to ask for help. Warm experts presumably do not mind using the Internet themselves, because they are fast and good at it and they like using the Internet. Teaching someone how to use it, on the other hand, takes a lot of time and patience, because the Internet, applications, and devices are becoming more and more complex, which will most likely prompt a lot of questions from new users.

For those non-users, however, who mentioned a strong interest in using the Internet themselves in the future, the availability of these experts in their close networks is very valuable. Some of the British interviewees were in the process of starting to learn how to use computers. The majority of them mentioned friends, neighbours, or family, who would help them, when they got 'stuck'. Social networks also represent one of the most valuable sources for motivating non-users to go online in the first place. The opinion

of close friends and family is presumably valued more than that of some far-away politician by most people. This strong influence of social networks has been formulated in previous research (e.g. Bakardjeva 2005) and should be encouraged. Instead of providing online 'services' to those non-users who mentioned an interest in going online themselves, warm experts could be more helpful, if they taught non-users the necessary skills in a friendly and personal setting, so they can acquire the skills they need to do the things online they want to do. In these highly networked and technologised societies, everyone plays a part in helping others online, if they want to be online; social networks, governments, communities, commercial sectors, third parties, etc.

7.4 Summary of Findings

This study set out to answer a set of research questions regarding mechanisms contributing to Internet non-use in two highly developed and technologised countries: Great Britain and Sweden. The specific questions asked 1) whether the same socio-economic factors are influential for middle-aged non-users and the general non-user population, 2) what the reasons for non-use were, and 3) how non-users themselves perceived their offline lives. All of these questions were overarched by the following general question that guided this work: What kinds of mechanisms lead to different types of non-users and how do they negotiate their offline lives in highly technologised societies?

The overarching question will be tackled at the end of this section, as the sub-questions need to be answered before it is possible to make statements about the guiding question. The results showed that in general similar socio-economic factors were influencing Internet non-use in the middle-aged groups as in the complete population. However, a stronger influence lay on educational qualifications and income. This result was confirmed in the qualitative phase, which showed that a considerable proportion of British non-users were from less fortunate socio-economic backgrounds, and those Swedish non-users who

were offline mainly due to excluding factors were mostly from an immigration background or were struggling financially.

Most non-users mentioned several different reasons for being offline. In the majority of cases in both countries there was a mixture of factors relating to choice and exclusion. The extent to which one of them was more predominant than the other was dependent on socio-economic circumstances, support or 'services' from warm experts, opinions of others and their general attitudes towards trying out new technologies. The majority of non-users in both countries displayed a generally reluctant attitude about ICTs. However, the mixture of reasons is one that is hard to disentangle. Digital divides and inequalities are persisting, but it is questionable in how far they have developed a culture of 'no need' for technologies in the disadvantaged socio-economic groups.

Non-users varied regarding their perceptions of their offline lives. While a number of non-users – especially those from more advantaged socio-economic backgrounds – were happy with being offline and did not see any disadvantages for any part of their personal or professional lives, others – especially those who were struggling with socio-economic difficulties – felt left out and excluded. The majority of non-users in Britain found themselves somewhere in the middle of this spectrum; they thought that there were potential benefits for them in using the Internet but they were not of the opinion that they could not live well without it. A number of non-users, however, thought their lives would improve, if they could use the Internet and were planning on improving their skills. This potential move online was highly dependent on how happy or unhappy non-users were with their offline lives and of course the opportunities to actually go online. This was significantly easier for those who already had Internet access at home.

The general research question asked for mechanisms that led to different types of Internet non-users as well as their negotiation of offline lives in highly technologised societies. The first part needs to be altered with regards to the attempted typology. While it would have been possible to group non-users by the likelihood of starting to use the Inter-

net in the near future their combination of reasons for being offline and their combination of factors contributing to a potential move online were still various. Equally, it was not regarded as recommendable to group them by reasons for non-use, as once again a number of factors were in play and the combination and weight of factors were different in each case. Mechanisms contributing to non-use were – as mentioned above – socio-economic background (especially educational qualifications and income), close social networks (support, ‘service’, and attitudes), and attitudes towards new technologies in general and ICTs in particular (which are influenced again by social networks and socio-economic background). The ways non-users negotiated their offline lives were accordingly varied. The majority had others using the Internet for them so that they fall into the category of proxy users, so they cannot be described as disconnected from the Internet.

7.5 Internet Non-Use – The Challenge of Definitions

Earlier research points out what also became obvious in the results – especially the qualitative: “[A]ny attempt to establish long-term conceptual guidelines for measuring and standardising internet-related indicators may be jeopardised by the (unpredictable) appearance of yet more devices that will enable access to the internet and by the evolution of innovative web-based services, especially those based on broadband” (Dolničar 2011: 192). For operational reasons, non-users in this study were initially defined as those individuals who had never used the Internet themselves on any device before or only tried it a few times, i.e. they lack the essential skills needed to use the Internet. While this attempt of pre-defining non-use was necessary to conduct the quantitative work and recruit non-users for the interview study, it became clear during the interviews that non-use is an extremely blurry subject not only for researchers, but for non-users themselves as well. Some of those who defined themselves as not using the Internet were, in fact, using it on their phones either without realising that they were connected to the Internet at all and others because they defined non-users as someone who is not using computers to access

the Internet. Again others would describe themselves as non-users, because they had only tried using the Internet a few times but never really managed to 'figure it out', so in their eyes, they were non-users.

It is almost impossible to create a clear definition of non-use, as the picture becomes more and more complex. Would someone who has attempted using the Internet before a couple of times and sometimes looks at the screen when someone opens a page for them be described as a non-user or a 'low user'? The picture becomes even more complex, if we consider the time frames of potential Internet use: "If you ask 'Do you use the internet at least once a month' this produces a 3-5% greater positive response compared to asking people if they currently use the internet. Moreover, asking about usage during the past three months produces at least 30% more users compared to asking if people are monthly users" (Dolničar 2011: 193).

While it is, of course, necessary to establish definitions and categories to facilitate surveys mapping digital inequalities and related issues, it is important that researchers keep in mind that these definitions are by no means perfect or exhaustive. Qualitative studies need to be done to complement and enhance quantitative studies to avoid giving a wrong picture. A potential reason for the extreme gap between non-user proportions in Britain and Sweden might be a different understanding of Internet use: A number of low users in Britain might have identified themselves as non-users rather than users – as was the case in the qualitative study as well – whereas a number of low users in Sweden might have identified themselves as users rather than non-users. While this is, of course speculation at this point, it is something that researchers need to keep in mind when making broad statements and assumptions. Survey results can only provide a limited picture of extremely complex issues. Similarly to the attempt at creating a typology – which would have been possible and sensible, if judging purely by the survey data – the oversimplification of non-use was revealed through the qualitative study, which showed the complexity of Internet non-use in two highly technologised countries.

8 Conclusion

The aim of this dissertation was to shed light on an under-researched topic within the area of digital inequalities research: Internet non-use in highly technologised countries as exemplified by Great Britain and Sweden with a specific focus on the age group 25 to 55 year-olds, which has not been made a subject for examination before. The focus on these two countries enabled a comparison between two economically equally developed countries with different proportions of Internet non-users. The middle-aged populations were chosen as an especially interesting group, as they stay in the work force for a considerable amount of time and are more likely to have children living in the household than other age groups – being offline might hence be problematic for some of these non-users. Moreover, children and young people as well as the elderly have been examined with regards to Internet use and non-use, but the age group ‘in between’ has not. The mixed methods design sought to provide a new angle on digital inequality research and make it possible to consider important individual-level variables that have an impact on Internet use and non-use. The comparative design was chosen to add another layer of depth to this research and uncover mechanisms and factors that might be hidden or taken for granted, if it was not for a comparison of two economically similar countries that differ in terms of technology-proneness, proportions of non-users, and policies regarding ICTs.

The paragraphs below will critically discuss the contributions and limitations of this study (8.1) as well as provide some policy recommendations on basis of the findings (8.2) and suggest future research (8.3) that could improve our understanding of Internet non-use in highly technologised countries.

8.1 Contributions and Limitations

The results discussed in the previous chapter (7) showed a multi-layered and complex picture of non-use in both countries as soon as individual-level factors were considered in the analysis. Considering socio-economic factors in the non-user debate is, of course, im-

portant but is not providing a complete picture of the phenomenon. Non-users were not found to be offline due to one specific reason but rather due to a combination of a number of factors. Socio-economic factors were still playing an important role in explaining Internet use and non-use; however, individual factors played a significant role as well, as shown in the second quantitative chapter (6), which added attitudinal variables to the original logistic regression models. These additions changed the influence of socio-economic variables considerably and confirmed the findings from the interview study that provided an extremely complex picture of reasons for non-use and perceptions of non-users about their lives offline.

Contributions

This study contributes to the field of Internet non-user and digital inequality research theoretically as well as empirically. On the basis of the combination of data it was not deemed recommendable to develop different types of non-users but rather present the complexity of the individual cases to add to the theoretical understanding of non-use. The combination of quantitative, mainly socio-economic, data with individual data, such as attitudes and perceptions of non-users, suggests that at this point a typology of non-users would paint an incomplete and potentially misleading picture of the complex matter of Internet non-use in highly developed societies. It seems that non-use becomes more complex as societies proceed to become more and more oriented towards leading technology-dominated lives. Even typologies that consider factors related to choice and exclusion (e.g. Wyatt et al. 2002) do not seem to grasp the complete picture as it was shown that an entangled combination of both sets of factors was at work in all cases of the interview study. In her French mixed-methods study Trémenbert (2010) considered additional factors related to isolation and motivation. She comes up with five different types of non-users: (1) unwilling non-users who know about the Internet but don't want to use it; (2) potential users who lack a certain degree of motivation; (3) future users, who are very motivated

and very knowledgeable; (4) excluded non-users, who know little about the Internet and are excluded for objective or subjective reasons; and (5) somewhat motivated and little informed non-users, who are still refractory (*ibid.*: 9). While it would be possible to group non-users in the study at hand according to these categories, this would paint a misleading picture of motivations, reasons for non-use, and perceptions of lives offline. These typologies do not seem to consider the potential lack of life-fit of the Internet in non-users' lives, as has been done by Selwyn (2006: 284). This notion, however, became apparent in the interview study and especially pronounced in those cases where non-users had decided to become users or in the case of ex-users. The change in circumstances led to a change in behaviour; i.e. the living circumstances had changed and accordingly the life-fit of ICTs in some non-users lives.

Empirically, this study showed the added value of a mixed methods design and conducting a country comparison. Both emphasised a number of phenomena that would have been hidden otherwise. Apart from the findings above a prime example of the advantages of a cross-country comparison is the perception of British middle-aged non-users that ICTs were not 'their generation', which was not mentioned by any of the Swedish interviewees. If it had not been for this comparison with Swedish non-users the British findings would have suggested that this is a general issue for all middle-aged non-users, when it is, in fact, a country-specific phenomenon that is influenced by cultural differences in societal IT-proneness and expectations. The comparison also showed that there are a number of common factors contributing to Internet non-use in both countries, so that some general conclusions could be drawn from the data. The combination of all these different layers provides an extremely detailed picture of middle-aged non-users in Great Britain and Sweden that can be built on in future research and that can be utilised for policy recommendations.

Limitations

Nonetheless, the study at hand has its limitations regarding the generalisability of results. Some of the quantitative data from Britain and Sweden were not directly comparable due to different wording or because some variables were only available in one dataset but not in the other. As Hasebrink-Paus et al. (2009) put it: “[T]he many gaps in the data and the many differences in definitions, samples and methods used for such core issues as online use and risk mean that all claims and conclusions must be treated as indicative rather than conclusive. Simply put, some data were weaker than could be wished, some were absent and some were difficult to interpret” (ibid.: 51). Although international projects, such as the World Internet Project, specifically try to avoid these issues, they will never be completely eliminated. However, simple issues such as the phrasing of questions regarding children in the household or asking for disabilities should be possible to minimise fairly easily.

Other issues, such as different interpretations of questions by the respondents are less easy to eradicate. The study at hand tried to overcome this issue through a close collaboration with Swedish scholars to ensure that the interview guides ask the same questions and probe for the same notions within attitudes and experiences of non-users in both countries. The principal investigator took part in the majority of the Swedish interviews to guarantee the same approach in all interviews used in this study. However, the single-author approach of this study poses limitations in the sense of the reach and detail of the study. Although theoretical saturation with regards to the qualitative data was reached in both countries, a significantly larger sample in both countries would add to the generalisability of the findings and is strongly encouraged for future projects. Specific suggestions for future research in this area will be provided in section 8.3.

Another limitation of this study is the limited number of qualitative interviews, which is one of the pitfalls of a single author study. A larger study with a similar research

design, potentially involving more than two countries, would enable an even more detailed picture of the topics analysed and deliberated in the last seven chapters.

8.2 Policy Recommendations

The recommendations presented below are not meant to be fully formulated policy agendas but rather ideas to give policy makers something to think about in an infrastructure-dominated environment (Section 2.5; for Great Britain see Helsper 2011; White & Selwyn 2011; for Sweden see Olsson 2006) The recommendations pick up on specific notions found in this study and previous research in the area of non-use and digital inequalities.

Judging from the results and discussion, the current development of IT policies in Britain and Sweden in the direction of infrastructure provision is, of course, necessary, but only the first step for those non-users who would like to go online. Those interviewees who were offline due to socio-economic constraints but showed an interest in going online mainly lacked home access or easily available access elsewhere. As in Hanna's case (Section 5.2.1), a lot of non-users from rural areas might be faced with no household access and the next available connection far away. This means that it takes a lot of effort for these non-users to get online in the first place. The results suggest that potentially governmentally subsidised home access through cheap and easy-to-handle devices and Internet connections for those who desire to go online would be a first step in the right direction. A number of studies have suggested that personal home access provides a completely different quality of access. Moreover, it would lower the threshold for those who worry that they might break the computer for other users, if they had their own and would not put other people's work or documents on the line.

A second step would include a larger number of IT courses not only for older people, but also – and specifically – for younger non-users. In both countries, non-use was being treated as somewhat of a taboo topic, similar to illiteracy. Apart from those non-users

who actively chose to stay offline, the majority of those who had excluding factors among their reasons (7.1) often felt left behind and were apologetic about their non-use. While it seems to be ok and 'natural' for older individuals to be offline, this was not perceived as normal for middle-aged non-users. A shift in perceptions away from non-use being regarded as something abnormal (Selwyn 2003b) seems advisable to be able to address this topic in the first place, instead of leaving non-users feeling uneasy about being offline (see also Klecun 2008). Moreover, opening up a dialogue about Internet non-use among younger and middle-aged groups of the population would be advisable instead of assuming non-use is something particular to only the older generations (see also Helsper 2011a).

This might also tackle issues with motivation of those non-users who do not see any benefit for their current lives. A number of them did not really know what others did when they were online, apart from the sending emails and buying things online. A large information campaign that does not only advertise the usefulness of ICTs for employment, but also shows the breadth of things that could potentially make the everyday lives of non-users easier could help with this. In this context it would be important to stay positive about the potentials and not drift towards saying that non-users miss out and are making a bad choice. Instead, it would be useful to encourage non-users to take the first step and show them how easy and safe Internet use can be.

Today's common policy agendas that aim to get the whole society online often fail to see that non-users who would theoretically be interested in going online might require various different types of policies instead of the current focus on infrastructures and general IT skills. A broader information campaign about how use of the Internet could be potentially beneficial to those who are currently choosing to stay offline could help to mitigate the often-negative picture of the Internet that is often communicated by the media (e.g. crimes committed online, privacy issues, stolen credit card details etc.). These recommendations could be fruitful for policies across various developed countries.

While these policy recommendations are formulated with those in mind who want to become Internet users in the future, or who are at least broadly considering it, it is necessary to reflect on both the common notion found in the interviews and the current policies in Britain and Sweden, which focus on the need for everyone to be online. The results presented and discussed in this study found that this is clearly not necessary. Many non-users were thriving without being online themselves, and all of them had access to the Internet via friends, family, or public libraries and community centres when they needed it. Moreover, the difficulties of defining non-use (Section 7.5) show that some low users, who are counted as users in most studies, might do fewer things online than some of the non-users in this study who were using the Internet by proxy. This raises issues not only about what society and research define as use and non-use of technologies, but also on what it means to be offline versus online, to have a phone versus no phone, to have a car versus no car. Additionally to the above given examples, this is the case for many other things that are largely taken for granted in Western societies. This shows that there is a need for a fully formulated theory of non-use in the social sciences—not only with regards to the Internet, but also other common technologies. With more and more widely used technologies around, this is a shortcoming that should be changed in future research.

8.3 Future Research

While this study was able to shed light on important factors and mechanisms contributing to Internet non-use in highly developed and technologised societies in Europe, it produced a number of new questions as well. We know more about middle-aged non-users, but we still do not have the full picture due to the abovementioned limitations. More research on the age group ‘in between’ is needed to find out about their specific struggles with being offline as expressed by some non-users in Britain and Sweden. A large-scale mixed methods study should be applied – ideally including a country-comparison of several European states – that specifically focuses on these age groups as has been done for children, for ex-

ample (e.g. Livingstone et al. 2012). Considering that this age group will stay part of the work force for a considerable amount of time and a large number have children living in the household, there should be a focus on those non-users who want to go online but are facing barriers that prevent them from doing so: among others cost, lack of access, confidence, and skills seem to be major barriers to non-users who did not actively choose to live offline.

A second line of research is suggested that should focus on the most vulnerable group found in this study: immigrants. They are often missing in large-scale studies due to language issues or other obstacles. They were found to be one of the most vulnerable and biggest offline groups in the Swedish interview study and should not be ignored in future research. Both Great Britain and Sweden are home to a considerable number of immigrants who came to these countries for a variety of reasons. However, we know very little about their Internet use or non-use. The findings in this study suggest complex family structures that might include patriarchal traditions and language issues at least for women. The three cases in this study, however, are nowhere near enough to make any final conclusions on this. A multilingual team would be needed to shed light on the dynamics in this group and why so many of the women are offline. There is a big potential of forgetting about these groups, because – especially in Sweden – they often live in separate neighbourhoods in the suburbs of larger cities and stay amongst themselves. Part of the integration into a highly technologised society, such as the Swedish one, might include the ability to use ICTs, not to speak of the general ability to communicate in Swedish or at least English in written and verbal form, the first of which was a problem for all of the female immigrants in the interview study.

A closer look into these issues would contribute considerably to the understanding of Internet non-use and digital inequalities in highly developed countries. This type of research could not only be extremely interesting in Western Europe, but also in other highly technologised areas, such as North America, Australia, or New Zealand. In all cases, a

mixed methods design should be preferred over a single method design to bring breadth and depth to the research and shed light on this topic that has thus far mostly been looked at from a purely quantitative perspective. The complexity of the results in the study should not be discouraging from future research but rather inspiring to look into this topic on a larger scale.

8.4 Concluding Remarks

This study is contributing to existing non-user and digital inequality research theoretically and empirically by providing a different angle on Internet non-use on the basis of a comparative mixed-methods design that focused on middle-aged non-users and their perceptions of everyday ‘offline’ life in a networked world (Castells 2000). It showed that a combination of several different mechanisms on both a macro- and a micro-level (see Section 2.7, Figure 3) contribute to being an Internet non-user. The extensive analyses of both sets of factors and the combination of these in the second quantitative phase (Chapter 6) showed a complex picture of reasons for non-use that are nearly impossible to disentangle. Moreover, it became clear that a grouping of non-users with specific sets of reasons for non-use might be useful for policy interventions but was not considered as a useful way forward in this study. To gain more in-depth knowledge of these complex mechanisms it is advisable to keep an open mind and not ascribe individual non-users to a typology upfront, as it cannot provide the complete picture. This study contributed to providing a more detailed and colourful picture of this societal phenomenon as well as providing ideas for future research and potential policy interventions.

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Appendix A – Specifics of Quantitative Methodology

This appendix explicates important specifications regarding the quantitative methods and analyses mentioned in footnotes and brackets within the thesis chapters (specifically chapters 3 and 4).

It explains differences in wording of questions within the questionnaires in the two utilised surveys, differences in definitions between the British and Swedish datasets, and other issues of comparative data analyses (I), such as the recoding of educational qualifications (II) and income (III) for both countries. Moreover, it explains how variables were created for Great Britain on the basis of the Swedish data (IV). The lists of variables used in the Principal Components Analysis are presented at the end of this appendix (V).

I. Wording of Questions

Tables I.a. and I.b. below summarise the wording of the questions asked in the 2007, 2009 and 2011 waves of the British Oxford Internet Surveys (OxIS) and the Swedish World Internet Institute (WII) surveys. The tables show that some of the questions were asked differently in the three waves. Moreover, they were sometimes also asked differently between the two countries, which makes a direct comparison difficult at times and sometimes even impossible.

Table I.a. Wording of Questions asked in Great Britain 2007-2011

	2007	2009	2011
Internet Access at Home	Does this household have access to the Internet? [If 'NO', PROMPT: have you had access in the past?]	Does this household have access to the Internet? [IF 'NO', PROMPT: So there is no internet access in your home at all? IF STILL NO: Have you had access in the past?]	Does this household have access to the Internet? [IF 'NO', PROMPT: So there is no Internet access in your home at all? IF STILL NO: Have you had access in the past?]

Broadband Access at Home	Do you have a broadband Internet connection at home? [PROBE: A broadband connection offers access to the Internet at faster speeds than a standard dial up modem. It enables users to have the Internet 'always on' and to make & receive phone calls on the same line]	Do you have a broadband Internet connection at home? [PROBE: A broadband connection offers access to the Internet at faster speeds than a standard dial up modem. It enables users to have the Internet 'always on' and to make and receive phone calls on the same line]	N/A
Internet Use	Moving back to the Internet, do you yourself personally use the Internet at home, work, school, college or elsewhere or have you used the Internet anywhere in the past?	Moving back to the Internet, do you yourself personally use the Internet at home, work, school, college or elsewhere or have you used the Internet anywhere in the past?	Do you yourself personally use the Internet on whatever device at home, work, school, college or elsewhere or have you used the Internet anywhere in the past? [READ OUT. CODE ONE ONLY. IF NEVER USE PROMPT: So you have never used the Internet at home, school or work?]
Demographics			
Age	Age: In what year were you born?	Age: In what year were you born?	Age: In what year were you born?
Gender	Gender [BY OBSERVATION]	Gender [BY OBSERVATION]	Gender [BY OBSERVATION]
Disability	Do you have a health problem or disability, which prevents you from doing every day tasks at home, work or school or which limits the kind or amount of work you can do?	Do you have a health problem or disability, which prevents you from doing every day tasks at home, work or school or which limits the kind or amount of work you can do?	Do you have a health problem or disability, which prevents you from doing every day tasks at home, work or school or which limits the kind or amount of work you can do?
Marital Status	Marital Status: Are you...? Single, Married, Living together with a partner, Divorced/separated, Widowed	Marital Status: Are you...? Single, Married, Living together with a partner, Divorced/separated, Widowed	Marital Status: Are you...? Single, Married, Living together with a partner, Divorced/separated, Widowed
Children	How many children [live in your household]?	Do any children (people under 18) live in your household?	Do any children (people under 18) live in your household?

Educational Qualifications	What is the highest educational or vocational qualification that you have? [IF STUDENT/AT SCHOOL] Or that you will receive if you complete your next set of exams?	What is the highest educational or vocational qualification that you have or that you will receive if you complete your next set of exams? [CODE ONE ONLY. IF MENTIONS MORE THAN ONE ASK: Which one would you consider the highest degree?]	What is the highest educational or vocational qualification that you have or that you will receive if you complete your next set of exams? [CODE ONE ONLY. IF MENTIONS MORE THAN ONE ASK: Which one would you consider the highest degree?]
Occupational Status	Which of these descriptions best describes your current situation? [NOTE: IF RESPONDENT IS A STUDENT AND IS WORKING ASK WHAT IS YOUR PRINCIPAL ACTIVITY? FULL TIME STUDENT WHO WORKS PART TIME IS A STUDENT. FULL TIME EMPLOYEE WHO IS A PART-TIME STUDENT = FULL TIME WORKING]	Which of these descriptions best describes your current situation? [NOTE: IF RESPONDENT IS A STUDENT AND IS WORKING ASK: What is your principal activity? FULL TIME STUDENT WHO WORKS PART TIME IS A STUDENT. FULL TIME EMPLOYEE WHO IS A PART-TIME STUDENT IS WORKING FULL TIME]	Which of these descriptions best describes your current situation? [NOTE: IF RESPONDENT IS A STUDENT AND IS WORKING ASK: What is your principal activity? FULL TIME STUDENT WHO WORKS PART TIME IS A STUDENT. FULL TIME EMPLOYEE WHO IS A PART-TIME STUDENT IS WORKING FULL TIME]
Income	The incomes of households differ a lot in Britain today. Here is a card showing the range of incomes that people have. Which of the letters on this card best represents the total income of your household before tax? Please just tell me the letter.	[Self Completion Section] The incomes of households differ a lot in Britain today. Here is a table showing the range of incomes that people have. Which of the letters on this table best represents the total income of your household before tax?	[Self Completion Section] The incomes of households differ a lot in Britain today. Here is a table showing the range of incomes that people have. Which of the letters on this table best represents the total income of your household before tax?
Mobile Phone	Do you yourself have a mobile phone?	Do you yourself have a mobile phone?	Do you yourself have a mobile phone?

Reasons for non-use (only data from 2011 used)	
1. I will read a number of reasons that some people give to explain why they don't use the Internet. Could you tell me which of these reasons apply to you? (Multiple responses possible)	
a. I am just not interested (Interest) b. I have no connection available where I live or where I work (Access) c. I have no computer available (Access) d. It's too difficult to use (Skills) e. It's not useful f. It's too expensive g. I am worried about my privacy h. I worry about bad experiences with SPAM or viruses i. I do not have enough time (Time) j. There's nothing of interest on the Internet (Interest) k. Do not yet know how to use the Internet (Skills) l. It's too time consuming (Time) m. It's not for people of my age n. It's not for people like me	
2. And which of these reasons [why you are not using the Internet] was the most important? (Only one response possible)	
a. I am just not interested (Interest) b. I have no connection available where I live or where I work (Access) c. I have no computer available (Access) d. It's too difficult to use (Skills) e. It's not useful f. It's too expensive g. I am worried about my privacy h. I worry about bad experiences with SPAM or viruses i. I do not have enough time (Time) j. There's nothing of interest on the Internet (Interest) k. Do not yet know how to use the Internet (Skills) l. It's too time consuming (Time) m. It's not for people of my age n. It's not for people like me	
Attitudinal variables (only data from 2011 used; Chapter 6: Quantitative Results II)	
Agreement vs. disagreement: It is a good idea to try new technologies or gadgets.	
Agreement vs. disagreement: Use of computers and the Internet threatens personal privacy.	
Agreement vs. disagreement: I get nervous using technologies, because I might break something.	
Agreement vs. disagreement: The Internet is frustrating to work with.	
Agreement vs. disagreement: The use of the Internet can be addictive.	

Table I.b. Wording of Questions asked in Sweden 2007-2011 (in Swedish)

	2007	2009	2011
Internet Access at Home	Har du tillgång till Internet i hemmet?	Har du tillgång till Internet i hemmet?	Har du tillgång till Internet i hemmet?
Broadband Access at Home	Hur är ni huvudsakligen uppkopplad till Internet i hemmet?	Har ni bredband hemma?	Har ni bredband hemma? Bredband är alla fasta anslutningsformer utöver telefonmodem och ISDN. Tex. Mobilt bredband, ADSL, Fiber och Kabel.
Internet Use	Brakar du använda dig av Internet någon gång någonstans?	Brakar du använda dig av Internet någon gång någonstans?	Brakar du någon gång använda dig av Internet? Oavsett plats eller teknik.
Demographics			
Age	Vilket år är du född?	Vilket år är du född?	Vilket år är du född?
Gender	Kön?	Är du man eller kvinna?	Är du man eller kvinna?
Disability	Har du någon form av funktionsnedsättning?	N/A	Har du något funktionshinder som försvårar din användning av datorer och Internet?
Marital Status	Civilstånd?	Vad är ditt civilstånd?	Vad är ditt civilstånd?
Children	Hur många barn finns det i hushållet?	Finns det hemma-boende barn i hushållet som inte har fyllt 21 år?	Finns det hemma-boende barn i hushållet som inte har fyllt 21 år?
Educational Qualifications	Vad har du för utbildning?	Vad har du för utbildning?	Vad har du för utbildning?
Occupational Status	Vilken är din nuvarande selsättning?	Vilken är din nuvarande selsättning?	Vilken är din nuvarande huvudsakliga selsättning?
Income	Ange er hushålls-inkomst per år före skatt.	Ange er hushålls-inkomst per år före skatt.	Ange er hushålls-inkomst per år före skatt.
Mobile Phone	Har du en mobiltelefon?	Har du en mobiltelefon?	Har du en mobiltelefon?
Reasons for non-use (only data from 2011 used)			
Vilket är ditt främsta skäl till att Du inte använder Internet?			
a. Inget intresse/inte användbart b. Krånglig teknik/kan inte c. Ingen dator/internetuppkoppling d. För dyrt e. Inte tid/allför upptagen f. Annat			
Attitudinal variables (only data from 2011 used; Chapter 6: Quantitative Results II)			
Agreement vs. disagreement: Jag tycker o matt prova nya tekniska apparater och prylar.			
Never/rarely vs. (very) often: Hur ofta skickar du SMS-meddelanden?			

II. Educational Qualifications in Great Britain and Sweden in Comparison

Educational qualifications were coded differently in Great Britain between waves 2007, 2009 and 2011. Together with experts from the Oxford University Department of Education the manifold categories for each year were recoded into five categories for 2009 and 2011 and four categories for 2007. Although ‘no qualifications’ was supposed to be one of the possible categories, a presumed flaw in coding by the company who collected the data for the OxIS led to a proportion of 0 per cent in that category. It is assumed that those without educational qualifications were counted towards the category ‘basic qualifications’. The influence of educational qualifications are thus not directly comparable between 2007 and the other two waves.

Table II.a. below shows how the categories were recoded to make them comparable with the Swedish data.

Table II.a. Educational Qualifications, Great Britain, 2007-2011

Year	Original Items	Grouping	New Variable
2011	0 = No qualifications 1 = 5 or more GCSE grades A-C 2 = 4 or less GCSE grades A-C 3 = GCSE grade D-G 4 = 5 or more Scottish Standard Grades, grades 1-3 5 = 4 or less Scottish Standard Grades, grades 1-3 6 = Scottish Standard Grades, grades 4-7 7 = Scottish Highers 8 = CSEs 9 = 5 or more O levels 10 = 4 or less O levels 11 = GCE A levels or equivalent 12 = NVQ 1 or 2 13 = NVQ 3 or 4 14 = GNVQ Foundation 15 = GNVQ Intermediate 16 = GNVQ Advanced 17 = Certificate or Diploma of Higher Education 18 = Bachelor's Degree 19 = Graduate Certificates and Diploma 20 = Master's Degree 21 = Doctoral Degree	0 = No Qualifications 1-2 = Secondary Qualifications 3 = Basic Qualifications 4-5 = Secondary Qualifications 6 = Basic Qualifications 7 = Secondary Qualifications 8 = Basic Qualifications 9 = Secondary Qualifications 10 = Basic Qualifications 11 = Secondary Qualifications 12 = Basic Qualifications 13 = Further Qualifications 14 = Basic Qualifications 15-16 = Further Qualifications 17-21 = Higher Qualifications	0 = No Qualifications 1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4 = Higher Qualifications

2009	0 = No qualifications 1 = SNQ (Scottish National Qualifications) 2 = 5 or more GCSE grades A-C 3 = 4 or less GCSE grades A-C 4 = GCSE grade D-G 5 = CSEs 6 = 5 or more O levels 7 = 4 or less O levels 8 = GCE A levels or equivalent 9 = NVQ 1 or 2 10 = NVQ 3 or 4 11 = GNVQ Foundation 12 = GNVQ Intermediate 13 = GNVQ Advanced 14 = Certificate or Diploma of Higher Education 15 = Bachelor's Degree 16 = Graduate Certificates and Diploma 17 = Master's Degree 18 = Doctoral Degree	0 = No Qualifications 1-3 = Secondary Qualifications 4-5 = Basic Qualifications 6 = Secondary Qualifications 7 = Basic Qualifications 8 = Secondary Qualifications 9 = Basic Qualifications 10 = Further Qualifications 11 = Basic Qualifications 12-13 = Further Qualifications 14-18 = Higher Qualifications	0 = No Qualifications 1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4 = Higher Qualifications
2007	1 = SNQ (Scottish National Qualifications) 2 = 5 or more GCSE grades A-C 3 = 4 or less GCSE grades A-C 4 = GCSE grade D-G 5 = CSEs 6 = 5 or more O levels 7 = 4 or less O levels 8 = GCE A levels or equivalent 9 = NVQ 1 or 2 10 = NVQ 3 or 4 11 = GNVQ Foundation 12 = GNVQ Intermediate 13 = GNVQ Advanced 14 = Other 15 = University	1-3 = Secondary Qualifications 4-5 = Basic Qualifications 6 = Further Qualifications 7 = Basic Qualifications 8 = Secondary Qualifications 9 = Basic Qualifications 10 = Further Qualifications 11 = Basic Qualifications 12-13 = Further Qualifications 14 = system missing 15 = Higher Qualifications	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4 = Higher Qualifications

Table II.b. shows the much more simplistic categorisation of educational qualifications in Sweden. While there were up to 21 categories in Great Britain that had to be recoded to four and five categories respectively, the Swedish questionnaires only provided five possible answers that were recoded to four categories. The Swedish final categories do not provide a possibility for 'no qualifications'. The comparison of British and Swedish data regarding educational qualifications thus has to be regarded as an indication rather than an actual comparison.

Table II.b. Educational Qualifications, Sweden, 2007-2011

Year	Original Items	Grouping	New Variable
2011	1 = Folkskola/Grundskola 2 = Mer aen grundskolenivao, men ej studentexamen 3 = Studentexamen/ Yrkesutbildning 4 = Høegskole- eller universitetsstuderande 5 = Høegskoleexamen (Filkland 3 aor)/ Universitetexamen eller høegre	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4-5 = Higher Qualifications	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4 = Higher Qualifications
2009	1 = Folkskola/Grundskola 2 = Mer aen grundskolenivao, men ej studentexamen 3 = Studentexamen/ Yrkesutbildning 4 = Høegskole- eller universitetsstuderande 5 = Høegskoleexamen (Filkland 3 aor)/ Universitetexamen eller høegre	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4-5 = Higher Qualifications	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4 = Higher Qualifications
2007	1 = Folkskola/Grundskola 2 = Mer aen grundskolenivao, men ej studentexamen 3 = Studentexamen/ Yrkesutbildning 4 = Høegskole- eller universitetsstuderande 5 = Høegskoleexamen (Filkland 3 aor)/ Universitetexamen eller høegre	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4-5 = Higher Qualifications	1 = Basic Qualifications 2 = Secondary Qualifications 3 = Further Qualifications 4 = Higher Qualifications

III. Household Income in Great Britain and Sweden in Comparison

Tables III.a. and III.b. below show the recoded categories for household income in Great Britain and Sweden. The original categories provided in both datasets were recoded into three comparable categories. The tables show that the percentage of those in the highest income categories has gone down in Britain and increased in Sweden between 2007 and 2011. Due to the original categorisations in Great Britain, it was unfortunately not possible to replicate the exact same categories throughout all three waves. As the categories were the same in 2009 and 2011, those data are comparable, whereas the 2007 data are not directly comparable to the other two waves.

Table III.a. Annual Household Income in Three Categories, Great Britain, 2007-2011

	2007 (%)	2009 (%)	2011 (%)
Low <£12,500	22.9	20.5	20.5
Medium >£12,5-25,000 (2007) >£12,5-30,000 (2009-2011)	25.6	32.8	32.0
High >£25,000 (2007) >£30,000 (2009-2011)	37.0	24.7	26.5
No Response	14.5	21.9	21.1

Source: All Respondents, OxiS. 2007: 2,350; 2009: 2,013; 2011: 2,057.

Despite keeping the same categories across waves 2007 through 2011 the stability between the three recoded categories is stronger in 2009 and 2011 than 2007. Moreover, the proportion of ‘no response’ has increased by ten percentage points between 2007 and 2009 and 2011. A similar increase – albeit not as stark – can be seen in the British survey and can most likely be attributed to the world economic situation that affected countries and individuals alike.

Table III.b. Annual Household Income in Three Categories, Sweden, 2007-2011

	2007 (%)	2009 (%)	2011 (%)
Low <SKR200,000	28.3	14.2	13.4
Medium >SKR200-400,000	33.2	23.0	23.4
High >SKR400,000	19.7	31.7	36.2
No Response	18.8	31.1	27.0

Source: All Respondents, WII. 2007: N=2,016; 2009: N=2,063; 2011: N=2,671.

IV. Variable Construction for Reasons of Non-Use

The table below describes how the available variables in the British data set had to be re-coded and reconstructed to make them comparable with the Swedish data set. In Sweden

only six response items were pre-determined, which partly summarise variables that were split into two items in the British data. The third column shows which original variables the newly constructed variables (column 2) are made up of.

For ‘reasons mentioned’ (Section, 4.2.1, Figure 4) multiple responses were possible. The percentages of the individual items were thus averaged on basis of the items listed in Table I.a. in this appendix (reasons for non-use 1.). For ‘most important reasons’ (Section 4.2.1, Figures 5 and 6) the individual items were totalised (on basis of the items listed in Table I.a. above, reasons for non-use 2.) so that the sum of all items would sum up to 100 per cent.

Table IV Variable Construction for Reasons of Non-Use

Swedish Original Variable	British Constructed Variable	British Original Variables Used (see Table I.a. in this Appendix)
Inget interesse/inte användbart	No Interest	a. I am just not interested j. There is nothing of interest on the Internet
Krämlig teknik/kan inte	No Skills	d. It is too difficult to use k. Do not yet know how to use the Internet
Ingen dator/internetuppkoppling	No Access	b. I have no connection available where I live or where I work c. I have no computer available
För dyrt	Too Expensive	f. It's too expensive
Inte tid/allför upptagen	No Time	i. I do not have enough time l. It's too time consuming
Annat (coded missing)	Other (coded missing for “most important reason”)	e. It's not useful. g. I am worried about my privacy h. I worry about bad experiences with SPAM or viruses m. It's not for people of my age n. It's not for people like me

V. Principal Components Variables

To be able to use the below listed variables in Principal Components Analysis conducted in chapter 4, they had to be recoded into dummy variables that only have the two values 0 (not true) and 1 (true). Most of the variables had more than two values. The number of new individual dummy variables corresponded with the number of original values, e.g. four new variables for occupational status, which had originally four values. Only those

variables that produced loadings higher than .400 in any of the produced components were kept in the analysis, which is why the tables below do not always include all available dummy variables, but only those that were kept in the analysis. Additionally, for those variables that only had two values in their original variable, only one of the two dummies was kept in the analysis as they would only mirror each other and hence bias the data, as their influence would be artificially doubled.

Table V.a. Variables in the Principal Components Analyses, Great Britain 2011

Variable	Original number of values (Number of new dummy variables for this variable used in PCAs)
No Internet Household Access	2 (1)
Living Alone	2 (1)
No Children Living in Household	2 (1)
Age	Continuous
Occupational Status: Employed	4 (3)
Occupational Status: Unemployed	4 (3)
Occupational Status: Retired	4 (3)
Educational Qualification: None	5 (3)
Educational Qualification: Secondary	5 (3)
Educational Qualification: Higher	5 (3)
Annual Household Income: Low	3 (3)
Annual Household Income: Middle	3 (3)
Annual Household Income: High	3 (3)

Table V.b. shows that some of the variables had to be coded slightly differently for the Swedish dataset than for the British one, as they had a different number of values in the original variables. This was, for example, the case for educational qualifications (see also tables II.a. and II.b.).

Table V.b. Variables in the Principal Components Analyses, Sweden 2011

Variable	Original number of values (Number of new dummy variables for this variable used in PCAs)
No Internet Household Access	2 (1)
Living Alone	2 (1)
No Children Living in Household	2 (1)
Age	Continuous
Occupational Status: Employed	4 (3)
Occupational Status: Unemployed	4 (3)
Occupational Status: Retired	4 (3)
Educational Qualification: Basic	4 (2)
Educational Qualification: Higher	4 (2)
Annual Household Income: Low	3 (3)
Annual Household Income: Middle	3 (3)
Annual Household Income: High	3 (3)

Appendix B – Specifics of Qualitative Methodology

This appendix contains the interview guides for the qualitative semi-structured interviews that were conducted with middle-aged non-users of the Internet in Great Britain and Sweden, as well as the information sheets and informed consent forms that were handed to the interviewees before the interviews were started.

1.a. Interview Guide Great Britain

Non-Users of the Internet in and around Birmingham, 25 to 55 years old, April 2011 - May 2012

Opening interview

I'd like to talk about a few things with you today – the use of information and communication technologies in your daily routine, and what you think about them.

I'd also like to hear a bit about what you think about the Internet and people who use it.

Technologies in everyday life and attitudes

Can you tell me about your typical day?

Which kinds of technologies do you use in your everyday life?

How do you feel about using technologies?

[Can you give me an example?]

[Do you care about technology in general?]

Is there any particular technology that you like to use?

What aspect do you like about [technology]?

Is there any particular technology that you don't like to use?

What exactly do you not like about [technology]?

How do you feel about using computers?

Have you tried using computers?

If yes: What did you like about it?

If no: Have you observed a friend/family member using a computer?

If yes: How did you feel about them using the computer?

Mobile phones?

Smart phones?

Internet

What about the Internet?

How do you feel about using the Internet?

What do you think people are using the Internet for?

What about [key features they left out]?

Keyboard/usability/writing letters, enjoy writing?

Reading books/newspapers? Kind of old vs. new technologies

[Everyday tasks without the Internet

If you want to go and visit your family/friends/go on holidays, how do you go about booking train/bus tickets?

Has anyone ever used the Internet for you?

How do you feel about this?]

Demographic Data

If you're happy with it, I'd like to ask you some questions about you?

How old are you?

What was the last form of school you visited?

Do you have a paid job?

If yes: What is your occupation?

If no: Are you retired/house wife/student/looking after family?

Are you belonging to a particular religion?

If yes: Which one?

Closing interview

We haven't really talked much about [theme name]. Do you have anything you'd like to say about [theme name]?

Is there anything else you would like to tell me?

Can you think of anyone else I should talk to?

It was great to talk to you! Thanks a lot for your time!

Would you be happy for me to call you in case I'd like to clarify something?

I.b. Interview Guide Sweden

Icke användare av Internet i Göteborg, 25 till 55 år gamla, Maj-Juni 2012

Introduktion

Jag skulle vilja prata med dig idag om några saker – användning av informations- och kommunikationsteknologier i ditt vardagsliv, och vad du tycker om dem.

Jag skulle också vilja höra lite om Internet och personer som använder Internet.

Teknik i vardagen och attityder

Kan du berätta för mig om en typisk dag?

Vilka tekniker använder du i ditt vardagsliv?

Hur känner du för att använda tekniker?

[Kan du ge mig något exempel?]

[Är du i allmänhet intresserad av/bryr du dig om teknik?]

Är det någon särskild teknik som du gillar att använda?

Vad/Vilken aspekt hos tekniken gillar du?

Finns det någon särskild teknik som du inte gillar att använda?

Vad exakt är det du inte gillar med tekniken?

Hur känner du för att använda datorer?

Har du provat att använda datorer?

Om ja: Vad var det du gillade med det?

Om nej: Har du tittat på när en vän/familjemedlem har använt dator?

Om ja: Hur kände du det att de använde datorn?

[Mobiltelefon? Smartphone?]

Internet

Hur är det med Internet?

Hu känner du för att använda Internet?

Vad tror du att folk använder Internet för?

Hur är det med [viktiga aspekter som de inte nämnt]?

[Keyboard/användbarhet/skriva brev, gilla att skriva?

Läsa böcker/tidningar? Gammal vs. ny teknik]

Vardagssysslor utan Internet

Om du vill åka och besöka familj/vänner/åka på semester, hur gör du för att boka tåg/bussbiljetter?

Har någon någon gång använt Internet åt dig?

Hur känner du för det?

Demografiska data

Om det är okej med dig, skulle jag vilja ställa några frågor om dig.

Hur gammal är du?

Vilken skola [nivå] gick du senast i?

Har du ett avlönat arbete?

Om ja: Vad arbetar du med?

Om nej: Är du pensionär/hemarbetande/student/tar hand om din familj?

Tillhör du någon särskild religion?

Om ja: Vilken?

Avslutning

Vi har egentligen inte pratat så mycket om [theme name]. Är det något du vill säga om [theme name]?

Är det något annat som du skulle vilja berätta för mig?

Är det någon annan som du tycker jag borde prata med?

Det var väldigt trevligt att prata med dig! Tack så mycket för att du tog dig tid!

Vore det okej att jag kontaktade dig ifall det är något jag skulle behöva få klarhet i?

II.a. Information Sheet and Consent Form Great Britain

Researcher:

Bianca Reisdorf

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Background to the research

A large number of people in Great Britain are not using the Internet. Previous research has focused on which groups of the population are not using the Internet, but has rarely asked for reasons. This project aims to shed light on this question and find out about underlying reasons for non-use of the Internet.

Why is this research being conducted?

The aim of this research is to understand *why* a large group of British citizens is not using the Internet. This might help policy makers to provide useful help to those non-users who would like to use the Internet, but are facing difficulties with access, skills, or other obstacles.

The basis of your selection for the research

This research involves British citizens who are currently not using the Internet on a computer or a mobile device, such as mobile phones.

What will you be asked to do should you agree to participate?

You will be asked a set of questions about your everyday life and your engagement or disengagement with and attitudes towards a set of technologies with specific focus on the Internet. The interview will take roughly 30 minutes.

Confidentiality

With your agreement the interview will be recorded and later transcribed. The recording will then be destroyed and the transcriptions kept on a private secure server at the Oxford Internet Institute. Your interview will be anonymised. Your participation is voluntary: you do not have to answer every question. You have the right to withdraw from the study at any time.

Questions and Feedback

Further information regarding the project may be obtained by contacting the principal researcher, Bianca Reisdorf. Feedback of the results of this study will be made available to you on request. The study is being supervised by Dr. Grant Blank and Dr. Rebecca Eynon of the OII and has received ethical approval from the Social Sciences and Humanities Inter-divisional Ethics Committee of the University of Oxford. There are no known risks to participating in this study.

By signing below I confirm that I have read and understood the information and in particular, have noted that:

- I understand that my involvement in this research entails taking part in an interview, related to not using certain technologies, such as the Internet.
- I have had any questions answered to my satisfaction.
- I understand the risks involved.
- I understand there will be no direct and immediate benefit to me from participation in this research.
- I understand that my participation is voluntary, and that responses are completely anonymous and that no identifying information is required.
- I understand that if I have any additional questions or concerns, I can contact the research at the address or mobile number provided.
- I understand that I am free to withdraw at any time without comment or penalty.
- I agree to participate in the project.

Print Name..... (Participant)

Signed..... (Participant)

Print name..... (Researcher)

Signed..... (Researcher)

Date.....

II.b. Information Sheet and Consent Form Sweden

Forskare

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Bakgrund till forskningen

Ett stort antal människor i Sverige använder inte Internet. Tidigare forskning har fokuserat på vilka grupper av befolkningen som inte använder Internet, men har sällan efterfrågat vilka anledningar som ligger bakom. Detta projekt har för avsikt att belysa denna fråga samt att förstå de bakomliggande orsakerna till varför vissa människor inte använder Internet.

Varför bedrivs denna forskning?

Syftet med denna forskning är att förstå varför en stor andel svenskar inte använder Internet. Kunskapen kan vara till hjälp för politiker och beslutsfattare att hjälpa de icke-användare som skulle vilja använda Internet, men som upplever svårigheter med tillgång, kunskap, eller andra hinder.

Urval

Denna forskning innefattar svenskar som i dagsläget inte använder Internet på dator eller mobil enhet såsom mobiltelefon.

Vad kommer du bli tillfrågad att göra om du säger ja till att medverka?

Du kommer att få frågor om ditt vardagsliv och din kontakt eller brist på kontakt med och attityder mot ett antal tekniker med särskilt fokus på Internet. Intervjun kommer att ta ca 30 minuter.

Konfidentialitet

Med ditt samtycke kommer intervjun att spelas in och senare transkriberas. Inspelningen kommer att förstöras och transkriptionerna förvaras på en privat och säker server på Oxford Internet Institute. Din intervju kommer att anonymiseras. Ditt deltagande är frivilligt: du behöver inte besvara alla frågor om du inte vill. Du har också rätten att när som helst avbryta ditt deltagande.

Frågor och feedback

Ytterligare information om projektet kan erhållas genom kontakt med forskarna, Ann-Sofie Axelsson eller Bianca Reisdorf. Feedback gällande resultat från studien kan göras tillgänglig om du så önskar. Studien handleds av Dr. Grant Blank och Dr. Rebecca Eynon vid Oxford Internet Institute och har blivit godkänd av den samhällsvetenskapliga och humanistiska etiska kommittén vid Universitetet i Oxford. Det finns inga kända risker med att delta i den här studien.

Genom att signera nedan bekräftar jag att jag har läst och förstått informationen och i synnerhet tillkännager jag att:

- Jag förstår att mitt deltagande i detta forskningsprojekt innebär att delta i en intervju som handlar om att inte använda vissa tekniker såsom Internet.
- Jag har fått eventuella frågor besvarade till min belåtenhet.
- Jag förstår riskerna med deltagandet.
- Jag förstår att deltagandet i forskningsprojektet inte kommer att medföra några direkta eller omedelbara fördelar för mig.
- Jag förstår att mitt deltagande är frivilligt, att mina svar är helt anonyma samt att jag inte behöver uppge någon information som är identifierbar.
- Jag förstår att om jag har ytterligare frågor eller saker jag undrar över så kan jag kontakta forskarna via den adress eller de telefonnummer som uppgivits ovan.
- Jag förstår att jag är fri att när som helst avbryta mitt deltagande utan att behöva förklara mig eller utan att riskera någon påföljd.
- Jag ger mitt medgivande till att delta i projektet.

Signatur (Deltagare)

Namnförtydligande (Deltagare)

Signatur (Forskare)

Namnförtydligande (Forskare)

Datum.....