INTERRUPTION EVENTS AND SENSEMAKING PROCESSES: A NARRATIVE ANALYSIS OF OLDER PEOPLE'S RELATIONSHIPS WITH COMPUTERS

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Abstract

This thesis provides a situated understanding of the ways in which the reality of a new technology is socially constructed. In particular, it examines how members of the aged interpretive community made sense of the computer as an *interruption event*, a technology not yet routinised as part of their everyday taken-for-granted reality, and needing to be consciously considered and evaluated to make it understandable. Members' sensemaking is studied as a narrative process in which meaning is produced by drawing on a repertoire of narratives, evaluating and developing localised responses to those narratives for the purpose of action taking.

Two hundred and four participants over the age of 55 years, recruited predominantly from senior citizens' and SeniorNet organisations in the North Island of New Zealand, were interviewed in 28 focus groups over an eighteen month period between September 2001 and May 2003. Participants were categorised according to their self-identified membership of one of three groups: computer users affiliated to SeniorNet member organisations; computer users without SeniorNet organisational affiliation; and non-computer-users. Their computer-related stories were analysed using narrative analysis to identify and map the similar and different ways in which they constructed computers and themselves in relation to computers, in the stories they told.

The research findings from this interpretive study augment the largely functionalist literature on older people and computers and provide insights not identified in previous studies. In particular, the findings indicate that participants identified a common meaning for the computer as actually or potentially useful for older people, but their meanings also varied according to their membership of one of the three participant groups, with SeniorNet members tending to identify the computer as an opportunity; Users, as a tool; and Nonusers, as a threat. Participants' meanings were traced through a storying process that identified three narrative elements as key: the settings in which accounts of the principal protagonists—older people and computers—were produced; the strength of the narrator's identification with old

stories and values; and the ways in which the narrators oriented to the computer—in the context of other technologies and events, or in isolation from them.

The study makes a contribution to knowledge by enhancing understanding of older people's relationships with computers, through a micro level investigation of their experiences with, and meanings for, the technology. In addition, by identifying and explicating the processes through which the ongoing reality of a new technology is constructed and negotiated, and compared and contrasted in relation to three separate sub-groups of the one demographic population, the study contributes to social construction of technology theory. The study also makes a contribution to practice by showing how the alignment of old stories and new stories is a crucial component in the process for enabling those new to a technology to negotiate an appropriate placement for it, and how such alignment can be influenced by age-peer groups and the imperatives of inter-generational family communication.

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CHAPTER 1

Introduction

> *Young people revel in new techniques, and as they represent the future, it is possible to ignore the plight of the old, and dismiss their complaint as a temporary aberration and one which will die out sooner rather than later…Without a change in attitude about computers on the part of the public and on the part of [computer] professionals we shall be condemning a minority of the population, generally the aged and those who find difficulty in coping on their own, to a second-class existence. (Sherman, 1985, p. 320).*

1.1 Introduction to the study

Computers have been described as "the technology that more than any other defines our age" (Bolter, 1984, p. 8-9). They are ubiquitous in many societies, including New Zealand. One indicator of this ubiquity is the statistic that shows that 62% of New Zealand households own a home computer (Statistics New Zealand Household Economic Survey, 2004). Such statistics tell one story—that of the technology's diffusion. However, they say little about what computers mean for people in that society, particularly what they mean for those such as the aged, for whom the technology is new and can be seen as an *interruption*—an event not yet routinised in the everyday reality of their lives (Berger & Luckmann, 1967).

In this study, I argue that individuals make sense of computers as interruption events through a narrative process. In this process, they draw selectively on a repertoire of available narratives, evaluate and re-story those narratives to make them personally meaningful, and then take action accordingly to use—or not use—the technology. Specifically, the study traces the narrative processes that members of the aged interpretive community engage in as they make sense of computers. By providing a window onto these sensemaking endeavours and explicating the key elements in this process, the study offers a contribution to theory in relation to the ways the ongoing reality of a new technology is constructed and negotiated. The study thus provides insights into and enhances our understanding of older people's relationships with computers. In addition, by identifying the processes through which a technology-

related interruption event can be successfully negotiated, the study offers practical assistance to other individuals in similar situations, as well as to those associated with such individuals and those, such as government agencies, attempting to facilitate the take-up of new technologies.

The study offers important insights into aged individuals' relationships with computers; however, the scope of the study is limited to one particular group of older people—retired persons. Consequently, it does not include older workers and does not focus on older people's relationships with computers in the context of organisations or paid employment. The principal reason for this restricted scope is the context within which the study was framed—as part of a larger government-funded research project investigating the impact of information and communication technologies (ICTs) on various groups in the community constructed as potentially disadvantaged by the New Zealand Government's proposal to become an information-based society and a knowledge-based economy (Butler, 1996; Doczi, 2000; Knowledge Economy, 1999; Maharey & Swain, 2000). Therefore, the focus of attention in this study is on older people as senior citizens, not on older people as older workers.

1.2 Background to the study

As indicated above, this study was conceived within and developed from a larger research project. Setting the study in relation to this wider project provides important contextual material for understanding the background to the study and my early involvement with it. It also serves as an illustration of the narrative nature of life, a philosophy fundamental to the study and my relationship with it. In particular, the relationship of the current study to the wider research project points to the inter-connected and inter-textual way in which stories overlap and are nested within other stories. MacIntyre (1981) described such a situation as finding ourselves subordinate parts in some stories and main characters in others, with each drama enabling and constraining the other. I take up and examine this point throughout the thesis, including in relation to the story as a multi-layered concept. But first, I background the research context from which this study of older people and computers developed.

I was employed as a part-time student research assistant on a project funded by the Foundation for Research Science and Technology (FRST) from June 2001 until June 2005. The FRST-ICT project (original contract number UOW X0016) was a government-funded research contract won by a team at the University of Waikato under Professor Ted Zorn. One aspect of the project was to research the socio-economic impacts of ICTs on a number of groups in the community deemed to be at risk of exclusion from an *e-society*. In funding such research, the Government was endeavouring to ensure that its agenda to change New Zealand from a commodity-based economy into a knowledge-driven economy would not divide the country into a society of advantaged *computer-haves* and disadvantaged *computer have-nots*. Therefore, identifying the contours of what was being described as a *digital divide* and how it might be addressed in New Zealand was imperative for the achievement of the Government's social and economic agenda.

As a member of the FRST-ICT project team, I was keen to pursue the problem of digitally disadvantaged groups, particularly older people, who were identified as one of a number of groups potentially on the wrong side of the digital divide (Maharey & Swain, 2000). My recent personal experience as an older person returning to university studies after more than 30 years in the workplace prompted my interest in this area. As a returning student in the 1990s, I encountered acres of computer terminals, photocopiers, and online library catalogues—a scene worlds away from my undergraduate days in the 1960s when there was one coin–operated photocopier in the university library and all notes and assignments were done in longhand or on a typewriter. Now, everything was done on computer and a lack of skills in that area was a significant stumbling block to my confidence as a mature student and also to my academic achievement.

With this recent Rip van Winkle experience in mind, I had some empathy for older people, many of whom had retired from the paid workforce before the computer phenomenon 'took off'. I enthusiastically volunteered to collect data about older people's (and other groups') experiences of and attitudes to computers. In stage one of this two stage project I recruited participants for focus groups from SeniorNet[1]

[1] [1] Members of SeniorNet clubs were recruited for the first stage of the project. SeniorNet is a voluntary, not-for-profit organisation founded in the United States in the 1980s and introduced to New

organisations and asked them to identify the barriers, benefits and negative consequences of computers and the Internet for older people, as well as possible strategies that might alleviate their concerns and improve their access to and use of these technologies. (See Appendix 1 for details of the FRST-ICT research project, including the information sheet provided for participants, guiding interview questions, and demographic questionnaire). At the completion of stage one of the FRST-ICT project, my supervisors and I wrote an article on the preliminary work done with this first group of research participants in which we discussed participants' perceptions, including the gendered nature of their responses to the technology (Richardson, Weaver, & Zorn, 2005).

Stage two of the FRST-ICT project involved data collection with a second, larger group of older people, this time including nonusers. The data collected in the second stage have not been separately analysed outside of this doctoral study, or previously published. Both stages of the FRST-ICT data collection rounds have been incorporated into the dataset for this thesis. However, as I indicate below, the current study has taken a new approach to that data, for a different purpose. In doing so, this study extends and develops work previously published in relation to the FRST-ICT project and in relation to the literature on older people's relationships with computers.

1.3 Approach, purpose, contribution

The new approach adopted in this study came about as I reviewed the empirical material gathered for the FRST-ICT project and I became aware that it contained stories about participants' experiences with computers. Since a focus on stories and meanings represents a significant departure from previous studies conducted into older people's relationships with computers—the majority of these studies having focused on overcoming barriers to computer use—and since identifying stories in focus group material also represents a departure from much of the literature on the focus group method, I decided to explore the ways in which participants constructed

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Zealand in 1992. Its purpose is to provide opportunities for older people, over the age of 55 years, to learn how to use personal computers from their age-peers. SeniorNet in New Zealand consists of a conglomeration of more than 100 independent, locally owned and run learning co-operatives operating under the umbrella name of SeniorNet. Club members meet for face-to-face computer training in small groups at local learning centres.

and made sense of the computer through stories, as a way of making a contribution to knowledge and to theory.

The particular approach to the narrative adopted in the study recognises stories as collaborative accomplishments (Gubrium & Holstein, 2002) on multiple levels. On one level, participants' stories are *their stories*, developed within a particular socio-cultural context, at a particular point in time and space, and in response to a particular set of guiding interview questions. On a second level, they are *cultural stories*—negotiated responses to socio-cultural narratives, including those about old age and technology. On a third level, my representation of these stories may be seen as *my research story*—an empirically sensitive and grounded project, but one that is open to other interpretations and readings (Alvesson & Deetz, 2000; Silverman, 2000). This third level of storying is itself the product of an iterative process of supervisory feedback, writing, and revision, and espouses a particular academic and personal view of the world, filtered through the interpretive understanding of a middle-aged female with a sceptical stance towards the pervasive use of computer technologies. *My research story* also encompasses a particular kind of ethical orientation, which Schwandt (2000) described as an ethical-moral sense of closeness, caring, and "*being-for the Other" (p. 205),* imbued with a strong respect for and sense of responsibility towards those with whom I engaged in the research project.

My purpose in this study is awareness-raising and celebration. My specific aim is to identify, understand, and make available for others the narrative processes through which the computer, as an interruption event, has been evaluated and made meaningful by a particular group of older people who shared their experiences with me. The goal is to recognise and celebrate this group's placement at a particular moment in history and to raise awareness of their endeavours to make sense of that moment.

The contribution I offer to knowledge, to theory, and to practice derives from the fundamentally different approach taken to studying older people's relationships with computers. Specifically, I depart from previous research on the topic in four key ways: (a) by adopting a social constructionist approach largely neglected in previous studies that have predominantly employed a realist and pragmatic approach; (b) by

paying attention to the construction-work in which older people engaged, particularly the ways in which they storied their relationships with computers, and how those stories relate to the wider socio-cultural context in which they were produced. This inter-play between individual and societal levels is an area overlooked by the majority of prior studies that have attended only to the micro level of the older individual's (non) use of computers; (c) by focusing on the sense older people made of computers rather than on their use or non-use of the technology—the principal area of interest in prior studies; and (d) by attempting to understand how older people understand the computer, rather than attempting to facilitate uptake of that technology. By taking a different approach and focusing on different issues from previous studies, the thesis produces new insights into older people's understandings of and engagement with computers.

In addition to signalling the key ways in which this study differs from previous studies and thereby makes a contribution to that body of knowledge, I also set out in the following section the ways in which key terms have been used in this thesis.

1.4 Clarification of key terms

In this section I clarify usage of four key terms: *computers, stories, sensemaking and meaning making,* and *older people*.

Computers. I use this term broadly to include personal/home computers (PCs) and computers encountered in businesses and other organisational contexts. Occasionally its use is extended to include tools and appliances that incorporate microprocessors or embody computer-like characteristics, such as mobile phones. The boundary around this term has been kept intentionally broad so as to encompass the stories of nonusers of personal/home computers, as well as the accounts of users of that technology.

Stories. The term s*tory* is a key concept in this study. However, it is a term open to a variety of meanings. In the literature, it is an amorphous, fluid, and contested term lacking a widely-agreed definition (Riessman, 1991, 1993). Le Guin (1989), for example, commented: "Through long practice I know how to tell a story, but I'm not sure I know what a story is" (p. 37). Czarniawska (2004) argued that not all

narratives are stories because the latter contain a plot, whereas the former do not. By contrast, Boje (2001) argued that a story is an account which is antenarrative and before plot. Connelly and Clandinin (1990) took another tack, making a distinction on the basis of *story* as phenomenon, and *narrative* as method of inquiry.

In this study, I use the term to encompass stories recounted by individuals within a particular socio-cultural-historical context. Of principal interest are the stories that individuals tell about their experiences with computers. I discuss the philosophical/theoretical underpinnings of such stories in chapter two, particularly in relation to their deployment in making sense of interruption events. I operationalise their definition in chapter four, for analytical purposes. I also elaborate on specific understandings of the term as developed from the findings, in chapter five. Here, the following explanation, informed by Somers and Gibson's (1994) framework of narrativity, serves as an introduction to the ways I am using this complex and multi-layered concept in this study.

At the first level, there are the stories *individuals* tell about their experiences. Such accounts represent the sense that individuals make of events in their world. However, such stories are not simply idiosyncratic accounts. Instead, these stories are co-produced and enacted by individuals who author their own local versions of the broader socio-cultural narratives they draw on, consciously and unconsciously, in making sense of their world.

At a second level, there are *socio-cultural narratives*. Such narratives constitute a corpus of publicly available accounts produced by a wide range of institutions, such as media and governments, and include the taken-for-granted practices to which members of a particular society have been socialised. This vast repertoire of socio-cultural narratives constitutes a contested terrain in which stories compete for attention. Some stories dominate and become influential as *master narratives*. Others lose favour and become synonymous with the past—*old stories*. Yet others gain ascendancy as *new stories* and find favour for a period of time. Individuals draw from this changing repertoire of narratives as they negotiate their way in relation to and make sense of the changing social world.

At a third level, there are *meta-narratives*. Meta-narratives constitute the 'big stories of our times', such as the story of *technology-as-progress*. Meta-narratives can also, I contend, be used to identify the storylines or plot patterns that underpin a number of seemingly disparate stories reducing otherwise complex accounts to their basic narrative elements and causal relationships. As such, meta-narratives are relativist projects and provide a means to evaluate some stories in relation to other stories, to see through the layers of surface variability in such accounts, and to identify the commonalities, as well as the differences, across those stories.

In addition to these three levels, I also recognise a fourth level of stories, that of theory (Richardson, 2000). In particular, following Leonardi and Jackson (2004), theories of technology are seen as stories. Of relevance to this study are the following sets of stories about technology: technological determinism, technology as neutral, and social construction of technology.

Sensemaking and meaning making. Following Bruner (1990), I use sensemaking and meaning making as interchangeable terms. Making sense of something, in this study, equates with making it meaningful.

Older people. This term, as used in the study, refers to those persons aged 55 years of age and over. I explain in chapter four that this age limit was based on entry-level age requirements for members of SeniorNet clubs in New Zealand. SeniorNet was the initial source of participants for the study, and the definition of age used with the first group of participants was also used with later groups.

Having explained the background to the thesis, the scope, approach, purpose, and contribution of the current study, as well as the ways in which key terms have been used, the following section sets out the ways in which the story of the thesis unfolds.

1.5 Organisation of the thesis-story

The study of older people's relationships with computers presented in this thesis-story unfolds over the succeeding chapters in the following way:

In chapter two, I explain the philosophical/theoretical framework that underpins and shapes the study. Specifically, I outline the social constructionist epistemology and the narrative philosophical perspective that acts as a particular kind of social constructionist lens for framing and focusing the study.

In chapter three, the social constructionist-narrative approach, expounded in the previous chapter, is used to organise an unconventional review of the topic literature. In particular, I use this approach to explore and critique the literature identifying three master narratives about older people's relationships with computers, three underpinning meta-narratives, and the theoretical stories of technology they assume. At the completion of this review, I argue the case for this study's contribution to knowledge through the adoption of a social constructionist-narrative perspective that frames the relationship between the principal protagonists—older people and computers—in a contextualised, complex, and colourful manner—one that contrasts significantly with the pragmatic approach dominant in the literature on older people and computers.

In chapter four, I set out the specific research questions that focus the study and explain the rationale for and the theory underpinning the methods used to collect and analyse the data. I also detail the ways in which the analytical methods have been implemented and reflect on their strengths and limitations.

In chapter five, I present an overview of the findings from the analysis in order to roadmap the way ahead in the following three chapters, where I present and discuss the findings in detail.

In chapters six, seven, and eight, I present and discuss participants' stories about computers, according to participants' categorisations into one of three sub-groups: SeniorNet members—computer users recruited from SeniorNet organisations; Users—individual users of computers, with no affiliation to organisations such as

SeniorNet; and Nonusers—individuals who made little or no use of computers. I concur with Wyatt, Thomas and Terranova (2002) that defining people as users of technologies serves to confirm "the technocratic vision of the centrality and normativity of technology" (p. 25). I am uncomfortable using this nomenclature because a narrative perspective appreciates that labels are not neutral (Randall, 2001). However, my principal interest in the study is in participants' relationships with computers, and computer usage and non-usage represent one way to distinguish participants' ways of relating to the computer.

In chapter nine, I review the study's key findings and conclusions and outline the contributions offered to knowledge, theory, and practice. I also identify areas for future research.

In summary, in this chapter I indicated that this study about older people and computers was developed from a government-funded research project on the socio-economic impacts of ICTs. The purpose of the study is to identify, understand, celebrate, and raise awareness of the particular ways in which some older people constructed and made sense of the computer at a particular point in time and space. The study makes a contribution to theory through the identification of the processes by which a new technology—constructed as an interruption event—is made sense of by individuals in relation to their own lives. Understanding the elements in this process may help aged individuals and others deal with similar events in the future. In the next chapter, I present and discuss the philosophical/theoretical framework that informs and guides the study.

CHAPTER 2

Philosophical/Theoretical Framework

All knowledge claims are necessarily embedded within a specific way of engaging the world. (Fay, 1996, p. 216)

In this chapter, I introduce the philosophical/theoretical framework that guides the approach to the study. In section 2.1, I explain the social constructionist epistemology that underpins the study. In section 2.2, I draw on these assumptions to describe the narrative perspective that acts as a particular kind of social constructionist lens for focusing the study. In section 2.3, I set out the particular model of the narrative used in this study.

2.1 Social constructionism

The assumptions that guide my thinking as a researcher are grounded in a social constructionist epistemology. This way of knowing about the world argues that social phenomena do not simply exist *out there*, but are instead the negotiated products of ongoing construction, interpretation, and sensemaking in which social actors engage with others to produce social reality (Berger & Luckmann, 1967; Burr, 1995; Gergen, 1999; Gubrium & Holstein, 1997, 2000a; Lewis-Beck, Bryman, & Liao, 2004; Potter, 1996; Schwandt, 2000). However, the constructing processes in which social actors engage are not developed by individuals inside their own heads; rather, their constructions and interpretations are drawn from and developed within a social-cultural realm, of which individuals are a part, and in relation to which they learn to take part.

The social constructionist position espoused here draws on a loose collection of theoretical perspectives that underpin, to a greater or lesser degree, a number of approaches in the social sciences (Burr, 1995), including the narrative approach (Czarniawska, 2002). From this perspective, knowledge is seen as historically and

culturally specific and sustained through social and cultural processes and practices, and particularly through language (Schwandt, 2000).

Language, from a social constructionist perspective, does not simply reflect reality or act as a simple conduit for the communication of fixed, pre-determined meanings; instead, it constructs reality (Weedon, 1997), providing the conceptual frame within which individuals make meaning and take action. Language, as Berger and Luckmann (1967) put it, marks the coordinates of one's life in society and "fills that life with meaningful objects" (p. 36). In addition to producing the parameters of an individual's life coordinates, language is also a social phenomenon, a shared cultural space in which meanings can be negotiated and communicated through cultural and social convention (Hall, 1997). Although meaning is never fixed in language, it is able to be negotiated and shared with others and underpins practices of socialisation.

Socialisation practices, according to Berger and Luckmann (1967), are "the comprehensive and consistent induction of an individual into the objective world of a society or a sector of it" (p. 150). It is through the practices and processes of interacting and identifying with others that individuals learn to be members of society (Berger & Berger, 1976). Although socialisation, like meaning, is never total and never finished (Berger & Luckmann, 1967), it is through this process that knowledge is learned as *objective truth* and internalised as *subjective reality* (Berger & Luckmann, 1967). Through socialisation, particularly the internalisation of rules and roles, individuals learn to participate in the day-to-day life of a society and adopt its norms and conventions.

Acts of socialisation—socially approved and preferred ways of acting in society—are taken for granted as the normal and ordered reality of everyday life—*the way things are*—until individuals encounter an *interruption event.* When such interruptions occur, social actors find themselves in an uncertain environment, a non-routine situation, where they can no longer take day-to-day reality for granted. In this position, individuals are forced to make conscious sense of what is going on around them. Making sense of the situation enables individuals to render the problematic event unproblematic (Berger & Luckmann, 1967), returning life back to a state of equilibrium and normality. To make sense of and to guide their actions in relation to

such events, individuals draw selectively on a matrix of stories of personal experience, as well as from the repository of socio-cultural narratives available to them. Calling on a range of stories and narratives and evaluating their suitability for making sense of the particular situation enables individuals to negotiate and construct responses that are appropriate for them in the context of their lives. Narratives are key elements in this process.

2.2 Narrative philosophy

Narratives are a fundamental aspect of the socially constructed ordering of reality and a primary means by which humans organise and make sense of their experiences (Bruner, 1990; Fisher, 1984; MacIntyre, 1981; Richardson, 1990), including in relation to interruption events. The narrative philosophy espoused here identifies stories as ways of being, ways of knowing, and guides for action (Bruner, 1990; Fisher, 1985; Weick, 1995), and storytellers as author-actor-producers involved in the activity of storying.

2.2.1 Ways of being

Stories are ways of being because, from a narrative perspective, individuals *are* stories (Kenyon & Randall, 2001). Individuals can be seen as assemblages of stories (Gubrium, 2001), memories, and experiences that are drawn on selectively to produce a self (Goffman, 1997), in order to meet the needs of the particular situations encountered (Bruner, 2002). According to Sarbin (1986), people think narratively and structure their experiences in terms of stories. In this process, stories are employed to organise (Bruner, 1990) and impose coherence on what would otherwise be a "flowing soup" (Weick, 1995, p. 128) of lived experiences, by "connecting past actions and episodes into a coherent and unified story" (Bochner & Ellis, 1995, p. 204). Thus, personal experience can be seen as a story in which events that occur in the external world are continually integrated and sorted "into an ongoing 'story' about the self" (Giddens, 1991, p. 54). However, these stories are not simply constructed by individuals in a vacuum of idiosyncratic and personal experience; instead, actors embody narratives (Fay, 1996), particular ways of being in the world and those narratives become our positional identities, "the stories we tell ourselves about ourselves" (Hall, 1995, p. 66). They are also the means by which we present and represent ourselves to ourselves and others (Sarbin, 1986).

2.2.2 Ways of knowing

Stories are also ways of knowing because individuals draw selectively from a socio-cultural and historically-specific repertoire of narratives (Somers & Gibson, 1994) in order to construct and organise the meaning of their social world. Drawing on a shared storehouse of knowledge allows members of a society to interact effectively with others (Berger & Luckmann, 1967), to conform to society's prevailing values and practices (Bilton, Bonnett, Jones, Skinner, Stanworth & Webster, 1996), and to make sense of issues and events going on around them (Weick, 1995).

According to Bruner (1991), narratives accrue, creating cultures, histories, traditions, and homespun accounts of happenings, which are then converted into more or less coherent stories about the social world. As ways of knowing, stories are deployed as sensemaking activities (Bochner & Ellis, 1995; Boje, 1989; Boje, 1991; Boje, 2001; Ochs, 1997; Randall, 2001) in a constructive and creative process of relating the apparently independent and disconnected elements of one's existence into a *gestalt*—a relationship of parts to a whole (Polkinghorne, 1988). This process is a reflective one conducted, according to Fisher (1984), by individuals selecting from among the set of socio-cultural narratives available to them, and using tests of narrative rationality—principally the extent to which a story is coherent and rings true with the stories known to be *true for them* in their lives—to test and negotiate the appropriateness of the selected narratives. Stories are always embedded in other stories, and the value and meaning of any one particular story is "always a matter of how it stands with or against other stories" (Fisher, 1985, p. 358). Therefore, according to Fisher (1984), it is important for individuals to choose their stories carefully in order to live a good life.

2.2.3 Guides for action

Finally, stories are guides for action because they provide a moral frame of reference for acting in the world (Fisher, 1984; MacIntyre, 1981), and a horizon from which to evaluate what to endorse or oppose (Taylor, 1989). Such frames enable new stories (possible new ways of knowing and acting), selected from the socio-cultural repertoire of narratives, to be evaluated in terms of old stories (existing ways of knowing) that are known to be true in terms of an actor's life story (ways of being).

If, in relation to an interruption event, a new narrative is selected from the repertoire of available stories, and found, by evaluation and negotiation, to be an appropriate fit with the stories of self also selected, it may be seen as meaningful and therefore as an appropriate guide for action (Clarke & Cochrane, 1998). However, if a new story is evaluated and found not to be an appropriate fit with the stories of self also selected, then the new narrative may be resisted and the old stories may continue to guide action accordingly.

Through this reflective, evaluative, sensemaking process, social actors can be seen to draw on and personalise (Bruner, 1990; 2002) versions of a *cultured story* (Finnegan, 1997), as they fit themselves into the kaleidoscope of socially and culturally embedded narratives (Fay, 1996). In doing so, they attempt to make sense of interruption events and create templates for future action (Weick, 1995). Through this process, individuals use stories to help them manage their uncertain futures (Ochs, 1997).

2.2.4 Author-actor-producers

The philosophy of the narrative articulated here also points to stories as activities in which individuals engage as actors, authors, and producers. Individuals are actors in that they participate in stories which existed prior to their entry into a particular setting, and which continue on after the actors exit from the scene (Berger & Luckmann, 1967; MacIntyre, 1981). However, the actors are also authors as they do not simply act in, but contribute to the narratives they enact. They narrate stories and make such accounts their own (Bruner, 2002; MacIntyre, 1981; Mishler, 1995), by constructing their own versions of the socio-cultural narratives selected. However, actor-authors are not free to improvise at will. They are always constrained by the stories available to them, in the particular narrative productions of which they are, at any particular point in time, a part (MacIntyre, 1981). As MacIntyre (1981) reminded us: “We are never more (and sometimes less) than the co-authors of our own narratives. Only in fiction do we live what story we please” (p. 199). In addition, individuals are producers in that they are involved in an entire production process in selecting and interpreting socio-cultural narratives, constructing their *own* versions of such narratives by negotiating, challenging, or reproducing them, as well as

narrating, and performing such stories before a particular audience, for a particular purpose, in a particular socio-cultural context (Fairclough, 1992; Goffman, 1997).

2.3 Narrative in this study

In translating this narrative philosophy into the specific dimensions of this study, I argue that as individuals we are assemblages of stories, as well as being the authors, actors and producers of stories. As such, we are always in the process of assembling and re-assembling (constructing, negotiating, evaluating, authoring, narrating, and performing stories) as we participate in the day-to-day activity of social life within a social world of stories and storied others. Storied others include the objects we encounter, such as computers. Such objects are themselves assemblages of, and actors in, stories because they are constantly being constructed by a multitude of others—including designers, advertisers, media representatives, policy makers, family, and friends—to take on and perform a multitude of roles.

In making sense of interruption events, such as the introduction of the new computer, I argue that individuals engage in a sensemaking process—a production activity—in a particular socio-cultural context in relation to which they conduct a negotiation with themselves about themselves in relation to a range of stories and storied others. In this process individuals bring to the negotiation an assemblage of stories, drawn from the socio-cultural repertoire of narratives, and also from the stories they know to be true in terms of their own lives. The negotiation process can involve a sense of struggle and conflict as individuals work to find a resolution, that is, a sense of alignment (Stokes & Hewitt, 1976) among the assembled stories. This process may result in the creation of a new story, or the confirmation of an old story. Whatever the final outcome, individuals adjust their assemblage of stories accordingly, and then carry on with the normal day-to-day reality of their lives until the next interruption event gives cause for further contemplation and negotiation.

Drawing on the philosophy of the narrative outlined above, the specific model that underpins this study conceptualises stories as production processes in which author-actor-producers work to make sense of interruption events. In this process, they draw selectively on a repertoire of socio-cultural narratives. They evaluate the selected narratives for an appropriate sense of fit with the stories known to be true in terms of

the author-actor-producer's life. They do so in order to produce a meaningful response and to take action consistent with that meaning. This process is represented diagrammatically, in Figure 1 below.

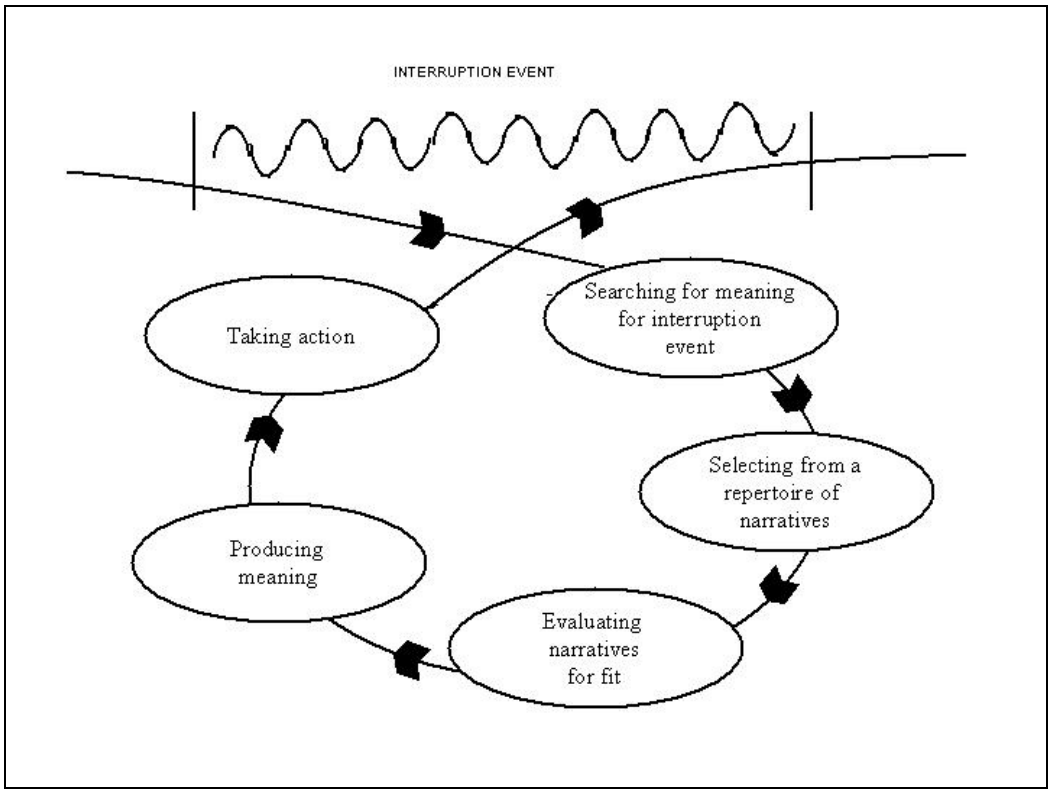

Figure 1: Model of storying process used in making sense of interruption events

The above diagram outlines the narrative production process by which individuals make sense of interruption events. The process encompasses: (a) the search for meaning in relation to a particular socio-cultural context; (b) the selective appropriation of stories from a repertoire of socio-cultural narratives; (c) the evaluation of those narratives for fit; (d) the production of meaning; and (e) the development of a response that enables action to be taken in accordance with the meaning produced.

In summary, in this chapter, I explained the social constructionist epistemology and the philosophy of the narrative that underpin the way the study has been approached. Fundamental to the study is the understanding that social reality is a constructed reality made meaningful by author-actor-producers who engage interactively in an

ongoing process of meaning-making through the selection, negotiation, enactment and personalised authoring of socio-cultural narratives. This understanding informed the development of a model of storying as a production process through which interruption events are made sensible. In the next chapter, I present and discuss the literature on older people and computers using this espoused social constructionist epistemology with a narrative lens to frame and organise that review.

CHAPTER 3

Older People and Computers: Narratives from the Literature

In this chapter I review the literature on older people and computers, identify gaps and limitations in that literature, and indicate the ways in which this study aims to make a contribution to knowledge on the topic. Though these goals conform to the conventional objectives of a literature review chapter, the outcome is less conforming. There are two reasons for this. The first is that the scholarly literature on the topic is small and theoretically thin, therefore I am concerned to provide as comprehensive a picture as possible of existing knowledge on the subject. The second is that the scholarly literature is predominantly functionalist and deterministic, and I am anxious to inject some energy into the topic, as well as adding to the ongoing conversation. To achieve these objectives I have adopted a broader definition of the term *literature* than may be usual, encompassing not just empirical studies and survey results, but also practitioner-based reports, government papers, media articles, and commentaries on the topic from *gurus* in the trade and popular literature. My readings from these sources extend over a longer period than may be usual for a study on new technologies, covering more than twenty years. However, this extended coverage has the benefit of showing the ways in which the construction of computers, older people, and their relationships have developed, but also remained the same over time.

My review of this literature is organised around a series of narratives. Three master narratives, in particular, dominate the ways in which the relationships between the principal protagonists—computers and older people—have been presented in the literature. In section 3.1, I review the studies and reports that constitute the narrative of *the enabling machine and elderly individuals* in which computers have been identified as functional and communicative tools that can extend the capabilities and social networks of the elderly, once inhibitors to the use of computers have been overcome. In section 3.2, the review is organised around the narrative of *the*

potential divider and senior citizens focusing attention on computers as instruments of change for the development of knowledge-based economies/societies and the corresponding concerns of governments for the potential marginalisation of some societal members, such as many senior citizens, who are not *technologised*. In section 3.3, the literature is organised around the narrative of *the desirable commodity and grey consumers* in which computers have been identified as meaningfully invested signs, and older people as grey consumers—a large potential target market for computer products.

Each of these three sections is structured in the following way. First, I outline the parameters of the master narrative that dominates the collection of literature under review in the section, and also identify the storyline or meta-narrative underpinning that collection. Second, I review the literature. Third, I critique the narratives and discuss the stories (theories) of technology they assume. I also identify gaps and limitations in the literature reviewed.

In the final section of the chapter, 3.4, I draw on this review and the identified gaps and limitations to argue the case for an alternative approach to the study of older people and computers—one that adds significantly to the richness of understanding and knowledge on this topic.

3.1 The enabling machine and elderly individuals

In this section I review empirical studies and practitioner-based reports that form the principal body of knowledge on the topic. The master narrative of *the enabling machine and elderly individuals* identifies computers as benign and beneficent tools assisting often frail and isolated elderly persons to live enhanced and independent lifestyles with the enabling support of computer technology. In these portrayals, older people are embodiments of physiological and cognitive decline, whose aged-based deficiencies are compensated for, at least to some degree, by their computer assistants. The storyline, or *meta-narrative*, is that of the computer as a *knight in shining armour* character and older people as potential victims in need of rescue.

The singular role of the computer-as-hero in the literature on older people and computers is in stark contrast to the multiple ways in which the technology has been

presented in the wider academic literature. It also contrasts with the fictive literature in which, in addition to optimistic and utopic portrayals, a variety of critical, pessimistic, and dystopic accounts also exist.

Interestingly, the *computer-as-villain* is a character largely missing from the studies and reports on older people's relationships with the technology. One possible reason for the lack of emphasis on the villain-computer is the problem-solution focus adopted by those studying the relationship between older people and computers. The central purpose of this problem-solution approach is to identify potential issues that might inhibit computer use and to recommend ways to overcome them, rather than to question the role of the technology, or its promotion as benign and beneficent for the aged, or the necessity for its near universal adoption. Applied research, according to Barrow and Smith (1979), is designed to "yield practical information to solve a particular problem and is not concerned with theoretical speculation on why the problem exists" (p. 64). This problem-solution, non-critical approach is dominant in the work reviewed in this section, and in the literature on this topic as a whole.

I return to discuss the master narrative and its underpinning storyline further in section 3.1.5, but first I present and review the studies and reports which make up this particular collection and discuss the contributions they make to knowledge on the subject. The review of this body of work is organised around four major themes: the benefits of computers for older people, in section 3.1.1; the barriers to older people's use of computers, in section 3.1.2; the solutions identified for overcoming these inhibitors, in section 3.1.3; and the possible negative consequences of computers for older people, in section 3.1.4. These four themes are discussed below.

3.1.1 Benefits of the enabling machine

The literature identifies two key ways in which computers are beneficial for older people: first, in relation to increasing older people's functionality, that is, their ability to operate independently and interact successfully with the environment (Czaja & Lee, 2003); and second, in relation to connectivity—the older person's ability to communicate conveniently with others for social support and other reasons. In these studies, connectivity also serves a functional purpose.

3.1.1.1 Functionality

During the 1980s and 1990s, researchers identified computers as beneficial for older people, predominantly as tools for retarding brain deterioration and facilitating independence. In this context computers were positively associated with improving the quality of life and self-esteem of elderly persons.

Although devoid of investigative detail, a number of research accounts in the 1980s and 1990s reported that computers were mentally stimulating "mind tools" (Hoot & Hayslip, 1983, p. 497), "valued tools" (Ryan & Heaven, 1986, p. 26), or assistive devices able to be used by the elderly to help them achieve day-to-day goals (Kornbluh, 1986). A primary function of computers, according to Hess (1984), was to "retard deterioration in the ability [of the elderly] to function independently" (p. 62). To this end, computers had a role to play in activities such as stimulating brain activity and increasing hand-eye co-ordination (Kornbluh, 1986). In addition, Morris (1996-7) noted that computer technologies could usefully compensate for some of the deficiencies of old age, for example by acting as a medication reminder prompt.

More recently, the functionality of computers has been extended to promote elder-independence in additional ways. According to Nourbaklish (2005), extensive investment has been channeled into developing human-friendly domestic robot applications for use by an increasingly large elderly population in Japan. Here, anthropomorphic, bipedal robots are being developed to provide assistance, companionship, and entertainment, in the home environment. Robots are even being developed as 'pets' for the residents of nursing homes.

Numerous early reports described computers as providing the elderly with an improved quality of life (Kornbluh, 1986; Robinson & Birren, 1986; Skolnick, 1984), enhanced opportunities for independent lifestyles (Krauser, Baker, Lynch, & Carmone, 1986; Raz, 1994; Ryan & Heaven, 1986; Stern, 1994), and improved self-esteem (Kornbluh, 1986). In addition, computers have, with the popularisation of the Internet, also been studied in relation to the connectivity benefits they provide older people.

3.1.1.2 Connectivity

The use of computers for communication purposes has received considerable attention in three main areas: loneliness reduction, access to support and companionship relationships, and healthcare related benefits.

One of the primary areas for research on older people's use of computers for communication purposes has been the study of the effects of email and Internet use on loneliness reduction and quality of life enhancement (Hahm & Bikson, 1989; Lansdale, 2002; McConatha, McConatha & Dermigny, 1994; Swindell, 2000). White, McConnell, Clipp, Bynum, Teague, Navas, Craven, and Halbrecht (1999), for instance, studied the effects of training and Internet use on loneliness among residents in a retirement community in North Carolina. Using four different measures of psycho-social wellbeing, the authors identified a trend toward decreased loneliness among members of the intervention group in comparison with the control group. Although the sample size of 19 was small, the authors argued for the potential of the technology to have a beneficial impact on psycho-social wellbeing. In a later, similar study with 100 older-aged participants, White, McConnell, Clipp, Branch, Sloane, Pieper and Box (2002) identified similar trends towards less loneliness and depression among the intervention group by comparison with the control group. However, the authors also commented that the Internet can only become an effective health promotion tool for those older adults who are willing and motivated to use it. That is, benefits accrue to those who are prepared to make the effort to use the technology.

By contrast, other researchers (Coleman, 1998; Czaja, 1994; Czaja & Lee, 2003; Hawthorn, 2002) identified that the design of the technology was crucial if older people were to benefit from its usefulness. Czaja, Guerrier, Nair and Landauer (1993) looked at computer communication for the elderly, studying the consequences of 36 older women's use of an electronic text messaging system which provided access to news and weather reports, movie reviews, and health information in a community in South Florida. In this study, computer terminals were placed in participants' homes and linked to a host computer at the research laboratory. Impacts of computer-mediated communication on participants' morale were measured using survey instruments. The authors concluded that computers could enhance the quality

of life opportunities of older people, especially those who lived alone and spent extensive amounts of time at home, provided they were designed in such a way as to accommodate age-related changes in cognitive and perceptual abilities—for example, minimizing demands on working memory by providing on-screen, easy to read prompts. Providing opportunities for the facilitation of communication and interactions with others was considered particularly important at a time of life when, often following the loss of friends and family, many older people had difficulty making new friends.

Cody, Dunn, Hoppin and Wendt's (1999) study of 292 older adult learners' use of WebTV connections in 11 assisted learning and independent living facilities also found evidence of increased feelings of connectivity amongst those who learned to use the technology. In addition, the authors identified that those who were already highly interconnected with others—that is, they had numerous and satisfying contacts with friends and relatives—made more use of email than those who were less well connected. However, despite this qualification, the use of email and the Internet has consistently been identified as a way to reduce older people's isolation and facilitate their communication with others.

In addition to loneliness reduction, a second communication-related benefit that researchers have identified is the use of computers for developing support and companionship relationships. Wright (2000), for instance, studied the use of the Internet for social support purposes among members of the SeniorNet community. He asked 136 participants to complete online questionnaires regarding perceived satisfaction with their Internet-based relationships and their non-Internet-based relationships. He found that those who spent more time per week communicating online were more satisfied with their Internet support networks than were those who spent less time communicating on the Internet. Conversely, those who spent less time communicating online were more satisfied with their non-Internet support networks. Wright concluded that for those who spent a great deal of time on the Internet, there was the potential for relatively strong relationships to form, even amongst those who only knew each other through the Internet.

Other researchers also identified the Internet as beneficial for developing social networks. Ito, O'Day, Adler, Linde, Mynatt, O'Day (1999) and Ito, O'Day, Adler, Linde and Mynatt (2001) conducted a year-long ethnographic study of SeniorNet in the United States, in which the authors interviewed staff members, observed online activity over a period of months, attended classes in physical learning centres, and interviewed online members and students. SeniorNet members' online communications were observed to provide crisis help and technical support, as well as the opportunity to share with others who had common interests and experiences. In particular, SeniorNet members were found to share and exchange emotional and informational support "with warmth and civility" (p. 18).

SeniorNet members have also been studied by others, such as Lin, Hummert and Harwood (2004), who conducted a discourse analysis of 550 messages in SeniorNet online discussion forums over a two year period. These authors concluded that the Internet provided a rich communication context in which members could reach out to others and express their identities. Similar beneficial experiences of online communications among older people were also identified in a non-western context. For example, Kanayama's (2003) study of the online experiences of elderly Japanese in a seniors-only environment found that participants felt comfortable using the Internet to find friends and connect socially with others. The author observed all the messages posted to a Senior Internet Group email list service for members over an eleven month period during 1999/2000 and conducted follow-up telephone interviews with six women and five men for 30 to 60 minutes each. In these interviews, participants described their online exchanges as an affectionate and supportive way to share stories and listen to others. All these studies point to the computer as beneficial for older people, particularly in providing them with convenient access to networks of companionship and supportive relationships.

In addition to developing and enhancing support and companionship relationships and social networks, a third communication-related benefit that researchers have identified is a link between older people's use of computers and health-related benefits, such as improved wellbeing. McConatha et al. (1994), for example, examined the effects of interactive computer-based education and training on the rehabilitation of 14 long-term care residents over a six month period and concluded

that participants experienced increased feelings of control and an overall sense of wellbeing through their use of computers.

Other commentators, too, have weighed into this debate; for example, Lansdale (2002); McConatha (2002); and Morrell, Mayhorn, and Bennett, (2002) acknowledged the benefits of the Internet for establishing a positive relationship between social connectedness and ageing successfully, that is, growing older with a sense of healthy adjustment and wellbeing (Barrow & Smith, 1979). Kirkwood (2001) pointed to the opportunities of the Internet for older people and suggested that information technology could be used to transform the lives of older people, enabling "radical new models of health care and support for older people living at home, effecting savings that would amply repay the costs of installing an Internet connection in every house" (p. 3). Similarly, Wright and Query (2004) argued that computers could enable individuals to take responsibility for their own healthcare and wellbeing without having to rely on others.

In summary, the literature here suggests that computers provide older people with opportunities for independence and connectedness, while compensating, at least partially, for the debilitating effects of the ageing process, reducing the potential for older people to withdraw and become socially isolated. The emphasis, in the underpinning narrative, is on computers as heroes and enablers, and on older people without technology both as potential victims, and as grateful beneficiaries. This scenario sets up a hierarchical relationship in which the computer is the dominant character and older people are either submissive or resistant. Being submissive—that is, learning how to use computers—is the preferred state, and being resistant is a condition to be overcome. Therefore, a significant amount of research attention has focused on identifying the barriers for older people in learning and using computers and how those barriers might be addressed.

The next section reviews studies identifying the potential barriers for older people in relation to computers.

3.1.2 Barriers to learning and using the enabling computer

Research on the barriers for older people learning and using computers has focused on five main areas: psychological barriers, including fear and anxiety; relevance barriers, particularly having no need or use for a computer; physiological barriers, in particular deteriorating perceptual and motor skills; cognitive barriers, including declining memory and attention-deficit problems; and finally, affordability barriers, that is, a limited ability to purchase, maintain, and use a computer. These barriers are discussed separately below. They are, however, not necessarily distinct areas and have often been found in combination, exacerbating the problems many older people encounter with computers.

3.1.2.1 Psychological barriers

A number of studies identified the role of psychological barriers, including fear and anxiety, lack of confidence, lack of motivation, and negative attitudes as barriers to older adults' learning and use of computers.

Computer-related fear and anxiety are significant inhibitors for many older people. According to Kelley and Charness (1995), anxiety is "a clinical term referring to a negative or stressful emotional state when thinking about or using a computer" (p. 111). The majority of studies on computer-related anxiety have attempted to measure the levels of older people's anxiety using an intervention, typically a training situation, with a test group and a control group, collecting pre-test and post-test scores on survey instruments. Using this configuration, Temple and Gavillet's (1990) study with 43 subjects recruited from senior citizens' centres in Nevada found that those who chose not to participate in the training course—one of two control groups used in the study—were significantly more anxious about computers than were those who participated in the sessions, or those who were waiting to take the course at a later stage. However, those participants who took the training course showed little significant change in anxiety levels between their pre-test and post-test scores, leading the authors to conclude that anxiety may play a significant role in determining participation in computer training courses. That is, those who are less anxious about computers may self-select into studies and therefore experience little change in their anxiety levels.

On the other hand, Charness, Schumann and Boritz (1992), Cody et al. (1999), and Morris (1994) found that anxiety levels amongst older learners did diminish with familiarity, based on pre-test, training intervention, and post-test scores using survey instruments. Similarly, Dyck and Smither (1994), comparing levels of computer anxiety amongst 219 younger people and 203 older people, found that higher levels of computer experience were associated with lower levels of computer anxiety. The authors also identified that older people had lower levels of computer confidence than did the younger people. This finding was reiterated by Marquié, Jourdan-Boddaert, and Huet (2002), who found that older people were less confident than younger people in their own computer knowledge, leading the authors to conclude that lack of confidence was one of the reasons why elderly people had difficulty in mastering new computer technologies. However, no attempt was made to determine the origins of this lack of confidence.

By contrast, with research that attempted to measure computer anxiety, a study of older people's perceptions of computing conducted by Richardson et al. (2005) with 98 members of three SeniorNet clubs in New Zealand, identified expressions of fear and anxiety in participants' focus group discussions about their computer experiences. The authors examined differences in the ways that women and men communicated these fears. Women, for example, identified themselves as 'technophobic' and as particularly anxious in relation to certain machines like the computer, but much less so in relation to other technologies like microwaves and knitting machines. Male participants, on the other hand, while also anxious and frustrated in their computer-related learning, were less inclined than were the women to frame their problems as a result of their own shortcomings, and more inclined to attribute blame to the newness of the technology and their lack of familiarity with it.

In addition to fear and anxiety, commentators have also pointed to lack of confidence and lack of motivation as inhibitors to older people's learning and use of computers. Ruth (1986) argued, that "Cautiousness and disbelief in one's own capability may be an obstacle in accepting technological advances" (p. 252). Hendrix and Sakauye (2001) also indicated that the link between ageing and memory failure can create a negative impact on older people's motivations to learn, in that their self-beliefs may influence how they respond to memory tasks. Buys (1998), who conducted structured

interviews with 13 older people about their experiences with computers at a SeniorNet club in Ipswich, Australia, also found that the most important aspect for older adults in learning new computer skills was their motivation and desire to learn.

Further, attitudes to computers have been identified as significant factors in older people's relationships with computers. According to Kelley and Charness (1995), an attitude is a "social psychological concept which refers to one's beliefs, feelings, and behaviours toward an attitude object" (p. 111). These authors suggested that a positive attitude toward computers might lead to an attempt to use a computer, though it may have little influence on one's ability to do so. On the other hand, White and Weatherall's (2000) interviews with six members of a SeniorNet club in New Zealand found that participants' positive attitudes towards computers and their views on its perceived usefulness were key influences in decisions to become involved with computers.

Positive attitudes of users towards computers have also been contrasted with the negative attitudes of nonusers. Kerschner and Hart (1984), Smither and Braun (1994), and Galusha (1998) identified that nonusers had less positive feelings about technology than users, were less familiar it, and were also less likely to understand how it might be useful to them. Baack and Brown (1991) attempted to measure attitudes towards computers using a questionnaire administered to 235 younger people and 184 older people recruited from several large and small Midwestern cities in the United States. The authors found that older adults had less favourable attitudes towards computers than did the younger people. Older participants also indicated lower overall anxiety levels in relation to computers than did the younger adults. The latter finding contrasts with the anxiety expressed by other nonusers, such as those studied by Temple and Gavillet (1990), discussed earlier. Baack and Brown's (1991) group of older respondents expressed no interest in having hands-on involvement with computers, but neither were they particularly anxious about them, compared with the younger people surveyed. The authors attributed this anxiety differential to the fact that the younger research participants were facing performance pressures in relation to their enrolment in a new university course on computers, while the older participants, on the other hand, had no such pressures to contend with. Baack and

Brown (1991) concluded that older people will have little motivation to use a computer unless the benefits of acquiring such skills are readily apparent.

The studies discussed above present mixed results in terms of the relationship between psychological barriers and computer use for older people. However, on the whole, the literature points to anxiety with the technology as negatively related to familiarity with it. The use of self-selected samples has been identified as problematic in that it is unlikely that subjects who volunteer for training will have extremely negative attitudes to, or anxiety about computers (Kelley & Charness, 1995). Many older people were also identified as lacking in confidence and motivation to learn how to use computers. Motivation was additionally linked to perceptions of relevance.

3.1.2.2 Lack of relevance barriers

Relevance has been identified as one of the critical issues in the uptake of a new technology. Rogers (1983) theorised that the degree to which an innovation is perceived as consistent with an individual's needs, experiences, and values, and the degree to which the uses of an innovation are readily apparent, are two of the factors which contribute to the diffusion of a technology.

This theorising was confirmed by later empirical work by researchers such as Selwyn (2004), who identified limited relevance of computers as a key issue in older people's non-adoption of the technology. Selwyn's interviews with 35 older people over 65 years of age in England and Wales found evidence of physiological and psychological reasons for respondents' non-use of computers. However, according to Selwyn, most salient were the issues of ambivalence and relevance. His interviews identified that nonusers had profoundly ambivalent attitudes towards computers, that is, they held simultaneously positive and negative views about the technology. On the one hand, non-computer-using participants acknowledged the 'miraculous' nature of the technology. On the other hand, they struggled to find a useful or pleasurable place for the computer in their lives, either as a tool or as a hobby. For nonusers, the technology was seen as neither relevant nor advantageous at a day-to-day level. Selwyn concluded that "In its present form, ICT is not universally attractive to, or universally needed by, older adults" (p. 382). His recommendation was to include older people in discussions about how ICTs could be made more attractive,

interesting, and useful for older adults, rather than simply assuming the universality of their utility.

3.1.2.3 Physiological barriers

In addition to psychological barriers, physiological and cognitive changes which occur as part of the normal ageing process have also been identified as inhibitors to older people's use of computers (Blake, 1998; Coleman, 1998; Hanson, 2001; Wordon, Walker, Bharat & Hudson, 1997).

Vision impairments have been identified as the most common source of difficulty for older people using computers and the Internet (Blake, 1998; Hanson, 2001). Vision-related problems included difficulties with small font sizes and certain font colours on certain background colours. Blake, citing Carey (1997), indicated that the central problem for the visually impaired was not just their inability to see with clarity, but their comparative disadvantage in processing information. A person with full vision is able to scan 20 boxes on a computer screen display, select three options, click and then access the selected files, while a visually impaired person has to move deliberately through all 20 options before making selections. Blake concluded that the consequences of such deliberations for Internet users were frustration as well as higher telephone costs.

In addition to eyesight problems, other physiological problems identified include manual dexterity difficulties, particularly in relation to the use of the computer mouse and the keyboard (Hanson, 2001; Hendrix & Sakauye, 2001). Williamson, Bow and Wale's (1997) study of the problems encountered by older people using the Internet observed 60 older people in three public libraries in Victoria, Australia. The authors found that the biggest problems participants experienced were with using peripherals, particularly the mouse, both for pointing and clicking (21% participants) and scrolling (24% participants). In addition, 30% of the participants indicated they had problems reading the screen because the print was too small or the colour of the print was unreadable. Web page designs, particularly the lack of instructions on how to proceed, were also considered frustrating by 30% of participants. In addition, slow response times were identified as problems by 20% of respondents. Such issues point to age-unfriendly design as potential barriers for older people in learning and using

computers (Coleman, 1998; Czaja, 1994; Czaja & Lee, 2003; Hanson, 2001; Hawthorn, 2002; James, 1996; Zhao, 2001).

3.1.2.4 Cognitive barriers

In addition to physiological barriers, cognitive changes as a result of the ageing process have also been identified as inhibitors to older people's learning and use of computers. Cognitive changes (Wordon et al. 1997; Coleman, 1998; Hanson, 2001) provide older people with challenges in their learning. For example, older people have been found to take longer to work through tutorials and ask for more help than younger learners (Charness et al. 1992). They also experience attention-related problems, memory impairments, and interference from previously learned skills (Hanson, 2001). However, Morrell, Park, Mayhorn and Kelley's (2000) study of 60 older adults' computer learning demonstrated that while cognitive deterioration may be responsible, in part, for older people's learning difficulties, they can with the aid of simple instructions acquire computer skills over time. This finding points to the benefits of training in overcoming some of the older person's barriers to using computers. The issue of age-sensitive training is addressed in section 3.1.3 below.

3.1.2.5 Affordability barriers

In addition to ageing-related barriers to learning and using computers, some research also points to the financial cost of purchasing, maintaining, and using a computer and an Internet connection as a barrier to the technology's diffusion among the older population. Such research often cites macro level statistical data. Gilligan, Campbell, Dries and Obermaier's (1998) report on the barriers for older people in using computers drew on comparative GDP per capita data from six European countries: Finland, France, Germany, The Netherlands, Spain and the United Kingdom, as well as figures on the state-funded pensions paid in each of these countries. Against this backdrop, the authors discussed the cost of computer hardware and software and the cost of an Internet connection to show that financial cost was a significant barrier to computer ownership for many older people over 65 years of age, particularly those on state-funded pensions. Recognition of cost as a barrier has encouraged government bodies to promote public access facilities as an alternative to home-based ownership (Blake, 1998; Botha, Small, Crutchley & Wilson, 2001).

In summary, the vast majority of studies on the principal inhibitors to older people's use of computers have focused on the individual as the source of his/her problems in relation to technology. Matters of individual deficiency relate principally to the ageing condition and also to the role of anxiety, attitudes, motivation, confidence and perceptions of relevance. Situational factors, such as the financial cost of buying a computer and using an Internet connection, were given much less attention. Empirical investigations, in this research area, were primarily conducted using controlled studies. The emphasis, in the underpinning narrative in this section, is on older people as victims of the ageing process. For such individuals, the computer-hero holds the prospect of salvation—provided, older people are prepared to assert themselves in relation to the challenges that confront them.

The next section discusses the dominant ways in which these challenges and barriers have been addressed to facilitate older people's take-up of the technology.

3.1.3 Solutions to learning and using computers

Solutions to the barriers identified in relation to older people's learning and use of computers have been addressed in the literature in four principal ways: (a) designing age-friendly hardware and software to accommodate older people's physiological problems; (b) addressing psychological barriers by decreasing anxiety and changing negative attitudes; (c) devising age-friendly training programmes to deal with cognitive slowing and associated attitudinal and confidence problems, as well as providing instruction on how to deal with the risks associated with computer use, and assisting individuals to understand the computer's potential relevance and applications; and (d) providing public access to computer systems for those unable to purchase their own personal computer. The predominant area of study, and the one that appears to have had the most impact on overcoming older people's barriers to computing, is age-sensitive training. It is that area I discuss below.

Age-sensitive computer training, particularly in seniors-only centres, has been identified as one of the most significant ways to address many of the barriers identified for older people learning to use computers. Case studies of such training include Eilers' (1989) two year ethnographic study of a group of older computer users in California. In this study, Eilers observed that the most effective teaching methods were: simple explanatory lectures with plenty of review; adequate,

supervised practice time; friendly self-instructing, self-paced lessons which allow the learner to deal with errors privately; instruction and assistance by age-peers who are supportive, empathetic and patient; informal, non-competitive ambience and camaraderie; relevant courses applicable to the lives of elders; and a comfortable physical environment.

Similarly, Irizarry and Downing (1997), and Irizarry, Downing and Elford's (1997) study of older people's computer learning in Adelaide, Australia, found that teaching methods appropriate to older adult learners included: small class sizes; students and instructors from the same age cohort; a slow pace of presentation and ample opportunity to ask questions; and freedom to work at one's own pace. In addition, Wrixon (2001) identified that age-peer instruction was successful because older people acted as positive role models for other older people.

Not only do age-peer training organizations assist older people's computer learning and dispel their fears about the technology, they also act as agents of change for the diffusion of the technology (Crow, 2002; Furlong, 1995; Murdock, Hartmann & Gray, 1992; Rogers, 1983; Tatnall & Lepa, 2003). In doing so, such groups "may be the most effective conduit for achieving greater market acceptance and penetration among the elderly population" (Festervand & Wylde, 1988, p. 162). Indeed, through organisations such as SeniorNet, many of the perceived negative consequences of computers for older people are assuaged.

In summary, age-peer training in seniors-only centres has been identified as a significant means for dispelling older people's computer anxieties and enhancing their computer-related experiences. Such peer networks have also been recognised as instrumental in the diffusion of the technology through older age groups. The emphasis, in the underpinning narrative in this section, is on older people leaving their potential victim status behind and working heroically together to achieve their *technological salvation*.

The next section discusses possible negative consequences of computers for older people.

3.1.4 Possible negative consequences of computers

Much of the literature has focused on identifying the benefits of computers for older people, the barriers hindering uptake, and the ways in which those barriers might be addressed. As a result, little attention has been directed towards exploring possible negative consequences of the technology. This is an interesting omission given the prominence of the computer's perceived negative effects on another demographic group, children, where the technology has been identified as a site for playing out adults' fears about the future and concerns for the loss of childhood innocence (Buckingham, 1997, 2002; Selwyn, 2003a). In the literature on children and computers, some researchers have canvassed parents' concerns about their children's easy access to sexually-explicit material and commercialism on the Internet, as well as the potential for outsiders to invade family privacy and the security of their children (Lenhart, 2001; Turow, 1999; Turow & Nir, 2000). The issues of the potential detrimental impacts of computer gaming and computer addiction have also been highlighted (Buchanan & Funk, 1996; Colwell & Payne, 2000).

However, potential detrimental impacts of computers, in relation to older people, have tended to focus more on the consequences of nonuse than on effects arising from their use. For instance, Skolnick (1984) argued that the introduction of computers could push the elderly, who did not use computers, "to the edges of life in the community" (p. 13). Sherman (1985) also feared that the elderly would be condemned to live a second class existence because they would be unable to adjust to the new technology. On the other hand, Applebaum and Chambliss (1997) expressed concern that older people's knowledge and experience would be seen as of little value in today's rapidly changing technological societies.

Other commentators, such as Rosenblith (1984), opined that computer terminals could generate new forms of loneliness for the elderly by reducing their (face-to-face) interactivity with "fellow humans" (p. 9). Glanz (1997) queried the romanticisation of computers and the Internet as a form of "technological salvation for older persons" (p. 74). Sixsmith and Sixsmith (1995) cautioned that the benefits of many of the technologies designed to promote independent living for older people needed to be weighed against their potential downsides for such people. These authors argued that the benefits of remote monitoring facilities, in which video links

can be set up to enable frail older people to remain in their own home and be monitored by external caregivers, avoided the necessity for their institutionalization, but such technologies also contributed to a loss of privacy and dignity for the aged person. The authors expressed concern about whose needs such technologies were designed to serve.

Such expressions of concern by practitioners about the potential negative consequences of computers for older people have been augmented by a recent empirical study that focused partial attention on older people's own concerns. Richardson et al.'s (2005) study asked members of three New Zealand SeniorNet clubs to identify ways in which computers might be seen as negatively impacting older people. Focus group participants identified negative factors such as spending too much time on computers, which had the potential to detrimentally affect family and marital relationships as well as contributing to a decline in their physical health through a lack of physical exercise. They also identified being exposed to computer viruses as a negative factor associated with computers. However, having identified the potential for these risks to occur, participants also demonstrated that they had taken steps to deal with them, such as scheduling the amount of time they spent on the computer and also learning how to deal with computer worms and viruses.

In summary, potential negative consequences of computers on older people constitute an under-explored area in the literature. The only empirical work carried out on the subject established the existence of downsides. However, rather than presenting as hapless victims, research participants, in the one study conducted in this area, showed an ability to deal to the downsides and to assert themselves positively in relation to the technology.

Having, in this section, reviewed the literature associated with the narrative of the *enabling machine and elderly individuals*, in the next section, I critique these studies and also point to the gaps and limitations identified in this body of work.

3.1.5 Critique of the master narrative of the enabling machine and elderly individuals

The literature discussed in the preceding sections contributes to knowledge on the topic of older people and computers in significant ways, particularly in terms of understanding the benefits computers provide for older people and the ways in which barriers to their use can be overcome. However, having acknowledged this significant contribution, I also need to explain the limitations and gaps in this collection of studies, in order to add to the ongoing conversation about the topic.

The narrative of *the enabling machine and elderly individuals* presents one version of the story of older people's relationships with computers. Principally, it focuses attention on two main characters—the computer and the older person—and the ways in which they are conjoined by a particular hero-victim storyline. In this configuration, the computer is the central character, the dominant player, and a seemingly immovable object around which the producers of the accounts—researchers, practitioners, and older people—are assembled. Essentially, the computer is a hero-character and older people are victims of biology and societal isolation waiting to be rescued, resuscitated, and given the kiss of life by their computer-hero-prince.

In the underpinning narrative of this collection of studies, the computer is positioned as playing a pivotal role in modern life. This characterisation serves to perpetuate the theory of technology identified as technological determinism (Bromley, 1997; Heilbroner, 1994; Henwood, Wyatt, Miller & Senker, 2000; Leonardi & Jackson, 2004; MacKenzie & Wajcman, 1999; Marx, 1994; Marx & Smith, 1994; Scranton, 1994; Smith, 1994; Williams, 1994) in which technology is depicted as an undeniable and unstoppable force acting on society. In this story technology is a "panacea for everyday problems" (Smith, 1994, p. 23), a "cause of human wellbeing" (Smith, p. 23), and also a source of salvation for older people (Glanz, 1997). Critics suggest that this story is so deeply rooted in social life that it seems natural to those it dominates (Feenberg, 2003). However, its naturalness, according to Sussman (1997), is artfully constructed through the political use of language and, in particular, through the anthropomorphism of assigning agency to technology and the use of the passive voice in which agenda-setting actors are intentionally hidden.

One of the effects of such constructing work is that technology is seen to be in charge, while "power elites" (Sussman, p. 26) who shape and fashion the technology for consumption by others, are insulated from scrutiny. Another effect, as evidenced by these studies, is the attention focused on how best to adapt to the technology (Mackay, 2001; MacKenzie & Wajcman, 1999), rather than asking who is responsible for the construction of the story and for what purpose.

In addition to the computer's centrality in the *enabling/elderly* narrative, the character's presumed innocence and neutrality also serve to enhance the propitious nature of its relationship with older people. This characterisation draws on a second theory of technology, that of the *technology-as-neutral* perspective, in which technology is understood to be a neutral artefact and the effects of the technology depend on how it is used (Bromley, 1997; Henwood et al. 2000; Woolgar, 2005). In the case of older people, the computer is constructed principally as a useful tool enabling those who use it to increase their connectedness with others, while at the same time decreasing their dependence on others. The construction of the computer character as a functional operative has some appeal for members of the older age demographic, who, imbued with a strong sense of stoicism (Sennett, 1998), espouse an ethic that values work (Haddon, 2000; Willis, 1995) and often associates leisure with laziness and idleness (Mansvelt, 1997). The *technology-as-neutral* story creates a space in which people are able to make choices about how to use the computer (Henwood et al. 2000), compared with the story of technological determinism in which the only choice is how to adapt. Even so, the neutral perspective fails to recognise the multiple ways in which the computer has been constructed, including for example, as a benign and beneficial enabler for older people, and as a source of fear and anxiety for parents in relation to children and young people.

In the *enabling/elderly* narrative older people are predominantly configured as one-dimensional, narrowly constructed characters (Loseke, 2003), facing or experiencing bodily deterioration and cognitive decline. Their sedentary profile is purported to make them well suited to utilising the benefits of the Internet (Norris, 2001).

In producing the *enabling/elderly* narrative, researchers and practitioners have consistently framed the issue of computers and older people in terms of a problem-

solution scenario in which the use of computers is deemed to be beneficial for older people, and the problem is to identify and overcome barriers to the technology's use. Research attention has focused on solving the problem and producing objective knowledge, principally, through the use of controlled studies. Therefore, the collection of studies and reports reviewed here provides a limited and partial understanding of the story of older people and computers. For that reason, examining how older people, computers, and their relationship are constructed within a particular social-cultural-political-historical context would add a significant new dimension to our understanding and enhance knowledge on this topic.

In addition to these limitations, gaps can also be identified in this collection of studies. First, older people have been constructed as a largely homogeneous population of individuals, often isolated and alone. Their relationship with others, except with other seniors, has largely been ignored. Their relationships with younger people, for example, have been studied predominantly in formal classroom and controlled study situations where older people were frequently found to be less computer confident and more anxious than younger people, and also likely to be intimidated by learning with younger people in mixed classroom situations. However, I am not aware of any work done on older people and computers in the family setting, or from the perspective of their identities as parents and grandparents. Examining the ways in which older people's experiences of computers is constructed in the family setting, and also the ways that their constructions of the computer may vary in different contexts and from different identity positions are areas that would further enhance our understanding of aged-computer relationships.

Second, in the current collection of studies and reports under review, the voices of computer users have been privileged over those of nonusers, the latter being identified predominantly as deviants whose attitudes need changing. In addition, the voices of some users, particularly members of SeniorNet organizations, appear to be privileged over those of other users. Certainly they appear to have been heard more often, presumably because SeniorNet members are an easily identifiable group and readily accessible to researchers. However, do computers mean the same to all older users? Indeed, do they mean the same thing to all older nonusers? Examining the ways in which different groups of older people construct their meanings for the

computer would also augment our understanding of older people's relationships with computers.

These two areas point to ways in which the current narrative of older people and computers could be extended and enriched by additional investigations.

In the next section 3.2, another version of the story of older people and computers is explored, one that draws in the wider social context, particularly the role of the state in promoting computers and their use.

3.2 The potential divider and senior citizens

In this section, I review the scholarly literature and government reports on older people and computers in relation to the *digital divide*— a concept used to configure the relationship between many governments and their citizens, including seniors, in relation to ICTs (Gunkel, 2003). The master narrative of *the potential divider and senior citizens* focuses on computers as instruments of change for many governments in the development of knowledge-based economies/societies, and on older people as senior citizens, one of a number of groups potentially marginalised by this shift to a technologised economy/society. Many governments, endeavouring to minimise the fallout from potentially large numbers of their citizens becoming technologically disenfranchised, have implemented initiatives—often entitled *bridging the digital divide*—to address the problem of the failure of some of their citizens to *technologise*.

Thus the problem-solution scenario identified in relation to the master narrative of *the enabling machine and elderly individuals*, discussed in section 3.1, is again invoked here, in the master narrative of *the potential divider and senior citizens*. However, this time a solution to the problem is sought, not by practitioners and academics, but by governments. Also, by contrast with the *enabling/elderly* narrative, where computers were identified as tools that could be usefully deployed by older individuals to enhance their mental capacity and extend their social networks, computers in the *divider/citizens* narrative are considered a necessity. They are also constructed as powerful actors in a vast socio-technical system (Feenberg, 1995) that embraces, not just individuals, but also nation-states and a

global network of economic and cultural relations (Chernomas & Sepehri, 2003; Smart, 1993; Thurow, 2003).

The *divider/citizens* master narrative reiterates the story of technological determinism evidenced in the *enabling/elderly* narrative. However, this time, the unstoppable computer is seen as marching triumphantly (Staudenmaier, 1994) across the globe recruiting volunteers, conscripting others, and generally ordering and constructing the world to its service (Heidegger, 2003), in order to create a web of interconnected knowledge-based economies/societies. By contrast with the *enabling/elderly* narrative that focused primarily on older people as isolated individuals, the *divider/citizens* narrative assembles a large international cast of individual and institutional actors around the conquering, all-powerful computer. The meta-narrative underpinning the *divider/citizens* narrative is another version of the *computer-as-knight in shining armour* story. Again, the computer is a hero-character whose task it is, this time, to rescue whole nations and their citizens from the potential wasteland of third-world status. An important component of this rescue package is that all citizens understand the necessity and the urgency to follow the computer-way. Those who do not understand the necessity to technologise will be helped to do so, and as a result, no one will be left behind as they journey with their *computer-saviour* to the *promised land* (Brown, 1997).

I revisit this narrative further in section 3.2.3, but first I discuss the studies and reports that make up this particular collection and how they inform understanding of older people's relationships with computers. The review is organised over three sections: In section 3.2.1, I introduce and discuss the concept of the digital divide and review survey data, as well as the small number of empirical studies on older people conducted explicitly within the digital divide framework. In 3.2.2, I explore the story further, in relation to the local New Zealand context of production. Here, I look at the New Zealand Government's articulation of the digital divide and the particular ways in which the *problem* of older people has been addressed in Government documents. In section 3.2.3, I summarise the contributions this collection of studies makes to knowledge on the topic, and also discuss its limitations.

3.2.1 The digital divide

The digital divide has been variously described as an information gap, a knowledge gap, and a technology gap, between those advantaged and those relatively disadvantaged by access to and meaningful use of computers and the Internet. The divide has arisen, according to commentators such as Rogers (2001), because diffusion of the technology has not spread evenly throughout societies. Moreover, the uneven nature of this diffusion constitutes an important social problem (Rogers, 2001) because access to information (Phipps, 2000) is related to a sense of belonging and participation in one's political community (Cheyne, O'Brien & Belgrave, 2000), and is considered a basic entitlement of citizenship (Norris, 2001). According to Phipps (2000), "Information is necessary to communicate, to access services, to exercise rights, to access benefits, to participate in the democratic process and ensure its accountability" (p. 62), and "Lack of access to the means of communication increasingly used by the rest of society has the potential to worsen the relative position of excluded individuals and groups" (p. 63). For reasons such as these, a number of governments around the world have introduced initiatives to bridge the divide and facilitate citizens' access to computers and the Internet.

Digital divides exist in different situations and in different forms. According to Norris (2001), there are three divides: a global divide between industrialised and developing countries; a social divide between the information rich and the information poor within nations; and a democratic divide between those who use digital means to participate in public life and those who do not. On the other hand, others recognised that a digital divide exists between different types of users, for example: between those who have access to dial-up and those who use broadband connections (Davison & Cotton, 2003); between those who live in rural areas and those who live in urban areas (Hindman, 2000; Shrewsbury, 2000); and between those who are able to effectively use the medium and those who are not (Hargittai, 2002). Perhaps, most pertinent to this study, some researchers point to the existence of a *grey gap* (Lenhart, Rainie, Fox, Horrigan & Spooner, 2000) between older people and others in relation to computers, particularly the use of the Internet.

3.2.1.1 The digital divide and older people

One societal group, identified as of some concern in relation to the digital divide, is older people. Negroponte (1995) ruminated that "Some people worry about the social divide between the information-rich and the information-poor, the haves and the have-nots, the First and the Third Worlds. But the real cultural divide is going to be generational" (p. 6). Norris (2001), too, expressed concern for older people, remonstrating that "despite the fact that the Internet seems well suited to the needs of the elderly" (p. 84), significant generational differences in adaptation to the new technologies exist and have been "established in hundreds of surveys" (p. 200).

Certainly, statistics consistently point to age as an important variable in determining access to the Internet, with such access declining significantly in the older age groups (Adler, 1995; Fox, Rainie, Larsen, Horrigan, Lenhart, Spooner, & Carter, 2001; Hoffman, Novak, Schlosser, 2000; Lenhart, 2003; National Telecommunications & Information Administration, 1998; Norris, 2001; Rice, 2002; Statistics New Zealand Report on the Digital Divide, 2004). Statistics in New Zealand as of 2004 indicate[1] that only 17% of households, where at least one person was aged 65 years and over, had access to a computer and/or access to the Internet, compared with 63% of households with at least one person in the 45-54 age group, 62% in the 35-44 age group, and 59% in the 15-24 age group.

Surveys also show that there is significant variability in attitudes to and use of computers and the Internet by older people. Treguer (2002) showed that "The growth rate of the over 50s on the web is on average twice that of those under 50 throughout the world" (p. 98), and that 'senior surfers' spend more time on the Internet than other generations, and have the highest usage rate among private users. Fox et al. (2001) observed that wired seniors are devoted Internet users, who have fallen in love with email. Van Dijk (2005) showed that the young-old (55-65 years) were increasingly connected—an age group dubbed by Fox et al. (2001) as a 'silver tsunami'. However, those in the older age groups, that is, those over 65 years of age, continued to lag behind (Fox et al. 2001; Van Dijk, 2005).

[1] Statistics New Zealand Digital Divide Report (2004) states that data used for the 65+ age groups have a sample error of between 30 and 50%, and should be used with caution.

Such statistics have been helpful in "charting the broad adoption and use of the Internet and in establishing the contours of the Internet's infiltration" (Rainie & Bell, 2004, p. 51). However, they reveal little about older adults' relationships with computers. Only a small number of qualitative studies have attempted to address this issue in the framework of the digital divide.

Millward (2003) explored the *grey digital divide*, using questionnaires and interviews to examine the feelings of older people in Wigan, England, toward the Internet. Of the 58 respondents in the study, 31% were Internet users, and the majority, 69%, were nonusers. Millward found that for users, the Internet was a convenient means to carry out activities such as contacting family and looking for holidays. On the other hand, the majority of nonusers expressed 'no interest' in using the Internet. Millward interpreted this response to be a defensive strategy, one he believed was less stigmatising than admitting that nonusers were unable to use the computer. The author argued that, "A barrier of personal protection could be erected by reporting a lack of interest in the web" (p. 10). He attributed respondents' lack of interest in computers to a lack of skills and recommended that more effort be put into training older people to use the Internet, not just on improving their access to computers, as a way of reducing the digital divide.

By contrast with Millward's assessment, other researchers have questioned the framing of older people's non-use of computers as problematic. Loges and Jung's (2001) study of older people and the digital divide looked at the relationship between Internet connectedness and age. These authors used a telephone survey with 1,812 respondents in the Los Angeles area to compare the extent to which older and younger people used the Internet in their daily lives, and the extent to which they attached importance to it as a resource to help them meet their goals. Using an Internet Connectedness Index to measure levels of connectedness, the authors found that older people engaged in lower levels of Internet use compared with the younger people. However, despite lower levels of use, older people subjectively evaluated their Internet connection to be as central to their lives as did the younger people. That is, the extent and type of Internet use engaged in did not limit the importance of the medium for those using it. The authors rationalised that lower levels of Internet connectedness were understandable in relation to older participants' concerns about

privacy and the perceived risks associated with conducting financial transactions online. Also understandable were respondents' generally lower levels of need to use the Internet for communication purposes when contacting others by telephone was simply more convenient. Indeed, the "presumption that seniors who do not gain Internet access are deprived of a resource for enhancing their lives" (p. 536) was found not to be consistent with the way many older people lived their lives. The authors concluded that lack of access to the Internet, one of the defining features of the digital divide, was a problem only if more and more information were to be transferred to the Internet, without consideration for the consequences of such actions on those who preferred not to use the medium for such purposes.

Selwyn, Gorard, Furlong and Madden (2003) reached a similar conclusion. These authors reported on access to and use of ICTs by 352 older adults in England and Wales, using a 36-page structured interview instrument. A minority of the participants interviewed, 23%, used computers. Eighty one per cent of such users made use of a computer at home, with only 9% making use of public access facilities, such as computers in public libraries. However, the use of computers was found to be a minority activity compared with the use of other ICTs such as watching television and listening to the radio. By comparison, nonusers, 77% of the total, indicated that they did not use a computer, principally because they had no interest or motivation (25%), they were too old (21%), or they had no need (18%) to do so. In conclusion, the authors called for a more realistic appraisal of ICT use suggesting that "The government and others must accept that, in its present forms, ICT is not universally attractive to, or universally needed by, older adults…and it is folly to expect [its] universal take-up by older adults" (p. 579).

In summary, statistics consistently point to age as a significant factor in predicting computer and Internet use, with those in the old-old age bracket, that is, those over 65 years, significantly less inclined than those in younger age groups to make use of the technology. This fact was reinforced by empirical studies that found the majority of older people interviewed had little need for, or interest in, using computers and the Internet. Despite finding that many older people had little need for, or made little use of computers, those who did use computers described them as central to their lives.

However, some researchers questioned the framing of ICTs as universally necessary for older people.

In the next section, I explore the issue of the digital divide further, this time as it has been constructed in New Zealand.

3.2.1.2 The digital divide in New Zealand

This section explores the issue of the digital divide, specifically in relation to the ways in which the New Zealand Government has constructed and responded to the issue. The objective is to provide a greater degree of contextual richness to the story of older people and computers, particularly the local New Zealand story, a context largely neglected in the literature on the topic.

New Zealand was one of a number of industrialised countries that have embraced the concept of the information society/knowledge economy. The literature on this topic is vast, and according to Alvarez and Kilbourn (2002), diffuse and fragmented. In essence, the concept encompasses the vision of a post-industrial world of computers and communication replacing the old industrial world of coal, steel and railroads (Feenberg, 1995). As Lyon (1995) points out, not only was the arrival of the information society seen as an apparently and entirely natural event, it was also seen as being "the outcome of progressive tendencies within Western industrial societies" (p. 68), and the "obvious and logical way forward" (p. 68).

During the 1990s, the New Zealand Government argued that, in order for the country to participate effectively in the new globalised information society, it was imperative to change from being a commodity-based economy, with low levels of computer skills, to become a more technologically-literate, knowledge-based economy (Butler, 1996; Knowledge Economy, 1999). It was anticipated that this change would provide more opportunities for international trade which would in turn have material (economic) consequences, including the creation of more jobs, higher skill levels, more innovation, and more consumer activity, resulting in more national prosperity and an improved quality of life for all New Zealanders.

The Government calculated that the transformation to an information society would enhance New Zealand's image overseas, leading other knowledge-based economies to see this country as credible, competent, and a suitable place for foreign economic investment (Information Technology Policy Group (ITPG), 2000). Such investment was anticipated to provide opportunities for economic growth and expansion. However, being seen to be *up with the play* and technologically credible internationally, required the development of a domestic emphasis on the promotion and use of ICTs, including the development of *e-practices* and *e-service delivery* mechanisms within government and the public service.

Therefore, in addition to its own use of computers, the Government promoted the use of computers by others in order to advance and support the national economic agenda. Government papers recorded for instance that, "With an ICT literate population and widespread access to ICT, New Zealand will be on a sounder footing to compete with other knowledge economies" (Social Impact of Information Technology, 1999, p. 5). In addition, it was reasoned that "To achieve growth rates similar to our competitors and improve employment opportunities, we will need as much of our human capital as possible, in all locations to be maximising their potential" (Social Impact of Information technology, 1999, p. 2).

The change to an information society/knowledge economy was designed to provide the country and its citizens with opportunities for the future. However, these proposed structural changes also presented the Government with challenges, in particular the challenge "to create conditions for all citizens to access technology, education and training in using and developing technology" (Getting IT, 1999, p. 2). In this regard, a major concern for the Government was the potential division of the country into the *technologically advantaged* and the *technologically disadvantaged*, if some members of the population were able to participate in the new society/economy and some were not (Butler, 1996; Doczi, 2000; Getting IT, 1999; Maharey & Swain, 2000). Such divisiveness might also disrupt the strategic drive to propel the country forward to a more prosperous place (ITPG, 2000; Social Impact of IT, 1999). It might also inhibit the agenda to use IT to "address current inequities, develop New Zealand in new economic directions, and enhance social cohesion" (Doczi, 2000, p. 1).

The Government also expressed concern that, since the greatest gains from an investment in *e-connectivity* would come from the greatest number of people going online (Doczi, 2000; ITPG, 2000), large numbers of nonusers would be managerially inefficient; that is, maintaining a dual system, an Internet-based system for *connected* groups, and a manual one for those *not-connected* would be expensive and cumbersome. For reasons such as these, identifying those groups in the population most at risk of being unable to participate in this new information society/economy was an important issue for the Government. As a consequence, between 2000 and 2004, the Government put in place a number of initiatives, including research projects to identify and study the problems of those citizens potentially *disadvantaged* by the introduction of ICTs. At the same time they sponsored and encouraged the uptake of computers by community groups. Digital divide initiatives with community groups were co-ordinated by the Community Employment Group expressly set up for the purpose within the Department of Labour.

More recently, the Government's Digital Strategy (2005) devolved responsibility for bridging the digital divide to the grassroots level. In this initiative, individuals in their communities were required to work together to bring about appropriate and necessary changes at a local level, rather than having a centrally-developed solution imposed on them. Such a strategy in effect enlists New Zealanders, including senior citizens, in the programme to change New Zealand using ICTs.

3.2.1.2.1 The digital divide and senior citizens in New Zealand

Older people have been mentioned sporadically in the Government's digital divide papers. Butler (1996), for instance, described them as individuals isolated in their homes and likely beneficiaries of information technologies. In the Knowledge Economy (1999), they were identified as older workers for whom ICT training would be necessary, principally because the birth rate was falling and their numbers would be needed in the workforce. Maharey and Swain (2000) described them as belonging to one of three main groups: those who were interested in digitised services, but were unable or afraid to use them; those not at all interested; and those, such as members of SeniorNet, who were very interested. In the Digital Strategy Draft (2004), the elderly were noted as one of a group of people contributing to the high percentage of

'not-connecteds' (p. 16) in the country. However, the elderly were not specifically mentioned in the final version of the document (Digital Strategy, 2005). Also, despite the Government's verbal support of SeniorNet (for example, Dalziel, 2002; Maharey, 2002), there have to date been no government-led initiatives to address the digital divide in relation to older people.

Minimal reference to or support for older people in the Government's digital divide documentation can be explained, at least partially, by drawing on the work of Selwyn (2002) and Phipps (2000). According to Selwyn (2002), digital divide initiatives incorporate two agendas: the domestic agenda of social inclusion, and the global agenda of economic competitiveness. In balancing these two agendas, Phipps suggests that attention focuses on economic issues. The result is that those citizens on the wrong side of the digital divide, who, given the opportunity will use ICTs for the purpose of doing a job of work, are accorded higher priority than those such as older people who have limited ability to participate in the labour market. Consequently, the place of senior citizens in the socio-technical system remains a matter of concern for governments, but one afforded lower priority than other more economically productive groups, who are seen as better able to help move the nation forward to the *promised land* of the information society.

In summary, a review of Government papers showed a primary focus on using technology to gain access to the globalised information society/knowledge economy. However, anxious that such an exercise should not result in a fissure at home, the Government initiated efforts to investigate the possibility of a digital divide occurring. Through this exercise, non-computer-using senior citizens were identified as one of a number of groups on the wrong side of the digital divide. However, to date minimal attention has been directed towards this group, possibly because the dual agenda of economic competitiveness and social inclusion, within which the digital divide has been framed, places a higher priority on the former than on the latter.

Having, in this section, reviewed academic studies, statistical surveys, and government reports on the digital divide and older people, in the next section I critique this body of work and also identify its gaps and limitations.

3.2.2 Critique of the master narrative of the potential divider and senior citizens

The literature discussed in the preceding sections informs and enriches understanding of the context in which the story of older people and computers has been produced, in particular, the framing of the issues at a macro level, and their performance at a micro and local level. In the *potential divider and senior citizens narrative*, computers and the Internet, nation-states, and citizens were identified as intertwined in a global economic and cultural network, in which computers were not only seen as necessary for individuals, they were also identified as fundamental to the future prosperity of countries. The phenomenon of the digital divide, in this scenario, focused attention on winners and losers, including older people. However, only a small number of empirical studies have specifically addressed the issue of senior citizens and the digital divide.

This collection of empirical studies, statistical surveys, and government papers contributes to knowledge on the topic. It does so, however, in a partial and limited way. The defining limitation of the collection is the set of theoretical assumptions that underpins the narrative. The narrative of the *potential divider and senior citizens* presents one version of the story of older people's relationships with computers. In doing so, it focuses attention not just on the two main characters—the computer and the older person—as the *enabling/elderly* narrative did, but draws together a cast of actors conjoined by the storyline of the digital divide and the information society/knowledge economy, played out in an international arena. This is the story of technological determinism writ large. In particular, it is the story of technology as a crucial change agent (Marx & Smith, 1994), a *saviour* who will fix the economy (Smith, 1994; Robins & Webster, 1989) and bring about significant social change (Bimber, 1994; Light, 2001).

In the *divider/citizens* narrative, the story of technological determinism has been delivered through the mechanism of a binary digital divide. The simplistic notion of a dichotomous divide, adopted largely uncritically in this collection of surveys, government papers, and studies has, however, been thoroughly critiqued in the wider scholarly literature. In the wider literature, the phenomenon has been described as

"an artfully constructed public problem" (Light, 2001, p. 710), in which an attempt has been made to neatly package the long standing and complex problem of social inequality (Phipps 2000; Selwyn, 2002a; Selwyn, 2002b), in order to bring about its resolution through a technological fix (Gunkel, 2003; Robins & Webster, 1989; Warschauer, 2002, 2003). However, instead of being viewed through this critical lens, the topic of older people and computers, in the digital divide version of the story, has more often been approached from a structuralist-functionalist, problem-solution perspective.

A structuralist-functionalist framing, following Haralambos and Holborn (1991), positions society as a system made up of interconnected units in which each part affects each other part and the system as a whole. Parts of the social system are deemed to be functional to the degree that they maintain the system and contribute to its survival. System survival is achievable through processes of social ordering and social control. According to Woodward (1997), one way social order can be maintained is through a system of binary opposites—insiders and outsiders—where transgressors are relegated to an *outsider* status, according to the needs of the system. As a social policy intervention, then, the construction of the digital divide can be understood as the creation of a system problem in which some units—groups of people *not connected* to each other through the Internet—are deemed to be *outside* the system and need to be brought into line so that societal change—to an information society/knowledge economy structure—can be successfully implemented and the stability and future survival of the system achieved. Therefore, social control is channelled through policy mechanisms designed to close the digital divide and bring *outsiders* inside. Such practices contribute to the normalisation of the technology and its taken-for-granted status.

Also taken for-granted in the *potential divider and senior citizens* narrative is the underpinning story of technological determinism that not only identifies technology as the solution for a number of problems, it also fixes the positioning of the actors within that story. One way to unfreeze the relationship between older people and computers is, therefore, to change the underpinning story and approach the relationship of individuals and computers from an alternative perspective.

An alternative perspective, consistent with the study's philosophical/theoretical framework, is the social construction of technology (SCOT) body of theory drawing on Bijker, (1994, 1995, 2001) and Pinch and Bijker, (1984, 1987). SCOT identifies technology as socially and politically constructed in its design, development, and use (Woolgar, 2005). From this perspective, computers can be seen as interpretively flexible, and multiply invested with meaning. Within the one object, there are many artefacts (Bijker, 2001). Those artefacts have no "fixed and stable nature and predetermined boundaries" (Jackson, Poole & Kuhn, 2002, p. 237), instead they are continuously changing and being reconstituted through engagement by different groups (Jackson et al. 2002).

Adopting a constructionist theoretical lens makes it possible to story computers in more complex and variegated ways than they have been presented in much of the literature on older people and computers, where one underpinning story—that of technological determinism—has dominated. A constructionist lens provides an opportunity to address the fixed and stable nature of the technology and to explore multiple possible meanings associated with it.

The adoption of an alternative theoretical lens points to one significant way in which the current narrative of older people and computers could be further developed.

The next section reviews studies and reports focusing on computers and their associated meanings for grey consumers.

3.3 The desirable commodity and grey consumers

In this section, I present a third version of the story of older people and computers, one in which older people have been constructed as *grey consumers*, that is, as members of a large and growing market segment, whose discretionary income and leisure time identify them as lucrative targets for consumer goods such as the personal computer. I draw on statistical surveys that demonstrate the buying power of the grey market, empirical studies that highlight the differences between computer users and nonusers for marketing purposes, and the scholarly and popular literature for an understanding of the ways in which computers have been invested with meaning for grey consumers.

The master narrative of *the desirable commodity and grey consumers* identifies computers as objects invested with meaning, and older people as targets for the consumption of that meaning. The setting for the interaction between these two protagonists is the consumer culture. According to Hepworth (1996), the phenomenon of the consumer culture is about "living in a society in which the mass production, marketing and consumption of goods on a global scale are the fundamental economic imperatives of everyday life" (p. 19). Within such a culture, consumption is not just concerned with the production, distribution, and acquisition of commodities; instead, it is a process in which meanings are produced and consumed, and identities are expressed and displayed (Mackay, 1995), in relation to a system of values (Baudrillard, 2001). Consumer goods in such a system are particularly significant for what they represent, that is, their symbolic connotations (Mackay, 1997; Haddon, 2000; Morley, 2003). Consumer items are thus containers of meaning and expressions of personal style and taste, as well as signs of affluence (Baudrillard, 2001). They can be read, according to Blaikie (1999), as positional goods, for example, as ways of defining social identity and differentiating members of one social group from another. For these reasons, consumption can be seen as a system of signs and meanings, of demarcation and classification (Baudrillard, 2001), and a means by which the abiding inequalities of status, class and power are maintained (Silverstone & Hirsch, 1992).

However, consumption is also recognised as an activity which is increasingly required to keep the wheels of industry turning. It is a process, according to Baudrillard (2001), in which individuals are enrolled for the purpose of performing social labour in consuming products, as much as for performing industrial labour in producing those goods. It is a system that involves the manufacturing of need (Baudrillard, 2001; Bowring, 2003), in particular, the creation of an insatiable desire for new and novel goods (Lasn, 2000). It is also described as one of the significant ways modern society is able to sustain itself (Silverstone & Hirsch, 1992).

The meta-narrative underpinning *the desirable commodity and grey consumers* is, once again, that of the computer-as-hero in rescue mode. This time, the hero can be seen as rescuing ageing individuals from the spectre of deficit and decline (Gullette, 1997; Trethewey, 2001), by holding out the promise of youthfulness, the prospect of

being up-with-the-play, and the respectability of being seen as competent. It is, therefore, the *knight in shining armour* character and the narrative of the *enabling machine and elderly individuals* revisited and updated. However, this time attention is focused, not on the lonely and isolated elderly, but on those older people who have the financial means and the desire to keep up (Gilleard & Higgs, 2000). For grey consumers, the computer is promoted as a *desirable*, must-have item.

I return to this narrative in section 3.3.3, but first I outline the ways in which the empirical studies, media reports, and the popular and trade literature that make up this small collection of commentaries enhance our understanding of older people's relationships with computers. I do this over three sections. In section 3.3.1, I reference market-related research on older people's use of technology. In section 3.3.2, I identify the meanings commonly associated with computers and older people in the academic and popular literature, including in media reports. In section 3.3.3, I summarise the contributions this collection of studies makes to knowledge on the topic, and also discuss its limitations.

3.3.1 The grey market for technology

Some research has focused attention on the *grey market* and its considerable buying power. Surveys, often reported in the popular media, highlight for instance, the size and buying power of this demographic group. In the United States, it has been estimated that "Seven baby boomers will turn 50 every minute between now and 2014. They account for 74% of personal financial assets, 50% of discretionary income, 65% of cruise travel, 48% of luxury car sales, and 77% of prescription drug sales" (SeniorNet.com website: Bridging the Digital Divide, 2001). Similarly, in Britain, Green (1999) indicated that the grey market deserves serious attention because this group holds between 70% and 80% of Britain's wealth and accounts for more than 40% of consumer spending. In New Zealand, the *Waikato Times* newspaper published a recent article indicating that a survey of 299 retired New Zealand pensioners showed that 70% of Kiwi pensioners owned a mobile phone, 50% had their own PC, and 20% had a digital camera (Kiwi Pensioners Named Leading Internet Users, 2005).

Statistics such as these are always open to critical appraisal. However, their publication in the popular media not only highlights the spending capacity of this large and growing market segment, but also serves to normalise the use of these technologies among those in the older age groups and to subject those who do not use the goods to an insidious and persuasive system (Bowring, 2000) of promotion and pressure. By such means the old, according to Cruikshank (2003), are becoming like a "colonised people" (p. 3), subjected to the "technologies of cultural imperialism" (Ess & Sudweeks, 2001, p. 266) in which they are being called on to imitate the dominant market group—the young (Gilleard & Higgs, 2000).

Some research has reported statistics about patterns of grey consumption; other research has taken a different tack, focusing on characteristics of marketers and of consumers. Treguer (2002), for instance, pondered on the reasons why marketers neglected those in the older age groups. He hypothesised that since marketers were themselves young, and belonged to the "the youth tribe" (p. 4), they had an affinity with younger people. However, they had no such affinity with those in the older age groups, with whom they associated a panicky fear of death. As well, according to Treguer, there were perceived negative associations between old age and business image—that is, old is *not cool* In addition, he suggested, there was a perception that the elderly had lost their status in Western societies, whereas youth, beauty and activity were the guiding stars of today.

Focusing on consumers rather than marketers, Trocchia and Janda (2000) conducted semi-structured interviews with six users and six nonusers aged between 57 and 87 years of age. Their objective was to identify, for marketing purposes, the motivational and attitudinal characteristics of those who used and those who did not use the Internet. The authors found that attitudes to the technology were shaped by: (a) reference group affiliations, with users more likely to align themselves with groups who had positive associations with the technology; (b) technology schemas, or expectations and beliefs about technology—users had more positive mental models than did nonusers; (c) meta scripts about change, the tendency to accept or resist change—users were found to be more comfortable with change than were nonusers; (d) perceptions about the value of the technology for relating to others—nonusers were less likely to see the technology as having value for maintaining

existing connections or developing new ones; (e) perceptions of comfort with using the technology for conducting financial transactions—nonusers were more inclined to value face-to-face contact and to want to hold and touch goods when purchasing them than were Internet users; and (f) lack of physical dexterity and visual acuity were also seen as inhibitors to Internet use. The authors concluded that "an Internet marketer who can educate older individuals about these issues [the benefits of the Internet] can carve a lucrative niche within the market for Internet-related products and services" (p. 613). In particular, the authors suggested targeting older individuals with physical disabilities by focusing on the theme of "bringing the outside world into the home via the Internet" (p. 613). For those who might be averse to change, it was suggested that attempts should be made to minimise the differences between nonusers' current activities and the ways which activities would be conducted on the Internet. Email, for example, could be portrayed as "little different from conventional mail, but much more time and labor efficient" (p. 612).

In summary, the older age demographic has been identified as an important, that is, a large and expanding target market for the consumption of technology products. Some research attention has been paid to possible reasons why they might have been neglected by marketers, including marketers' lack of affinity with this age group, as well as the associations between old age and impending death, and their *non-cool* image. In addition, characteristics of non-Internet users were identified for the purpose of enhancing tactical selling opportunities to such people. Also identified was the role of marketing professionals in promoting the computer as a consumer product.

In the next section, the construction of the computer as a *desirable commodity* is explored further, this time in relation to the meanings commonly articulated for computers and older people.

3.3.2 The meaningfully invested computer

This section draws on the academic as well as the popular/trade literature, to show that computers have commonly been associated with three meanings—being modern, being youthful, and being competent. Each is pertinent to a discussion of older people's relationships with computers. However, no empirical studies have focused

on these specific meanings, although some studies, including some previously reviewed earlier in the chapter, have referenced these associations in their findings.

3.3.2.1 Being modern

Computers have been associated with modernity (Mackay, 1997; Treguer, 2002), and with feelings of being able to participate more fully in the future (Turkle, 1984). In relation to older people, empirical studies discussed earlier in the chapter identified computers as providing participants with a way to feel they were participating in the modern world (White & Weatherall, 2000), and a way to feel they were keeping up and not being left behind (Richardson et al. 2005). In addition, Baack and Brown (1991) judged that keeping up was important because it contributed to feelings of personal control over one's environment.

In a similar vein, Blit-Cohen and Litwin's (2004) semi-structured interviews with 10 Internet users and 10 nonusers recruited from four senior centres in Israel found that for those who used the Internet, "Being involved with the virtual world represented a link to modern life and a fruitful way to integrate into contemporary society" (p. 393). Apart from the computer's symbolic value, the authors identified that using it enabled some older people to remain actively involved in society and able to cope with the continuous changes that took place around them.

In addition to these empirical studies that linked older people positively with computers and the modern age, media reports have also portrayed computers as connecting older people with the modern world (Conover, 1997; Killick, 2003), and as providing them with a new lease on life (Noer, 1995; Richardson, 2002). Such articles, often accompanied by photos of happy, smiling faces, serve to challenge negative, technophobic labels of old age, and to promote the positive and energizing aspects of the aged-person computer relationship.

3.3.2.2 Being youthful

In addition to being seen as important symbols of the modern age, and as having a modernising influence on those who use them, computers have also been associated positively with the young and negatively with the old, particularly in the popular and trade literature. This old-young dichotomy has evolved from early depictions of older

people as antagonistic to technological progress, to current-day constructions of older people as engaging with technology in various age-defying, youth enhancing ways.

Some of the early writers in this area described the formation of an inevitable generational divide between the young and the old. Toffler (1971), for example, identified the accelerating pace of change as creating a distinction between "advance agents of the worldwide super-industrial society" (p. 43) and those "people of the past" (p. 43) who "prefer to disengage to idle at their own speed" (p. 44). Others, such as Negraponte (1995) contemplated that the digital revolution would produce a generational divide in which "an entire sector of the population will be or feel disenfranchised" (p. 228) because "being digital is different" (p. 231) and the "control bits of the digital future" (p. 231) will be in the hands of the young who will do things differently from the way things have been done before.

Similarly, Tapscott (1998) forecast, that "One of the great stories of the dawn of the new millennium will be the ascendancy to power of the Net Generation" (p. ix). He predicted that the old and the young would be on a collision course where a "battle of the titans" (p. 12) would be likely to take place between those threatened by and mistrustful of the new technologies, and those resentful of attempts to curtail their growth. He envisaged four possible scenarios in this generational war: peaceful co-existence between the groups; a cold war standoff; an explosive and volatile situation; and older people conceding defeat so that the world could reinvent itself for the better. Although the latter strategy seemed to offer the brightest hope for the future, Tapscott was resigned to the likelihood that scenario three—a potentially explosive and volatile situation—would most likely occur and an inevitable tension would develop between the generations.

By contrast, Mosco (2004) was highly critical of the *children will lead us* myth (p. 79) espoused by *cyberspace enthusiasts* such as Negraponte (1995) and Tapscott (1998). Instead, Mosco (2004) argued that generational divisions were not inevitable, but were in fact central to the production of the myths surrounding the new technology. Mosco argued that the enthusiasm with which the new cyberspace technology has been received is little different from the enthusiasm created for earlier technologies such as telegraph, electricity, telephone, radio and television. He

suggested that we invent myths whenever we invent new technologies because “We want to believe that our era is unique in transforming the world” (p. 117). Therefore, “applying the mute button to the past” (p. 117) and denying history creates a form of historical amnesia in which each new technology creates the possibility for a new beginning, and each new generation has the opportunity to create this new beginning. In order for this “ever-ending story” (p. 115) to continue unabated, history has to be jettisoned as “burdensome excess baggage” (p. 80). Looking back is not considered helpful in this scenario because history knows nothing of cyberspace—looking forward is the key. Mosco suggested that this anti-history perspective also acts as a form of inoculation against criticism from older people. After all, their knowledge and experience are no longer relevant in this new world of cyberspace. They simply do not understand. It is the young who know, and the young who will lead the way.

Gates (1996), too, described children as the key to the future. He accepted as inevitable that some people would choose not to use computers, but this was not really a problem for Gates for two reasons: Firstly, “Over time the new machine [will find] a place in our everyday lives because it not only offers convenience and saves labour, but it can also inspire us to new creative heights” (p. 7). After all, Gates reasoned, previous technologies such as bicycles, pocket calculators, and radios also encountered opposition, which eventually dissipated. Secondly, opposition from some groups was not a problem because children would act as agents of change for the future. In fact, children were natural change agents because they enjoyed the interactivity of the computer and they had no investment in established ways of doing things—no ‘excess baggage’ that had to be jettisoned, as Mosco (2004) would have put it.

Not only are young people identified as the most likely to realise the potential of the new technologies, but for many critics such as Latham (2002), the concept of *youth* itself is a commodity item, a set of values produced by a modern mass-consumer culture. For Latham, this makes youth a cyborg identity, a prosthesis which can facilitate incorporation into a techno-economic system. However, youth is not a set of values adopted only by the young. The youth culture is also spreading to the not-so-young. Gilleard and Higgs (2000) identified that engaging with a set of youth-related cultural values and practices was about staying young, about arresting and

resisting the processes of ageing by embracing new lifestyles and buying new products in order to create new selves. Additionally, the authors argued that a key maxim in selling to this older age group is to realise that "Age does not sell" (p. 71). Older consumers, they suggested, are not "seduced by appeals to their aged status," but rather their "social value lies in being 'still young'" (p. 71).

Treguer (2002) went further, arguing that "The over 50s have a spectacular passion for multimedia computing and the Internet" (p. 96). He suggested they are *fascinated* by this particular technology for at least three reasons: switching on their PC allows them to connect to modernity and thus remain in the know; using CD-ROMs and the Internet allows them to enjoy their favourite pursuits, including history, genealogy and art from the comfort of their homes; and mastering these technologies allows them to be "on an equal footing with the younger generations and show that they are not old and crabby" (p. 96). Therefore, being hooked-up to the enabling computer is not just a way to connect to the future, or to keep up with the grandchildren (Timmermann, 1998); it is also an important way to stay young.

In addition, through the advancing fields of medical prosthesis, older people (and others) are becoming recipients of enhancement and restoration devices (Shilling, 2005) that offer opportunities to seemingly "defy the built-in obsolescence of the ageing process" (Bell, 2001, p. 147). Implants such as heart pacemakers, and robotic devices such as artificial limbs, according to Shilling (2005), have weakened the boundary between humans and machines. It could also be argued that the dichotomous boundary between old and young has itself been disrupted in this process. The cyborg image, which Haraway (1991) proposed as a way out of the gendered dualisms of man and woman, artifice and nature, can now be extended to blur the distinctions between old and young. Thus, *old* is not only being redefined through advancements in technology; it is also seemingly *disappearing* in the youth-oriented consumer culture of the modern age (Bell, 2001).

However, computers are desirable commodities for many older people not only because they offer opportunities for various forms of age-resistance and age-defiance, but also because using computers enables many to keep their skills up-to-date.

3.3.2.3 Being competent

In addition to positive associations with modernity and youthfulness, computers have also been identified as providing older people with opportunities to present as mentally *switched-on* (Howells, 2002), and competent. Surprisingly, only one empirical study has been identified as relating to this area. Ryan, Szechtman and Bodkin (1992) focused on societal attitudes toward older computer learners, and found that older adults who engaged in computer activities were considered atypical for their age and more competent than their younger peers. The authors concluded that older adults could overcome general negative expectations for competence by choosing to use computers. Whereas, computers in section 3.1 were identified as beneficial for individuals in terms of providing them with enhanced functional and cognitive capacity, Ryan et al.'s (1992) finding points to computers as conferring upon older people a status that marks them as positively different from and more competent than others.

In summary, computers have been associated with three principal meanings in relation to older people: *being modern*, *being youthful*, and *being competent*. Although no studies have specifically investigated these meanings, some work in this area indicates that older people who align themselves with computers also articulate these meanings. Drawing on these articulations, computers can be seen as desirable devices for older people for two reasons: they provide opportunities for enhancing capacity and the opportunity to increase social networks; and they are symbolically important in connecting older people to the future, to opportunities to be and remain young, and to opportunities to display their mental competence and their ability to keep up. Thus, computers can be seen to offer both practical and symbolic significance for many older people.

Having, in this section, reviewed academic studies, statistical surveys, media reports and commentaries from the popular literature on computers as desirable consumer items for older people, in the next section, I critique this body of work and also identify its gaps and limitations.

3.3.3 Critique of the master narrative of the desirable commodity and grey consumers

The literature discussed in the preceding section contributes to knowledge on the topic of older people and computers by highlighting the importance of meanings in understanding the contours of their relationship. However, little empirical work has been carried out to investigate how the meanings identified here translate into older people's lived experiences with the technology. This is a significant gap and provides an opportunity for future research that would enhance our understanding of older people's relationships with computers and add to knowledge on the topic. Of particular interest would be the extent to which older people's meanings align with, add to, or contest those identified in this review.

The narrative of the *desirable commodity and grey consumers* presents one version of the story of older people and computers. It focuses attention on the two main actors—computers and older people—but also on those such as marketers who promote the technology to this large and growing market segment, for the purpose of making sales. However, marketers are not the only group responsible for the ways in which the *desirable/consumer* story is represented in the marketplace. Others, as this review has shown, are also involved, including: researchers who research, produce, and circulate *their* stories of older people and computers; newspaper reporters and editors who publish *their* stories; gurus who compose and publish *their* stories; and older people who tell *their* stories. Even the narrative of the *potential divider and senior citizens* may be viewed as another version of the *desirable commodity* narrative in that older people are constructed as consumers of government services. Thus, stories and meanings are constantly being produced and consumed, reproduced, negotiated, and contested in the maelstrom of the consumer culture.

Consequently, it is somewhat surprising to find that the dominant meanings that prevail in relation to older people and computers tend to reiterate the narrative of the *enabling machine and elderly individuals.* Certainly, in the narrative of *the desirable commodity and grey consumers* the sample population has changed—older people are now *greys* with high disposable incomes and available leisure time, rather than the elderly, the isolated, and the institutionalised. However, the computer remains stable and fixed as the enabling one— focused this time on symbolic connections

rather than functional ones. One explanation for this recurring narrative is evident in an examination of the theories of technology underpinning the narratives and the assumptions made about the protagonists.

The story of technological determinism underpins the *desirable/consumer* narrative, as much as it did the *enabling/elderly* narrative, albeit this time in its softer version, within a matrix of social, cultural, and economic factors (Smith, 1994). In this narrative, the aged-computer relationship is still one in which computer users are seen as the privileged beneficiaries of computer-related social change. Nonusers are still the losers, not only because they are deficient in terms of their computer skills and are therefore seen to be less competent than users, and also less switched-on, but more importantly, because they are seen to lack the desire for acquisitiveness and self development (Hepworth, 1996), which are two of the fundamental driving forces of the self-sustaining consumer culture. Indeed, because nonusers do not conform to the prevailing cultural norms, they are seen as deviant (Becker, 1963); and as such they represent a problem. Attention, once again, is focused on the problem of how to convert nonusers into users. However, the solution within the maelstrom of the consumer culture is achieved less by direct intervention, as was the case in the previous two master narratives, but by stealth—by the ongoing activities of a large number of players in which meanings are produced and consumed, and objects such as the computer become normalised in the process. Through this normalisation-by-stealth process, even *desirable commodities* can quickly lose their special significance. When they do, they become part of the taken-for-granted fabric of society, invisible, and hidden from critical attention (Selfe, 1999).

Therefore, paying attention to the limitation identified in the studies reviewed in this section, and investigating the ways in which groups, such as older people, negotiate and articulate their understandings of computers, provides an opportunity to explore how such new technologies are invested with meanings by marketers and others, in a particular socio-cultural context, at a particular point in time—before such technologies become taken-for-granted and invisible.

In the next section, I draw on the limitations and gaps identified in the review of the literature to argue a case for this study.

3.4 Making the case for this study

In this chapter, I reviewed the literature on older people and computers organised around their pairing as actors in three master narratives. Older people were presented as *elderly individuals*, *senior citizens*, and *grey consumers*, and computers as *enabling machines*, *potential dividers*, and *desirable commodities*. The relationship between these actors was also presented in terms of an underpinning meta-narrative in which the computer was constructed as a hero rescuing older people. In the narrative of the *enabling machine and elderly individuals*, the computer was constructed as a *knight in shining armour* character rescuing aged individuals from isolation and disablement. In the narrative of the *potential divider and senior citizens*, the computer was presented as a *knight saviour*, leading nations and their citizens to the *promised land* of the knowledge economy/society—provided all citizens, including seniors, could cross the digital divide and become technologised. In the narrative of the *desirable commodity and grey consumers*, the *knight in shining armour* computer returned, this time, rescuing older people from the spectre of old age, by the prospect of being with-it and modern, the promise of youthfulness, and the respectability of updated competence.

Despite obvious similarities in the underpinning storylines of the three narratives, particularly the emphasis on the computer-as-hero, these three narratives also displayed subtle differences, particularly in relation to the ways the aged person-actors were presented. In the *enabling machine and elderly individuals* narrative, the focus was single-mindedly on older people and how they could be assisted to use the computer—a tool ubiquitous in modern society. By contrast, in the *potential divider and senior citizens* narrative, senior citizens were only one of a number of groups being herded across the digital divide to the *promised land*. For a number of reasons, they were often overlooked in this process, including because they were less able than some groups to make an economic contribution and work their way over the great divide. However, in the *desirable commodity and grey consumers* narrative, the aged once again presented as a population of significant interest, principally because of their large numbers, available discretionary time, and high disposable incomes. Here the emphasis was not so much on enabling them, but on extracting an economic contribution by converting them to consumerism.

The three master narratives and the positioning of the principal actors in them provided critical insights into the ways in which the topic has been investigated and represented in the literature. The underpinning issue in all three narratives was the problem of how to convert nonusers into users. Increasing the enablement of older people through the use of technology would also ensure that they conformed to the requirements of the prevailing socio-cultural climate, that is, to become technologised.

The literature on which this review is based included a number of empirical studies—controlled studies in which pre-test, intervention, and post-test measures were taken on a range of factors, including participants' responsiveness to computer training. Surveys also recorded respondents' uses of and attitudes to computers. Interview-based studies focused on the older person's computer use/non-use. Also included in the collection were articles written by practitioners working with older people and commentaries from popular/trade books on technology, as well as government reports, and a sampling of newspaper articles. This literature contributes to our understanding of the relationship between older people and computers in significant ways. However, the topic remains an under-researched area. In particular, the literature is largely non-critical, atheoretical, and functionalist, and draws predominantly on one perspective, that of technological determinism, for its theoretical underpinning.

In addition, the review identified that little attention has been paid to older people's meanings for computers and the ways in which these meanings might have been developed—appropriated, negotiated, contested—from, and in relation to, the socio-cultural context in which they were produced. Also, little attention has been focused on the production processes with which older people might engage in their own meaning-making. The literature, has, in other words, largely neglected the social constructionist approach which is likely to enrich our understanding of the inter-actor pairing of older people and computers by adding more contextual layers, more richness and colour, and greater levels of variation and complexity to the overly simplistic rendition of this relationship currently provided in the predominantly deterministic and functionalist literature.

Therefore, this study aims to make a contribution to knowledge on the topic in two principal ways: by adopting an alternative perspective—the social constructionist–narrative approach, and by paying attention to the ways in which older people themselves make sense of the computer. The next chapter explains and details the methods adopted in this study for achieving these particular aims.

CHAPTER 4

Methodology and Method: the Production of the Researcher's Narrative

In this chapter, I make transparent and available for scrutiny the production of the researcher's narrative. I begin in section 4.1 by setting out the research questions that focus the study, and also locate the study within the qualitative research paradigm and the interpretive tradition. The methodological position I adopt derives from this tradition. I revisit here the underpinning philosophical/theoretical framework outlined in chapter two. That framework informs not just the investigative techniques I used in collecting and analysing empirical material, but also the approach to the entire research project.

In the next section, 4.2, I discuss the theory of the focus group method and detail the ways in which data were collected using this method. At the conclusion of this section, I reflect on the strengths and limitations of the method as applied in this study. In the final section, 4.3, I outline the method adopted to analyse the dataset of stories gathered from focus group interviews—narrative analysis. The procedures involved in conducting the analysis are also detailed. I conclude by briefly reviewing the analytical method used and summarising the approach taken to this investigation.

4.1 Focusing and locating the study

The literature review identified that computers—in previous studies on older people's relationships with the technology—had been presented predominantly as objective reality. In these studies, the ways older people constructed and made sense of that technology was a largely neglected area—but one that warranted further attention. To that end, the following research questions were posed for empirical investigation:

> *(1) How do participants story computers?*
> *(2) How do participants story themselves in relation to computers?*

These questions focus attention on participants' views and on the constructed nature of reality, in particular on the narrative as a mode for representing and constituting that reality (Bruner, 1991; Richardson, 1990a). The emphasis in these questions is not on the story as a product, that is, as an object with a definitive boundary and an essential structure (Fay, 1996), but on the story as a social performance (Boje, 1989), and a social process (Gabriel, 1995)—a dynamic, creative, and social activity, in which participants engage and through which they display their membership of a particular culture (Bruner, 1991; Gubrium & Holstein, 1997; Hauerwas & Burrell, 1989; Lempert, 1994; Polkinghorne, 1988; Randall, 2001; Richardson, 1990; Riessman, 1993; Steinmetz, 1992). These emphases locate the empirical investigation within the matrix of qualitative research (Connelly & Clandinin, 1990), particularly the interpretive approach (Riessman, 1993).

Researchers within the qualitative research paradigm draw from a repertoire of underpinning assumptions in approaching their studies. Those assumptions include the following five notions: that reality is socially constructed; that the everyday world of lived experience, particularly research subjects' meanings of that experience, is a rich area for exploration; that the richness of such experiences can be captured, at least partially, by researchers interacting with research subjects in relative proximity in a particular setting; that the research so conducted is shaped by the setting, its participants (researchers and research respondents alike), and their interaction; and that such research can produce insights not only into the local subject of study, but also into the socio-cultural system of meanings to which it is connected and from which it is composed (Alvesson & Deetz, 2000; Cresswell, 1998; Deetz, 1982; Denzin & Lincoln, 2000; Janesick, 2000; Schwandt, 2000).

In conducting their studies, qualitative researchers engage in interpretive acts (Janesick, 2000) which, according to Putnam (1983), centre on the study of meanings and sensemaking. In aiming to explicate the subjective and consensual meanings that constitute social reality, they do more than simply integrate data and conclusions. They select, interpret, and shape findings (Watson, 1994) in an endeavour to make sense of the worlds they investigate. In doing so, interpretive researchers also acknowledge that truth is a perspective (Charmaz, 2000), and knowledge is always partial, limited, and situated (Richardson, 2000). Indeed, because a research report is

"always a mediation of the 'realities' it reports" (Watson, 1994, p. 86), interpretive research can be described as a productive process (Denzin, 1994) in which researchers and research subjects work interactively to construct data that are produced by the researcher into a literary product (Alvesson & Deetz, 2000)—a narrative production (Denzin, 1994; Richardson, 1990, 2000).

4.1.2 Drawing on the narrative perspective

The *turn to narrative* (Denzin, 2000) in interpretive inquiry also explicitly highlights the author's privileged role in producing the research story (Brown, 1998; Humphreys & Brown, 2002; Lincoln & Denzin, 2000) because participants never speak for themselves, but are always spoken for (Krieger, 1991). The illusion that participants speak for themselves is, Brown (1998) pointed out, simply an illusion and the result of an authorial strategy that makes the researcher/author the spokesperson for others. Given that I take this authorial stance in this thesis, I endeavour to "make visible the hand behind the text" (Watson, 1994, p. 78) and to reveal the thoroughly orchestrated process by which the researcher's narrative has been achieved.

In addition to making the role of the researcher/author explicit in the process of research narrative production, another key aspect of the narrative perspective is a focus on individuals as social actors, authors, and producers engaged in acting out and making sense of day-to-day activities and experiences (Bruner, 1990, 2002; MacIntyre, 1981). In this endeavour, individuals are enabled but also constrained by the narratives available to them (Davies, 1994; Richardson, 1990) and by the narratives of which they find themselves a part (MacIntyre, 1981; Randall, 2001; Somers & Gibson, 1994). In part, individuals have authorship over their identity through the stories they spin inside themselves as they make up their lives (Bruner, 2002; Kenyon & Randall, 2001). However, such stories are not original creations. They are only co-authored productions (Kenyon & Randall, 2001) because stories are always embedded in larger socio-cultural stories (Richardson, 1990) that act as a kind of narrative template for individual storying purposes (Randall, 2001). Thus individuals are not autonomous beings free to author their own stories at will, but nor are they simply "nodes in a mechanical system" (Fay, 1996, p. 242); rather they draw astutely (Gubrium & Holstein, 1997), though not always consciously, on culturally

accrued narratives (Bruner, 1991) in order to participate in and make sense of the social world.

However, the narrative perspective is not only concerned with actor-author-producers; it also pays attention to the ways in which the players and their actions are linked through emplotment. Emplotment is an authorial device (Humphreys & Brown, 2002) that allows author-actor-producers to make sense of the events going on around them (Czarniawska, 2004). Sense is made by individuals subsuming characters and events into a plot—a meaningful sequence or story-line based around an interpretive theme—in relation to which events become understandable and intelligible (Boje, 2001; Cunliffe, Luhman & Boje, 2004; Czarniawska, 1998, 2004; Pentland, 1999; Polkinghorne, 1988; Ryan, 1993; Somers, 1994; Somers & Gibson, 1994). Emplotment is the narrative element that enables authors to select plots from an accessible repertoire (Czarniawska, 2004) and then organise and connect events and characters into an explanatory scheme (Ryan, 1993). It is through this mechanism that stories become abstract conceptual models that can be usefully deployed by individuals—researchers and participants—as a way of explaining events and observed data (Pentland, 1999).

The narrative perspective espoused here does a number of things at once—it emphasises the socially constructed nature of the social world; it highlights the interpretive composability (Bruner, 1991) of knowledge of that world; it draws attention to the inter-textual and nested nature of stories within other stories (Van Maanen, 1988), as well as the interplay amongst them; it acknowledges the role of author-actor-producers in co-authoring and enacting stories; it provides a mechanism for understanding the particular in relation to the general—the local version of a story in relation to the generic and more universal narrative it manifests; and it positions researchers and research subjects in parallel processes—as storytellers engaged in meaning-making activities, sometimes jointly, but always endeavouring to understand important life experiences (Mishler, 1986).

This narrative perspective underpins a methodological position that implies interpretive investigative techniques—in particular, getting close to human subjects and listening to the ways they construct their versions of reality to make them

meaningful. Seidman (1991) suggests that if a researcher is interested in subjective understanding—participants' meanings for their experiences—then interviewing is an appropriate avenue for that inquiry since it is consistent with people's ability to make meaning through language. Therefore, interviewing research subjects for their stories about computers seemed an appropriate way to address the research questions, because individuals' stories of their experiences provide access to their uniquely personal understandings and the meaning they make of those experiences (Bruner, 2002; Gabriel, 1995; Seidman, 1991).

In addition, the theoretical/philosophical perspective that frames this study identifies storying as a social process in which individuals engage by drawing on a repertoire of narratives to construct and make sense of their social world and in doing so enact versions of themselves (Bruner, 2002; Humphreys & Brown, 2002). Therefore, identifying how participants story computers and themselves in relation to computers implies a social context for storying—a site where, according to Cunningham-Burley, Kerr and Pavis (1999), "the social location of participants and the context of their accounts is recognised" (p. 198). Focus groups, according to these authors, provide one such site.

Having set out in this section the interpretive methodological platform on which the study was based and the research questions which focused the investigation, I explore in the next section how, consistent with this interpretive approach, focus group interviews were seen to provide an appropriate method for paying attention to the storying processes of research participants.

4.2 Collecting the data

In this section, I discuss the focus group method and its application in this study. In section 4.2.1, I begin by outlining the theory of focus groups and relating that theory to my experience with focus groups in this study. In the second section, 4.2.2, I detail the way in which the focus groups were organised in practice. In the third section, 4.2.3, I reflect on the strengths and limitations of the method.

4.2.1 Focus group method

As previously indicated in chapter one, I was engaged in a government-funded research project investigating the socio-economic impacts of ICTs on various disadvantaged groups in the community, including older people. I collected data for this project using the focused group interview method. Making use of this dataset for my doctoral study was not only time and cost efficient, it also provided an opportunity to explore further into the assembled dataset for insights into older people's relationships with computers that went beyond the solicited perceptions of the technology's barriers, benefits, and negative consequences for older people. I did not, therefore, set out to collect stories from focus groups. However, on reviewing the empirical material, it became apparent that it contained a number of stories through which participants explained their experiences with, or their negative positioning in relation to computers. Indeed, following participants' stories led to interesting insights not identified in previous studies on the subject. Interestingly, none of those studies, with the exception of Richardson et al. (2005), used focus groups as a method of data collection.

The focus group method has been well documented in the literature. However, that literature is largely silent on the usefulness of focus groups for the production of narratives, notwithstanding occasional references to group interviews as providing access to a "veritable swirl" of narrative material (Gubrium & Holstein, 2000a, p. 27), to a postmodern polyphonic form of data collection (Fontana & Frey, 2000), and even to their deployment as a means of collecting stories (Banks-Wallace, 1998; Banks-Wallace & Parks, 2001). I present and critique some of this literature below.

The literature identifies focus groups as "group discussions focused by a facilitator around a particular topic or area of experience" (Johnson, 1997, p. 517), using a small group of participants, usually six to 10 people (Patton, 2002). One of their main purposes is to extract opinions, attitudes, and perceptions, using an extraction process that involves a moderator/facilitator asking a series of focused questions, often using a semi-structured interview format, while encouraging interaction among group members (Patton, 2002).

There are a number of recognised logistical advantages for researchers in using the method, including the cost effectiveness and speed of producing a large quantity of data in a reasonably short period of time (Stewart & Shamdasani, 1990; Hedges, 1985; Morgan, 2002; Patton, 2002; Robson, 2002; Wilkinson, 2004). Additionally, it is argued that participants' interactions can enhance data quality (Patton, 2002), producing rich, multi-layered data (Hicks, 1998). The dynamic nature of the group format is also recognised as facilitating disclosures (Wilkinson, 2004), generating spontaneity and enthusiasm (Hicks, 1998) as well as unanticipated surprise and discovery (Agar & MacDonald, 1995).

In addition, focus groups have been recognised as providing research participants with beneficial experiences. Participants have been reported as describing focus groups as enjoyable, supportive and informative (Carey, 1994; Johnson, 1997), as fun (Longhurst, 1996), as stimulating (Hedges, 1985) and as providing richer experiences than do in-depth interviews (Goss & Leinbach, 1996). For some participants, groups may also be a safer environment for sharing ideas (Madriz, 2000), as well as a way to have their collective voices heard (Carey, 1994; Seymour, Bellamy, Gott, Ahmedzai & Clark, 2002), and a way to support and connect with others, and validate their own and others' experiences (Johnson, 1997; Madriz, 2000). For those who may be intimidated by a one-on-one interview situation, groups may be reassuring (Kitzinger & Barbour, 1999). Some of the literature also suggests that the researcher's control over the interview situation may be reduced in focus groups (Wilkinson, 2004), although not eliminated (Kitzinger & Barbour, 1999).

While the literature attributes to focus groups a number of advantages as a means of data collection, it also points to a number of limitations. For example, because of the group format and the need to hear from a number of people in a short period of time, it is not possible to ask a large number of questions, nor to explore points made in depth (Hedges, 1985; Patton, 2002). This limitation led Agar and MacDonald (1995) to suggest that focus groups provide "discovery without explanation" (p. 85). Group dynamics have also been identified as an area of potential concern, leading some researchers to argue that opinionated group members may dominate the discussion (Hedges, 1985), and that members with minority view points may be disinclined to speak, or risk criticism if they do (Patton, 2002). These areas give rise to concerns

that the outcomes from focus group discussions may not be fully representative of the views of all those present, and the results cannot be generalised beyond the particular context of the group (Bloor, Frankland, Thomas, & Robson 2001; Fontana & Frey, 2000).

On the whole, the literature presents a largely positivist view of focus groups, one that identifies research participants as passive subjects (Cunningham-Burley et al. 1999; Johnson, 1997) or vessels able to be mined (Gubrium & Holstein, 2002) for their opinions and preferences—understood as objective facts—by a neutral interviewer who skilfully facilitates the mining process, attempting all the while to control for bias (Gubrium & Holstein, 2002). By contrast, focus groups conducted within a constructionist frame give primacy to dialogue among participants, highlight the multiple ways in which reality can be constructed and recognise the situated nature of the understandings produced (Cunningham-Burley et al.).

In my experience focus groups are sites in which stories can be produced, storytelling can be conducted, and storying processes can be observed in action. I explain each of these areas below.

Focus groups are sites in which stories can be produced. In this study, participants were identified as producing stories when they shared personal experiences about computers, or they recounted incidents about others' experiences, or alternatively they explained, justified, or excused their actions in not using computers. True, the plot lines were often indistinct and the characters emaciated, as Gabriel (1995) also found to be the case with the stories produced in an organizational context. However, in support of such emaciated constructions, Gubrium and Holstein (1997) argued that narratives need not be full-blown stories; indeed, they may be "short accounts that emerge within or across turns at ordinary conversation, in interviews or interrogations" (p. 147). In addition, Boje (2001) indicated that stories can be fragments and bits and pieces. They do not require beginnings, middles or endings (Boje, 1995), and they can be "partial, fragmented and extended across multiple conversations" (Boje, 1998, p. 2). Certainly, the stories I encountered in focus groups in this study confirm the fragmented, nonlinear nature of a story (Boje, 2001).

However, consistent with the views of Boje (1995, 1998, 2001), Gabriel (1995), and Gubrium and Holstein (1997), they are none the less stories.

Focus groups are also hospitable places for telling stories—albeit a fragmented, chaotic soup kind of storytelling (Boje, 2001). This perspective reiterates Mishler's (1986) view that if participants are left alone to tell their stories, they do so. Riessman (1993) and Czarniawska (2002) also reported encountering similar situations in which participants had stories to tell, when the researcher let go some of the control and let them tell their *own* stories. This point suggests that researchers, in trying to keep participants on track and focused on answering the researcher's questions, may in fact be striving to tell a researcher-driven story rather than hearing the stories that participants want to tell about their experiences. Certainly, in relation to the focus groups in this study, stories often emerged when the discussions were allowed to flow, including when participants exchanged stories amongst themselves, or they illustrated their particular point with an example from their own experience.

In addition, focus groups are suitable forums for paying attention to storying in action. As discussed above, stories are social performances and social processes through which participants enact versions of socio-cultural narratives and in doing so they display their membership of that culture. In this study, focus groups provided a particular social context in which participants, as members of a culture, were able to interact and as they did they enacted various versions of the narrative about *how to be an older person in relation to computers*. In doing so, they took up a number of positions—as heroes and potential victims—and played out these roles in different settings, as the analysis will show.

4.2.1.1 Organising the focus groups

In this section, I explain the procedures involved in organising the focus groups, particularly recruiting the participants, and the ways in which the focus groups were conducted.

4.2.1.1.1 Recruiting participants

I conducted 28 focus groups with 204 older people during an 18-month period between September 2001 and May 2003. In Stage 1 of the FRST-ICT project, 88

participants were recruited from 3 SeniorNet organisations. In Stage 2 of the project, 116 participants were recruited, principally from 10 senior citizens' organisations.

The term *older people*, in this study, refers to those 55 years of age and over. Older people, as Wenger (2002) points out, can include anyone aged 45 or more, though it is a term often used, she suggests, in relation to those over 60 or 65 because those were the commonly applied compulsory ages for retirement from the work force, or for applications for entitlement to aged-pension benefits. However, for the purpose of this study, 55 was chosen because it is the age of eligibility for entry to SeniorNet, the organisation set up by older people to help older people learn how to use computers[1]. The SeniorNet-based definition of an older person was used because SeniorNet was the initial, and the largest single site of recruitment for participants in the study. It was maintained as the minimum level age for all research participants for reasons of consistency.

4.2.1.1.2 Types of organisations approached

In the first stage of the project, computer users were recruited from SeniorNet organisations. In the second stage, non-computer users were canvassed, principally from senior citizens' groups. I describe below the procedures involved in recruiting members for each stage.

For the first stage of the project, participants were recruited from SeniorNet organisations in the local area, that is, within 2-3 hours driving time from my home base in Hamilton, New Zealand. This time limit was set for practical reasons of time and cost. The time frame constituted what I considered to be a reasonable day of no more than six hours' travelling time and 2-4 hours in which to complete one or two focus groups in a particular location.

I obtained the names of all the SeniorNet clubs in New Zealand from the Internet and approached the clubs in the local area by emailing the secretaries of each group and asking for their assistance. Three groups responded promptly to the request. I met with a gatekeeper (liaison person) appointed by each club to discuss the details of the

[1] The age of 55 for entry to SeniorNet was originally set by SeniorNet in the United States and New Zealand organisations followed suit. The age has since been lowered to 50 in the United States. However, New Zealand groups have retained the 55 age level entry

project, so that an assessment could be made of the demands that would be placed on the clubs and the participants. Each gatekeeper and each club was very supportive of me and the project. In two cases, the gatekeepers recruited participants on my behalf, and in the third case I was invited to address members at a monthly club forum so that participants could be recruited directly from the assembled gathering. Eighty-eight members were recruited from these three clubs for 10 focus groups.

For the second stage of the project, participants were recruited principally from senior citizens' organisations. These organisations were chosen because their members self-identified as older people and because these organisations provided an easily identifiable and time-cost-efficient pool of potential participants for the study. As I had done with the recruitment of SeniorNet members, I limited recruitment to organisations within 2-3 hours driving time from my home base.

I used two methods to gain entry to organisations for the second round: (1) I wrote or emailed the secretaries of senior citizens' organisations in the region, using names and addresses obtained from the Internet; and (2) I made use of personal networks, for example, asking friends for an entrée into seniors' organisations of which they were a member.

Recruiting participants took two main forms—either directly through personal contact with organisational members, or indirectly through a gatekeeper. The process, in relation to the former, took the following general form: I was usually invited to address a club assembly at which I could make a personal plea for participants for the study. I usually had 5-10 minutes in which to explain the study and the request. Interested participants were invited to meet with me during the tea break, or similar interval, where I asked them to complete a form with their name and contact details. I undertook to contact them by telephone to discuss the matter further. In these direct appeal situations, I sometimes found that I was one of a number of people addressing an assembled gathering of between 30 and 200 members, asking for their support in one way or another. Through this personal approach method, 40 volunteers were recruited for seven focus groups.

The process in relation to the indirect or gatekeeper method of recruiting participants took a variety of forms. In two cases, club secretaries followed up my personal letter to them for assistance, by calling for volunteers at club assemblies and then advising me of the contact names and details of those who had agreed to participate. In a further four cases all my conversations with the organisation's representative were conducted via email. In each of these cases the representative agreed to find recruits and also arrange a venue for the focus groups. In these cases, names and addresses of volunteers were emailed to me by the gatekeepers, with one exception. In the case of this exception, the gatekeeper advised that she was unable to say who would turn up, but she assured me that there would be a good attendance on the day. Through the gatekeeper method, 164 participants were recruited for 21 focus groups.

4.2.1.1.3 Following up the recruitment drive

Following the recruitment drive, participant-volunteers personally recruited by the researcher were contacted by telephone to discuss any questions they might have about the study or the focus groups, their ability to participate at the agreed date and time, and their ability to travel to the venue in their local area. In a few cases, the particular dates proposed for the focus group did not suit, and those people regretfully declined to participate. The telephone calls were then followed up with a letter confirming the arrangements for the focus group. Enclosed with the letter were an ethics consent form, an information sheet about the research, and an outline of the trigger questions that would be posed in the focus groups (See Appendix I). The volunteers recruited by gatekeepers, with the one exception referred to above, were contacted by letter only, thanking them for volunteering, confirming arrangements for the focus groups, and enclosing the usual consent forms, information sheet, and proposed questions. No financial inducements were offered to participants, though two organisations requested a small payment for the use of their premises for the duration of the focus group.

Through the process detailed above, 204 people over 55 years of age were successfully recruited for 28 focus groups: 88 participants from 3 SeniorNet organisations (10 focus groups); 22 participants from 3 Greypower organisations (4 focus groups); 36 participants from 3 Age Concern organisations (4 focus groups);

40 participants from 4 Probus clubs (7 focus groups); 6 participants from 1 Lyceum Club (1 focus group); and 12 participants from one bowling club (2 focus groups).

4.2.1.1.4 The research participants

Information about the participants was gathered from three self-report sources: (a) from the focus group discussions themselves; (b) from a brief demographic questionnaire; and (c) from the introductions I asked people to make at the beginning of each focus group session. I discuss here information gathered from (b) and (c) and leave the discussion of (a) until the following chapters, since information gained from the focus group discussions constitutes the prime subject material for the study and is more appropriately relayed in relation to the study's findings.

Analysis of the demographic questionnaire material shows that the vast majority of the participants were in the category Wenger (2002) broadly described as the *young elderly*, with only a minority in the *old elderly* category. The breakdown of focus group participants' age ranges shows that: 14.5% were aged between 55 and 65 years; 74.5% between 66 and 80 years; and 10% between 81 and 90 years. The vast majority, 98% identified as European New Zealanders, and 47% gave their highest educational qualification as secondary school, while 12% had a university degree, and 34% had a trade or other qualification. The questionnaire thus revealed that 46% of focus group participants had a vocational or higher degree qualification which compares with 18% of the general New Zealand population over 55 years of age at the 2001 household and population census (Statistics New Zealand, 2001). In terms of years of computer experience, 65% indicated they had none or less than 12 months experience, with 15.8% indicating they had between 1 and 2 years' experience, and 19.2% claiming 3 or more years' experience.

A second source of information on participants was the introductory sessions I ran at the beginning of each focus group session. I began the focus groups by briefly introducing myself and the work I was doing at the university on the research project. I then invited participants to introduce themselves and talk about their experiences with computers. My original reason for doing this was to make it easier for me to identify and track speakers' voices on the taped audio-recordings of the focus groups. However, I found after running these introductions on several occasions they were

more than just a tracking device, they were a rich source of information from which I could get to know the participants better, even to the extent of compiling mini-biographies on them.

These introductions also highlighted an interesting definitional problem around the meaning of computer user and non-user, which I will now explain. In the recruitment drive I had called for *computer users* in the first round, and *nonusers* in the second round. For this purpose *users* were defined as people who used computers, and *nonusers* were defined as people with no or little experience of using computers. All the SeniorNet members were computer users (though not all were computer owners) and introduced themselves as having varying degrees of experience with computers—from very little to several years'.

However, in the second (non-user) recruitment round, a number of participants (33) introduced themselves as having some computer experience. Twenty-one of these participants had less than three years' experience. Twelve had between three and five years' experience. When these participants introduced themselves, I inquired further. Participants confirmed that they had, according to my definition, *little experience with computers*, that is, they used the computer infrequently, or they used it in a limited way, for example in relation to one application only. This study, I reminded myself, was about how the participants constructed computers and themselves in relation to computers. *Use* and *non-use* were relative terms. They had no fixed meaning; they were but positions on a continuum (Wyatt et al, 2002). In a similar way, the terms *user* and *nonuser* could not define the participants, as these categories also slid up and down a continuum from high to low, encompassing a diverse range of meanings at each location. I concluded that the boundaries of the terms *use* and *non-use*, *user* and *non-user* were malleable and permeable, as befits a postmodern, uncertain and fluid world "where the undecidabilities of language take precedence over language as a mirror of reality" (Alvesson, 2002, p. 61). At the time, I concluded very quickly that the experienced users should be allowed to remain in the focus groups. With hindsight, it is my view that the research benefited significantly by the incorporation of three different groups: SeniorNet members, non-SeniorNet computer users, and nonusers. Certainly, the juxtaposition of *users* and *nonusers* in

some focus groups provided interesting and colourful conversational exchanges that would most certainly have been missing from a more monochromatic setting.

4.2.2 Conducting the focus groups - Settings

Of the 28 focus groups conducted, two took place in a gatekeeper's private home at her suggestion, and 26 were held in venues hired in the local area, usually the venue where the particular club or organisation met for its monthly meetings. The principal reasons for hiring venues already known to residents in the local area were that the venue was easily locatable and accessible, and the surroundings were familiar and fitted out with facilities such as toilets and a kitchen. Locating the focus groups in a known venue was also an attempt to reduce feelings of anxiety in relation to the study. It is my recollection that the vast majority of participants had never previously attended a focus group, with many indicating that they did not know what the term meant; indeed, some preferred to call them meetings, a label they were more familiar with.

The choice of venues dictated, to a large extent, the seating arrangements for the discussions. For example, in the focus groups held in a gatekeeper's lounge room, we all sat around in a circle on lounge chairs, whereas in the other venues, some large and some small, we sat together around a table, usually a long table. I had no assistant, so it was my role to keep the conversation going, take notes, keep an eye on the tape recorder, make refreshments, wash-up afterwards, and generally manage other logistical tasks.

4.2.2.1 Format of focus groups

The general format for the focus group sessions was as follows: focus groups began with introductions to the research project, questions and answers about the project, and the paper-work—the signing of consent forms and the completing of the demographic questionnaire. Then the focus group discussions could begin. At the outset, I introduced the study as a research project being carried out by the university with funding from FRST, a government agency, to look into the impacts and uses of computers by a number of different community groups. Following this statement—which largely followed the written statement they had received in the mail—I then asked if there were questions about the study or matters that participants wanted to

clarify before proceeding. Participants were also advised that they did not have to answer any questions they did not want to and that they could leave at any time. While such statements were considered standard ethical procedure within university research practice, a number of participants indicated that such statements frightened them more than the focus group discussions themselves.

With participants' permission, the focus group session was recorded using a tape cassette machine and microphone displayed prominently on the table in front of participants. While some participants were initially apprehensive about being recorded, no one at any point asked for the sessions not to be recorded or for the machine to be turned off.

The focus group discussions began with participants being invited to introduce themselves, to give their name, using a pseudonym if they preferred (no one did), and to say something about themselves and/or their experiences with computers. When the introductions were completed, the focus group trigger questions were put to the group. No props were used to stimulate conversation. The discussion ran for approximately one hour, though sometimes the discussion would go on for longer, at the request of participants, often into the hospitality session where tea, coffee and muffins were provided. The total length of time for participants at the venue was approximately two hours. While there was some variation in the sequencing of these events, due to the time of day the focus group started, on the whole the focus groups followed this general format.

4.2.2.2 Members' interactions in focus groups

The size of the focus groups varied from four to 13 participants; the average being six to seven participants. Thirteen, the result of enthusiastic gatekeepers recruiting on my behalf, was actually too many as some voices were simply not heard. On the other hand, focus groups with only four tended to be both interesting and informative as members had time to swap longer stories, hold the fort, and play to the gallery (Hedges, 1985). On review, the smaller groups provided a number of the most colourful and memorable stories in the dataset. However, the average focus group size, 6-7 people, was ideal for soliciting a wider range of views, for establishing a robust exchange of opinions, and for allowing the voices of all members to be

satisfactorily heard. Although Patton (2002) nominated 6-10 as a suitable size for focus group discussions, in my experience, 10 is too many, particularly if the objective is to hear stories, and six is a more congenial number since it provides those attending with time to listen to others, to consider their responses, and tell their *own* stories.

However, numbers of participants attending the focus group is only one dimension influencing group interaction; other people-related factors also need to be considered in creating an environment conducive to a free flowing discussion and exchange of views. Wenger (2002), for instance, identified special challenges in interviewing older people, including paying attention to sensory impairments such as hearing problems, impaired vision, and possible speech disorders resulting from strokes or other illnesses. In this study, hearing impairments were an issue in some groups and where this situation was made known, participants and I endeavoured to accommodate the situation by taking turns to speak, rather than members talking over the top of each other, or engaging in side conversations as happened from time to time when members followed up a particular point of interest with others. While the atmosphere in such groups was less lively than was the case with some other groups, participants with hearing problems were accommodated. In addition to hearing problems, a small number of participants had other health-related problems (multiple sclerosis and stroke disorders) which could have affected their participation but for the patience and consideration of others.

In addition to members' consideration for others, the levels of vibrancy and interactivity (noise) in the focus group discussions were also influenced by factors such as participants' experience, or lack of experience, with computers, and the degree of similarity or difference in these experiences. The quietest groups, on the whole, were those that consisted entirely of female nonusers. By contrast, the noisiest groups were: groups in which users and nonusers exchanged often very different stories about computers; groups of SeniorNet members who exchanged not only stories of their experiences, but also information that might be helpful to or supportive of others and groups in which members had come along purposely (it seemed to me) to make their particular points of view known. It is my impression that many participants were particularly keen to present as *switched-on* because they

used computers. Others were keen to present as no less interesting and intelligent because they were not interested in using computers. Still others came along to express their strongly held views with conviction.

Capturing the energy, the colour, the fun (Longhurst, 1996), the *experience* of these focus groups, not simply tape-recording and analysing the words expressed and exchanged, became important to me as a way of showing my respect for and appreciation of those individuals. These focus groups were not simply a physical address at which people congregated and from which data were collected. They were a carnival—the coming together of groups of people to share a moment of orchestrated, yet unpredictable (Agar & MacDonald, 1994) discussion in an atmosphere which could never reach saturation (Charmaz, 2000) in terms of inter-personal dynamics or drama, even though the content may begin to sound familiar. Hedges (1985) talked about similar feelings of vibrancy which he regarded as one of the distinct values of qualitative research. Related to this feeling is the value of the narrative perspective and the opportunity to tell a story about the richness of these focus groups (Goss and Leinbach, 1996; Hicks, 1998) and the particularity of these situated moments.

4.2.3 Strengths and limitations of the focus group method

In this section, I reflect on the strengths and limitations of the focus group method, as it was applied in this study.

4.2.3.1 Strengths

My experience of focus groups echoed the views expressed by others, such as Carey (1994), Johnson (1997), and Longhurst (1996) who identified focus groups as enjoyable, supportive and informative. It also contrasted with the somewhat flat and mechanical nature of focus groups described by Krueger and Casey (2000) and Morgan, (1997, 2002). However, and most importantly in the context of this study, I found them to be a hospitable environment for the production and distribution of stories (Czarniawska, 2004), particularly postmodern polyphonic narratives (Fontana & Frey, 2000) where scattered bits and pieces of information and fragments of stories could “collide rather than interact” (Boje, 2001, p.5) as participants talked with, to, and occasionally over the top of each other, exchanging information,

encouraging one another, laughing, cajoling, disagreeing, interrupting, arguing, soap-boxing, and playing up to the researcher. Such snatches and snapshots of lived experience provided access to a mosaic collage of stories (Gabriel, 1995) and a web of little stories (Boje, 2001). For me, the focus groups provided a platform where stories could indeed be engaged, exchanged, and enacted in an energetic and ebullient atmosphere before a participant-audience.

I argue, therefore, that these focus group forums provided a lively atmosphere rich in storytelling opportunities. However, it is also appropriate to reflect on the particularities of the storytellers—due largely to the partial and limited nature of the research participant recruitment process.

4.2.3.2 Limitations

The choice of senior citizens organisations as the primary sites for recruiting participants limited the range of voices heard in the focus groups. Participant recruitment is therefore an area that warrants closer scrutiny. The selection of these sites was expedient. For practical budgetary reasons of time and cost, I tapped into a source of participants from a select section of the aged community—those who had reasonable health, access to a particular set of social networks, and proximity to towns with community-based networks and facilities for the aged. I did not tap into the voices of those who were isolated in their homes or institutions, immobile, unwell, unable to speak English, or those who were not confident enough, or articulate enough, to participate in a focus group, or those who were not prepared to do so for a myriad of other reasons, including having no interest in computers or no desire to participate in a research project.

In addition, one obvious gap in the participant population is the lack of ethnic diversity[2]. Whereas census statistics indicate that four percent of over 65 year olds in New Zealand identify with the Maori ethnic group (Statistics New Zealand, 2001), those focus group participants who identified as Maori, constituted only 1% of the participant population; 98% identified as European (Pakeha) New Zealanders. It may be that the organisations from which I recruited participants are themselves attractive

[2] This situation has recently been addressed in relation to the FRST-ICT project, as a Maori researcher and I have run a number of focus groups with older Maori, asking questions about the barriers, benefits and negative consequences of computers for older Maori.

largely to *white* New Zealanders. It may also be that the subject matter of the study, or participation in focus groups, was not of interest to Maori or other ethnicities. I acknowledge that this lack of ethnic diversity, particularly Maori, may be seen as a limitation in my research and in the narratives expressed through it. I accept this criticism. I respect the view that stories are "related within a particular cultural frame of reference and the language of the research participant" (Bishop, 1996, p. 25) and I do not have the cultural knowledge of Te Reo Maori (Maori language) or Tikanga (Maori customs and traditions) to interpret or represent such stories.

As a result of the particular recruitment process adopted, I tapped into a section of the older population which Holbrook and Jackson (1996) described as the articulate, well-educated middle class who are perhaps more likely than others to join focus groups, especially, it could be argued, if they are not being encouraged through financial inducement. I also attracted more female than male participants, no doubt partly due to the fact that, statistically, there are more women than men in the age groups I was canvassing. Census statistics indicate that 56% of those aged 65 years and over were women and 44% men (Statistics New Zealand, 2001). The focus group ratios were 62.2% women and 37.8% men. The focus group sample also contained a group of people more highly educated than the general population in this age group. It may also be the case that the people who join the types of organisations I recruited from are more highly educated on average than the general population. It may be that those with higher education are more interested in computers, or more confident to talk about their experiences in focus group forums organised by university researchers. Certainly, it is interesting to note a similar gender and education mix in other studies with community groups. For example, Wuthnow (1994) found that women were more likely to be involved with small community groups than were men in all age categories, and the demographic group most likely to be involved in small groups was college-educated men and women aged 50 years and over.

I acknowledge that the recruitment process contributed to the selection of a group of participants who were not fully representative of the general population of older people in New Zealand, making generalisations from this particular group problematic. However, generalisations are not an objective of interpretive researchers

whose endeavours include capturing stories of lived experience and producing rich descriptions of those accounts (Denzin & Lincoln, 2000; Janesick, 2000). Neither are generalisations possible from group interview situations (Bloor et al. 2001; Fontana & Frey, 2000) because of the highly context-dependent nature of their results revolving around issues of variability in group composition and group culture. Indeed, the objective of the research was not generalisation, but identification of the ways in which participants storied computers and themselves in relation to computers. The focus group method, as I have indicated, provided a rich situated opportunity for addressing these issues. In particular, the focus group settings provided opportunities for participants to engage in telling and sharing their individual stories in interaction with others. This social occasion also provided a forum for witnessing storying in action, particularly, the ways in which the participants acted out socio-cultural stories as they made sense of their experiences.

Having in this section identified how the empirical material was originally collected for a particular purpose and then revisited to address the research questions posed in this study, it is appropriate to examine, in the next section, the ways in which this data were analysed and made sense of to produce the study's findings.

4.3 Analysing the data

In this section, I explain the way in which the empirical material gathered from the focus groups was transformed (Riessman, 1993) into research findings, via the particular analytical technique of narrative analysis (Czarniawska, 2002, 2004; Potter, 1996; Richardson, 1990, 1990a, 2000; Riessman, 1991, 1993, 2003, 2004). I begin, in section 4.3.1, by outlining the challenges of conducting narrative analysis on focus group data and how that problem was resolved. Next, in section 4.3.2, I detail the way in which the data were analysed. Finally, in section 4.3.3, I reflect briefly on the analytical method employed.

4.3.1 Narrative analysis

Narrative analysis provides a means of studying personal experience and meaning, particularly how events have been constructed by a knowing, active subject (Riessman, 1993), and how the narrator's experiences and meanings relate to public forms of social organising (Lempert, 1994). Narrative analysis is considered an

appropriate method for investigating empirical material when those data are treated as stories (Mishler, 1986). It is also considered appropriate because it provides an opportunity "to see how respondents in interviews impose order on the flow of experience to make sense of events and actions in their lives" (Riessman, 1993, p.2). These claims point to narrative analysis as an appropriate method for use in this study.

However, there is no one best method for doing narrative analysis (Mishler, 1995). Czarniawska (2004) describes it is as a creative, rather than a prescriptive activity, in which researcher-authors engage in selecting, interpreting, organising, and connecting events and characters in order to tell a particular story about those events and characters. The creative aspect of narrative analysis has definite appeal, but I also considered it to be particularly daunting as it offered no straightforward toolbox of procedures (Silverman 2000) for interrogating the data. The daunting task of applying this method was further exacerbated by claims that narrative analysis is not useful for studies of large numbers of nameless, faceless subjects (Riessman, 1993; 2004). Although I would argue that *my* research subjects were not nameless and faceless, certainly there were a large number of them, and I reasoned that the method would, therefore, not be easily applied to the data collected for this study. Also, the data were collected from focus groups and, as a result, the stories were emaciated (Gabriel, 1995), fragmented (Boje, 2001), and spread across many people. In addition, the two studies of storytelling in focus group situations, that I was aware of, Banks-Wallace (1998) and Banks-Wallace and Parks (2001), provided insufficient detail on the method of narrative analysis they employed, to act as a useful model for this study.

Therefore, since I was unable to use a previously tried and tested model of narrative analysis, in relation to the analysis of stories produced in focus group situations, I considered the possibility of creating my own method. To this end, I investigated various typologies of narrative analysis and found Riessman's (2004) framework, which related specifically to oral narratives of personal experience—a description that broadly fitted the types of stories collected in this study—to be a helpful starting point for considering the approach options. Riessman (2004) identified four models of narrative analysis: thematic analysis—seen as useful for theorising across a

number of cases; structural analysis—described as suitable for in-depth analysis of a small number of lengthy narratives; interactional analysis—an approach seen as useful for studying the dialogic process between teller and listener; and performative analysis—described as appropriate for detailed studies of identity construction. I quickly eliminated two strategies—structural and interactional analysis—because the dataset of stories I had to work with was too fractured and too multi-voiced to accommodate these methods. That left two remaining broad approaches within this typology—thematic analysis and performative analysis. Each offered opportunities, but each also had its downsides, as I explain below.

The first approach, thematic analysis, offered a way to organise the large body of data obtained from the focus groups, pulling "together a lot of material into more meaningful and parsimonious units of analysis" (Miles & Huberman, 1994, p. 69). This approach seemed to be a particularly useful strategy for managing and organising the large number of stories I had collected. However, critics of this technique, such as Boje (2001), highlighted a number of problematic issues with the approach in relation to the study of narratives. In particular, Boje (2001) argued that thematic analysis stopped storytelling in its tracks (p. 125), that is, it degraded storytelling and replaced it with causal maps and taxonomic charts, in which the "relationships between the cells and the excess beyond the taxonomy [were] not explored" (p. 15). It served, he suggested, to trap stories in little theme cages (p. 122). In so doing, according to Riessman (1993), the method removes stories from their narrative context when it "should be preserved, not fractured by researchers" (p. 4). In addition, the process of finding a pattern of common thematic elements across storytellers and their stories tends to overlook possible differences among the participants and their reported experiences (Riessman, 2004)—a matter that was inconsistent with the social constructionist approach, in particular, with its emphasis on the recognition of diversity and multiple constructions of reality. Also, according to Riessman, the method mimicked an objectivist view of language, that is, language as a mirror of reality, rather than language as a means by which reality is constructed—the view adopted in this study. In summary, thematic analysis offered a number of strengths, but it also appeared to present a significant challenge as a method of narrative analysis for use in this study, principally because it appeared to be inconsistent with the constructionist perspective.

It seemed to me that the problems associated with thematic analysis, as a form of narrative analysis for use in this study, could be alleviated by drawing on the strengths of another form of narrative analysis from Riessman's (2004) typology, the performative approach. Performative analysis is a method emergent in narrative studies (Riessman). The approach draws on Goffman (1997) and the conceptualisation of the individual as a performer and as a character performed, that is, as a socialised self whose performance derives from the scene in which action takes place before a particular audience. The approach focuses on narrative elements, such as, settings, actors, characters, and plots, and how they inter-relate. Using the performative approach in this study would allow attention to be paid to participants as performers (social actors) in relation to their socialisation within socio-cultural master narratives, particularly, master narratives about older people and technology. Attention could thus be directed to the ways in which participants constructed and narrated their *own* versions of these narratives, by identifying the roles such narrator-actors assumed for themselves in their stories and the roles they assigned to others, such as computers, as well as to the ways they connected their characters and events into meaningful sequences, that is, through the identification of the interpretive themes (plots) that linked them.

By paying attention to these particular narrative elements and the ways in which they inter-relate, the performative approach aligns with the theory and philosophy of the narrative espoused earlier in this chapter. The approach is also consistent with the constructionist perspective that underpins the study. However, despite this alignment, I was concerned that the fragments of stories gathered from the focus groups would not sustain detailed discourse analysis of identity construction (Alvesson & Karreman, 2000; Lempert, 1994; Riessman, 2003) for which the method was seen as most appropriate (Riessman, 2004). In summary, performative analysis provided a number of opportunities, but there were also challenges in applying the method to the fragmented and emaciated data collected in the focus group situations.

In the end, I opted to draw on the strengths of both thematic and performative analysis to develop a combination method for analysing stories developed in the focus group situations. Using thematic analysis provided a means of organising and finding patterns of similarity and difference across the large dataset of stories. On the

other hand, performative analysis focused the analysis on the narrative elements in those stories, particularly, on the narrators, characters, plots, and settings, that is, on what is specifically narrative about a narrative (Sewell, 1992). Looking for patterns of similarity and difference across these elements in the dataset allowed me to drill down into the micro-level detail of participants' stories. At the same time, looking for the ways in which participants' plotted their stories allowed me to relate their stories to the socio-cultural master narratives from which they were constructed.

Having in this section indicated the way in which I approached the analysis of the focus group data—by drawing on the methods of thematic analysis and performative analysis in combination—I explain in the next section how I deployed this method in practice.

4.3.2 Analysing the data

In this section I detail the way in which the data were processed to answer the research questions. The analysis involved four stages: the transcription of focus group tapes; the identification of stories in the transcription texts; the identification of narrative elements in participants' stories—in particular, *how* the computer actor and the participant actors were characterised in participants' stories; and the identification of the processes of storying—that is, *how* the stories were produced. I explain each of these areas below.

4.3.2.1 Transcription of focus group discussions

The focus group discussions were tape recorded for the reasons Silverman (2000) indicated, that is, to provide a reasonably accurate record of the exchanges that took place, to act as an aid to memory, and to enable the material to be revisited from time to time, as and when necessary. However, it is also recognised that transcribing such tapes is an interpretive practice and the transcription record created is an incomplete, partial, and selective representation of the events reported (Riessman, 1993; Silverman, 2000).

Since the ensuing analysis was conducted using interview transcripts as the primary source of data, it is important, therefore, to outline the dimensions of this partial record. The 28 focus group interviews were reduced to 29 doubled-sided, 90 minute tapes. These tapes were transcribed by an external agency and further reduced to 693

single-spaced typed pages in Microsoft Word format. During the transcription process the spoken dialogue was transformed into a linear sequence of typed words, with no indicators of pauses in a speaker's flow, no records of hesitations, such as "umm," overlapping speech, conversational asides, or bursts of hilarious laughter; as a result, much of the vibrant, rich complexity of the exchanges, including unseen facial expressions, hand gestures, and atmosphere, was not captured.

Certainly, the group nature of the interviews made it difficult to pick up every word that was said, since some voices were softer than others, some were less clear because they were heavily accented, some participants were further away from the microphone than others, and some voices were simply lost in the general milieu of conversation. I tidied up the transcripts as much as possible, attending to typing errors and omissions, while listening to the tapes on multiple occasions. However, despite this effort the transcripts remain an imperfect record of the discussions that took place. Having said this, they are a valuable resource, and a significantly more reliable record of events than memory would have been and also more accessible for detailed analysis.

During the process of tidying up and listening to the tapes, I also added the names of each speaker to the transcripts, based on notes taken during the focus group discussions. Noting speakers' names against their dialogue, wherever possible, allowed me the opportunity to track speakers' statements through the transcript and to build brief profiles based on this information. Later, participants' names were changed to protect their identity, and a register of participants' *real* names and their *reported* names (pseudonyms) was drawn up to keep track of name allocations. Renaming was necessary to ensure privacy and confidentiality, but it also had the added advantage that each participant was given a unique name identifier which avoided the complication of using the same name several times while referring to different people.

Having reduced the focus group discussions to a text format in preparation for analytical investigation, the next stage in the process was the identification of stories.

4.3.2.2 Identification of stories

In this section, I outline the parameters of a story—the key unit of analysis in the study.

As previously indicated, there is considerable disagreement in the literature on the precise definition of a story (Polkinghorne, 1988; Riessman, 1991, 1993). This definitional problem may also be exacerbated when a story is identified as a social performance (Boje, 1989) or a social process (Gabriel, 1995), as it is in this study, rather than as an artefact (Foss, 2004) with clearly defined boundaries. Gabriel (1995) argued that stories in dynamic situations do not "stand as obelisks or pyramids in a barren landscape" (p. 15); instead they evolve, compete, merge, disappear, reappear, mutate, merge, are sometimes aborted and are often multi-authored. These descriptions echo my experience with stories in the focus group situation and they also highlight some of the difficulties encountered in defining a story as a unit of analysis—that is, as a discrete and detachable section of text (Riessman, 1991).

However, it was necessary to define the parameters of a story in order to focus and facilitate the analysis, and to be consistent in deciding what was and was not a story, for the purpose of this study. Clearly, the definition had to be one appropriate to stories produced in the dynamic situation of focus groups. In the end, Boje's (1991; 1995; 2001) concept of a story-performance was adopted as a definitional guide because it seemed most suitable for the multi-voiced, collective form of storytelling shared and performed in the fragmented and often overlapping discussions that took place in the ebb and flow of focus group exchanges. Boje (1991) identified a story as: "An exchange between two or more persons during which a past and or anticipated experience was being referenced, interpreted or challenged" (p. 111). The particular experience of interest, in the case of this study, was an experience with computers. Therefore, for the purpose of this study, a section of transcription text was counted as a story if it referenced or recounted an experience about or with computers

4.3.2.2.1 Identifying stories: the pilot study

In this section, I explain the procedure used in locating and tracking stories, a procedure that I tested in a pilot study before launching into a full scale examination of the whole dataset. A pilot study was considered helpful for three reasons: to develop confidence in the procedure of finding stories with a small sample, before being overwhelmed by a large database; to develop and test a systematic process for managing the data; and to test out the application of Boje's (1991) definition of a story.

I chose three transcripts for the pilot study. With the first transcript, I developed a process for identifying stories. With the second transcript, I reviewed and refined the process. With the third transcript, I tested the revised process. The first transcript, focus group 12, was chosen because it consisted of a small group of men who, I recalled, had engaged in vociferous storytelling. The second transcript, focus group 2, was chosen because it consisted of a small group of women, who were much quieter. Whether stories were identifiable in this transcript was a matter to be tested. The third transcript, focus group 3, was chosen because it consisted of a mixed group of men and women in which there were colourful exchanges between users and nonusers. It was, in my recollection, a rich source of stories.

Armed with Boje's (1991) operationalised definition of a story, I searched the transcripts for stories about experiences with or about computers. I read through the electronic version of the transcript at least once to get a feel for what was being said. Next, I read through the transcript page by page asking myself the question: *Does this piece of text contain a story according to the definition I am using?* If a section of text did not contain an account of a computer-related experience, it was not considered a story for the purpose of the study. When a section of text conformed to the definition, I highlighted the segment in the transcript and also copied and pasted it into a new Microsoft Word document called *Stories.doc*—one story on each page of the electronic document. *Stories.doc* became the *master file* of stories extracted from the transcripts. Each story in this master file had a unique numeric identifier—a page number. In addition, details of the focus group name and number, and the line numbers for the segment of text from the original transcript were also noted, as were the storytellers' names. In addition to identifying stories and copying them into a

master file, I also attempted to categorise them thematically according to their content and write up a brief summary of each story into a *Summary.doc* file.

The pilot study proved helpful in several ways: in testing and developing the definition of a story; in refining the procedure for extracting stories; and in identifying the problematic areas in the search for stories. First, and most importantly, the pilot study enabled me to see that one definition of a story was, on its own, inadequate to cover the variety of stories produced in the focus groups. In particular, stories about experiences with computers did not fully capture non-computer-users' representations. The definition of a story was therefore extended to include accounts as explanations, justifications and excuses (Scott & Lyman, 1968). The process of storying was also extended to encompass the work of accounting for the ways in which "categories of actors do, could, or should behave" (Baker, 1997, p. 143), or as Czarniawska, (2004) put it, that characters should know their lines and know how to deliver them. These extensions were consistent with the parameters of the study's philosophical/theoretical framework and enabled me to incorporate the stories of all participants, not just those who used computers.

As a result of the pilot study, and in addition to Boje's (1991) definition that I, now, labelled the *conversation story*, three more story-types were also identified: the *individual story*, the *serial story*, and the *accounting story*. Definitions and illustrations of each type, presented below, will clarify how these terms were used.

The first type of story identified was a *conversation story.* It was defined, following Boje (1991), as an exchange in which two or more participants discussed a past and or anticipated experience with computers. A *conversation story* could, at times, be brief covering only a few paragraphs of focused conversation. It could also ramble over a number of pages of text sometimes stopping abruptly as the conversation took off in a completely new direction in response to a comment or a question by one of the interlocutors, sometimes resurfacing again a number of pages later, sometimes not. The fleeting, insubstantial nature of the *conversation story* was reminiscent of Gabriel's (1995) experience with the collage of stories encountered in the organisational setting, and also with Boje's (2001) description of the nonlinear and fragmented nature of such stories.

One example of a *conversation story* was Story 124, in which four Nonuser participants discussed their experience of feeling *left out* by not having access to a computer. It went like this:

> *SandraN: There's one thing that does upset me is when you see holidays advertised - you know aeroplane fares - and they say it's cheaper if you book through your computer. That really annoys me!!*
> *NellieN: That annoys me too!*
> *GeorgeN: Yes! Discrimination! If you've not got a computer, you are discriminated against by other people, by having been sort of considered privileged to be able to get cheaper bookings and that sort of thing. So you are being discriminated against ....*
> *ReinhardtN: But it doesn't work out much cheaper if you've got to buy the computer to get cheap airfares.*
> *(Story 124)*

This is a *conversation story* because it is an exchange in which two or more people are engaged in a discussion about a shared past experience with computers. In this case, this particular *conversation story* rambled over several pages as participants discussed their experiences and rationalised their position as Nonusers. In this account some participants recalled conversations with their children about the limited availability of airfares on the Internet and the fact that the seats were not really any cheaper. Others talked of hearing about the difficulties of not being able to access the websites when special airfare deals became available on the Internet.

It is not appropriate to go into a detailed examination of this account here. My point at this stage is simply to provide an example of this particular kind of story and also to signal the way in which the rambling nature of the *conversation story* has been contained, by the use of ellipsis, to produce a manageable version of the story for re-telling in this thesis. (I talk further about the issue of the containment of stories in a discussion on the problematic area of story identification below).

The second type of story identified in the pilot study was the *individual story*. An *individual story* was defined as an account in which an individual recounted a past or anticipated personal experience with a computer, or recounted a story told to him or her about computers. This form of story is consistent with what one might expect to

find in many everyday conversations in which a person tells a story about an experience. One example of an *individual story* was Story 29, in which BettyN recounted her experience with mobile telephony, a particular form of information and communication technology, and conveyed her indignation at the ways in which such technology is invading private space. She recounted her experience this way:

> *I sort of think we've managed without mobile phones or whatever for about 2000 years and suddenly nobody can live without them, you know. And I remember once going to the supermarket in Coastlands shopping mall and I went to the loo there, and a woman came in the next loo and her phone went and she answered it. So I was very naughty but I very deliberately flushed the toilet. It was so indelicate. I was so indignant that people cannot even go to the loo and have a minute without pressure.*
> *(Story 29)*

BettyN's story serves as an example of an *individual story* because it is an account of a particular personal experience with computers—in this case, computers in the form of mobile telephony. There are no interjections or contributions from other interlocutors, except as an audience for such a story.

The third type of story identified in the dataset was the *serial story.* A *serial story* was defined as a present or anticipated experience with computers repeated across two or more focus groups. A *serial story* discussed a commonly shared position on computers—a kind of collective story (Richardson, 1990). A *serial story* could appear as a cursory statement embedded in a conversation, or it could appear as a more extended account. Two examples are provided. One example of a *serial story* was Story 222, in which WendyN, in discussion with other Nonusers, offered a reason for learning to use a computer. She put it this way:

> *IonaN: I'd like to know how to do it [use a computer].*
> *WendyN: Yes, so you can at least converse with your children, and grandchildren - to know what they're talking about.*
> *(Story 222)*

This section of text serves as an example of a *serial story* in that it references the recurring narrative of *computers as intergenerational connectors* in which a number

of participants, over a number of focus groups, talked about computers as a way to connect with their grandchildren and bridge the generation gap. Another example of this same story is Story 23, in which two women talked about their experience of using the computer to connect with the grandchildren:

> *MarieS: Communication with the grandchildren is important too. Well, you're keeping up with them—or trying to keep up with them. So, you've got something in common.*
> *KatrinaS: You can still talk to them in their language! We try to.*
> *MarieS: You can still talk to them, Yeah. And I do a Messenger thing. My granddaughter's in New Plymouth and I'll write her quite a bit on this.…You can have such a lot of fun.*
> *KatrinaS: Yeah, I think that's what it is.*
> *(Story 23)*

There are various versions of this particular *serial story.* However, my point in providing two illustrations of this one type of story is to show its recurring or serialised nature.

The fourth type of story identified was the *accounting story*. It was defined as an account in which an individual or a number of individuals discussed an anticipated or past experience with computers. This discussion may act as an explanation, justification, or excuse, for the participants' positioning in relation to computers. Story 174 offers an illustration of this story-type:

> *GretaN: We are all going to be ningnongs. Ningnongs. Well, everything will be mechanical won't it? Everything will be mechanical. You'll get the information you want straight from the computer. You won't look through books. You'll just look up the computer and there it is.*
> *(Story 174)*

This section of text is considered to be an *accounting story* because it presents an anticipated experience with computers, one in which the technology is expected to reduce creative human beings to automatons. Given this representation of the computer, it is not surprising that the narrator has no desire to use the technology.

The above illustrations indicate what counted as a story for the purpose of this study. In particular, a story was based around a past, present, or anticipated experience with

computers. Therefore, a section of text was not counted as a story if it did not reference or recount an experience about or with computers. For instance, I did not consider the following section of text to be a story because it did not focus on computers:

> *I think you're very, very aware as you get older that people will use your time if you let them. This is the one thing that I have learned. You can be very, very busy going hither and thither and doing all sorts of things—things that are not important to your life any more. So this is why they say old people get selfish. And you've got to get a bit selfish because it's a matter of self-preservation. Now I know that Anna belongs to quite a lot of organizations, and is doing a lot of good works, but if she wants to get this book written, then she's got to make that a priority.*

In addition, if a section of text contained an exchange about computers, it had to do more than simply convey information, in order to count as a story. It also had to recount a past, present, or anticipated experience about computers. Therefore, I considered that the following segment was not a story because there was no particular experience with computers recounted in this conversation, although an exchange of information about computers did take place:

> *Speaker 1: Well we've got two [phone] lines in—one for the computer.*
> *Speaker 2: Well that's okay but a lot of people don't have that.*
> *Speaker 3: No, a lot of people haven't. They've only got the one and it is frustrating.*
> *Speaker 2: That's one of the frustrating aspects of it.*
> *Speaker 4: Well to have two lines is the best, yeah.*
> *Speaker 2: It's expensive.*
> *Speaker 1: But it leaves the phone free.*
> *Speaker 2: It does.*
> *Speaker 1: Yeah, that's right.*

This section of text is not considered a story because participants did not recount a past, present or anticipate experience with computers.

These two negative examples are introduced here to demonstrate the difference between a story and a non-story in terms of this study, and also to show that the pilot study was a mechanism through which I could clarify the distinction between the two.

The second way in which the pilot study proved helpful was in refining the procedure for extracting stories. In particular, I abandoned the attempt to categorise the stories thematically into *Summary.doc* concurrently with the identification and extraction of stories from the transcripts. This process became too cumbersome and was not particularly productive as I was, at that time, not familiar enough with the narrative material in the transcripts. Therefore, rather than conflating the process of identifying and analysing stories, I opted for a two stage process of first identifying stories in the transcripts and entering them into an electronic master file, *Stories.doc*, before attempting to analyse them.

The third way in which the pilot study proved helpful was in alerting me to the problematic area of designating the beginning and the ending of a story. Riessman (1993) indicated a similar micro-level concern with marking off segments of text to indicate that a story begins *here* and finishes *there.* Czarniawska (2004) offered a solution by suggesting that texts always belong to other texts. Consequently, there are no *real* beginnings and endings, there is only ongoing conversation in relation to which texts speak to other texts across time and place (p. 663). In the end, I made a subjective call on where to mark the start and the finish of a story on a case by case basis, erring on the side of situating the story within its conversational context as much as possible. Sometimes this meant that two stories were contextually conjoined because it made more sense to keep them together than to separate them. On other occasions, it meant that a long, rambling, *conversation story* was contained by the use of ellipsis to condense it into a smaller, more digestible version for re-telling in this thesis. In such ways, Czarniawska (2002) would argue, narratives are self-consciously constructed out of interview material. This point also confirms Mishler's (1995) view that stories are made, not found.

The procedure for identifying stories, outlined above, and refined through the pilot study, was then applied to all the transcripts. Through this process, the material gathered from 28 focus groups was reduced to 374 stories.

In summary, I showed in this section that, to count as a story, a section of text from the focus group transcripts had to focus on computers and it had to recount a past, present, or anticipated experience with computers. Following this definition, four

types of stories were identified: (a) *conversation stories* or exchanges in which two or more persons discussed a past and or an anticipated experience with computers; (b) *individual stories* or self-contained snippets of accounts in which an individual recounted a past or anticipated experience with a computer, or recounted a story told to him/her about computers; (c) *serial stories* in which individuals or groups discussed a present or anticipated experience with computers, across two or more focus groups—a kind of collective story about computers; and (4) *accounting stories* in which individuals recounted a past or anticipated experience with computers, and in doing so accounted for their positioning in relation to computers.

4.3.2.3 Analysis procedure

In this section, I detail the ways in which I analysed the stories, extracted from the focus group transcripts, to answer the research questions.

The general approach I adopted was: (a) to work inductively from the data (Cresswell, 1998; Janesick, 2000), rather than with preset categories developed from the literature and applied to the data; (b) to work with stories as blocks of text rather than reducing the text to specific words or phrases (Ryan & Bernard, 2000)—an approach often adopted with thematic analysis (for example, Owen, 1984); (c) to immerse myself in the data, reading and re-reading the stories and asking myself a series of questions, in particular, *how are actors (computers and participants) represented in these stories*, and *how are these representations similar and different across the dataset?* Following Ryan and Bernard's (2000) lead, I interrogated the data further by asking questions—*when*, *why*, and *under what conditions* do these similarities and differences occur; and, finally (d) to focus the analysis around narrative elements—narrators, actors, characters, settings and plots.

I used a two stage process in the analysis: I began by identifying *how* computers and participants as actors were constructed (characterised) in participants' stories, and then I focused on *how* the storying was achieved by identifying *what* narrative elements were involved in the production of those constructions, and *how* they were deployed. I explain this process in more detail below.

The specific procedure I adopted to identify how participants' constructed the computer-actor in their stories was as follows: I manually trawled through paper copies of all the stories extracted from the transcripts, looking at each story on repeated occasions for an understanding of how the computer was presented. (I did this manually because I considered that it gave me a closer connection with the data, than did the disembodied method of using technology to do this job for me. However, the irony of working on a project on technology using manual methods did not escape me). I looked at each story in turn, asking myself the questions—*How is the computer portrayed in this account? What does the computer look like in this story?* Through this questioning process, recurring and repeated patterns or themes (Boyatzis, 1998) began to emerge in participants' descriptions. I sorted each theme into separate piles (Ryan & Bernard, 2003) and assigned a descriptive character label to each. Further investigation showed that there were significant similarities and differences in the ways that participants presented the computer in relation to their self-identified categorisation as members of one of three different groups: SeniorNet members, non-SeniorNet member computer users (Users), and non-computer-users (Nonusers). As a result, constructions of the computer were further sorted according to participant-type. The outcome of this process was an understanding of the computer as a storied character who took a variety of forms in participants' narrative productions.

The procedure I adopted to identify how participants' constructed themselves in relation to computers was similar to that described above. However, on this occasion I began with the three participant-types: SeniorNet members, Users, and Nonusers and looked at the ways that the members of each group portrayed themselves in relation to the computer. Again, I looked at each story in turn. This time I asked myself the questions—*How are the participants presenting themselves in this account? What do they look like in this account, as opposed to that account?* Through this questioning process, a number of different patterns (themes) emerged in the ways participants' presented themselves in their stories. Each theme was assigned a descriptive character label. The outcome of this process was a profile of participants' as storied characters in their own narratives.

To this point, the analysis provided an understanding of how computers and participants were constructed (characterised) in participants' stories. However, more work had yet to be done to develop an understanding of how those stories were produced. Organising the characterisations of the computer-actor and the participant-actors into visual displays (Langley, 1999; Miles & Huberman, 1994) provided a mechanism for mapping similarities and differences in the ways in which the characters had been constructed within each participant group and also across the three groups (Eisenhardt, 1989). I resisted the necessity to do this initially because I considered it to be incompatible with the creative process of doing narrative analysis (Czarniawska, 2004), but this approach ultimately proved to be helpful. This organising strategy, in combination with a closer interrogation of the data using a series of focusing questions, enabled insights to be generated from that data (Eisenhardt, 1989; Alvesson & Deetz, 2000).

I began this stage of the process by interrogating the data using Ryan and Bernard's (2003) *when*, and *under what conditions* questions—in this case, *under what conditions are these descriptions of the computer different from those descriptions? What difference do these descriptions make to the ways the participants present themselves?* This focused scrutiny enabled me to identify a number of different contexts in which the interactions between the principal actors (computers and participants) took place. When this pattern in the dataset was identified, I then explored each setting to develop an understanding of the ways that members, within and across the three participant groups, acted out their relationships with the computers similarly or differently in different settings.

Next, I interrogated the stories using Ryan and Bernard's (2003) *why* question—in this case, *why are these descriptions of the computer different from those descriptions?* This questioning enabled me to see that participants not only constructed the computer similarly and differently in different settings, they also oriented to it in similar and different ways producing a variety of perspectives of the phenomenon. As a result, I explored participants' orientation to the computer within and across the three participant groups.

To interrogate the empirical material still further, I asked two *what* questions drawn from narrative researchers, particularly, Polkinghorne (1988), Somers (1994), and Somers and Gibson (1994). First I asked: *What are the narrative themes joining these actors in causal emplotment?* Searching for answers to this question, I scrutinised the stories told by the members of each participant group looking for the themes underpinning that group's constructions—the latent rather than the manifest level of thematic analysis (Boyatzis, 1998)—paying particular attention to the ways they evaluated the computer and the criteria they used to do so. This interrogation process enabled me to determine the similar and different ways that the narrators linked the computer with particular associations and sets of values, thereby drawing conclusions for themselves about the value of computers for older people.

Having established how the participants plotted their relationships with computers, I was then able to address the second question I posed to the data: *What are the narratives they are drawing on as they make these associations and assign these values?* In answering this question I looked to see if the themes by which participants evaluated and emplotted their relationships with computers were constitutive of one or more master narratives. By scrutinising and unbundling the connections participants made between the computer and different value sets and associations, I determined that they drew on a range of narratives—old and new—with which they identified strongly or weakly. Similarities and differences were detected in the particular narratives the members of the three participant groups drew on and how they put them to use. For instance, some narratives were reproduced, some were updated, and some were accommodated, while others were resisted.

Following the process outlined above, that is, by asking a series of *what, why, when,* and *how* questions and searching for similarities and differences in participants' storied responses, I interpretively analysed the data, identifying and mapping the various ways in which participants constructed computers and themselves in relation to computers in their stories. I particularly noted the ways in which these constructions were storied by narrators as they drew selectively on a number of master narratives to evaluate and emplot the relationships between the actors in different settings. Through this process, I was able to develop a situated

understanding of participants' meanings for the computer and the storying activities used to construct those meanings.

4.3.3 Reviewing the analytical method

The previous section detailed the ways in which the focus group discussions were transformed to a collection of stories, and how those stories were analysed to produce research findings. The problematic issue of defining a story—an area of considerable disagreement in the literature—was also encountered here. In this case, the parameters of a story revolved around a focus on computers and the recounting of a past, present, or anticipated experience with computers.

The method, developed specifically to analyse the stories produced in the focus group situation, drew on thematic analysis and performative analysis in combination. It is untested as a methodological tool. However, as the presentation and discussion of the findings over the following chapters shows, the method generated a number of insights into older people's relationships with computers not identified in prior studies, and to this extent, it has allowed a contribution to be made to knowledge on the subject.

In conclusion, in this chapter I outlined the dimensions of the interpretive methodological position and the narrative theoretical/philosophical framework that informed the investigation. I showed how data originally collected for a project on the impacts of ICTs on disadvantaged groups was revisited using this framework. Also discussed was the way in which the focus group data were analysed using a form of narrative analysis developed to meet the challenges of exploring the collage of stories produced in the focus group situation. This analytical method drew on thematic analysis and performative analysis in combination to identify and map the narrative elements deployed in participants' stories and storying processes, across the database of stories produced in the focus group situation. As a result of this analytical inquiry, it is possible to tell new, that is, previously untold stories about older people's relationships with computers. Also, for reasons of transparency and credibility the procedures involved in collecting and analysing the data were explained in detail.

In the next chapter, I overview the findings from the narrative analysis before going on in the following three chapters to explain, in detail, the ways in which the three groups of participants storied computers and themselves in relation to computers to make sense of this phenomenon.

CHAPTER 5

Overview of Findings

This chapter presents an overview of the findings from the analysis. Its principal objective is to provide a synopsis of those findings before presenting and discussing the micro level detail of participants' stories and their productions in the ensuing chapters. To achieve that objective, the chapter is structured as follows: In section 5.1, I outline the findings in relation to the research questions. Then, in section 5.2, I indicate how these findings will be presented and discussed over the following three chapters.

5.1 Outlining the findings

The research questions asked: *How do participants story computers?* and *How do participants story themselves in relation to computers?* In addressing these questions, the analysis focused attention on identifying: what stories participants produced; how they constructed the principal characters and plotted their interactions in those stories; what narratives they drew on in this process, and how. The key components identified were: narrators, settings, actors, characters, meta-narratives, master narratives, local stories, and the production elements of orientation, identification, and settings. I review each of these components briefly below and outline their inter-relationships in this study.

5.1.1 Narrators

Research respondents were identified as the narrators of stories produced by the members of one of three groups—Users, SeniorNet members, and Nonusers, and individuals were identified accordingly. For example, the pseudonym *AnnU* indicates that Ann was a member of the User group. Similarly, *BenS* indicates that Ben was a SeniorNet member, and *ClareN* indicates that Clare was a Nonuser. The stories told by individual narrators were aggregated into collections of accounts—Nonusers' stories, SeniorNet members' stories, and Nonusers' stories.

I too am a narrator, the principal narrator of this thesis-story that draws on and analyses participant-narrators' accounts with the goal of producing interpretive insights into their storying processes.

5.1.2 Actors, settings and characters

Participants and computers were recognised as actors in participants' stories. The analysis identified that participants' interactions with the computer took place in three main settings: the individual, the family, and the wider social arena. The majority of the stories were narrated as one-on-one encounters between individuals—usually the participants themselves—and the computer. I bounded these narrative encounters by describing them as taking place in the *individual setting.* A second grouping of stories involved interactions between computers, participants, and family members. I bounded these narrative episodes by describing them as taking place in the *family setting*. A third cluster of stories involved participants' experiences with computers in the wider arena, including their encounters with computers in organisations or businesses. I bounded these narrative experiences by describing them as located within the setting of *organisation/society*.

In these settings, computers were characterised in two principal ways—as the *Good Computer* and the *Bad Computer*. If the computer was described by participants in positive terms—either with glowing enthusiasm or in a more prosaic manner, for example as merely useful or efficient—I categorised it as the *Good Computer*. If the computer was described in negative terms, I categorised it as the *Bad Computer*. In many stories the computer was characterised as one or the other. However, in some stories the computer was presented in both roles, morphing deftly between the *Good* and the *Bad Computer* in quick succession.

These two character positions can be generalised as follows. The *Good Computer* performed a predominantly, though not exclusively, functional role. It assisted individuals by providing convenient access to others, to information, to a means of relaxation, as well as enabling their acquisition of new skills and facilitating their development of new interests. Also, it assisted by bringing families closer together and allowing significant contributions to be made to organisational speed and efficiency. As a character-type, the *Good Computer* is analogous to but not

synonymous with the *knight in shining armour* computer character identified in the underpinning meta-narrative, in the Literature Review chapter. By comparison with the computer-character in that meta-narrative, where the computer was seen as the hero for aged victims, the computer-character in participants' accounts was assigned a much more subordinate role, that of a companion-assistant—at least in the *individual setting.* In reducing the role of the computer from hero to 'sidekick', participants were able to present themselves as having superiority over the computer, rather than being in a position of needing to be rescued by it.

On the other hand, the *Bad Computer* character presented significant challenges for many participants as they endeavoured to maintain their superior positioning in the human-computer relationship. The narration of a villain role for the computer was dominant in the accounts told by Nonusers, but was also evident in Users' stories. The *Bad Computer* was portrayed as seductive and destructive, as a character capable of corrupting the innocent and the unsuspecting and reducing them to a passive drone-like state. In particular, the *Bad Computer* seduced, isolated and de-skilled children, who were often seen as the most innocent and the most vulnerable. It also disrupted families and caused disharmony between married couples. In addition, the *Bad Computer* character was seen as responsible for unemployment and social dislocation. As a character-type, the *Bad Computer* has no equivalent in the literature on older people and computers, where only the *knight in shining armour* hero appeared. However, this evil character can be detected in the wider literature on technology where the dystopic computer is often presented as a malevolent, homogenising, and disempowering figure (Bromley, 1997).

The following table, Table 1, summarises the major ways in which these two computer characters were narrated in participants' accounts. Each character can be seen as multi-talented, playing a variety of roles in the three different settings. It is noticeable that the *Bad Computer* appears much less often in SeniorNet members' accounts and much more frequently in Nonusers' and Users' stories.

Table 1: Computer characters in participants' stories (I=Individual setting; F=Family setting; O=Organisation/Society; U=Users; S=SeniorNet members; N=Nonusers)

Character	**Description**	**Illustration**	**Setting**	**Narrator**
Good computer	Relates to, but is not synonymous with *knight in shining armour* character			
Connector	Facilitates connections to people and access to information	"I use the computer mainly to get into news overseas, to where I originally came from, with the 'papers and things like that. Keeps me up with all the villagers." WinnieU	I, F	U, S, N
Enabler (individual)	Provides connections to the modern world, and to an increased sense of self esteem, and a new sense of energy	"It's fair to say that…using computers keeps you young for starters and the fact that you are prepared to have a go at computers proves that you're young at heart, a bit, and it keeps you that way" EwenS	I, F	S, N, U
Good companion	Provides companionship 24/7	"I play Bridge and I really love that. It is really relaxing and it is very good for everybody to just sit there and do your own thing" JuneS	I, F	S, N, U
Enabler (organisational)	Contributes to increased speed and efficiency; and progress	"It's a lot more efficient than in the old days…they've got the stock control going through that machine and it reorders the stuff for them. So you think about the tremendous amount of work that must save" MaudU	O/S	U, N
Bad computer	Has no equivalent in the older people and computers literature			
Isolator	Separates users from real human contact with other s. Also alienates nonusers because they do not have access to a computer	"Someone on their own…they suddenly find this toy can do all sorts of things…and it suddenly becomes their world. To the extent that they don't look after themselves." MurrayN	I, F, O/S	U, N
Seducer	Is attractive and alluring particularly to those susceptible to influence	"It's a drug. It's a drug, there's no question about that." ThomasU	I, F, O/S	U, N
Inducer of Dependence	Reduces users to a dependent, servile and passive state--automata	"Relying too much on computers, the citizen in the year 2050 is going to be an egghead and he is not going to be able to add one and one…unless he relies on a machine." PaulN	I, F, O/S	U, S, N
Societal Dislocator	Contributes to societal unrest, dislocation and disharmony	"So many people are unemployed and why? Because of all the machines that are coming out and doing away with labour." FionaN	O/S	U, N

In relation to participants as characters, the analysis identified that participants narrated hero-type positions for themselves as actors in their own stories. In particular, they displayed a strong sense of agency (choice) and autonomy (control) in relation to the computer. This hero-type characterisation contrasts with the ways in which older people were presented in the meta-narrative in the Literature Review chapter, where they could often be seen as victims needing to be rescued by the hero-computer. Also detectable in participants' accounts were differences in the types of hero-roles the members of each participant group narrated, as well as differences in the hero's capacity to act in different settings. Similarities and differences were also apparent in the ways the heroes did battle with the villain computer-character.

In general terms, Users presented themselves as persons who, with determination and effort, had learned how to use the computer, to become in the end not only competent and discriminating users, but also insightful about the computer's social effects. Users were *realists*—computers were useful tools. However, Users were also *critics*, observing and assessing the social ramifications of the computerisation phenomenon from a distance. SeniorNet members, like Users, also recounted their experiences with the frustrations of learning how to use the computer. However, SeniorNet members were not merely analytical observers, but also *techno-idealists* who championed a vision of computers as connectors—a way to connect with and be part of the modern world. SeniorNet members were also *activists*. They formed small groups and worked tirelessly to assist others negotiate successfully through the maze of ICT learning challenges for a good cause—an increased sense of connection with the modern world. Nonusers, on the other hand, were *heroes of the resistance*. In this capacity, they put themselves outside the norms of modern society, spurning conformity, and fending off overtures from others, in order to 'travel to the beat of their own drum'. Like Users, they were acute observers of technologisation and its social effects. Like SeniorNet members they were *idealists*, but unlike SeniorNet members they were *nostalgic idealists*, clinging to an old set of values rather than hitching their wagon to the new rising star.

The following table, Table 2, sets out the major ways in which participants, as members of one of the three participant groups, presented themselves in relation to

computers, in each of the three settings. Also noted is the general tenor of the tales told by each of the participant groups.

Table 2: Participants as characters in their own stories (I=Individual setting; F=Family setting; O=Organisation/Society; U=Users; S=SeniorNet members; N=Nonusers

Narrators as hero actors	Roles	Description	Setting	Tenor of tales told
Users – realists, critics	Cultural adaptors	Adapt positively to the modern world of computers	I	Tales of use and restraint
	Frustrated Learners	Find difficulty learning computer & being dependent on others	I	
	Discriminating Users	Use the computer as necessary, not appropriate for everything	I	
	Guardians of the future	Are anxious about children's use of computers. Identify harmful effects	F	
	Armchair critics	Are critical of the effects of computer on society	O/S	
SeniorNet members – techno-idealists, activists	Aged warriors	Find it difficult to learn computer but persevere against the odds	I	Tales of use and adventure
	Comrades in adversity	Are prepared to give and receive help and support to aged-peers as they battle against the odds	I, O/S	
Nonusers – nostalgic idealists, resistors	Isolates	Feel left out or left behind in a technologically driven society	I	Tales of morality and resistance
	Resistors	Resist adopting the computer; employ active & passive strategies	I	
	Guardians of the Future	Are anxious about children's use of computers. Identify harmful effects	F	
	Targets for Change	Are targeted by the children to keep up with latest technology	F	
	With-IT for the Grandchildren	Are prepared to modernise to connect with grandchildren	F	
	Outsiders	Find themselves neglected & discriminated against in technologised society	O/S	

5.1.3 Meta-narratives, master narratives, and local stories

The single underpinning *meta-narrative* identified in the literature on older people and computers—the *knight in shining armour* computer-character rescuing older people (and others) from various states of distress—was not reiterated by participants, but was instead fractured into multiple stories, narrated, and performed in multiple settings.

In constructing their stories, participants drew on, but also negotiated and challenged the three *master narratives* identified in the Literature Review: *the enabling machine and elderly individuals, the potential divider and senior citizens,* and *the desirable commodity and grey consumers*. Predominant in participants' accounts, as it had been in the Literature Review, was the master narrative of the *enabling machine and elderly individuals*. In this narrative, the computer was identified as a device that could assist and enable older people in a variety of ways. Members of each participant group reproduced this narrative to some degree. However, they also constructed their own local versions of it. For instance, Users reproduced the master narrative, but they also disputed the singular definition of the enabling computer and critically appraised the computer as both good and bad. SeniorNet members, too, reproduced the narrative, but they did so with a paradoxical twist—by emphasising the face-to-face aspects of their encounter with the virtual technology. Nonusers acknowledged the master narrative, but explicitly rejected it.

The second master narrative—*the potential divider and senior citizens*—identified the computer as a necessary component of modern life. The narrative represented the perspective of governments who feared that citizens, without access to computers, would be marginalised in the information age. This narrative provided the context within which participants constructed and produced their stories. Users and SeniorNet members implicitly drew on the narrative in constructing the need to develop computer skills in order to participate with confidence in the modern era. However, this was only one of a number of reasons they used computers. Nonusers can be seen drawing on this narrative in recounting their experiences of being discriminated against by organisations because they were non-computer-users. However, although Nonusers were frustrated by this experience, they did not consider themselves to be

marginalised by such actions. Instead, they acknowledged that being a non-computer-user was a matter of choice. Indeed, for them it was a preferred position.

The third master narrative—*the desirable commodity and grey consumers*— identified computers as important symbols of the modern age distinguishing those who used them in positive and empowering ways. SeniorNet members drew on this narrative, albeit selectively, whereas Nonusers, and to a lesser degree Users, contested the narrative's validity.

Participants acted to make sense of the computer by evaluating a position for themselves in relation to each of these master narratives. In doing so, they juxtaposed these narratives with another set of master narratives, predominantly the narratives of stoicism and asceticism to which they had been previously socialised. The identification, in participants' accounts, of overlapping master narratives—constructed as *old stories* and *new stories*—contrasts with the singular way in which the master narratives were presented in the literature, where the principal focus was on narratives about technology in isolation of other master narratives and their socio-cultural-historical contexts of production. Participants' relationships with *old* and *new stories* have been identified and tracked as one of three key production elements in the process through which they made sense of the computer.

5.1.4 Production elements

The analysis identified three elements as key factors in participants' sensemaking processes: (a) the context in which their stories were narrated and enacted—the *individual setting*, the *family setting*, and the *setting of organisation/society*; (b) the *orientation* they adopted in relation to the computer—either a close-up or a situated lens, that is, considering the computer either in isolation of, or in relation to other technologies and events, and also focusing attention on uses, or effects of the technology; and (c) the strength of participants' identification with *old stories* and their preparedness to adopt *new stories*. These elements, often in combination, were found to influence the ways in which members of the three groups constructed their relationships with the computer and helped them make sense if it.

A summary of the narratives and their production elements is presented in Table 3, below.

Table 3: Key elements in the production of participants' stories

Narrator	**Master narratives**	**Local versions of master narratives**	**Identification with old stories defines parameters of relationship with new stories**	**Orientation to computer**	**Settings – individual, family, and organisation/society**
Users	- Reproduced the *enabling/elderly* narrative. - Drew implicitly on *potential divider* narrative. - Challenged *desirable commodity* narrative.	Computers may be useful tools but must be used with discrimination and caution.	Identified with old values *(old stories)*, but were still able to find a way to accommodate *new stories*—the story of the new computer	Various positions - close up and situated lenses; positive, but also critical.	Constructed accounts in all 3 settings and adopted various positions in each setting
SeniorNet members	- Reproduced the *enabling/elderly* master narrative. - Drew implicitly on *potential divider* narrative. - Reproduced *desirable commodity* narrative in conjunction with a SeniorNet story.	Computers provide SeniorNet members with opportunities to participate in new adventures and connect with the modern world. Face-to-face benefits of SeniorNet experience emphasised.	Identified with and enacted old values – being busy & productive (*old stories*), and in doing so found a way to assimilate *new stories*.	Adopted only close up lens; focused on personal benefits and positives.	Constructed accounts predominantly in SeniorNet setting
Nonusers	- Acknowledged, but also challenged *enabling/elderly* master narrative. - Drew on *potential divider* narrative. - Refuted *desirable commodity* narrative.	Computers incompatible with existing values and as such represent a threat and are best left alone.	Identified strongly with old values (*old stories*). Strength of this identification blocked acceptance of *new stories*.	Adopted situated lens with a critical. Position.	Constructed accounts in all 3 settings and adopted various positions in each setting

Having outlined the key narratives and production elements identified in participants' storying processes, I indicate below the ways in which these findings will be presented and discussed over the following chapters.

5.2 Presenting the findings

The findings, summarised in tables here, are presented and discussed in more detail over the next three chapters, with each chapter focusing on the stories and storying processes of a particular participant group—chapter six focuses on Users, chapter seven on SeniorNet members, and chapter eight on Nonusers. The key findings established in relation to each group are carried forward and discussed in relation to each succeeding group, so that by the end of chapter eight, a cumulative picture emerges of the ways in which participants' storied computers and themselves in relation to computers.

Each of the three chapters is organised in the same way, as follows: first, the category of the research participant narrator—User, SeniorNet member, and Nonuser—is explained. Second, the ways in which the narrators draw on and reproduce the master narratives in making sense of their relationships with the computer are illustrated and discussed. Third, the ways in which the master narratives are negotiated or contested to produce participants' local versions (their *own* stories) is illustrated and discussed. Fourth, the ways in which these local versions are produced is examined in relation to the production elements of identification, orientation and settings. Fifth, the final section of the chapter draws the threads of the discussion together to summarise the key ways participants storied computers and themselves in relation to computers. Contrasts and comparisons are made throughout the chapter with other participant groups.

Having, in this chapter, previewed the findings from the analysis and indicated the ways in which these findings will be presented and discussed over the next three chapters I turn, in the next chapter, to a discussion of those findings in relation to the first of the three participant groups: Users.

CHAPTER 6

Users' Storied Productions

This chapter presents and discusses the findings from the analysis in relation to the storied productions of the first of the three participant groups—Users. The chapter shows how this group of participants storied computers and themselves in relation to computers by selectively appropriating and evaluating socio-cultural narratives to construct a meaningful response to the new technology. The chapter also demonstrates that a focus on the narrative elements of character plot, and setting produces insights into older people's relationships with computers not identified in previous studies on the topic.

The chapter is organised in five sections. In section 6.1, I explain the participant category, *Users*. In section 6.2, I show that Users storied their relationships with computers by calling, predominantly, on the master narrative of the *enabling machine and elderly individuals* to produce one account of that relationship. However, this master narrative did not completely define Users' understandings of the computer.

In section 6.3, I show that Users produced a number of cautionary tales about computers. In these stories, the computer was constructed as a dual character—sometimes good and sometimes bad. In producing these accounts, Users challenged the narrative of the *desirable commodity and grey consumers.* These accounts also show Users as socially and historically situated author-actor-producers drawing on a matrix of experiences and observations to make sense of the technological scene in which they found themselves. Their narrative sensemaking productions involved an evaluative process of relating today to yesterday, older people to younger people as well as to younger selves, and the new computer to older technologies, in order to fix a position for the computer and themselves in that scene. An examination of this sensemaking work has been organised around three main narrative production elements: *identification with old stories*; *orientation to the computer*; and the *settings*

in which the interactions with the computer took place. The element i*dentification with old stories* shows Users plotting their relationship with the computer according to two major themes: *moderation in all things* and *people before machines*. The element o*rientation to the computer*, shows Users emphasising different aspects of the computer—features or effects—in their evaluations. The element *settings* shows that participants' constructions of computers and themselves in relation to computers were different in different locations.

In section 6.4, I show that Users were able to find an accommodation between the principal master narrative of *the enabling machine and elderly individuals* and their alternative, more cautionary accounts, to find a meaningful place for the computer in their lives—primarily as a useful tool. In section 6.5, I conclude the chapter with a summary of these findings.

6.1 Users

The category, Users, describes those participants who responded to a request for research subjects with no or little experience with computers, but who in discussion self-identified as computer users. The majority of Users had less than three years' experience with computers; a minority had three or more years' experience. Thirty-three participants, 16% of total focus group respondents, identified as Users.

Users can be distinguished from the other two groups of research participants by their occupation of a fulcrum position on a continuum between two 'extremes'—the positivity of SeniorNet members and the negativity of Nonusers. Many Users conveyed ambivalent attitudes towards computers, that is, they identified the computer as both *good* and *bad*, rather than as highly positive or predominantly negative. In doing so, Users occupy an intermediate position between the other two groups of respondents and are therefore, I contend, a third category of participant worthy of closer attention.

6.2 Master narratives of age and technology

Three master narratives were identified in the literature: (a) *the enabling machine and elderly individuals*—in which computers were identified as useful devices providing older people with opportunities to extend their capabilities and social

networks once inhibitors to computer use were overcome; (b) the *potential divider and senior citizens*— in which those who did not use computers were seen as likely to be marginalised in an increasingly technologised society; and, (c) the *desirable commodity and grey consumers*—in which computers were portrayed as important symbols of the modern era capable of distinguishing those who used them in positive and empowering ways.

According to these master narratives, computer users are able to enhance their social networks and functional capacity by using the enabling computer. In such narratives, computer users are situated on the right side of the digital divide. They are thus able to partake of the benefits of the computer as a desirable commodity and may be seen as more modern, youthful, and competent than their non-computer-using peers. As such, computer users can be identified as responding positively to change, not just in relation to their own personal ageing and changing circumstances, but also in relation to changing times, such as the increasing technologisation of society. Therefore, at the intersection between the stories of technological determinism—technology as a force determining change, and biological determinism—gradual and inevitable bodily change and demise, computer users occupy a position of elevated status relative to non-users. How Users in this study storied computers and themselves in relation to the master narratives is explored below.

6.2.1 The master narrative of the enabling machine and elderly individuals

The analysis identified that Users drew predominantly on the master narrative of the *enabling machine and elderly individuals* in constructing their stories of the *Good Computer*. In doing so, participants constructed the computer as a functional object that assisted them in various ways in their day-to-day activities. However, this master narrative is not just about the computer, but also about being *elderly*, that is, about the ways that the declining physical and mental conditions of old age act to circumscribe an individual's life. The analysis showed that such conditions acted on, but did not completely define Users' lives or their relationship with computers. Thus, in many ways, Users can be seen as reproducing the *enabling/elderly* master narrative in a large number of their stories, particularly in relation to (a) the enabling computer and (b) themselves as old in relation to the computer. But they were also

able to portray themselves as heroic and able to overcome various age-related difficulties to become competent users of that technology. As competent users of the technology, they would not become victims of an information-based society.

The literature review showed two themes as dominant in the *enabling/elderly* master—functionality, where the computer was identified as retarding mental deterioration and improving the older person's quality of life and self-esteem (Hess, 1984; Hoot & Hayslip, 1983; Kornbluh, 1986; Krauser et al., 1986; Raz, 1994; Ryan & Heather, 1986; Stern, 1994), and connectivity, where the computer was seen as beneficial in reducing loneliness, producing access to support and companionship, and also in providing healthcare benefits (Cody et al. 1992; Czaja et al. 1993; Hahm & Bikson, 1989; Lansdale, 2002; McConatha, 1994; Morris, 1996-7; Swindell, 2000; White et al. 1999; White et al. 2002; Wright, 2000). These themes were also articulated in participants' stories. However, rather than the computer being seen as analogous with a *knight in shining armour* character rescuing *persons in distress* from loneliness and decrepitude, in Users' accounts the computer was seen, somewhat more prosaically, as a useful tool facilitating participants' activities and enabling their connectivity with social networks.

6.2.1.1 Functionality

Computers were seen as enabling by Users in that the technology facilitated some activities, while also providing a means of relaxation and opportunities for mental stimulation. Some Users described the computer as facilitating them by allowing them to use their time more efficiently. Efficiency is an aspect of functionality not previously associated with older people's use of computers. However, it is interesting in that it points to the appropriation of managerialist discourse about technology (Alvesson & Willmott, 1996) into everyday parlance. The *newspaper* story is illustrative:

> *I like reading the 'paper. I pick it up [on the Internet]. I only read—you have got it down the side, it's all listed down the side. You go through it and say I don't want to read that rubbish, not interested in that guy going to prison, not interested in that at all. Now, I will read that [article] so you bring that up on the screen and you read it. You only read what you want to know and you flick it up to the weather perhaps or whatever you want*

> *to know and you turn it off at the wall and walk away. In the past, I would have sat there and read the paper for about an hour and a half. I can do it now in 10 minutes on the computer. (Story 79)*

The computer in this story was seen as enabling in that it allowed quick access to news through its selective presentation of that information. Indeed, through a quick scan of selected areas of interest, the reader was able to keep up-to-date without wasting time trawling through screeds of unnecessary material. As a result, more time was made available for other activities.

However, not all Users took this efficiency view in relation to online newspapers. One group of participants engaged in particularly vociferous debate about the respective merits of online and physical versions of the newspaper. A truncated version of this lengthy conversation-story illustrates some of the dimensions of this debate:

> *MaudU: I read the newspaper online. I just cancelled my subscription to <u>The Herald</u>, so that saves me money…*
> *KenU: I don't know if my day would be complete without The Herald.*
> *NancyU: Neither would mine.*
> *KenU: If the newspaper arrives at half past ten, it will still take me till lunch-time to go through most of it, and there might be the letters page that hasn't been touched*
> *NancyU: And you can sit comfortably and read it…*
> *AnneU: And it's not all on the computer- when I first got the Internet I started looking it up too. But I found it frustrating because it was only little bits and pieces like…*
> *MaudU: It's not the whole article, no*
> *AnneU: So I still get a newspaper.*
> *KenU: And I try and keep informed by [reading the 'paper]. It means that in the afternoon we've got another 'paper arrived, which I - well I like reading <u>The Times</u> too.*
> *(Story 35)*

In this story, Users debated the advantages and disadvantages of reading the newspaper online, from the economic debate of using the online version to save money, to the portability of the physical newspaper, to the argument that reading "sound bites" of information does not constitute being informed. There was no consensus at the end of this exchange of experiences and perspectives—except an

agreement to weight the advantages of the technology differently. On display here is the ability of Users to make sense of the computer, not by passively accepting it as necessarily beneficial, but by being prepared to evaluate its utility for them in their circumstances.

For some Users, the computer's utility extended to its role as a *Good Companion* character, as Anita's story shows:

> *If I wake up in the night— you know how you have something on your mind and it keeps there and you think I can't get back to sleep. Well I get up and go into the computer and play solitaire and just think about that and I go back to bed and I've forgotten it.*
> *(Story 52)*

In this story, the computer was seen as playing a helpful role as a simple relaxation device, enabling the user's mind to be temporarily distracted from life's problems, allowing sleep to occur.

However, for other participants, the computer had a more significant role to play as a tool for the mind (Hoot & Hayslip, 1983: Kornbluh, 1986). This situation was reported in the following *sons against senility* story:

> *I've had a computer for about twelve months at my son's insistence, which he paid for and installed because he thought I was stagnating mentally and I've come to grips with it and have become quite efficient at it… He said 'Just because you're 75, Mum, you might be here for another twenty years. What kind of a creep are you going to be in twenty years time if you don't start getting your head round it now?' And I thought 'right!'*
> *(Story 32)*

This story focused attention on the computer as a means for enhancing the older person's continued intellectual development (Minichiello, Brown & Kendig, 2000). Although not a computer owner by choice, MaudU presented herself in this story and in the focus groups generally, as not only a competent computer user, but as someone prepared to use the enabling technology for a number of reasons, including the opportunity to stave off impending mental decline. This story also highlights the role

of children in reproducing the master narrative of the *enabling/elderly*. In this story, it was MaudU's son who encouraged her to use the computer as a developmental tool—an attempt to slow down the onset of senility and a possible state of second childhood. On one level, the situation provides an interesting parallel with an earlier time when MaudU as the mother would no doubt have provided her son, as a small child, with toys to challenge his growing mind. The mother has now become the child, the child has become the parent, and the computer has become the toy they exchange for the purpose of growth and development. On another level, the son's (reported) description of his mother as a potential "creep" if she did not make the effort to keep her brain alive is particularly strong. It conjures up a disturbing image of the elderly as a marginalised group, particularly those who might be neglected and left alone to deteriorate mentally and physically.

6.2.1.2 Connectivity

In addition to the computer's functionality as an assistive and developmental device, the enabling computer was also identified by participants as a useful tool for connecting them to other people, particularly members of the family, as PeggyU's *weekly correspondence* story shows:

> *The three grandchildren are in England - they went over in 1999 and we get a letter from at least one of the grandchildren every week - WEEKLY! I know for a fact, what 14 year old boy would sit down to write to his grandparent! We get an email. It might be only a few lines - we went to a scout camp or we did such and such and we are going somewhere – but we keep in touch. (Story 248)*

This story pointed to the importance of email as a significant computer application for many older people, as has been previously identified (Fox et al. 2001). However, in addition to the importance of the computer in maintaining relationships with distant family members, the story also highlights the role of young people in this configuration. PeggyU in this account, along with a number of other participants, identified that young people used email, but were much less inclined to use the more traditional 'snail mail' means of keeping in contact, writing letters by hand. Therefore, in order to stay in touch with grandchildren, many grandparents adopted email as a means of communication. Certainly, the computer enabled older people's

connections with family members. But this was often because it was the medium of choice for young people, not because older people necessarily preferred that medium.

However, being competent in the use of that medium allowed some Users, as WinnieU indicated, to maintain familial relationships despite the 'tyranny of distance' (Cairncross, 2001):

> *WinnieU: I use the computer mainly to get into news overseas, to where I originally came from, with the papers and things like that. Keep up with all the villagers. That's what I use it for.*
> *AnneU: Oh, I haven't tried that.*
> *WinnieU: That's another thing for you to try. It's very good because I can tell my sister who's in the UK what's actually happening in her area, so you know I know here before she does. It's quite good. I find that that's mainly what I use it for. (Story 33)*

In the *sisters across the seas* story, the useful computer was seen as doubly beneficial in enabling access to overseas newspapers and the convenient exchange of that information between family members. The story also highlights the image of the 'global village' (McLuhan & Powers, 1992) and the enactment of sibling rivalries between the modern, 'connected' sister and the old fashioned 'disconnected' sister who was behind the times in terms of her ability to keep up with information and the modern era.

In summary, the stories in this section showed that Users reproduced the *enabling/elderly* narrative principally by constructing the *Good Computer* as a device for enhancing their functionality and connectivity. The stories in the next section also show participants reproducing the master narrative of the *enabling/elderly*, this time, in terms of the ways they constructed themselves as old in relation to the new technology.

6.2.2 Older users and the new technology

The stories in this section pay attention to the ways in which Users storied themselves in relation to computers and, in so doing, partially enacted the role of the *elderly* depicted in the master narrative of the *enabling/elderly*, that is, as embodiments of physiological and cognitive decline. In these stories, Users focused

primarily on their early learning experiences with the computer. Three themes underpinned their stories: (a) old age as comparative disadvantage, particularly, in relation to one's younger, more able self, and also in relation to younger people; (b) old age as a time of special vulnerability in learning; and (c) old age as competence. The following stories are illustrative.

6.2.2.1 Old age as comparative disadvantage

For some participants, learning to use the computer was inhibited by their age, particularly their failing memory, a theme also commonly identified in previous studies (Coleman, 1998; Hanson, 2001; Morrell et al. 2000). PeggyU told one such story, drawing comparisons between her abilities when she was younger, and now:

> *PeggyU: There is a problem with age and learning to use the computer. I remember studying in my early twenties and you read a page and two weeks later if you were asked a question at the college you were attending, you know, in an exam and the question related to that particular paragraph of the page, you could visualise it like the printing at the top of the page and that's your early age. And now you don't. You get older you have to refresh yourself every time, remind yourself, so it becomes a little bit more difficult…*
> *WilleminaU: That's right*
> *SewellU: It's just a matter of*
> *WilleminaU: Familiarising yourself*
> *SewellU: Yes. But if you keep practising, you can remember*
> *(Story 101)*

In this story participants acknowledged the problem of declining memory, but were prepared to work their way around the problem by developing strategies to deal with it rather than surrender to it. Other participants identified a similar problem with failing memory, but lacking a coping strategy, complained that this put them at a disadvantage when learning from young people who had no appreciation of such difficulties. FoziaU told one such story:

> *FoziaU: The thing that I find is that young people get impatient with us older ones because we forget certain things. They just think - 'Ugh I taught you that! I told you that!!' So I say to them before I start a lesson with them on the computer -' I'm not quick. I'm warning you now', and they say' rubbish, rubbish', and I said,' well I'll prove it to you'.*
> *(Story 46)*

In the *impatience of the young* story, old age was identified as being a double disadvantage in learning to use the computer, not only because memory retention was an issue, but also because young teachers showed no understanding of or tolerance for such difficulties. Previous studies have also identified tensions between older people and younger people in computer learning situations (Morris, 1996-7), leading a number to recommend seniors-only sites as more conducive to older people's learning (Eilers, 1989; Irizarry & Downing, 1997; Irizarry et al. 1997; Wrixon, 2001).

Moreover, some participants identified themselves as disadvantaged in relation to the young when learning how to use the technology, as the following *disadvantaged generation* story shows:

> *RonaldN: But the kids around us now, they are starting off at a much higher level, aren't they? I mean they're born into it. Computer games have become - are second nature. Programming your videos, they do it before they can talk or walk, and they're born to it, but we weren't. We had to learn it all.*
> *AlistairU: That's right. But personally I find all those things, I've got to have the instructions in front of me, and I find them tedious and boring to do. So very often I leave it to one of the children to do it.*
> *RonaldN: Yeah you tune out like I did.*
> *(Story 17)*

This story showed two men, a User and a Nonuser, discussing their computer skills, relative to those of young children, and negotiating possible reasons for their comparative lack of technological know-how—in this case, not their age, but the timing of their birth relative to the introduction of the technology. Having constructed the problem as a matter over which they had no control, the two men decided to strategically withdraw from the battle—they "tuned out"—rather than admit probable defeat to those who have a strategic advantage over them because they were born in a different era. This scenario draws on Tapscott's (1998) construction of the inter-generational war that would likely arise between the children of the net generation and those from the non-digital era. However, this story suggests that rather than developing into a significant 'generational explosion' as

Tapscott had predicted, a face-saving retreat by those in the older generation is also a possibility.

Interestingly, the story also highlights similarities in the ways that Users and Nonusers, as members of the same generation, constructed themselves in relation to the computer, and also in relation to those more computer literate and therefore more 'advantaged' than themselves. In adopting similar constructions of themselves they also developed similar face-saving strategies to deal with their technological deficiencies—namely, retreat. This strategy also points to one of the issues, discussed in the next section, the older person's sense of discomfort and vulnerability in confronting the new computer.

6.2.2.2 Old age as time of vulnerability

Some participants considered learning the computer difficult, not so much because of short term memory problems, but because of their almost childlike helplessness and dependence on others in the learning process. JamieU's story demonstrates this point:

> *JamieU: I found it a nerve-racking experience when I first got it [the computer]. If I knew what was involved then I wouldn't have bothered buying the computer because you've only got to touch one button and … it was so frustrating. I'd have to ask the chap next door and he'd be very polite, you know, and I'd ask him, go across the road … I was so vulnerable…You do feel vulnerable, you know, and it was only when I came to see that that I was able to master the situation, but I'm sure a few others have been there.*
> *(Story 145)*

The *you feel a twit* story indicates that the experience of learning to use the computer was particularly frustrating, not just because this User felt at least initially that he could not control the machine, but also because he had to ask others for help. For a number of participants, asking for assistance was uncomfortable and embarrassing, for at least two reasons: firstly, because it breached a perceived link between wisdom and age—older people should know more, because they had lived longer and had accumulated more knowledge because of this longevity. However, the computer interruption severed this connection because it was something not previously

encountered and was not understandable from their base of accumulated working knowledge (Applebaum & Chambliss, 1997). Though scholars such as Robins (1999) have questioned the narrow construction of knowledge framed in the 'knowledge revolution' of contemporary society, the reality for many older people was that their knowledge did not 'stack up' in a computer-driven world. In this study, Users such as JamieU in this story acknowledged that admitting a knowledge gap was to display ignorance about a basic skill of computation. Having to ask for help to overcome this state was doubly uncomfortable. Millward (2003)'s study with older non-users found a similar sense of discomfort. In that study, the author concluded that for many nonusers it was considered less stigmatising to express no interest in using the technology than to admit to not being able to use it.

Secondly, asking for help was often considered by User participants to be a risky manoeuvre because it opened them up to potential ridicule and placed them in a position of vulnerability and dependence on others. Such a position was an unwelcome assault on their autonomy—their ability to function as independent, capable adults. It also presented a distinct challenge to their self-confidence and beliefs in their own capability. However, despite such difficulties many participants overcame these anxieties to become competent computer users.

6.2.2.3 Old age as competence

Users also narrated stories of competence, particularly in relation to their willingness and ability to keep up with the technology and participate with confidence in the modern era. In doing so, they drew implicitly on the master narrative of the *potential divider and senior citizens*, in which those people not connected with computers were identified as likely to be marginalised in a technologised society. One story of competence was told by GrantU:

> *A friend of mine rang up just recently and said that one of our mates had died. I said 'when is the funeral?' He said,' I do not know'. I said 'where is it?' He said, I don't know'. I said 'I will ring you back in 3 minutes time'. I flicked it up on the Internet, and rang back and said, '11 o'clock in the morning at Cambridge at such and such church'. Well otherwise what we would have done? We would have been ringing around all over the place.*
> *(Story 83)*

In this story, not only was the computer presented as a useful and efficient tool, but the operator was also seen as a competent tool user. In telling such stories, participants often also confirmed their position as 'digital immigrants' (Prensky, 2001)—as those new to the digital era and still adjusting to it. In a later story, GrantU talked about his computer competence in this way:

> *If you don't get in and keep up with it you get left behind. That's the way I looked at it. You either get into it and learn, or you get left behind…. Well there are so many things that you can research on there, for instance, I have been on a heart pill for some time… these are the things that you can research and if you have not got that you're left behind. You have to go to your doctor to find out everything.*
> *(Story 75)*

The *heart pill* story reflects the view that for many older people learning to use computers was a way to keep up with the changing times (Blit-Cohen & Litwin, 2004; Richardson et al. 2005). By being prepared to keep up in this way, Users were signalling to themselves and others that they had the mental capacity to perform in the modern world. However, in this story GrantU also indicated that one of the primary areas of interest for him was looking for information on a heart condition. In doing so, he highlighted the issue of age and demise. Though visiting health-related web sites is a popular past-time for many 'greynet' users (Shipside, 1999), such activities also tend to reinforce the master narrative of the computer as an enabling machine for elderly individuals.

In summary, the stories in this section showed that participants reproduced the *enabling/elderly* narrative by constructing themselves as *old* in relation to the new computer. In particular, they described themselves as *old* because of their failing short term memory, their childlike dependence on others for assistance in their computer learning, and their concern at being less proficient than younger people with the technology. However, Users also showed that they were able to overcome a number of age-related problems to become competent computers users.
Although renditions of the *enabling/elderly* narrative were dominant in Users' accounts, these stories did not represent the totality of Users' world views. These participants also constructed and narrated alternative, more cautionary tales about the

computer. In doing so, they also narrated and performed a variety of roles for themselves in relation to the technology.

6.3. Users' alternative, more cautionary tales

In addition to reproducing the *enabling/elderly* narrative, Users also produced alternative accounts in which the computer was portrayed as a much more complex character, one capable of playing a dual role, as the *Bad Computer* as well as the *Good Computer*. In these alternative stories, Users challenged the master narrative of the *desirable commodity and grey consumers* in which the computer was seen as positive and empowering. They also showed that old age was not a condition that completely defined their relationships with the computer, as it had done in the *enabling/elderly* narrative. Instead, age was a resource they called on—a resource filled with stories drawn from the public arena and woven into a matrix of personal experiences and observations and adapted to different situations. Drawing selectively on this resource enabled Users to fix a position for themselves in relation to the new computer. This positioning was enabled by an emplotment process (Polkinghorne, 1988; Somers, 1994; Somers & Gibson, 1994) that allowed Users to reduce the repertoire of socio-cultural narratives available to them to a manageable few plotlines or themes with which their particular relationship with computers could be evaluated, constructed and enacted.

In conducting this evaluative, emplotment process, Users were identified as evaluating the situation using a set of cultural values (Pentland, 1999) drawn from a previous era. This evaluative process showed that Users may have had limited experience with the new technology, but they were not inexperienced in life, nor were they technological dupes (Barley, 1998). Instead, they were able to weigh up the relative merits of the computer as an expression of values and priorities (Robins & Webster, 1989) against their own values and priorities, to produce a meaning for them.

This production of meaning process is examined, below, by attending to the ways in which Users storied the computer and themselves in their alternative accounts. This examination has been organised around three production elements: *identification with old stories; orientation to the computer;* and *settings*. Each element provides

some insight into how and why these participants constructed the computer as they did and how these constructions contributed to their particular meanings and actions.

6.3.1 Identification with old stories

One of the significant ways Users evaluated the computer was through their selective appropriation of old stories—those stories with which they identified most strongly (Somers, 1994; Somers & Gibson, 1994)—master narratives of prior socialisation. Socialisation, according to Musgrave (1988) is education in its widest sense and includes cultural expectations of how actors should interact within their society. Through socialisation, rules and roles are internalized and social members learn to adopt the norms and conventions, practices, and values of a particular society. However, rather than producing "a community of well-programmed social robots" (Stokes & Hewitt, 1976, p. 840), socialisation is an ongoing process (Berger & Luckmann, 1967) of education, re-education, and transition through old to new stories.

In this study, participants can be seen drawing on a set of old stories, in particular, a set of commitments based around the principles of hard work, sobriety and moderation (Latham, 2002) and the master narrative of stoicism and asceticism (Weber, 1978). Other commentators have identified a similar set of commitments in their studies with older people (Haddon, 2000; Mansvelt, 1997; Willis, 1995). Two themes, broadly linked to this set of commitments, underpinned Users' evaluations of the computer—(a) *moderation in all things* and (b) *people before machines*. I discuss these themes below, including how they were articulated in Users' stories and how they functioned as criteria for Users' judgments and actions (Mesthene, 2003). In doing so, I show how Users emplotted their relationships with computers by drawing on these themes, and in so doing, they challenged the master narrative of the *desirable commodity and grey consumers*.

6.3.1.1 Moderation in all things

This theme encompasses the notion that computers should be used in moderation, that is, they should not be used to excess by individuals or societies. In taking this position, Users were stressing the need to exercise restraint and self-discipline in using the computer so that human control over the machine could be maintained—

lest the machine take over. Users' stories on this theme often focused on computer addiction at the micro level, or fears for the 'robotisation' of society at the macro level.

This theme of moderation and the fight for control is identifiable in the stories participants articulated about the computer as a *Seducer*—a character who initially appeared to be attractive, but proved in the end to be otherwise. One such account was the *drug* story shared by ThomasU and MurrayN:

> *MurrayN: Have you found at all that people …who have a computer and really get wrapped up and immersed in their computers, spend a lot of time on it, and they alienate themselves from their friends and outside interests and so forth?*
> *ThomasU: Yes!*
> *MurrayN: Suddenly their world revolves around this bloody machine and they have to go to it.*
> *ThomasU: It's a drug. It's a drug, there's no question about that…I have seen that…*
> *MurrayN: But I could see that it does happen very easily to a person, particularly someone on their own…they suddenly find this toy can do all sorts of things and they can talk to other people and what have you and that suddenly becomes their world. To the extent where they don't look after themselves, they don't bother going out to shop because they might miss something.*
> *(Story 203)*

In this account, two men—a User and a Nonuser, both sharing similar views on this occasion—discussed the computer's centrality in the lives of some people. Centrality was also an issue Loges and Jung (2001) identified as significant in their telephone surveys with older and younger people about the role of computers in respondents' lives. However, the *drug* story does not attempt to measure *centrality*, it provides a subjective snap-shot of the issue, focusing particularly on perceived downsides.

The duality of the *good/bad computer* character is evident in this story—the *Good Companion* was identified as providing lonely people with something to do and someone to talk to. But this character quickly morphed into an alien invader character who acted to take over the minds and lives of otherwise normal people. On one level, this is the story of computer addiction (Neumann, 1998) and the loss of

personal control resulting from that condition. As such, it is about the crossing of the imaginary line between having a healthy interest in something and exhibiting obsessive behaviour. Interestingly, the narrators do not blame the victim in this scenario; instead, they construct the computer as the villain, a compelling but debilitating drug that renders the victim incapable of functioning normally. A line has therefore been crossed—the boundaries of the technology's acceptability have been exceeded. Abnormality has replaced normality. In this situation, the computer is no longer a useful resource, but instead becomes a destructive, stupefying, force.

On a second level, this is the story of the conflicts between 'man' and machine, nature and artifice, and the eternal battle between good and evil (Mesthene, 2003; Ryan & Kellner, 1990). The *drug* story shows that this drama can be played out silently, at a micro level, in everyday relationships between users and their computers. In doing so, the story implicitly underlines the need for caution in the use of such technologies.

The *drug* story, replete with imagery and layers of meaning, challenges the construction of the computer as a *desirable commodity* and provides a striking contrast with the depiction of the computer in the *enabling/elderly* narrative, where if the computer were a drug, it would more likely be an elixir of youth than a debilitating narcotic. Certainly, the possibility of the computer posing a threat to older people, rather than connecting them innocently to the world outside their homes, is not one that figures in the benign construction of the technology in that master narrative.

Another computer addiction story, this time told by a reformed addict, is perhaps an even more poignant reminder that the computer can attempt to control the lives of those who are socially connected, as well as those who are isolated and lonely. PeggyU's *solitaire* story unfolded like this:

> *I used to play solitaire—the girls said I was addicted! Well I could never see the sense in sitting and watching something on T.V. if I'm not enjoying it. So, I used to take myself off down to the computer and play a couple of games and I'll just have one more, one more and actually I got sick just before we went to*

> *England in 2000 and I think I must have been hallucinating because you know I had a high temperature and all I could see were Queens and Kings, and I thought Bill was right after all, I am addicted, you know. And then we went to England and I thought I'll have no problem here, and I mean every house we went to had a computer and my cousin said 'I've got all your games on there Peggy'. I said, 'don't worry, thank you, I'm not playing games any more'– and I haven't played one card game since. But I do at least three crosswords a day.*
> *(Story 98)*

In this story, the insidious nature of the computer as a *Seducer* character is again portrayed, this time by someone who had personal experience of addiction. Warnings from enlightened others about the possibility of addiction were ignored. As a result, the victim suffered through the addiction and then endured a withdrawal process until a healthy normality was eventually restored. Normality, in this particular case, was maintained by abstention rather than moderation—at least in terms of playing card games. However, the 'reality' of the computer's power-over others (Moss, 2002) is evident in this account, and serves as a warning to others to be vigilant.

Other participants, too, cited stories of computers being used to excess. In doing so, the narrators pointed to the downsides of the excessive use of the technology, and argued their case for a more healthy, balanced, and moderate position.

> *PaulN: Well, I know my brother-in-law, you ring him up and oh no he's on the computer. You can't get through on the telephone. And also I know of a case of a friend of mine; he was at the computer until 1 o clock in the morning. Alright I'm not criticizing that if that's what he wants to do, but in my opinion I would sooner do other things.*
> *MontyU: I agree with Paul that too many people spend too much time on a computer and for me they should get in the sunshine and at our age it's better to keep moving than put your bum on a chair and stay there. If they're going to do work on a computer, knock it off after so long and go for a walk and come back and finish it. But not to stay glued to it.*
> *(Story 227)*

The *inside* story—another account in which Users and Nonusers seem to hold similar views about the downsides of the computer—draws attention not so much to computer addiction as a problem in itself, but rather to addiction as a less than

constructive way to spend one's time. Drawing on examples of family and acquaintances who spent excessive amounts of time on the computer, the men argued for a more balanced position, one in which the computer should be used in tandem with other leisure activities. The men's view reflects Mansvelt's (1997) finding that people in this age group often associated leisure with idleness and laziness and considered it important to make constructive use of time. It also reflects a view that moderation is preferable to excess and over-indulgence, and self-discipline is an important means of achieving this result.

A *moderation-in-all-things* approach to the computer at the micro level was also reiterated as a concern at the macro level, particularly in relation to some Users' fears for societies in the future. One story is particularly illustrative of this concern. In the *accommodating the devil* story emerging fears for the future surfaced during a discussion in which AlistairU and KyleU were contemplating the various ways in which computers could be made more accessible to older people. They arrived at a point in the conversation where KyleU suggested that if older people could talk to machines rather than interface with them using a keyboard—a device foreign to many in this age group—one of the barriers to using a computer might be overcome. Their story then continued along these lines:

> *KyleU: I think there's going to come a time when we're going to tell them [computers] how to work - and providing they don't have intelligence, it will be a wonderful step forward. That is the only way I can see they're going to become acceptable [to older people]*
> *AlistairU: And you'll have a number tattooed across your forehead. Everything will all be done by cameras and recorded in one giant account.*
> *KyleU: Well what you say is frightening but it'll be - that's Huxley's Brave New World. You can see it all. We'll become less than human. Frightening really when you think about it, isn't it?*
> *(Story 14)*

Following KyleU's suggestion that people could talk to their machines, AlistairU envisaged not a new beginning but a terrible end—an end in which people would become bar-code wearing products (Lasn, 2000) in a surveillance-society (Lyon, 2001), where every movement would be tracked and recorded. Their construction of

this nightmare world has been influenced by fictional literature, such as Huxley's book referenced by KyleU, but it also draws on the creations of George Orwell and Kurt Vonnegut and others who envisaged various forms of technological nightmares that would follow from society's increasing reliance on and worship of technology. In this rendition of the dystopic story of technology, the men pointed to the existence of a fine line between 'man's' use of technology, and technology's use of 'man'; who is the master, who is the slave, and at what point does this role reversal take place?

In summary, the stories in this section indicate that Users did not consider the computer to be an enabling character unless used in moderation, that is, with a sense of self-discipline and restraint. Drawing attention to these areas indicated a need for caution in managing the human-computer relationship.

6.3.1.2 People before machines

A second theme, *people before machines*, identified Users as concerned that the uses of the technology were being prioritised over its effects on people, particularly on their displacement. This theme played out in several ways, as the following stories show.

One example of the *people before machines* theme concerns the role of the computer as a *Societal Dislocator*, that is, as a character who contributed to societal disruption, particularly through the elimination of jobs and the destruction of a sound work ethic. WinnieU's *wasted time* story reflects this position:

> *But there are idle hands now with all this computer technology. I mean in our day you were working hard to do all these things, like your washing and your cleaning and things like that, whereas they haven't got that now. They've got wasted time, haven't they? They've got time that they waste…Well that's why there's so much trouble in the world today because they're idle and what do they do? They get up to mischief.*
> *(Story 43)*

This story reflects a concern that technology has contributed to 'wasted time' and a loss of gainful employment—not just of paid employment, but of the need to use time constructively. A comparison was offered between 'our day', when people were

actively engaged doing manual work, and today when young people are idle with too much time on their hands. Technology has contributed to this change by taking away the opportunity for young people to achieve something constructive through the application of hard work and effort, providing them instead with the opportunity to be lazy and waste their energies. This view, grounded in a strong protestant work ethic (Sennett, 1998), identified idleness as "worthy of total moral condemnation" (Weber, 1978, p. 141). Since it is technology that produces idleness and wastefulness, it is technology that threatens social stability.

The *wasted time* story contrasts with the tenor of the *enabling/elderly* narrative, this time by situating the computer in relation to the wider socio-cultural frame within which it is deployed. In this broader context, the technology is not identified simply as a neutral tool for individuals to use; it is "an environment within which a way of life is elaborated" (Feenberg, 2003, p. 657)—an environment, according to participants like WinnieU, that undervalues the productive employment of people. In addition, the story focuses attention on the issue of technology as itself the problem, rather the solution it was described as being in the master narratives of age and technology.

A second example of the *people before machines* theme is identifiable in stories about the computer as an *Organisational Enabler*—a device that contributes to organisational speed and efficiency. In such stories, the duality of the *good/bad computer* was often evident, particularly in relation to the advantages the computer offered compared with the price that was being paid for such advantages. AlistairU's *old relics* story offers an illustration of this situation:

> *AlistairU: I notice for example with my son, who still runs the [family] business—he's up to his armpits in the computer and techniques and he's got all sorts of different systems going and even down to the serial numbers and all this business being controlled through the computers...But to him this is all quite natural and, of course, the throughput of goods and handling them can be done by one person. It's vastly increased. We're just perhaps relics of the old handwritten approach. There was something rather nice. I had a lady who worked for me once, an English lady, who had spent all her working life in England, working for one company, and she regretted coming out to New*

> *Zealand because she had racks of beautiful, handwritten records all very neatly written. It represented ten or fifteen years' work in her life. And she was an absolute jewel to have working for me. I went overseas and left her running the company at times, two or three months at a time. You know, that sort has gone. (Story 5)*

In this nostalgic story, a distinction was made between the way the family business was being run today—when computers seemed to do much of the work, at least in terms of recording throughput—and yesterday, when the business world was slower, when owners and staff had personal knowledge of the company, and business records were written-up by hand, and as such were not just a record of transactions, but also a source of pride. In espousing these today/yesterday comparisons, AlistairU identified himself as a 'relic' of another era—a time when business was less transfixed by throughput and efficiency. Also conveyed is a sense of loss for the old business model that sustained the owner and the business for years—a model based on the values of personal knowledge and direct face-to-face-contact. This old set of values is portrayed as a relic of the past, as are the relics, the 'museum pieces', who continue to espouse and display such values.

A third example of the *people before machines* theme also invokes the character of the *Organisational Enabler.* In this story, KyleU recalled some of his experiences with the technology at work, noting both advantages and disadvantages. He put it this way:

> *Computers have their place. For argument's sake we found it wonderful at the end of the month. We could press a button and the statements were all published, printed and all analysed—it saved a tremendous amount of work. If we'd just stopped there fine. But, instead, we tried to do away with all those people who do all these little jobs and now—when somebody walks in the door and says 'my account's wrong'. You can't point him to somebody and say 'He'll fix it for you because he's in charge of it'. No, instead, the computer is down and nobody has the answer.*
> *(Story 374)*

In this story the computer was identified as efficient in terms of its transactional processing capacity. However, this somewhat limited role for the technology was later extended, the narrator suggests, until it began to displace the people in the

organisation who knew what was going on in that business. The outcome, according to KyleU, was ultimately an over-reliance on a technology—which is prone to failure—and a loss of accountability, that is, the loss of a sense of ownership of a problem and a preparedness to take responsibility to solve it. Interestingly, in this story, KyleU's use of the inclusive 'we' points to all of us, including himself, as allowing this technology-takeover to occur. In doing so, by contrast with many participants, he positioned the technology and the actors involved with it as inter-related parts in an interacting system (Feenberg, 1995).

In summary, the stories in this section showed Users drawing on a range of personal experiences and observations to appraise the computer as a *good/bad* duality, rather than the predominantly beneficent computer it was portrayed as in the *enabling/elderly* master narrative. Users' appraisals were the outcome of a production activity in which they drew selectively on a repertoire of public and private narratives and subjected them to an evaluative emplotment process grounded in a particular set of commitments. Those commitments centred on two main principles: (a) moderation in all things is preferable to excess and indulgence; and (b) people are more important than machines. Emplotting the contours of their relationships with computers by drawing on these themes, Users highlighted the need for caution and judgement in using computers.

The evaluative process Users employed in their storytelling was augmented by an additional production element *orientation* in which the computer was also appraised, this time though different lenses. I discuss this narrative element in the following section.

6.3.2. Orientation

The analysis identified that participants' storying of the computer was also influenced by their orientation to it. In particular, participants were seen to take up one of two orientations—either a close-up lens in which the narrator focused on the computer as an isolated object, or a wide-angle lens in which the computer was contextualised in relation to other technologies and events. Viewing the computer through a close-up lens tended to focus attention on the *uses* of the technology, while the wide-angle lens tended to draw attention to the *effects* of the technology. Users

adopting the former orientation tended to be more positive about the technology than those who adopted the latter. The stories below illustrate these differences of perspective.

One example of the role of orientation in channelling Users evaluations of the technology is the *Yorkshire pudding* story, in which two participants debated the usefulness of the computer, particularly in relation to the usefulness of the information retrieved:

> *MaudU: It's amazing actually the weird stuff that you can pick up, because when this computer was first installed I said to my son, could he demonstrate what sort of things can I find out on this thing. He said 'what would you like to know?' Well I said give me a Yorkshire pudding recipe, thinking that I was being really difficult. Do you know he produced 30 Yorkshire recipes, just like that! I printed them off and he said, now take your pick, Mum…*
> *KenU: Well that's useless information as far as I'm concerned…You know we've got a cabinet full of long-playing records which never get used. We've got a library of cooking books. So what do you want another lot for?*
> *(Story 37)*

In this story, MaudU reproduced the *enabling/elderly* master narrative in describing the computer as amazing and slightly magical in its ability to find and retrieve information—even information as seemingly mundane as Yorkshire pudding recipes. KenU's response, on the other hand, was more critical. His stance was not so much to look at the technology in terms of what it could or could not do, but to view it in relation to other technologies that had once been the focus of attention and were now out of favour. He pointed to the records no longer played, and the cooking books no longer read, as evidence of such redundant technologies. These cast-aside technologies were all reminders to KenU of the ways in which many people are seduced by 'the new' (Campbell, 1992) and enthusiastically adopt whatever is current, novel, and fashionable. Stoll (1995) argued similarly about the development of fad, snake-oil, technologies that have their day and then become redundant, out of favour, when the novelty wears off. For KenU, the computer belonged to the fad category and as such it was an unnecessary indulgence, rather than a *desirable commodity* item. It should be treated with scepticism rather than fascination.

The *Yorkshire pudding* story shows that participants' responses to the technology were tempered by their orientation to it. Situating the new computer in a broader historical and social context, in relation to a procession of technologies led KenU to adopt a more critical perspective and to question MaudU's fascination with it. By distancing himself from the object of study in this way—tying himself to the mast as Ulysses had done to escape being seduced by the Sirens—KenU was able to see the computer from a different perspective and not become seduced by it. However, it could also be argued that by categorising the new Internet technology as similar to previous technologies, KenU was also denying himself the opportunity to see the technology as different and to take advantage of those differences. He was, in effect, closing down his options to participate in the possibilities of the 'new'.

Another story illustrating the importance of *orientation* in channelling participants' evaluations of the computer is the *déjà vu* story, in which three men, two Nonusers and one User, discussed the social effects of technology. One of the men began by relating an incident about his wife spending too much time on the computer. Another intervened to express his concern and the story, below, begins at this point:

> *WallaceN: That's isolation - well one party spending time on the computer - it's destroying relationships.*
> *AlexN: TV has done that too.*
> *MarshallU: Radio as well, I remember my father saying in 1936 the radio is spoiling the social life…They would talk all night. Did you hear this? What about this? In the early 30s you lived in a street where very few people in the road had the radio, and if something happened, like the outbreak of war in 1939, people would come to your house – the same as you would, you can remember that can't you?…It was the downfall of social life in New Zealand.*
> *(Story 60)*

WallaceN described the computer as a concern because it was coming between married couples and 'destroying relationships'. However, for AlexN and MarshallU the concern with technological isolation was not a new complaint. After all, these men acknowledged, the same criticisms had been levelled at the introduction of previous new technologies, such as television and radio. The men's recollections contrast with Mosco's (2004) assessment that a battery of optimistic projections often accompanies the introduction of a new technology. According to Mosco, the

practice of forgetting the past, of committing 'historical amnesia' is a way for new technologies to be seen as transformative and for each new generation to see itself as unique in transforming the world. Therefore, retaining memories of that past, as these participants did, and situating new technologies in relation to earlier technologies, offered possibilities for critiquing the reception of new innovations. However, retaining memories of the past can also be a practice identified as resistance—as morally bad, irrational, or futile (Bauer, 1995).

In the case of the *déjà vu* story, orienting to the new computer by locating it in relation to a battery of previous technologies did not appear to make the User narrator resistant or hostile—as one of the Nonuser narrators appeared to be. The User presented more as resigned—resigned, perhaps, to the repeating pattern of alarm: to alarm-fatigue. Perhaps he had wearied of the seemingly endless repetitions of the 'Boy who cried wolf' story in which alarms about impending danger came to nothing so often that people were immune to the cries and were unresponsive when danger finally did arrive. However, the User-narrator in the *déjà vu* story was not overly enthusiastic about the new technology either. Perhaps he had become euphoria-resistant too. Perhaps the "ever-ending story" (Mosco, 2004, p. 115) of promised-land technologies (Brown, 1997) had wearied him into a state of passivity.

In summary, the stories in this section highlighted the role of *orientation* in Users' meaning-making productions. In particular, orienting to the technology using a close-up lens was seen to focus attention on uses of the technology and tended to draw a positive response, in line with the portrayal of the computer in the *enabling/elderly* narrative. On the other hand, focusing on the technology using a wide angle lens, that is, situating the technology in a wider context, directed attention to the effects of the technology and tended to elicit a neutral or a critical response.

In addition to *orientation*, the analysis also identified that the narrative element of *settings* played an important part in participants' evaluations of the computer. It is to this production element that I now turn.

6.3.3. Setting

Users' stories about the technology were also found to be influenced by the context in which their relationships with the computer were acted out. In particular, the analysis identified three settings as significant: the *individual setting* in which one-on-one encounters with the technology were enacted; the *family setting*, in which interactions with computers involved a number of family members, particularly children and grandchildren; and the *organisation/society setting*, in which experiences with computers were encountered in organisations or businesses.

In the *individual setting*, participants were the narrators and principal actors in their own stories. In such productions, they were in charge. In this setting, Users were able to demonstrate their personal competence in using the enabling computer and managing its potential downsides. Many of their stories pointed to an ability to demonstrate agency (choice) and autonomy (control) in their relationships with the computer. Such stories included those in which they indicated making a deliberate decision to use the computer (*the heart pill* story), showing that they had overcome initial learning difficulties to become competent users (*you feel a twit* story), and that they had even survived problems with computer addiction to take charge of the seductive computer (*the solitaire* story). These stories also showed that the *enabling/elderly* narrative was prominent in this setting.

By contrast, in other settings, for example in the *family setting* and the *organisation/society* setting, Users were less able to assert their personal control over the computer or the technological scene in which they found themselves. In the *family setting*, they found themselves being influenced by the children or grandchildren into using the technology. For example, in the *sons against senility* story MaudU indicated that she was encouraged by her son to use a computer to stave off inevitable mental decline. Also in the *weekly correspondence* story, PeggyU pointed to email as the communication medium of choice for the grandchildren, and keeping in direct touch with them required the adoption of that medium. In addition, Users felt themselves to be less skilled than young people in using the technology, as the *disadvantaged generation* story showed. But, they were also frustrated with the role of children as teachers of the technology, because the young were unaware of

the problems older people experienced in learning to use the new computer, as the *impatience of the young* story showed.

However, one way in which participants were able to assert themselves in relation to young users of this technology was in their assumption of the traditional parent-as-protector-role. In this capacity, they could rehearse their anxieties about the digital age (Selwyn, 2003a), and maintain their position as guardians of innocent children. In this role, Users articulated concerns for children's unhealthy preoccupation with the computer, particularly the excessive amounts of time they spent using it. ElizabethU's story is illustrative:

> *I have got neighbours with two children—very nice children too. I was talking to their father and I said I have not seen those children outside for at least 12 months which is true—it was Christmas time when I was talking to them last— and he said, 'oh the boy he's off with his clothes after school and he is playing computer games not learning anything, just playing games'... They do not play outside at all. They have no outside interests and yet they have trampolines and all sorts of things. (Story 85)*

In the *gaming is not learning* story, concerns were expressed for the physical health and well being of young children who were seen to spend too much time inside playing on the computer, instead of participating in healthy outdoor activities. The story reiterates the theme of *all things in moderation* discussed earlier, in which a need for restraint and self-discipline was identified as important so that the computer user's relationship with the computer could be successfully managed, ensuring the user maintained a balanced and healthy lifestyle. In the case of children, the *gaming is not learning* story implicitly suggests the need for vigilance may be even greater because children need physical exercise and fresh air for healthy development, but they are also easily seduced by the computer. The story asserts that older people still have an important role to play in the family setting because they are more aware than children of the *good/bad* duality of the computer and of the need for vigilance and discipline in its use.

In the *organisation/society* setting too, Users' ability to act was severely limited—except for their ability to observe and critique the role of technology in society. This

ability was enhanced by a preparedness to locate at arms length from the scene, that is, to be armchair critics or social commentators. A view from this position is presented in the *stop the world* story:

> *ErnieN: I think they've [computers] got a place in our lives, but we don't want it to be overdone.*
> *BenjieN: How would the motor industry in Japan get on if they didn't have computers?*
> *MontyU: How would any industry run now without computers because they're supposed to be more efficient and everything else. That's why there are so many unemployed and all that, because all the work's being done by computers… The old story about stop the world I want to get off—it doesn't work like that. I wouldn't like the world to go back to as it was, shall we say, in a lot of cases.*
> *(Story 235)*

In this story, two Nonusers and a User appear to be in agreement that technology is one of the ordering principles of the current global economic system and the integrated nature of that system makes it virtually impossible to dismantle. This position parallels Fukuyama's (1992) view, that a society-wide rejection of technology would mean wholesale de-industrialisation and the demise of first world nations into third world impoverishment. Since computers are integral to the economic, political, and social fabric of system, going back to the old pre-computer era, as one of the narrators in the story identified, would be impossible because technology has changed everything (Postman, 1992). Also, endeavouring to turn back the clock would be submitting to a nostalgia myth (Mosco, 1998). Therefore, rather than withdraw—stop the world and try to get off—a more realistic approach, according to these participants, seems to be to accept that the technology has a place, but to try and prevent it from dominating.

In summary, the stories in this section showed that Users constructed the computer and themselves in relation to computers differently in different settings. The stories also demonstrate that locating Users' relationships with computers in multiple settings provides additional layers of contextualisation in which to explore the multiplicity of ways in which Users constructed the computer and themselves in their sensemaking endeavours. As such, these stories provide an important contrast with the uni-dimensionality of the constructions presented in the *enabling/elderly* master

narrative. In the *individual setting*, the only one represented in that master narrative, participants presented themselves as capable users of the enabling computer. However, in the *family setting* Users found themselves to be at a disadvantage relative to children because of the older person's lack of familiarity with the new technology. This lack of familiarity did not impact, though, on Users' ability to perform their traditional role as protector of the young. In this capacity, they identified children as potentially at risk in their relationships with the computer, particularly, in terms of their health and well-being. In doing so, Users asserted the experience of age over the naivety of youth, and made a case for their continued relevance in this modern age. In addition, in the *organisation/society setting*, Users' positioned themselves as armchair critics capable of seeing and reading the technological scene insightfully.

6.4 Finding a meaningful accommodation

In their reproduction of the master narrative of the *enabling/elderly*, Users told the story of the useful computer and of their competence in using it. However, in producing alternatives to that narrative, Users also challenged the *desirable commodity/grey consumers* master narrative, particularly, in their constructions of the computer as a sign of moral decline, a fad, a danger to children, and a concern for societies in the future—if computers were used to excess.

Juggling multiple constructions of the computer indicates the extent to which Users had to work through a maze of possible readings in order to produce a meaningful relationship with the computer. This relationship had to be one that did not threaten their identity (Schrauf, 2000) as mature adults with years of accumulated experience, but also one that did not show them to be stereotypically old and resistant to change (McGregor & Gray, 2002). It also had to be one in which they could find an appropriate alignment between their own principles and their perceptions of the principles inherent in the *Good Computer*. Also, it had to be one in which they could be seen to manage the problems associated with the *Bad Computer*.

Users negotiated their way through this maze by emphasising the role of the computer as an *enabler*, in particular as a useful tool. Users' preferred reading of the computer as a beneficial device is evidenced by the fact that a greater proportion of

their stories focused on the enabling (*good*) computer, than on the disabling (*bad*) computer. Adopting the tool metaphor allowed Users to make use of the new computer without finding themselves consumed by it as a *desirable commodity*. After all, a tool could be purposefully used, and was neither an indulgence, nor an unnecessary pleasure good (Weber, 1978). A tool could also be controlled by those who had the self-discipline and the skills to do so—not just the technical skills, but also critical awareness of the necessity for vigilance and restraint in managing the duality of the g*ood/bad computer*. By not allowing themselves to become too absorbed with the computer, as the *drug* story showed, or too enthusiastic about it, as the *déjà vu* story indicated, and by not forgetting the past entirely, as the *old relics* story highlighted, many Users were able to maintain a positive sense of self as they adapted to the changing times.

6.5 Conclusion

Users' relationships with computers were explored in this chapter in relation to three areas: (a) the master narratives they drew on to make sense of the computer; (b) the more cautionary stories they produced in making their evaluations of the computer; and (c) the three major elements identified in the production of their sense-making processes.

The master narrative of the *enabling machine and elderly individuals* was reproduced in Users' accounts through their descriptions of the computer as an *enabling* device connecting them conveniently to others and to information. In addition, Users portrayed themselves as *old* in their stories in descriptions of their slowness in learning to use the technology, their frustrating dependence on others for assistance when learning how to use the technology, and their lack of computer skills relative to young people. Age identity markers also figured prominently in their stories, particularly, in references to yesterday, 'my day', and the cultural practices of an earlier era.

Cautionary stories about computers were also produced, organised around two main themes—*all things in moderation* and *people before machines.* These alternative stories challenged the master narratives of the *enabling machine and elderly individuals* and the *desirable commodity/grey consumers.* In doing so, Users

constructed a more complex computer character with more depth and variation, than articulated in those narratives. In addition, participants' characterisations of themselves showed older computer users to be much less one-dimensional characters, than had been depicted in the master narratives and much more products of a particular socio-cultural-historical context.

Three production elements were identified as contributing to the richness and variety of participants' accounts: *identification*; *orientation*; and *settings*. Users' identification with old stories provided them with an evaluative framework in which they could locate themselves and plot the co-ordinates of their relationship with the computer. In so doing, they called on prior knowledge and commitments, particularly those centred on the principles of moderation and the prioritising of people over machines.

Users' stories were also influenced by the ways in which they oriented to the computer. Different orientations to the computer enabled participants to focus on different aspects of the technology—features or effects. Those Users who contextualised the computer in relation to other technologies or events over longer time frames tended to adopt more critical responses to the technology, than did those who looked more simplistically at the uses of the technology.

In relation to settings—the contexts in which the interactions between the principal actors took place—Users were found to display more autonomy and competence in the *individual setting* and less ability to do so in the *family* and the *organisation/society* settings. In the *individual setting*, the computer was most often appraised for its functionality, and participants for their ability to utilise this functionality with competence, judgement, and discretion. On the other hand, in the *family setting*, although seemingly technologically disadvantaged in relation to the young, Users managed to retain their sagacious positioning as older people by identifying the seductive computer's capacity for potential harm. In the *organisation/society setting*, too, the young were positioned as negatively affected by the technology, particularly in relation to the loss of gainful employment and the loss of an associated ethic that valued hard work. By comparison, older people were advantaged by their capacity to see and critique the effects of computers on society,

particularly their ability to contextualise the technologised world of today in terms of the pre-digital era of yesterday, and, therefore, not allow themselves to be duped by the euphoria of the 'digital sublime' (Mosco, 2004).

These production elements and alternative storyings provide an interesting contrast with previous studies in which older computer users had been presented as a largely homogeneous group, and the computer as predominantly beneficial, even desirable. Exploring the imagery and layers of meaning in Users' accounts also provided access to a richness and complexity not previously identified. In addition, paying attention to the elements of production highlighted a degree of diversity in participants' stories, as well as the tensions they experienced in relating their past history and biography to the current context in which computers are ubiquitous.

In the next chapter, Users' accounts are compared and contrasted with those of another user group, SeniorNet members, who storied computers and themselves in relation to computers in similar and yet significantly different ways.

CHAPTER 7

SeniorNet Members' Storied Productions

This chapter presents and discusses the findings from the analysis in relation to the second participant group—SeniorNet members. The chapter shows how this group storied their relationships with computers by drawing on master narratives about age and technology to produce their own particularised versions of those narratives, grounded in their experiences at SeniorNet. The chapter also compares and contrasts SeniorNet members' storied productions with those constructed by Users.

The chapter is organised in the following way: In section 7.1, I explain the participant category, *SeniorNet members*. In section 7.2, I show that SeniorNet members, like Users, reproduced the master narrative of the *enabling machine and elderly individuals* in their sensemaking productions. However, unlike Users, SeniorNet members did not also negotiate alternative, more cautionary tales about the dualistic computer. Instead, they called on the master narrative of the *desirable commodity and grey consumers*, producing positive and enthusiastic accounts of their computer experiences.

The relative positivity of SeniorNet members' responses is examined in section 7.3, in relation to the three production elements: *orientation*, *settings*, and *identification*. I show that SeniorNet members oriented to the computer using a close-up lens and a short term focus, paying particular attention to the personal opportunities the computer provided, while neglecting the downsides identified by some Users who adopted a more long term, historically situated, or future oriented perspective. SeniorNet members' positivity is also seen as attributable to the context in which their stories were produced—the discursive environment (Gubrium & Holstein, 2000a, 2002b) of SeniorNet in which a positive aged identity is negotiated and performed and an empowering response to the computer is co-constructed by members of that community.

The SeniorNet context is also seen as important because it is here that members are able to find an alignment between the old stories with which they identify and the stories of the new information age of which they find themselves a part. In the SeniorNet environment, participants assimilate these two sets of stories, the old and the new, into a highly charged tale about older people *and* the new technology. The outcome, a specifically *SeniorNet* story, offers an interesting contrast with the more strained accommodation Users developed in response to the computer. Finally, in section 7.4, I conclude with a summary of the findings presented in this chapter.

7.1 SeniorNet members

The participant category, *SeniorNet member*, describes those research subjects recruited from SeniorNet organisations. Eighty-eight SeniorNet members, 43% of total focus group participants, were recruited from three SeniorNet organisations. All were computer users, and all but one of the respondents owned their own computer. The majority of these participants had less than one year's computer experience.

SeniorNet members are distinguishable from Users by their membership of a formally constituted self-help computer organisation. In addition, SeniorNet members presented as more enthusiastic about computers than did Users. Because membership of SeniorNet appeared to be one of the factors that distinguished this group of participants from Users, and because it appeared to be an important influence on the ways that SeniorNet participants storied their relationships with computers, it is appropriate to provide a brief background on that organisation.

SeniorNet in New Zealand is a voluntary, not-for-profit network of organisations set up and run by seniors—those over 55 years of age—with the objective of helping their age peers learn how to use computers. For this purpose, face-to-face computer training sessions are provided—according to annual membership subscriptions there are more than 20,000 current members—in more than 100 organisations throughout New Zealand. The concept of SeniorNet, first developed in the United States in the 1980s, has expanded internationally since that time.

SeniorNet was introduced to New Zealand in 1992. However, this commonly reported (Lobb, 1993; Tillett, 1998) 'moment of introduction' was not simply a local

response to the increasing prevalence of computers in the community, but also, I contend, the product of a particularly turbulent period in recent New Zealand history. During the 1980s and the 1990s, successive Labour and National Governments introduced a series of sweeping, laissez-faire economic policy reforms (McLauchlan, 1992) based around the pursuit of efficiency (Hazledine, 2000) and the dismantling of the welfare state, including significant and unpopular changes to superannuation policies and guaranteed retirement income levels. Such reforms have been linked to the increasing politicisation and collectivisation of older people, many of whom saw these changes as a betrayal of their rights as taxpayers and a betrayal of the promises made to them over the years by successive governments (Koopman-Boyden, 1993; Levine & Roberts, 1993). From that time, older New Zealanders have become an increasingly visible social and political presence (MacLean, 2000).

Since that time, also, SeniorNet—one of the groups that gained momentum in that volatile climate—has established a significant presence in the local community. For instance, during the New Zealand government's recent campaign to 'bridge the digital divide', SeniorNet members were constructed not only as a group on the right side of this divide (Maharey & Swain, 2000), but also as models of the ways communities should be responding to the challenges of the digital age (Maharey, 2002). This reputation has been further enhanced by numerous stories in local newspapers about SeniorNet members' ability to surf the Internet and cross the digital divide (Family lines discovered online, 2005; Holloway, 2000; Howells, 2002; Hunter, 2000; Nicholson, 2002; O'Siochain, 2003; Richardson, 2002; Seniors taking on technology, 2003). In addition to attracting government recognition and community support, members of SeniorNet organisations have also attracted the attention of researchers. In this capacity, they have been a population commonly sampled and studied in relation to older people's use of ICTs (Adler, 1995; Buys, 1998; Fenton & Malcolm, 2001; Furlong, 1989, 1989a; Ito et al. 1999, 2001; Lin, et al., 2004; Richardson et al. 2005; White & Weatherall, 2000; Wright, 2000).

In summary, SeniorNet is an organisation with a significant profile in many local communities. It is also a "site for the production of a technologically-empowered senior identity" (Ito et al. 2001, p. 19). Just how that profile plays out, in relation to this study, is examined below.

7.2 Reproducing the master narrative of the enabling machine and elderly individuals

The analysis identified that SeniorNet members, like Users, reproduced the master narrative of the *enabling machine and elderly individuals,* in which the computer was seen as a useful device providing older people with opportunities to extend their capabilities and their social networks. Unlike Users, SeniorNet members did not challenge the primacy of this particular narrative; instead, they negotiated a collective and fundamentally paradoxical response to it. In doing so, they addressed a disturbing image in the underpinning meta-narrative of the *knight in shining armour* computer character rescuing older people from incapacity and isolation—the image of the lonely and isolated older person who is rescued by the *knight* only to remain physically isolated from society and connected virtually with others. Instead of remaining at home virtually invisible, participant SeniorNet members congregated noisily together celebrating a common interest and sharing an old fashioned sense of face-to-face community interaction. From the physical location of SeniorNet, participants co-produced a *SeniorNet* story, one that promotes the use of the virtual technology, but through the development of physical, social networks. In producing this *SeniorNet* story, participants created their own particular version of the *enabling/elderly* narrative, one that resonates strongly with the master narrative of the *desirable commodity and grey consumers* in emphasising the positive and empowering role of the technology. The way in which these two narratives are woven together forms the essence of the *SeniorNet* story, which I address in section 7.3.

7.2.1 The enabling computer

The themes of functionality and connectivity, identified as beneficial aspects of the aged-computer relationship in previous studies and in Users' accounts, were also reiterated in SeniorNet members' stories. However, in the SeniorNet stories, the computer was more often presented as an *opportunity provider* than the *useful tool* Users portrayed it as. In particular, the computer was identified as providing members with opportunities to connect to information and to others, to keep themselves mentally stimulated, allowing them to participate with confidence in the digital era. These opportunities were seen as empowering and energising.

7.2.1.1 Opportunities to connect to information and others

The multi-faceted nature of the computer as an opportunity provider was evidenced in accounts such as the one below, in which JamesS described his experience with the computer as a way to keep himself informed as well as occupied. He put it this way:

> *Well I have found that it has given me an added interest in life and especially on a wet nasty day you can go and spend an hour or two surfing the Net. Although I have not had a great deal of experience with email because most of my family in the UK have not even got a computer yet—which is a bit annoying. But I have used the Net to read the newspaper from the old home town and things like that, and I can keep up with world events and that sort of thing and I have started to get into Word now and started writing a bit of a life history which is something I have had in mind for a long time.*
> *(Story 338)*

In this *net benefit* story, the computer was described as a *Good Companion* character who helped to while away the hours, but who also enabled time to be used constructively in keeping up with world events, and with the local news from the old home town, as well as the writing of personal histories for future generations of family members to read. In this way, the computer facilitated the narrator's participation in a network of interconnections across time and space (Castells, 2000). By taking up these opportunities, the narrator felt that his life had been enhanced. In making these connections he was also reiterating the narrative of the *enabling/elderly* master narrative.

In addition, the *enabling* computer also provided opportunities for SeniorNet members to keep in touch with family and friends—a matter of considerable importance to many in overcoming some of the tyranny of distance (Cairncross, 2001) experienced by families with children and grandchildren living overseas. Email, in particular, was identified as an important means of communication. This finding resonates with Users' experiences and is a benefit commonly identified in other studies, for example Fox et al. (2001). One of the many stories SeniorNet members told about email went this way:

RuarkS: Well, I've never written a letter, maybe about 10 in my whole life and now there are emails flying everywhere. I've really enjoyed that and I didn't realize how great it was to write letters.
DanielS: It was an effort.
RuarkS: It was an effort but now it is just fun…
DanielS: I have a son in Melbourne with whom I used to write letters perhaps once every month or something like that, well now we are writing every day and I feel that we have got a much better relationship than we ever had before.
(Story 340)

In this story, two of the men discussed their experiences using email communications. For one, correspondence was a new experience that he once regarded as a chore, but no longer because using the computer had taken the drudgery out of the exercise. For the other participant, email was a way not only to help maintain a family relationship, but also to improve it through regular exchanges in which the minutiae of daily life could help to keep close families in touch, conveniently.

7.2.1.2 Opportunities for mental stimulation

In addition to keeping in touch with others and with information, the *enabling* computer also provided an opportunity to keep participants mentally fit and active during the declining years. RuthS told her story this way:

I find that as I'm getting older and further into old age I'm not using my brain so much. I mean I'm using my hands, I garden, and I mow lawns, I do embroidery and crocheting, I make my own clothes, but that's not using that [pointing to head] and I think we've got to keep that part of us active as well as anything else and I think this [the computer] is a way of doing it. It makes you think. The computer makes you think.
(Story 294)

In this story, the narrator explained that it was necessary to keep the brain, as well as the body active, and learning how to use the new computer was one way to do that in the declining years, when many other tasks had become routine and lacking in challenge. In so doing, she reiterated the role of the computer as a useful mind tool and a way to enhance mental stimulation (Hoot & Hayslip, 1983; Kornbluh, 1983), as some Users had also done.

An extension of the *computer-as-mental-stimulation* opportunity, which SeniorNet members explored, but Users did not, was the link to self-esteem enhancement. In forging this link, SeniorNet members' accounts supported findings in other studies in which computer learning has been associated not only with increased levels of self-esteem (Lawhon, Ennis & Lawhon, 1996), but also with an increased sense of mastery in different situations, as well as a sense of empowerment (Lansdale, 2002), and feelings of accomplishment (Purnell & Sullivan-Schroyer, 1997). These associations were clearly identifiable in SeniorNet members' stories, as the following account illustrates:

> *JudgeS: In my experience, you either use it or lose it which is very relevant. When you use it, it brings back your self esteem. You find that you haven't totally lost your marbles—that you can actually get some of them back…This technology is particularly challenging because as you get older you can convince yourself that you are staying fit and you can convince yourself of all sorts of things. But in fact you keep lowering the hurdles for yourself. But with this technology you can't. The technology sets the hurdles doesn't it and you have got to face up to it. I guess it is a sort of a hell of a shock that you can't manipulate this technology*
> *GaryS: You can't bluff your way through.*
> *JusgeS: That's the word – you can't bluff your way through it.*
> *(Story 332)*

In this *use it or lose it story* the new technology was identified as a significant hurdle for older people, but also as an important reality check. The narrator argued that when older people applied themselves to the challenging task of learning how to use the computer and they succeeded, they experienced a significant boost to confidence levels because they had persevered and not allowed themselves to submit passively to the *deficit and decline* narrative of old age (Gullette, 1997; Trethewey, 2001). However, without such a powerful reality check there might have been a tendency towards self delusion—to think you're keeping up when you're not because there was no external benchmark against which to measure performance.

This story reiterated the commonly told tale of the computer as an important means of mental stimulation for older people (Hoot & Hayslip, 1983). However, this version of the story pointed not just to the computer as a significant mind tool and an important benchmark for self-development, but also to the looming spectre of *losing*

it as one aged and the importance of *using it* as a means to maintain fitness and self-esteem. Through the adoption of this *use it or lose it* mantra participants demonstrated an acceptance of the inevitability of *the old-age-as-decline* story, but they also enacted a determination to delay the onset of this condition for as long as possible. However, adopting the *use it or lose it* maxim also tied them into the espousal of activity theory and the reiteration of successful ageing strategies (Gubrium & Wallace, 1990). Activity theory assumes a link between activity, satisfaction, and healthy adjustment. It is, according to Hooyman and Kiyak (1993), a perspective consistent with the values of a society that emphasises work and productivity and has led to policy initiatives that stress social activity as a way to ensure that the elderly remain integrated with and participating in their local community.

7.2.1.3 Opportunities for participation

SeniorNet members' stories also indicated that learning how to use the computer provided opportunities to operate independently and interact successfully with an increasingly technologised environment (Czaja & Lee, 2003). For many participants acquiring computer literacy was a necessity, as the following stories indicate:

> *RandolfS: In our everyday life we have to bang into computers. If I go into a shop and buy something someone has a computer which they tell how much it is and I can dispute whether the price is right, so I've got to have a general knowledge of just life and whatever century you're in.*
> *BirnieS: It's bringing ourselves up to speed really*
> *(Story 273)*

For the men in this story, being able to use computers was not an esoteric skill; it was about being able to perform basic level competencies in day-to-day situations. Without such skills these men considered themselves to be potential victims. In adopting this perspective, these participants implicitly reference the master narrative of the *potentially divider and senior citizens* where those who do not use computers are identified as at risk in a technologised society.

For other participants, too, computer literacy skills were seen as necessary, not so much to avoid being 'ripped off', but to maintain their independence in the digital age. AmyS's story was illustrative:

> *I really think, generally, that learning to use a computer has given me the confidence that I can now use telebanking with great confidence and I can even use those ATMs, I even put money in ATM machines…..it's given me the confidence to use other electronic things within the community …and I can now use a library computer*
> *(Story 272)*

In this *ATM story* AmyS indicated that learning to use the computer had given her the confidence, not just to use one machine but to use a number of the different self-service technologies she encountered in her daily life. By contrast with a User-narrator who might have bemoaned the loss of personalised customer service, this SeniorNet member acknowledged the prevalence of self-service facilities, identified the need to learn how to use them, and set about doing so. In telling this story, she was proudly demonstrating competence and capability (Cruikshank, 2003; Minichiello et al. 2000; Ryan et al. 1992), as well as an ability to adapt and transfer learning from one situation, the personal computer at SeniorNet, to other computer-related situations in the wider community.

In summary, the stories in this section showed that SeniorNet members reproduced the *enabling/elderly* master narrative by constructing the computer as a device for providing them with opportunities to extend their capabilities and their ability to operate independently and enhance their social networks. Of particular importance were opportunities to connect to information and to other people, to keep the brain stimulated, and to have the skills to participate with confidence in a computer-oriented society. Though SeniorNet members' stories were similar to Users' in many ways, they were also different, particularly in focusing on the computer as an opportunity provider rather than as a useful tool, and also in establishing a link between mental stimulation and the enhancement of self-esteem.

The stories in the next section also showed participants as reproducing the *enabling/elderly* master narrative; this time in terms of the ways they constructed themselves as *old* in relation to the *enabling* technology.

7.2.2 Older users and the new technology

Many SeniorNet members also reproduced the *enabling/elderly* master narrative by identifying themselves as *old* in relation to the new technology. Their performances

of *old* involved the telling of two kinds of stories—those about their unfamiliarity with the technology, and those about the age-related difficulties of learning how to use it.

Lack of familiarity with the technology was a common theme in participants' stories and provided a baseline excuse for initial difficulties in learning how to use it. This finding resonates with previous studies on older people's computer learning in which anxiety with the technology was seen as negatively related to familiarity with it (Charness et al. 1992; Cody et al. 1999; Dyck & Smither, 1994; Morris, 1994; Temple & Gavillet, 1990). A sense of the magnitude of this unfamiliarity was conveyed, for example, in a conversation story in which three SeniorNet men discussed their initial encounter with the computer:

> *HarryS: The elderly have not grown up with computers. Therefore to us it's rather like diving into a pool of cold water…*
> *BrienS: This technology is totally new to me.*
> *GregorS: At the initial stages you are frightened that you might blow the whole thing up if you press or click on the wrong thing and it is completely foreign to me…*
> *HarryS: It's a totally new world to what we've been used to*
> *BrienS: I've grown up on a farm with a totally different background. From cows to computers it's totally different (Story 324)*

In this *new world story* the men positioned themselves as strangers in a strange land of new technology; a place qualitatively different from the one they were familiar with—a world of tangibles and reality, of cows and hard physical work—not one of virtual experiences and cyberspace. As such, the computer represented a significant break with the past and a disconcerting interruption of the known world order. Learning how to use this initially 'foreign' machine was akin to the experience of diving into a pool of cold water—daring and exhilarating, but also of heart-stopping intensity.

Other stories about learning how to use the computer focused on age-related difficulties. For many participants, the learning experience was an emotional one exacerbated by the reality of the ageing process, and the realisation of ignorance. AlanaS, in her eighties, put it like this:

> *You think you‘ve learned quite a lot of things about life. When you're faced with a computer, first of all, you find you know nothing and I think that puts you in an awkward situation—you’re very often used to feeling you know things. And your memory's another thing. You're shown how to do something, but, ten, or even five minutes later you've forgotten what you were told. You feel a fool because you can't remember! (Story 297)*

This rendition of the *learning the computer story* revisited the experience of JamieU, described in the previous chapter, particularly in relation to the emotionality of the learning encounter (Richardson et al. 2005) and the awkwardness of being found to be deficient in terms of basic computational skills (Millward, 2003). In addition, difficulties in learning how to use the computer were compounded by the attendant problems of age, particularly short term memory loss, a commonly identified problem for older people (Baringer, 2002; Hanson, 2001; Irizarry & Downing, 1997; Morrell, 2000). However, with perseverance and determination SeniorNet members, like Users, overcame the anxieties of their early learning experiences to become competent users of the new technology.

As competent users, SeniorNet members were much less inclined than were Users to identify problems with the technology. Indeed, there was little evidence of Users’ *good/bad computer* dualism in the SeniorNet accounts. Although there were occasional references to the possibility of becoming addicted to the computer, such situations were often explained away as a problem of the member’s own lack of self-control, as the following story shows:

> *AdamS: But I do think you can sit there until you can’t get your bloody shoes back on—swollen ankles*
> *ZakS: Oh that’s your fault, that’s not the fault of the computer…*
> *BobS: You start scanning the ‘net – I think it can get a bit addictive, you know. You get on to something and,’Oh that’s interesting’,you know, and you get more engrossed in what you’re doing.*
> *XavierS: I’ve always been a perfectionist and it’s a disadvantage most of the time, but at the same time I get stuck in. Everything I do, I get stuck in and nine times out of ten I’ll go till I’ve finished and if I’m honest I’ll go till 2 or 3 in the morning without even thinking about it. It’s the same once I’m in the garden—I can’t get out of the damn garden. (Story 67)*

In this story, a group of SeniorNet men acknowledged the possibility of becoming absorbed with the computer and spending a lot of time on it. However, they also identified that such actions were less about the demanding nature of the computer and more about their own absorption with it and their dedication to the task at hand. By contrast, for Users, the addictive nature of the *Seducer* computer was presented as a bad thing, and as likely to take away people's ability to function normally. In the SeniorNet story, however, ZakS absolved the computer of guilt, and XavierS explained that his displays of obsessive behaviour were more those of a perfectionist, than an addict. Such stories, point to the need to manage the user-computer relationship effectively. This was a need Users also identified, but one that SeniorNet members were taught how to handle.

In summary, the stories in this section showed that SeniorNet members, like Users, reproduced the *enabling/elderly* narrative in constructing themselves as *old* in relation to the technology, that is, as unfamiliar with it and inexperienced in its use. In addition, being old, for both participant groups, had explanatory value in providing an excuse for initial difficulties in learning how to use the computer. However, by contrast with Users, SeniorNet members did not also construct the computer as a *disabling* device; instead, their experiences with it were overwhelmingly positive.

Having identified similarities and differences in the ways these two groups of computer users constructed computers and themselves in relation to computers, I sought to explain these differences by attending to the ways they constructed their accounts. Therefore in the next section, I examine the production of the SeniorNet members' stories and compare them with Users' production processes.

7.3 Producing the SeniorNet story

SeniorNet members reproduced the *enabling machine and elderly individuals* master narrative. However, they did so by producing their own particular rendition—a distinctively SeniorNet version of this narrative that simultaneously draws on the *desirable commodity and grey consumers* narrative and the *enabling/elderly* narrative to create a strongly positive world view. This version focused primarily on two aspects—the benign and beneficent nature of the computer and the positivity of

participants' experiences with it. In particular, SeniorNet members' stories emphasised the opportunities the computer provided for them to be energised, modern, and competent members of the computer age.

However, it is not just the computer, but also their experiences at SeniorNet that created the conditions of possibility for the construction of these meanings. I examine these issues below, in relation to the three production elements identified as key factors in participants' storying processes: *orientation*, *settings*, and *identification*. The element o*rientation* refers to the close-up or long-distance perspective taken in relation to the computer that tended to influence what participants paid attention to in the technology. The element of s*ettings* refers to the context within which the stories about the computer were produced. The element i*dentification* refers to the stories with which participants identified strongly. All three elements had some influence on the ways in which participants constructed the technology. In the *SeniorNet* story, the three elements had a powerful combined effect.

7.3.1 Orientation

The analysis identified that participants' storying of the computer was influenced by their orientation to it. Participants who adopted a close-up lens tended to focus attention on the computer as an isolated object, and they also tended to hold positive views about the technology. By contrast, those participants who adopted a wide-angle lens contextualising the computer in relation to other technologies and events, tended to have more neutral or critical responses to the technology. On the whole, SeniorNet members oriented to the computer using a close-up lens and a short term focus, rather than paying attention to the broader social ramifications of the technology, as Users had done. In doing so, SeniorNet members tended to construct the computer as having desirable properties for individuals.

On only a very few occasions did SeniorNet members orient to the computer using a wide-angle lens. One such occasion was initiated by EloiseS who raised the issue of societal dependence on computers—a computer as *Inducer of Dependence* story. She put it like this:

EloiseS: I really seriously wonder if we're not far, far too dependent on technology – the whole of the country.
LobeliaS: And if there's a power shortage –
EloiseS: I was in the Bank of New Zealand the other day and they said sorry but every computer is out …
JuneS: In the old days when the power went off we could put the iron on the coal range and still do the ironing.
(Story, 321)

In this *powerful technology* story, concern was expressed for high degrees of societal dependence on the technology. A personal experience of inconvenience was shared to support this concern. A personal example was also provided to show that, in the *old days*, the world—at least the world of household chores and domesticity—did not stop when the electricity failed. This story, grounded in lived experiences and the minutiae of day-to-day life, provides an interesting contrast with some of the stories Users told. For example, in the *accommodating the devil story*, two Users contemplated the far reaching and potentially nightmarish effects of the technology on societies in the future, in which they drew on Huxley's *Brave New World* to press home their fears about the potential for harm in technology-driven societies. One noticeable difference between the SeniorNet members' *powerful technology* story and the User's *accommodating the devil* story is the inwards orientation of the SeniorNet story—the focus on the personal, and the outwards orientation of the User's story—the focus on the wider world. I offer a possible explanation for this inwardly oriented focus, in the section below on *settings and identification*, however, at this stage I want to show how this theme of *personalisation* manifested itself in SeniorNet members' accounts.

7.3.1.1 Close-up and personal

The analysis showed that SeniorNet members were much less inclined than Users to identify the harmful effects of the computer, and much more inclined to pay attention to the opportunities the technology afforded them personally. One way to examine the personal nature of this relationship is to say that, for SeniorNet members, the technology had important *looking-glass* properties. Using the computer as a looking-glass, or a mirror, enabled SeniorNet members to see themselves as old, for example, as no longer having the mental agility they once had, and as having to work hard to keep up with the changing times and changing personal circumstances. The *looking-glass as a mirror* metaphor for SeniorNet members' relationships with the computer

was captured by the *enabling/elderly* master narrative that focused on the ageing and declining body as well as cognitive deterioration.

Extending the *looking glass* metaphor beyond the ability to reflect on ageing 'reality', to that of the looking glass as a *conduit to new worlds*, reminiscent of Lewis Carroll's adventures for Alice in Wonderland, SeniorNet members were able to use the *looking glass* to stay young and active. The *looking-glass as conduit* image of the *desirable computer* is part of the SeniorNet story and as such contrasts with the more prosaic accounts told by Users about their computer experiences. Through this medium SeniorNet participants gained access to new worlds of experience, including that of SeniorNet. It is also where the two master narratives are woven together to tell the story, not just of the *enabling* computer, but also of the *empowering* computer that offered SeniorNet members transformative powers to change their world.

The role of the computer as a conduit to new worlds of adventure was evidenced in the *Buck Rogers story*:

> *JudgeS: You have got to keep pace with the world… It takes a fair bit of courage though to take the plunge to not let the world leave you behind and I think that is probably the common factor amongst us [at SeniorNet]. People have made the effort to try and keep pace with the modern world.*
> *BertieS: For me we're in the Information Age and I want to be part of it. It is mentally stimulating and we have to keep moving with it and learn.*
> *JudgeS: It is real Buck Rogers stuff come to life isn't it?*
> *HarryS: Yes and do you think in another ten years we will beam up?*
> *JudgeS: You never know*
> *BertieS: Yes you never know. Beam me up Scotty!*
> *(Story 337)*

In this story, three SeniorNet men talked about the computer as something new and modern, and a challenge that took them outside their comfort zone, but also moved them forward into the exciting, new frontiers of the information society. With boyish enthusiasm, they displayed their excitement about being part of a voyage to new worlds by paralleling their adventures with those of space-age fictional heroes like Buck Rogers, and Scotty, a Star Trek television series character. For these men there

was a sense that the computer and the magical things associated with it were somehow not quite real, and the daunting journey of learning they were engaging on, was something akin to the fantasy world of a Boy's Own adventure story. In this story, the computer was a transporter to unknown realms and they were youthful adventurers.

The myth of youth, according to Szanto (1978), is about "exploration and discovery, potential, the future, risk for great reward" (p. 46), and the men's story reflects this scenario. Certainly, there was in their account a sense of daring, excitement, activity, and energy, a sense of reaching for the stars, of being transported to new and exciting places. BertieS's request to "Beam me up Scotty!" could be a request to beam him up out of trouble, or on to the next adventure. Either way the statement draws on the colourful world of science fiction where adventurers engage in heroic deeds and actions, often against unknown and overwhelming odds, to triumph in the end.

For other adventurers too, the computer offered transportation opportunities. EnidS, for instance, described how the computer provided her with opportunities to "develop my language skills more and genealogy and memoirs and all that sort of thing." She continued:

> *Living in a rest home, that's another thing. Having a computer's opened the world for me. It's changed my ways. I mean I'm surrounded by the people with walking frames and wheelchairs—and sleeping.*
> *(Story 286)*

In the *rest home story* the image is of EnidS as a young adventurer visiting other worlds and leaving behind her the physicality of the institution and the sleeping bodies and limited horizons of her fellow residents. The *Good Computer* takes her places and lets her explore new worlds. In doing so, it also helps to overcome some of the isolation of residential care (Cody et al. 1999; Czaja, et al., 1993; McConatha et al. 1994; White et al. 1999; White et al. 2002).

One of the outcomes of a close-up and personal focus on the *looking-glass computer* is the possibility of a transformation from an ageing self to an ageless self (Kaufman, 1986). Some, like EwenS, expressed it this way:

> *In my experience, using computers keeps you young for starters and the fact that you are prepared to have a go at computers proves that you're young at heart a bit and it keeps you that way.*
> (Story 370)

Other participants, too, felt rejuvenated by their association with the computer, either through self-esteem enhancement, or through the feeling that they were keeping up with the grandchildren, as the following story shows:

> *MartyS: I think during this learning process, you are never ever going to be, well I will never be fully conversant with everything, but during this initial period anyway you get a great deal of satisfaction when you do something right after struggling for a long time. And you finally get it right! It's good for you, isn't it? It does actually boost your self-esteem a little bit.*
> *TomS; And if you can tell your grandson, your thirteen year old grandson, 'don't do that son, try that' It's great! Just great!*
> *(Story 339)*

In this story, the men talked about some of the personal benefits of learning to use the computer, particularly the energising effects of that process. The energising properties of the computer highlighted in these stories have also been identified by others (Eilers, 1989; Glanz, 1997; James, 1996; Timmermann, 1998) and have been associated with the health and wellbeing benefits of computers for older people (McConatha, 2002; Morrell et al. 2002). However, as I show in the next section, these benefits were not simply an effect of the technology but, also, to a significant extent, an outcome of the SeniorNet experience.

In summary, the stories in this section showed that SeniorNet members tended to orient to the computer using a close-up short term focus, paying particular attention to the opportunities the computer provided them personally. In doing so, they showed themselves to be positive towards the technology and energised by their relationship with it. The positivity and the uniformity of this SeniorNet position contrasts with those taken by Users who tended to adopt a more mixed set of responses focusing on the duality of the computer from a range of close-up and more distant perspectives.

In the next section, I offer an explanation for the close-up, personalised focus of members' accounts as they drew on their experiences in the SeniorNet setting to make sense of the new technology and to construct a positive aged-identity.

7.3.2 Settings and identification

The analysis identified that participants' storying of their relationships with computers was influenced by the context within which the interactions between the principal actors took place. Users' accounts, for instance, were produced in response to a variety of experiences in relation to a range of settings, including those of the family and the organisation/society. By contrast, SeniorNet members' accounts were constructed predominantly within one interactional domain (Gubrium & Holstein 2000b)—SeniorNet. It is my argument that Users' constructions of the computer were more varied because they drew on a wider range of settings to construct their responses. On the other hand, SeniorNet members drew extensively on the environment of SeniorNet—the community of the like-minded (Morley, 2003)—to produce a more limited and uniform range of storied responses.

In this section, I draw on participants' accounts to explore the influence of the SeniorNet setting on members' constructions of a technologically empowered self (Ito et al. 2001). Specifically, I show that SeniorNet members' accounts point to perceived threats to identity as a motivation for many in joining the organisation. Those threats were seen either as externally generated, for example by the young, or internally generated, for example from a lack of self-confidence. However, such threats were averted by the protection and promotion of a strong SeniorNet identity and a positive sense of self, in the construction of which members developed enthusiastic responses to the computer.

7.3.2.1 Perceived threats to identity

Perceived threats to identity have been recognised as strengthening or encouraging the formation of a sense of community, leading some groups to distance themselves from others and associate primarily with those they regard as their peers (Pain, Barke, Fuller, Gough, MacFarlane & Mowl, 2001). This notion resonates with many of the stories SeniorNet members told in which they described themselves as intimidated by others in mainstream learning institutions, or as in need of special

attention not provided by those institutions or as simply more comfortable learning with their age-peers. Their response to these situations was not to try and change the existing education system to a more aged-friendly one, but to step 'outside the square' and set up their own separate aged-based system, calling on their own resources to do so. There were many such stories, an illustrative few are presented below.

Some participants, such as BrienS, described their experience with other learning institutions this way:

> *The thing is we had gone to some computers classes in the high school and we found that it was a mixed-age group class and of course the younger ones just got ahead of us so quickly and we tended to stay in the background.*
> *(Story 359)*

In this story, the narrator's concern was with falling behind the younger ones in a mixed-age group situation—a commonly identified issue in previous studies with older people leading some researchers to suggest that a seniors-only environment was more conducive to their learning (Eilers, 1989; Irizarry & Downing, 1997; Irizarry et al. 1997; Morris, 1994; Wrixon, 2001).

Other participants expressed less concern with their fellow students than with the ego-damaging experience of being taught by younger people. JodyS's story illustrated this point:

> *The advantage of SeniorNet over say technical colleges is that you don't find a 17 year old who's so brilliant you can't even understand what they're talking about…They're fresh from college brilliant in thinking, and we can say well we were like that 80 years ago…I feel very comfortable in this age group [at SeniorNet]… You can make a fool of yourself quite happily…and you're not frightened to ask questions.*
> *(Story 274)*

In this story, the narrator identified that being taught by younger people was difficult because they were extremely knowledgeable and as such they were often unable to communicate at a basic level. In addition, young teachers served to remind older students, such as the narrator of this story, that they were no longer young. In doing

so, many older people experienced a double blow to their pride which doubtless further inhibited their learning.

Other participants felt 'lost' in large night school classes and unable to ask questions. SamanthaS talked about her experience this way:

> *Well I went to a night school. It was a Saturday class for about 10 lessons— just to see what the computer was about. I don't think it was that I was older but everything was new; the language was new and the machine was new. The instructor was very quick. Some people would have kept up. He was so enthusiastic with what he was doing, you know, and he was way ahead. I thought nobody has got time for me (with about 20 in the room) answering what to them what would probably have sounded like a silly question. I thought well large groups were not really for me.*
> *(Story 281)*

In this story, the narrator identified that she was not able to cope with the night school learning situation, not so much because she was older, but because she felt unable to press for attention and have her needs addressed. In a number of such stories, participants described themselves as not keeping up with the speed of learning required and as withdrawing psychologically from the scene by putting themselves in the background. For many, withdrawing to the non-threatening environment of SeniorNet was the next step.

Perceived threats to identity generated by external factors, such as those described above, were also exacerbated by factors discussed earlier in the chapter, such as the newness of the technology, participants' low levels of self-confidence, short term memory problems, and fears that they could not learn again after an extended period of time away from the school system. These factors in combination produced two character positions for SeniorNet members in their stories: *Aged Warriors* and *Comrades in Adversity*. As *Aged Warriors*, they battled on two fronts: first, *against* the narrative of old age as deficit and decline, and second, *for* the opportunity to participate in and keep pace with the modern world. As *Comrades in Adversity*, they acted in concert mobilising and optimising their collective resources for these battles. In doing so, they created a sense of solidarity that energised their activities. Important to this sense of solidarity was the construction of a strong SeniorNet

identity based on in-group homogeneity and out-group difference (Pain et al. 2001; Tajfel, 1981).

7.3.2.2 A SeniorNet identity

Participants' stories point to SeniorNet as a special group of people, not only different from the young, but also different from other groups of older people who were invariably older and less 'switched-on'. In constructing themselves as different from outsiders, participants also tended to stress their in-group similarities, particularly in terms of their age, interests, and ways of relating. Through this definitional process, they forged a strong SeniorNet identity that underpinned their positive responses to the computer.

One story that pointed to the differences between SeniorNet and other groups, and to the defining characteristics of the SeniorNet group, was told by SamanthaS:

> *I think what is so good is coming to a SeniorNet meeting where other people are much the same age—I mean give or take 20 or 30 years. I mean you are still, well, interested in the same thing…If you join a music group or a gardening group or something else some of those people could have been doing it for 10, 20, 30, 40 years and you just never catch up. But with this group you can guarantee that most people have started not knowing anything, like me, and whatever they have learnt they are willing to share, and it is not a showing off sharing as the young ones do. It is 'oh I have done that I'll show you'... I've met a different kind of people here and that's been beneficial, quite apart from the computer.*
> *(Story 281)*

In this account, the narrator drew a distinction between SeniorNet and other groups in terms of SeniorNet members' willingness to share their learning rather than jealously guard their knowledge. She also identified the members of the computer group as similar in terms of interests and age, despite the difference of 20-30 years—the equivalent of a generation. There was also a presumed baseline of ignorance—a lack of knowledge about the computer that made it easier to feel an affinity with *ignorant* others. From this baseline of shared ignorance, a sense of community was able to be forged by members going forward together, that is, learning how to use the computer and reinforcing the need for each other in that learning.

Other participants made similar within-group parallels and out-group distinctions stressing their commonality of purpose at SeniorNet. HarryS and GregorS put it this way:

> *HarryS: This may be entirely subjective but I went to a series of Greypower meetings and a series of SeniorNet meetings and the atmosphere in the latter is completely different from the former. Greypower meetings tend to be—the word 'stodge' comes to mind. Whereas with SeniorNet everyone seems to be alert and there is an atmosphere of vibrancy I guess, which is completely missing from the other one.*
> *GregorS: Well it is a search for knowledge isn't it? I think everybody desires that.*
> *HarryS: Unless you have that search you don't go (to SeniorNet).*
> *(Story 330)*

In this story a distinction was made between two different groups of older people. SeniorNet members were described as significantly more alert. These kinds of comparisons also served to reinforce a unique and positive group identity that constructed a SeniorNet member as a particular kind of older person, specifically, as an adventurer in search of knowledge. This image tended to associate the SeniorNet member with the modern era, with activity and energy; rather than with being stuck in the *stodge* of the past, that is, with being old.

The construction of the SeniorNet identity also drew heavily on a shared sense of purpose that tended to coalesce around the mechanisms of co-operation and inter-dependence. One example of this mutually supportive situation was presented as follows:

> *We are all here for the one reason and I think it is the help that you get from other people. Everybody has a bit of knowledge about something. I went up to a bloke's place; he was having great trouble getting rid of some of these icons from his screen and it was only a couple of days before that someone had shown me how to get rid of them. This bloke had far more knowledge of computers than I did and yet I could tell him how to get rid of them.*
> *(Story 331)*

This story focused attention on the ways members helped, but also needed, each other. In doing so, the story reinforces the idea of a community of people working together for the common good rather than for their individual benefit. Through the sharing of this kind of story, the image of a cooperative community was co-constructed and members' appraisals of the computer and their own identity were also shaped by its contours.

One example of the identity-shaping process in action was witnessed in an exchange in which one of the younger members confessed to not liking the label, *senior*. The exchange proceeded as follows:

> *HannahS: I'm 56 I didn't want to be a senior.*
> *MurphyS: You're too young Hannah.*
> *HannahS: I'm too young to be in SeniorNet, I don't want to be with all—*
> *JenniS: I beg your pardon! I take exception to that!*
> *HannahS: Sorry, sorry I'm talking about a perception—the elderly, you know. It's the word senior*
> *MurphyS: But it is for seniors…*
> *JenniS: I can remember when I went back to university and the students were complaining that there was no babysitting crèche and I said why on earth can't you organise it? Well, it's the same here. The seniors have organised this. There could be a Middlenet, if you want one, go and organise it for yourselves.*
> *MurphyS: Because we don't want young ones with us because they'll fly through. But we like to move in class, as a group.*
> *HannahS: I don't want what I said to be taken personally; I was talking about a perception.*
> *JenniS: Too late!*
> *(Story 351)*

In this rare exchange of contradictory views about the wide range of ages possible in SeniorNet, one woman broke ranks by describing herself as too young to be associated with a group of elderly people. The solution for the others was simple—if she felt that way, she could organise her own group. After all, they had joined the age-peer organisation as a way to deal to some of the difficulties encountered in mixed-age group classes, and they therefore had little tolerance for such age-based distinctions.

This story points to the notion of exclusivity (Pain et al. 2001; Woodward, 1997) as one of the important ways the purity of the group's identity can be maintained. In particular, behaviours that did not conform to the expectations of the group, that is, that did not support the principle of a community of like-minded people working purposively together, were discouraged. One outcome of this identity shaping process was, I contend, a sense of solidarity in the public image projected by SeniorNet. Another outcome, for many, was the construction of a positive sense of self.

Indeed, for many participants the SeniorNet setting was particularly conducive to the development of a positive aged-identity. In this context, members co-constructed a non-competitive, non-threatening environment in which they could perform *old* together in comfortable, but reassuringly positive ways. One participant put it like this:

> *I just find it really pleasant. Growing old is less of a problem for me now. I don't necessarily have to slump into senility; there are people far older than I who are alert and with it. That is the main reason that I come to all these SeniorNet meetings and of course I learn from other people's mistakes about computers. (Story 336)*

The emphasis in this *growing old* story was on people helping people to build new ways of seeing and being. The computer was a part of this scenario—but only a part. This SeniorNet story provides an interesting contrast with the *sons against senility story* told by one of the Users in the previous chapter, where MaudU talked about her son buying her a computer to delay the onset of mental decline. Both stories focus on the inevitability of the *old age as deficit and decline* narrative. However, in the User's story, the computer offered an individual solution to the problem. In the SeniorNet version, the computer provided the opportunity for a community of people to get together to work on their problems and in doing so to model successful ageing strategies for each other. In both of these stories, old age can be seen as a social problem (Hazan, 1994), though the solutions differ: one is a somewhat dehumanised, technical fix solution (Robins & Webster, 1989), and the other, a more humanised response, though based on a segregationist, separatist strategy (Hazan, 1994). Significantly, the latter solution provided many SeniorNet members with a

predominantly positive and enthusiastic set of constructions of the computer and of themselves in relation to computers.

However, the SeniorNet setting did not simply present an opportunity for older people to congregate together—for the stigmatised to huddle together in self-help groups with sympathetic others (Goffman, 1968). Crucially, it provided an opportunity for many to develop a new identity in which they could perform being modern and old at the same time. In this safe environment, they could be open to change and the future without invalidating the past. They did so by using the technology of the new information age in a way that drew on old community values of solidarity, reciprocity and personal interaction (Castells, 2000), while also emphasising the stoic values of hard work and disciplined effort (Sennett, 1998). In articulating this conjoint story, SeniorNet members found a way to make sense of the new computer by aligning the new challenges with which they were confronted in the digital age, with the old stories to which they had been socialised.

This new story/old story alignment manifested itself in SeniorNet members' accounts through the construction of a positive aged-identity that emphasised two things in particular: self-worth and mutual support. According to Cruikshank (2003), an older person is able to retain an important sense of social worth and competence by keeping busy. Being busy not only helps to keep the "terror of ageing at bay" (p. 160), it also preserves a self-image of usefulness and productivity. Thus, by engaging in "work-like activities" such as voluntary work (Hockey & James, 1993, p. 144) and reciprocal help arrangements (Matthews, 1979), many older people not only avoid viewing themselves as unproductive and dependent, a state negatively associated with 'oldness' (Matthews, p. 90), they also engage actively in the community and keep themselves young in the process (Hooyman & Kiyak, 1993). Certainly, SeniorNet members enacted this story of "busyness" and activity, and they have been officially recognised for doing so (Maharey, 2002).

SeniorNet members' stories also identified mutual support and cooperation as enabling them to make sense of their environment. According to Albrecht and Adelman (1987), successful social support interventions provide individuals with a greater sense of control over events which, without such support, might otherwise

seem uncontrollable. Supportive arrangements can thus provide individuals with an increased sense of independence, resourcefulness and self-esteem. In the case of SeniorNet, the construction of mutual support and assistance arrangements based on the need to help each other learn how to use the computer and adjust to the new technology age, created the conditions of possibility for the enactment of a new story with which members could identify, while not invalidating the old story of hard work and the disciplined use of time that had shaped their lives for so long. On the basis of this old-new identity-values alignment, SeniorNet members were able to construct a peculiarly SeniorNet version of the *enabling/elderly* and the *desirable commodity* master narratives.

In summary, the stories in this section pointed to the SeniorNet setting as influential in the construction of members' predominantly positive responses to the computer. In particular, the stories showed that many people gravitated to the community as a way to deal with perceived threats to identity from non-age-peer environments. Such threats were alleviated by the development of a strong SeniorNet identity that drew on a unique combination of old-new ways of seeing and being in the world, to present a positive aged-identity and a re-energised sense of self-worth, as well as useful skills in how to use the new technology.

7.4 Conclusion

SeniorNet members' relationships with computers were explored in this chapter in relation to three areas: the master narratives they drew on to make sense of the computer; the construction of their own particularised version of these narratives; and the major production elements identified in the construction of a SeniorNet story.

The master narrative of the *enabling machine and elderly individuals* was reproduced in SeniorNet members' accounts through their descriptions of the computer as an *enabling* device providing them with opportunities to connect to others and to information, to keep mentally stimulated, and to participate with confidence in the modern technologised era. In addition, SeniorNet members portrayed themselves as *old* in relation to the new computer in their descriptions of unfamiliarity with the technology and their difficulties in learning how to use it, referencing short term

memory problems, in particular. In many ways, SeniorNet members' stories paralleled Users' stories in reproducing the *enabling/elderly* narrative.

However, SeniorNet members' stories also contrasted markedly with Users' accounts in that SeniorNet participants did not produce alternative, more cautionary tales about the potential downsides of the technology; instead they tended to emphasise the opportunities the computer enabled them to take up, including the opportunity to join SeniorNet. In doing so, members produced a uniquely SeniorNet version of the *enabling/elderly* narrative, one that drew on the construction of the computer as a *desirable commodity*, particularly as a means to engage meaningfully with a community of like-minded others at SeniorNet.

In the production of this *SeniorNet* story, three elements were identified as significant: members' orientation to the computer, the SeniorNet setting, and the construction of a positive aged identity and an empowered technological self in that setting. SeniorNet members, by contrast with Users, tended to orient to the computer with a close-up focus using a short term lens. In particular, they tended to relate to the computer in terms of the here-and-now, rather than relating to it in terms of possible future scenarios, or previous technologies and historical events. In addition, members tended to pay attention to the opportunities the computer provided them personally, particularly those they encountered in the SeniorNet context, such as the opportunity to interact with like-minded others and build self-esteem.

The SeniorNet setting was paramount in members' accounts, particularly in the production of a positive aged-identity that drew on the mutual support and assistance of others and the opportunity to make a positive contribution to their own and others' day-to-day lives. Being busy, being productive in their relations with others, and being able to succeed at something deemed challenging and worthwhile, enabled SeniorNet members to feel good about themselves and the computer. In this scenario, the computer was identified as the catalyst for a series of worthwhile opportunities and as such, was configured predominantly as the *Good Computer*. This positioning provides an interesting contrast with Users who were much more likely to identify the computer as a dual *good/bad* character to be accommodated, but with caution.

This study found that SeniorNet members' stories about computers tended to be more univocal and positive than Users' more dualistic productions. The evidence to support this contention was drawn from participants' accounts. It was also drawn from the theoretical position argued by Gubrium and Holstein (2000a; 2002b) that going concerns, such as support groups and recreational clubs like SeniorNet, promote particular ways of representing who and what members are and distinctive ways of representing their everyday realities. Relating this theoretical position to the stories produced in the discursive environment of the SeniorNet going concern, provided a way to explain some of the differences between SeniorNet members' and Users' constructions of the computer. In doing so, the study identified that SeniorNet members co-constructed the computer in relation to a positive aged-identity and in this process produced an account of the computer that was less varied and more optimistic than that presented by Users. In making a distinction between the ways in which two different types of computer user—SeniorNet members and non-SeniorNet members—related to the computer, this study makes a contribution to the literature on older people and computers in which comparisons have tended to be drawn between nonusers and users, rather than between different types of users. In making this distinction, I argue for a less homogenising construction of the term *computer user*, particularly older computer user, in favour of a more nuanced version.

In the next chapter, SeniorNet members' and Users' stories are compared and contrasted with those told by Nonusers, who storied their relationships with computers in significantly different, but also in surprisingly similar ways.

CHAPTER 8

Nonusers' Storied Productions

This chapter presents and discusses the findings from the analysis in relation to the third participant group—Nonusers. The chapter shows how this group storied their relationships with computers by acknowledging the master narrative of the *enabling machine and elderly individuals*, but choosing not to be persuaded by it; by refuting the *desirable commodity and grey consumers* master narrative; and by drawing, in part, on the *potential divider and senior citizens* master narrative. Their stories show how they negotiated their way through a maze of awkward dilemmas that tested their resolve to be different from the socially accepted norm—being a computer user. In choosing not to use a personal computer, Nonusers avoided any threats the technology posed to their principles—but at a cost.

The chapter is organised in the following way: In section 8.1, I explain the participant category, *Nonuser*. In section 8.2, I show that in relation to the predominant master narrative of the *enabling/elderly*, Nonusers acknowledged some of the benefits of the *enabling* technology, but they either had no need for such benefits or were critical of them. As *older people* in relation to the new technology, Nonusers presented themselves, principally, as either *too old* to use computers or *too young* to need them.

In section 8.3, the tension between Nonusers' acknowledgement of the benefits of the *enabling* technology and their resistance to using it is explored in more detail in relation to the three narrative elements: *orientation, identification,* and *settings*. The *orientation* element shows Nonusers positioning themselves similarly to many Users, and therefore differently from SeniorNet members, in adopting a long range contextualised perspective in relation to the technology. Nonusers' negativity toward the computer was compounded by the strength of their *identification* with the old stories or values they called on in making sense of the computer. Although these old stories were similar in many ways to those called on by Users and SeniorNet

members, Nonusers were much less amenable to negotiating new ways of seeing and being in relation to such stories. In these negotiations, they can be seen strongly contesting the master narrative of the *desirable commodity and grey consumers*. In addition, focusing attention on the narrative element of *settings* shows Nonusers constructing and acting out their meanings for the computer in relation to a variety of pressures from family members and organisational Others to technologise. Section 8.4 concludes the chapter with a summary of the findings.

8.1 Nonusers

The participant category, Nonuser, describes those research subjects who self-identified as non-computer-users for the purpose of this study, that is, as older people who made no or little use of computers. Eighty-three participants, 41% of focus group respondents, identified as Nonusers. The vast majority of these participants indicated that they had no experience with personal computers. However in discussion, some indicated that they had used computers at work before they retired and a small number had computers at home—gifts, often unused, from their children. In addition, a few indicated that they had, at some time, sent or received emails. A very small number indicated that they had taken introductory computer lessons so they could converse more easily with their grandchildren in relation to their grandchildren's interests.

Nonuser participants can be distinguished from SeniorNet members, not so much in terms of experience with computers—since the majority of SeniorNet members in the study had less than 12 months computer experience—but in terms of their responses to computers. SeniorNet members presented as extremely positive about computers and enthusiastic to learn how to use them. In contrast, Nonusers presented as predominantly negative towards computers and as having little interest in using them or little need to do so.

Nonuser participants can be distinguished from Users in terms of their computer experience—the majority of Nonusers had little or no computer experience, compared with Users, where a majority had up to three years' experience and a minority had three or more years' experience. However, both Users and Nonusers shared a sense of disquiet about computers and were critical of the computer's

perceived detrimental effects. Although critical of the technology, Users worked to find a balance between the *good* and the *bad* duality of the computer. By comparison, Nonusers were significantly more negative about computers and told a proportionately larger number of negative stories than did Users.

The relative positioning of the three groups is also reflected in the literature, where older non-computer users were often portrayed as more negative about computers than users. In particular, nonusers were described as having more negative attitudes towards computers than older users (Kerschner & Hart, 1984; Galusha, 1998; Lenhart et al. 2000; Smither & Braun, 1994), as displaying more anxiety towards computers (Temple & Gavillet, 1990), as having less understanding of how computers could be relevant to them (Selwyn, 2004), and as being less forward looking and integrated with the community than computer users (Blit-Cohen & Litwin, 2004). Such portrayals, Selwyn (2003b) suggests, underpin a conception of computer use as normal and non-use as abnormal, deficient, a problem to be solved. This problem-solution scenario permeated many of the studies conducted on older people's relationships with computers.

How Nonusers in this study storied computers and themselves in relation to computers is explored in detail below, firstly in relation to their articulation of the master narrative of the *enabling/elderly*.

8.2 Acknowledging the master narrative of the enabling/elderly

The *enabling/elderly* master narrative that Users in part, and SeniorNet members in their own particular way, called on to make sense of the new computer, was also acknowledged by Nonusers. However, the *knight in shining armour* computer character in the meta-narrative, responsible for rescuing lonely older people and providing them with opportunities to extend their capabilities and their social networks was overtly resisted by Nonusers. Their acknowledgement of this narrative was articulated through an understanding of the computer's functionality. Their resistance to it was influenced by their largely negative orientation to the technology. This orientation was the outcome of a strong identification with old stories that inoculated them against techno-euphoria and led them to cast the computer more as a

Trojan horse than a *knight in shining armour*. Nonusers' philosophy seemed to be that it was better not to let the Trojan horse through the gates than to deal with the inevitable consequences later.

While acting out this philosophical position, Nonusers also appeared to be mindful of the common belief that computer use was normal and non-use was abnormal (Selwyn, 2003b). Therefore, Nonusers' stories also exemplify a strong need to justify their nonconforming behaviour (Scott & Lyman, 1968). I highlight some of these issues below and explore them in more detail in the following section, (8.3).

8.2.1 The enabling computer

Nonusers, like Users and SeniorNet members, made sense of the computer by drawing on the master narrative of the *enabling/elderly*. In doing so, Nonusers acknowledged the role of the enabling computer in providing convenient access to information and to others. However, Nonusers did not always do so uncritically, as the stories below illustrate.

Some Nonusers acknowledged the computer's utility in enabling convenient access to information. MurrayN told one such story about using the Internet to locate information when all other avenues conveniently available to him had been exhausted:

> *If I want to know something which is not available in book form, for instance, some medical conditions – of recent times I've had the need to research certain aspects. I read up whatever I can find in the library and then if I want to go further I'll phone one of my family and they will zap it through [on the computer] and either 'phone back or if there's a lot of hard copy they will pop it in the mail.*
> *(Story 195)*

This story showed that using the Internet was an acknowledged way to supplement, albeit by third party, the limited resources of the local library and to overcome some of the disadvantages of rural isolation. In telling this account, the narrator was also reiterating the *death of distance* story (Cairncross, 2001), commonly told by Users and SeniorNet members and frequently reproduced in the utopic literature (Howcroft, 1999).

In addition to using the Internet to overcome rural disadvantage, other Nonusers acknowledged the computer's utility in helping those who used it to gain a sense of personal control over their lives (Baack & Brown, 1991). PaulN told one such story:

> *Well my daughter—she's 50. She had a breast removed two years ago and that was a very traumatic thing for her to control. It had to be removed. Anyway, what she did, she sat on the Internet and got all the information she possibly could get on the subject so she could talk to her surgeon about it. I'm sure it did help her.*
> *(Story 239)*

In this story, Internet based content was not valued simply for its own sake, but for the sense of personal control that resulted from an independent search for information.

For other Nonusers, the computer provided functionality, not just as a source of information, but as an efficient way to conduct business. WallaceN shared his experience this way:

> *WallaceN: Well we were in England last year and decided to have a few days in Ireland— so my daughter got on the computer and within half an hour we had done the booking. We didn't even need to leave the house.*
> *JennyN: Yes, it makes life so much easier.*
> *(Story 56)*

In this story, the narrator stressed the convenience of the Internet for making bookings and arrangements—a particularly useful tool while travelling overseas in unfamiliar territory.

However, for a number of Nonusers, the functionality of the computer did not extend into the area of day-to-day problem solving, as Selwyn et al. (2003) and Selwyn (2004) also identified in their studies of older people and computers. RonaldN told one such account, *the computer in the den* story, about his inability to find a use for the enabling computer:

> *Well having inherited this machine which sits on our desk, up in our den, I've asked myself many times, and my wife, what are we going to do with it now that we've got it? We're not interested in*

> *playing games on the wretched thing. The Internet doesn't interest me too much because, you know, there's the problems of the thing, and I'd hate to get involved in that. There may be the odd occasion when I'd want to look something up on the Internet, and my wife is a keen gardener, and there's all sorts of websites published in the magazines, which look interesting to delve into. Maybe we could do that. As for personal records and financial activities and whatever, I mean it's on the back of a notebook, is all I need.*
> *(Story 6)*

For RonaldN, the computer, inherited from his children, sat in the den unused. He understood how it could be useful, but he had no need for such usefulness. Indeed, he already had in place adequate systems for maintaining his financial and personal records, and he confessed to having reservations about the problems of the Internet that prevented him from following up on interesting websites he had seen advertised. For reasons such as these, RonaldN and other Nonusers often dismissed the enabling computer as unnecessary and therefore as personally irrelevant. This account resonates with Roger's (1983) assessment that relative advantage—the extent to which an innovation is better than the technology it is replacing—is one of the key predictors of the rate of adoption of that innovation. Clearly for the narrator of this story, the computer had no advantage over his existing manual systems. In addition, the Internet was seen as dangerous, (possibly because of security issues such as viruses and fears that personal information may be obtained by unscrupulous computer-hackers), common concerns for many older people and one of the significant contributors to older people's resistance to the Internet (Fox, 2001; Lenhart et al. 2000).

Despite concerns about the dangerous Internet, a small number of Nonusers acknowledged that the computer could be good company for older people. BrendaN contemplated the possibilities of the Internet like this:

> *BrendaN: Computers could be very useful. You know a lot of elderly people are crippled up with arthritis.*
> *EdnaN: Yes that's true.*
> *BrendaN: They can't walk without a wheelchair…if I get to that stage I'd like one…well you know, with the time they must spend at home not being able to do anything…You can get into chat rooms and that can't you? Someone who's living alone and*

> *disabled could be distracted, you know, pleasantly distracted, you know, company - coming from the screen.*
> *(Story 173)*

In the c*hat room* story, the computer was seen as a potential asset for older people living on their own, particularly those who were disabled or immobilised. Indeed, the narrator of this story thought that she might like to have a computer when she reached that stage. Interestingly, she knew about chat rooms and thought they would be good company for the housebound older person. Certainly, some studies have examined older people's use of discussion boards, (Alemain, 2005; Kanayama, 2003; Lin et al. 2004), and found that older people engaged in seniors-only forums with comfort and pleasure. In the context of this study, it was more common to hear participants, particularly Users and SeniorNet members, talk about email as a useful way to stay in touch with others.

By contrast, for many Nonusers, email was not considered a particularly beneficial means of communication. NancyN, for example, indicated that her preference for 'live' contact with others was one of the reasons she did not have a computer. She told her story like this:

> *I do not have a computer in the house... I'm widowed and live alone. I value live contact with people and I would rather ring up people and talk to them, than send an e-mail. I like person-on-person and I know if I had a computer - I have six children and they'd all e-mail me but they wouldn't ring me up and I want to talk to them - I want to hear a voice.*
> *(Story 181)*

The *disembodied email* story provides an interesting contrast with the email stories told by Users and Nonusers. The narrator of the current story expressed the view, also commonly articulated by Users and SeniorNet members, that email was a popular medium of communication for young people. However, rather than adjust to the new medium in order to stay in touch with the young ones, as many Users and SeniorNet members had done, this Nonuser chose not to have a computer so that the family would contact have to contact her using her, not their, preferred medium—the telephone. Nonuser's concerns about email, as presented in this story, also contrast with the enthusiasm with which many SeniorNet members described their

experiences with email. One such account was the *emails are flying everywhere* story in which two SeniorNet men talked about the benefits of email, not just for keeping in touch, but for actually improving family relationships. However, for the narrator of the *disembodied email* story, email contact was no substitute for authentic, direct communication with family members. In making this observation, the narrator also offered a contrasting perspective on the commonly argued position in the literature that older people isolated in their own homes could benefit from a computer because of its functionality in connecting them conveniently to others (Czaja et al. 1993; White et al. 1999). In offering a contrary view, the narrator implicitly argues that, rather than reducing the older person's isolation, the computer could in fact increase it (Rosenblith, 1984).

In summary, the stories in this section indicate that Nonusers drew on the master narrative of the *enabling/elderly* in making sense of the computer. However, they also experienced a degree of tension in constructing the computer according to this narrative. On the one hand, they acknowledged the computer's usefulness. On the other hand, they either had little need for such utility or had objections to using it.

The stories presented, in the next section, show that Nonusers also had some difficulty fitting themselves into the master narrative of the *enabling/elderly.*

8.2.2 Older people and the new technology

The stories in this section pay attention to the ways in which Nonusers presented themselves in relation to computers as they drew on the *enabling/elderly* narrative. In particular, Nonusers can be seen partially enacting, but also contesting the role of the *elderly* depicted in that narrative.

A number of Nonusers indicated that they understood the utility of the computer for older people but they themselves were not old enough to need it and therefore the narrative did not apply to them. BrendaN, in the *chat room* story presented above, stated this position when she argued that she would find a computer useful in the future when she would, one day, be old and unable to get around. VernaN told a similar story:

> *Well I've got no barrier against having a computer. When I am too old to do other things, for me it's a good device for people who can't get out of the house. While I can get out of the house I've got no desire to have a computer. I'm not going to be pushed into having one because it's a mod con, and to keep up with the Joneses, that doesn't appeal to me at all, but when I can't get around I've always said I'll have a computer.*
> *(Story 125)*

In the *computers for the aged* story, the narrator indicated that she was not technophobic, a commonly identified barrier for older people and others in using computers (Selwyn, 2003b). She was cognisant of the benefits of the computer for those who were housebound and unable to participate actively in a world outside the home. Indeed, in such a situation the computer could be useful and the narrator identified herself as someone who would use a computer at that housebound stage. However, owning a computer in order 'to keep up with the Joneses', that is, as a marker of status (Rogers, 1983), a sign of affluence (Baudrillard, 2001), a positional good (Blaikie, 1999), distinguishing those who are able to keep up from those who are not, was considered neither useful nor necessary. In this scenario, the computer had no appeal for a member of the generation who, imbued with sobriety and moderation (Latham, 2002), resisted pleasures in excess (Willis, 1995).

In a similar story about the appropriateness of computers for the aged, AleronN identified the computer as useful for the inactive and immobile. He ruminated on the situation in this way:

> *If I was confined to the house, I would probably have a computer. If I was immobile and confined to the house, not necessarily in a wheelchair but very largely. If I finished up living in an apartment or something you know, and a lot of us have looked at this concept of apartments you can buy them now …If I was living in that kind of concept instead of living on a quarter acre section … I'm still able to climb up a ladder and I'm still able to walk and ride a bike and that sort of thing. My outlook on computers would be totally different then. I would have one now if I was confined to the house. I would be having a computer without a doubt.*
> *(Story 201)*

In the *technology for the immobile* story, the narrator also identified the computer as a useful device for those who were not able to participate fully and actively in a physical life filled with doing, particularly with doing constructive things outdoors. The computer was seen as something to retreat to when the physicality of life was diminished and all that remained was to sit inside and occupy one's time. Therefore, the computer was for the *old-old*, not for the *young-active-engaged-with-living-old*.

The *technology for the immobile* story provides an interesting contrast with the views of many SeniorNet members, who did not see the computer in this dichotomous way, that is, as a device for the future rather than now, as a device for the withdrawn and the confined, rather than for those already actively engaged with and participating in life. Instead, for many SeniorNet members the computer was a means of transportation and transformation, of going places and doing things, while also allowing them to engage with personal change and challenge. By comparison, the Nonuser narrator of this story can be seen as categorising actions into active or passive positions, into outside or indoors types of activities, rather than taking a both/and approach, as many SeniorNet members appeared to do. Perhaps one explanation for the difference between the SeniorNet and the Nonuser stances is that the Nonuser was providing a justification (Scott & Lyman, 1968) for the abnormal status of being a non-user (Selwyn, 2003b), while also positioning himself, despite his lack of computer skills, as someone who was currently competent and capable, neither stereotypically old and unwilling to change (McGregor & Gray, 2002), nor technophobic and negative about the computer. Being prepared to contemplate the possibility of acquiring a computer in the future, the Nonuser was also suggesting that his current situation was a temporary aberration. Indeed, he would conform to the requirements of the *enabling/elderly* narrative, at the appropriate time—when he is old.

Taking another tack on the issue of old age and technology, a number of Nonusers conceded that age was a factor in their non-use of computers. ColinN, for example, talked about his experience this way:

> *I can recognise the great versatility and depth of personal computers. My own difficulty and increasingly so as I get older*

> *is that I think I know and I don't. I do a bit and I'm quite good at handling the essay writing and so on, on it, but when I get interested in another aspect, say graphics or spreadsheets or something or other, then I go to try and read a book on it and it goes in one ear and out the other…It's pure familiarity and perhaps short-term memory or something or other...But I find the books contradictory and difficult...If I ask someone, I find personally I get—what's the word—impatient—and I'd rather pick up a blank piece of paper and do it myself by hand.*
> *(Story 136)*

In this story, ColinN talked about his experience of learning to use the computer in much the same way that Users and SeniorNet members had done. However, rather than persevering through these initial challenges, the narrator appears to retreat into personal deficiency (Selwyn, 2003b), particularly short term memory problems related to old age, and impatience, as a way of justifying his return to the old manual ways of doing things.

Other Nonusers, too, signalled that *age* was an explanation (an excuse) for their not using the computer. DimitriN shared his story this way:

> *I've got no use for a computer myself. I'm too long in the tooth now. That's what I thought twenty years or so years ago when the firm was changing over to computers. Time to get out I thought. So I got out. And I still feel the same way. I would rather have my typewriter and my fax machine, which are inexpensive…You see I've only got to buy a typewriter ribbon every so often. That's ten, eleven dollars, and the fax machine has never been serviced.*
> *(Story 142)*

In this story, the Nonuser narrator indicated that he had played the 'age-card' previously, when confronted by the unsettling challenge of learning how to use the new technology some 20 years ago when his firm was converting to computers. In assuming a resistance to change position, he implicitly confirmed the view that *you can't teach an old dog new tricks.* This stance contrasts significantly with the *use it or lose it* mantra adopted by SeniorNet members who repeatedly called on this philosophy as they endeavoured to learn how to use the computer to keep themselves challenged and mentally alert. DimitriN had no such desire. His position seemed to be more concerned with avoiding possible assaults on his ego than avoiding mental

decline. In addition, this Nonuser argued that his old fax and typewriter may be old fashioned, but they were decidedly more cost efficient to run than the new technologies. In making this assessment, DimitriN was not only arguing the subjective case—*don't want to learn* he was also arguing the objective case—*can't be justified on economic grounds*. I talk about this latter justification further, in section 8.3 below, in relation to the production element of *identification*.

For still other Nonusers, the computer presented a challenge that some, in their old age, were willing to take up, while others were not. EleanorN and JanN talked about their different philosophies in the following account—the *two world views* story:

> *EleanorN: Well with all this new technology I was against it. I thought I won't be able to work it out. I've completely changed around now. I think you only have one life to live and you want to make the best of it and use every help you can. You know to enrich your life and give you more time. Very much I feel that way.*
> *JanN: I don't. I think we've been through such a big change in our lives—when you think about it, what with radio and everything that's here now. There's a different way of doing from when we were first brought into the world and I don't really think I need to [learn how to use the computer]. I think all the young ones need to yes, definitely. Yes I think it goes with the times. I think everybody's got their era to live and I've lived mine and I'm just going to sit back and let it all flow round me.*
> *EleanorN: Oh no I'm really for it.*
> *(Story 154)*

In this account, two women took opposing stances to the new computer. One, having overcome initial concerns about not being able to use the technology, became an advocate for it, articulating the *enabling/elderly* narrative—the normalised story of older people and computers. However, the other participant took an opposing view; rather than feeling compelled to be involved with the technology, as the young people needed to be, she argued instead for a position of choice for herself. Being old gave her licence, she argued, to take up a position of refuge where she could withdraw and watch the world pass by, rather than have to undergo even more change. In taking a refuge position, it could be argued that this Nonuser was not so much submitting to the deficit and decline narrative of old age (Gullette, 1997; Trethewey, 2001), or constructing herself as anti-technology, as she was actively

constructing a story about age as conferring privilege, allowing her to define the boundaries of her engagement with the modern world. In this refuge she was, at last, able to allow herself the luxury of letting the world flow around her.

In summary, the stories presented in this section show Nonusers making sense of their relationships with the computer by drawing on the *enabling/elderly* narrative. In doing so, Nonusers identified themselves as *old* in ways that were different from Users and SeniorNet members. Users and SeniorNet members acknowledged being old, but neither group was prepared to submit passively to the old age condition. On the other hand, many Nonusers considered themselves to be too young to need the *enabling* computer, or, alternatively, too old to use it. These differences among the three groups of participants are explored further in the section below in relation to the three production elements: orientation, identification, and settings.

8.3 Producing Nonusers' stories

The analysis identified that Nonusers' stories about their relationships with computers showed them to be strongly influenced by the *old stories* with which Nonusers identified, particularly, stories about thrift and frugality, independence and self-reliance. Those stories influenced Nonusers' orientation to the computer and the sense they made of it. I illustrate this argument, below, in relation to the production elements of the stories: orientation, identification, and settings.

8.3.1 Orientation

Nonusers' storying of the computer was influenced by their orientation to it. Nonusers, like many Users, adopted a wide-angle lens contextualising the computer in relation to other technologies and events. As a consequence, like many Users, Nonusers tended to be critical of the technology. The situated stance of Nonusers and Users contrasts with that taken by SeniorNet members who tended to focus on the short term, personalised benefits of the technology, and in doing so, SeniorNet members occupied a fundamentally positive position in relation to computers.

Nonusers oriented to the computer by situating it in relation to societal changes, and also in relation to other technologies. One group of Nonusers, for example,

endeavoured to make sense of the computer by relating it to significant societal change in New Zealand, particularly unemployment and increasing social inequality:

> *MaryN: Well you don't have progress at the expense of jobs and burglaries and murders. What's happening now – do you want progress at the expense of that?*
> *PenelopeN: Not at the expense of that.*
> *MaryN: But that's what's going to happen because it's getting worse and worse now.*
> *MaryN: More and more people lose their jobs. At one time if you read once in a year that there was a murder in New Zealand everyone was aghast.*
> *EleanorN: The gaps are widening.*
> *MaryN: But then there was plenty of work. You could walk out of this job and go into another job.*
> *EleanorN: You can't do that now…*
> *MaryN: It is technology.*
> *PenelopeN: It must be.*
> *JanN: Because you've got more people out of work.*
> *PenelopeN: It doesn't cause it but it does contribute.*
> *(Story 160)*

For these women, the computer was associated with unemployment and the widening gaps between the 'haves' and the 'have-nots' that contributed to social unrest and personal insecurity. Their assessment was that many of the problems facing the country could be attributed to the introduction of computers and the resulting displacement of people and emergence of social inequalities. Focusing on the human cost of such change, these women pondered the relationship between technology and unprecedented levels of societal disruption.

Other Nonusers endeavoured to make sense of the computer by relating it to the introduction of previous new technologies, as Users had also done. In one such conversation-story, a group of women began by discussing a newspaper article that identified a link between computer games and epilepsy in children. Their conversation went like this:

> *IonaN: There was an article in the [name of newspaper] which said that games can actually cause epileptic fits—if children sit and play those games for too long.*
> *NanN: And how good is it on their eyes, sitting all the time?*
> *IonaN: Well this is what's causing the epilepsy because of their eyes and the flickering.*

WendyN: Didn't we go all through this with television?
NanN: Yes – sit so far away from it and all that
IonaN: It was cancer causing as well. You had to have the TV screen covered when it wasn't on. Because of the rays that were coming out.
WendyN: All the rumours that fly around about those sorts of things… and we said the same sort of thing about microwave ovens. I mean its all new technology—you're always a bit suspicious of it.
(Story 220)

In the *newspaper* story some of the women expressed concern about the potentially detrimental effects of computers on children—a common concern for many participants, particularly in relation to the negative effects of computers on children's physical health from too much sitting, their loss of manual skills from too much reliance on the computer, and their loss of socialising skills through interacting only with the computer. However, this particular story took a different turn; rather than reiterating the *user-as-a-victim-of-technology* story, one of the Nonusers queried the *ever-ending* story of pessimism associated with the introduction of new technologies. Rumours, the narrator argued, tend to make people suspicious and anxious about new technologies.

The link between successive new technologies and risk, identified in the above *newspaper* story, resonates with the *déjà vu* story, told by MarshallU, in Chapter 6, where he recounted his father forecasting the death of social life in New Zealand when radio was first introduced. The inference in these two stories is that at the time a new technology is introduced risks are often associated with that technology. Those risks—perceived or real—dissipate over time as the technology becomes an accepted and normalised part of the social environment. Certainly, those participants in this study who situated the computer in relation to other technologies and events were more inclined to perceive the computer critically than were those participants who did not take this broader perspective. Associating a new technology with risks and dangers appears to deter some, but not all, from using it.

In addition to observing recurring patterns of pessimism in the reception of new technologies, Nonusers also noted a repeating pattern of fashion and obsolescence

with successive new technologies. One Nonuser, AetnaN, described her experience of the ongoing procession of technological change this way:

> *Remember when the fax machines came out? If you got a fax you could get a restaurant menu sent to you. You could get all sorts of information sent to you. I know we did between members of the family. But that's - nobody mentions that now. Now it's all about, have you got email? This will become just as obsolete - a lot of what is done now and it will be something else soon.*
> *(Story 25)*

The *flavour of the month* story draws attention to and implies a degree of frustration with the apparently never-ending succession of consumer items constantly available in the marketplace. This matter was also a concern for some Users, such as KenU, who pointed sceptically to redundant technologies and the investment tied up in cabinets full of long playing records and unused cooking books in the *Yorkshire pudding* story. According to Campbell (1992), demonstrations of low sensitivity to novel and fashionable items are common among those in the older age groups. In the case of this study, Nonusers and Users appeared to be more concerned about such fads than SeniorNet members.

In summary, the stories in this section indicated that Nonusers oriented to the computer using a wide-angle lens. Adopting this situated stance, Nonusers expressed concern at the social ramifications of computers. In addition, Nonusers identified recurring patterns in the reception of new technologies. As the stories in the next section show, Nonusers drew on a repertoire of old stories and commitments to guide their evaluations of the new technologies they encountered.

8.3.2 Identification

Nonusers, like Users and SeniorNet members, drew on the old stories with which they identified as an evaluative frame for making sense of the new computer. In doing so, like the other two participant groups, Nonusers drew on a set of commitments framed around work, sobriety, and moderation (Latham, 2002)—the principles of stoicism and asceticism. Whereas Users put these commitments to work, enabling them to find an acceptable accommodation between these old stories or values and the stories associated with the new computer, and SeniorNet members

were able to assimilate the old stories and the new stories in the context of SeniorNet, Nonusers found the evaluative frame less permeable and amenable to change. Indeed, the strength of Nonusers' identification with these old stories acted as a means of filtering out, rather than a means of adjusting to new ways of seeing and being.

In Nonusers' sensemaking endeavours, two themes in particular, permeated their evaluations of the computer and enabled them to plot the contours of their relationship with it: *needs not wants* and *machines as good servants, but poor masters.* These themes are discussed, below, in relation to Nonusers' stories and their rejection of the master narrative of the *desirable commodity and grey consumers*.

8.3.2.1 Needs not wants

The theme of *needs not wants* focuses attention on the principles of stoicism and asceticism, particularly on a low regard for materiality and the ascetic compulsion to save (Weber, 1978), that Nonusers identified as oppositional to the hedonistic morality of consumption (Baudrillard, 2001). Weber (1978) argued that asceticism identified possessions as hazardous to, and "distractions from the pursuit of a 'holy' life" (p. 140). Weber also argued that limits should be set on acquisitiveness and consumption for pleasure. Traces of this puritan ethic are apparent in a number of Nonusers' stories. Indeed, embodying these sober and restrained principles enabled many Nonusers to remain largely "unexploitable as a force of consumption" (Baudrillard, 2001, p. 52).

Calling on these principles, these old stories of socialisation, Nonusers contested, with resolve, the master narrative of the *desirable commodity and grey consumers* in which the technology was seen as an important symbol of the modern era and a beneficent resource for older people. For Nonusers, however, the computer represented a set of values largely incompatible with the principles that guided their lives (Rogers, 1983).

In enacting their principles, Nonusers also set themselves up as a particular kind of non-computer-user, one who identified that they had a choice in whether or not they used a computer. This positioning parallels that which Selwyn (2003b) described as

an *ideological refusenik*—those who can use the technology but refuse to do so. Selwyn distinguished this position from those who are not able to use the computer for reasons of cognitive deficiency or material circumstances—the *individual deficit* story.

The position of the *ideological refusenik* is evidenced in the following story in which a number of participants talked about their choice not to use the technology:

> *DukeN: Well with a lot of retired people, I don't think expense comes into it.*
> *FrancieN: I'm with you there. I don't believe expense does come into it.*
> *DukeN: As far as we're concerned, expense doesn't matter.*
> *NancyN: It doesn't with me either. If I needed one, I'd go out and buy one tomorrow.*
> *FrancieN: Yes, if we wanted one, we'd have them. Yes.*
> *DukeN: We were taught to save, you know. Nowadays the young people go and buy something and it doesn't matter what it costs. But we query it. Do we need it before we buy it?*
> *FrancieN: We save up.*
> *DukeN: Yeah, we save the money before we spend it.*
> *NancyN: We don't buy it unless we know how we're going to pay for it…When my kids used to say 'I want this'. I would say 'Yes, you might want it, but you don't need it'. If they needed it, you got it for them. But if they just wanted it then you weighed it up.*
> *(Story 189)*

In the *cost is not an issue* story, saving was identified as an activity more highly valued than spending. Saving was a matter of pride. It was an indicator of self-discipline, of the ability to weigh priorities and distinguish between needs and wants. It was firmly anchored in the values of thrift and frugality and provided a principled stance from which to evaluate their finances and their requirements, without simply succumbing to external pressures and instant gratification. In addition, the self-imposed discipline of saving for something meant that one worked hard for, and had a sense of pride in, the goods acquired. The acquired goods, therefore, represented reward for effort, not simply an insatiable desire for new goods and endless consumption (Lasn, 1999).

The negative association between consumption and computers was also evidenced in stories in which Nonusers talked about the fashion-obsolescence process of ongoing technological change, such as AetnaN's *flavour of the month story* described above. It was also highlighted in stories, such as the following, in which two participants discussed the way in which having the latest technology was seen as a sign of affluence (Baudrillard, 2001), a way of categorising members of society on the basis of their acquisitions. Their story went like this:

> *HazelN: Remember when television first came in? Remember, when someone down the road or down the street got it and everyone had to get it. Our children came home and said, are we poor that we can't get the television?*
> *JulietN: So that will be the term - you're poor because you can't afford a computer.*
> *(Story 26)*

In the *we're not poor* story, two Nonusers discussed the way in which technology can be read as a text (Woolgar, 1996), and their non-adoption of the latest technology—a television or a computer—could be read as poverty, rather than as self-exclusion, the desire to express individual agency by rejecting mainstream values (Ratcliffe, 1998). Interestingly, in this story, as in a number of stories participants told about computers, children were depicted as one of the prime socialisation agents for the latest technology.

As bearers of old socialisation practices, however, many Nonusers found it difficult to accede to the wishes of their children. VinnyN's story is illustrative:

> *One daughter said to me—"Get a computer, Dad"— and I said—"Well at my age how long am I going to use it?"— She said—"When you've finished with it, you can give it to Gillian". I was speaking to Gillian last night and she said—"By the time you give it to me it will be obsolete." So I have got along without it and I have got that many reference books. I agree computers are great things… I don't know about older people, but at my age I think like a lot of other things, shall I buy that pair of trousers, will I wear them out?*
> *(Story 73)*

In this story, the issue for the narrator was not so much the computer's utility; he understood that it could be useful. He was more concerned with the issue of whether,

at his time of life he would make enough use of the computer to warrant the expense. Again the focus was on evaluating priorities and assessing the viability of the transaction. Comparing the acquisition of a computer with the purchase of a pair of trousers is also interesting because it points to the computer as a commodity item rather than a significant item of capital expenditure. But it also reminds us that for VinnyN and many others of the older generation, a pair of trousers is supposed to be worn until it becomes threadbare and unwearable, not merely until next season when the fashion changes.

In summary, the stories in this section focused attention on an economic dimension of the stoicism and asceticism story, showing that for many Nonusers the computer was associated with a system of values that was incompatible with their personal philosophy of spending to satisfy needs rather than wants. If they had no need for the computer, then the computer was of no value to them, and spending money on it was a waste, an extravagance. Waste was also a sign of self-indulgence and was indicative of a lack of self-discipline. In sum, the computer was not a *desirable commodity*.

The stories, in the next section, are also linked to this underpinning set of puritan values and assumptions. However, this time the focus is on the issues of laziness, dependence, self-reliance, and concerns for an appropriate use of technology.

8.3.2.2 Machines as good servants but poor masters

The theme, *machines as good servants but poor masters,* focuses attention on the appropriate use of technology, that is, on technology as a servant of man rather than his master. This particular construction was offered by BettyN in one of the focus group discussions in which she argued that computers have their place, if they are kept in their place, that is, as servants not masters. In articulating this *master-servant* relationship, Nonusers identify with the story of *man as superior to the tools he creates*. Nonusers' fear that the 'natural moral order' espoused in this man-machine hierarchy is being undermined by an increasingly unhealthy obsession with technology as an equal or even a superior partner in the relationship. This theme draws in the concerns of many Nonusers, particularly their sense that computers are taking away individual initiative and contributing to a situation in which dependence

on technology may undermine values such as self-reliance and initiative (Clark, Demont-Heinrich, & Webber, 2004).

The stories in this theme resonate with, but are also different from the stories many Users told. Users displayed their mastery over the computer by choosing to use it with a view to *moderation in all things*. In Users' stories, they showed themselves capable of exploring multiple dimensions of the *good/bad* computer, but also as capable of finding a way to accommodate this apparent duality. Nonusers, on the other hand, demonstrated their mastery over the computer by choosing not to use it (Barley, 1998; Selwyn, 2003b). Therefore in telling their stories, Nonusers were concerned, at least partially, to justify their decision not to use the computer, but also to demonstrate the moral basis of that reasoning. Their stories, below, highlight these concerns.

One predominant concern for Nonusers in the *master-servant* theme was the way in which the computer-servant was seen to be usurping the role of the 'man-master' in terms of a relationship of increasing dependence. This concern for Nonusers translated into a fear for lost manual skills and reduced individual autonomy.

A number of Nonusers' stories on this topic focused on the computer as responsible for a loss of cognitive skills, such as the ability to do mental arithmetic—that is, to add a column of figures in one's head without recourse to a calculator. GeorgeN told one such story about his experience:

> *Talking about computers ... you go down to the service station you buy $20 of petrol you don't go and say I will have so many litres. You go into a shop and you buy goods for 69 cents or whatever and you give them a $5 note and the machine tells you the change. Nobody's got to think about that at all, you know, it's a lazy world in many aspects.*
> *(Story 127)*

In the *lazy world* story the narrator's concern was that, because of computerisation, individuals did not have to think anymore and they were, as a result, becoming lazy. Laziness, in relation to the puritan work ethic, is 'idle repose' and dangerous (Weber, 1978). It is also, in Huxley's *Brave New World*, the inevitable result of technology being allowed to take over, reducing the populace to a servile state in which they

come eventually “to adore the technologies that undo their capacities to think” (Postman, 1985, p. vii). The link between technology, dependence, and laziness is therefore, according to this Nonusers’ view of the world, one to be aware of and concerned about.

Other participants expressed similar concerns. In one conversation story, two men, a Nonuser and a User, discussed the extent of computerisation over recent years and its potential effects on societies in the future:

> *PaulN: Let’s not fool ourselves. In another 20 or 30 years everything is going to be, not only computerized, it’s going to be beyond our comprehension to understand what it’s going to be like. I think the way it’s exploded over the last couple of decades it’s going to keep going upwards for the next two decades.*
> *MontyU: Yes, well the amount of businesses that turn round and offer you rewards for giving them your codeword. You know. They would rather talk to you through the Internet—bill you through the Internet, than through the mail. Cost would be cheaper, I suppose.*
> *PaulN: I'm very, very scared, though. I'm very scared that relying too much on computers, the citizen in the year 2050 is going to be an egg head and he is not going to be able to add one and one to make two or anything like that, unless he relies on a machine and whether that will be the end of it I don’t know. (Story 230)*

In the *egghead* story the men noted the way that the computer phenomenon had developed over the last few years, assisted by companies who offered inducements to customers to join the ‘computer revolution’. One narrator hypothesised that the ramifications of this enthusiasm to computerise would manifest itself in citizens of the future who would be unable to do basic computational tasks such as add up without a machine. It is also interesting to note that, in this account, the Nonuser presented as much more pessimistic and concerned about the future effects of technology on society than the User, who acknowledged that technologising would probably reduce costs for businesses.

Other Nonusers, too, were concerned that the drive to computerise would produce automatons. GretaN, for example, expressed her concerns this way:

> *GretaN: We are all going to be ningnongs. Ningnongs. Well, everything will be mechanical wont it? Everything will be mechanical. You'll get all the information you want straight from the computer. You won't look through books. You'll just look up the computer and there it is.*
> *RobertN: Probably not our generation. It might be our grandchildren, or great grandchildren, though.*
> *(Story 174)*

In the *ningnongs* story the focus of concern was on individuals losing the skills to conduct their own searches for answers to questions and problems. It was hypothesised that individuals would consult the computer for their answers to everything. Interestingly, searching on the computer was not seen as a complex set of skills, but as an easy (lazy) place to look up answers—like turning to the solutions at the back of the book, rather than working one's way through the problem. Such actions would lead to the *robotisation* of the populace.

The *robotisation* of the population would invariably lead, one group of women predicted, to homogeneity of thought:

> *NancyN: It sort of feels that the whole of the society is going to end up dominated by one giant computer, you know, opinions will be formed and*
> *FrancieN: It's a bit sort of threatening isn't it?*
> *NancyN: Yes, you know, everybody will end up getting their research from the same quarters. The Internet will become the Bible rather than people doing it, you know [for themselves], and they'll all get the same opinions, the same things … do you know what I mean.*
> *(Story, 186)*

In this story, the concern was not so much with the loss of manual searching skills and laziness, but with the effects of everyone taking this easy option to look answers up in the computer. The result, these women predicted, would be domination—thought control.

Another potential implication of automaton behaviour, for participants such as DukeN, was the loss of a fundamental aspect of Kiwi (New Zealand) identity, in particular, the much prized ability to fix anything and make something out of nothing. He put it like this:

> *DukeN: I think, where we used to try and fix something ourselves, you know, now they'll ring up the computer probably and see how it's done…It means people aren't going to make new things and things like that. It's going to wipe all that.*
> *NancyN: So the answer's on the computer rather than looking for the answers within themselves.*
> *DukeN: We used to be a country of able to do anything, - No. 8 fencing wire—that could go by the board.*
> *(Story 187)*

DukeN's story expressed the fear that, in the future, New Zealanders would not be able to solve technical problems using practical, commonsense knowledge, framed within an iconic Kiwi make-do/can-do attitude drawn from the everyday experience of working with limited financial resources (Riley, 2000). Instead, they would simply look up the answers in the computer, and rely on the computer to think for them. Drawing on the *No.8 wire* story recognises the importance of technology, but in a relationship that shows 'man' to be in control of the technology, not the reverse.

The *No. 8 fencing wire* story has been described by English-Lueck (2003) as a New Zealand cultural narrative based on the "rhetoric of frontier inventiveness" (p. 4) and the idea that a New Zealander can fix anything with No. 8 wire. It draws on the view, attributed to the New Zealand nuclear physicist, Ernest Rutherford, that "We have no money, therefore we must think" (cited in English-Lueck, p. 4). Interestingly, this *No. 8 wire* narrative has recently been challenged by New Zealand's Finance Minister who argued that to create a vibrant knowledge economy a "more disciplined approach" was required than simply calling on individual initiative. The Minister suggested that it was "time we put this little romance to bed" (Devereux, 2005, p. 1). This statement, I suggest, would increase the concern of many Nonusers, including DukeN, about the decreasing emphasis on individual initiative and self-reliance embedded in the move to increased technologisation.

In summary, the stories discussed in this section highlighted the concerns of many Nonusers, particularly, in relation to perceptions of increasing dependence on the computer and declining levels of manual skills and initiative taking. These issues were of concern to participants often because they saw using the computer as indicative of laziness, of doing things the easy way, rather than doing things manually; that is, with effort. In addition, the computer was seen as taking away

opportunities for individuals to think creatively and use their initiative. Evaluations such as these drew from a set of commitments based broadly on the principles of stoicism and asceticism that emphasised the importance of hard work and self discipline. For many Nonusers, these commitments were incompatible with the values they attributed to the new computer.

In the next section, the ways in which Nonusers played out their relationships with computers in different settings are explored.

8.3.3 Settings

Nonusers tended to narrate negative and resistance stories in all three of the settings identified in the analysis: the individual setting in which one-on-one encounters with the technology were described, as well as justifications produced for being a non-computer user; the family setting, in which interactions with computers involved family members, particularly children and grandchildren; and the organisation/society setting, in which experiences as a non-computer user, were described in relation to organisations or businesses. In these settings, Nonusers can be seen drawing, at least in part, on the master narrative of the *potential divider and senior citizens*, as they recount experiences of feeling socially isolated, even discriminated against because they were non-computer-users.

8.3.3.1 Individual setting

In the individual setting, as shown in section 8.2 above, many Nonusers identified the computer as a potentially useful tool, but also as one that was not particularly relevant for them, or one they had objections to using. In choosing not to use the computer, Nonusers positioned themselves as *Isolates*, as non-conformists who disobeyed the rules (Becker, 1963) of a modern technological society and were, as a consequence, being ‘left out’ or ‘left behind’. This was a position of choice which some were generally happy with, such as JanN in the *two world views* story told above, where she declared herself happy to sit back and watch the world go by. However, other participants found being a Nonuser isolating. WallaceN told his story of isolation this way:

> *If you lose the ability to work you don't go out so much, you find technology is moving away, especially if you are not part of it…Even if people have got the time to talk to you, if they start saying oh so and so and so and so [talking in computer jargon], you say what was that all about? It's a turn off it's a switch off. It's a bit like people that are hard of hearing, they suffer from isolation. Well this is a different isolation; it's technological isolation.*
> *(Story 58)*

In the *technological isolation* story, WallaceN described himself as retired from the workforce and no longer in a position to keep up to date with the introduction of new technologies. As a result, he found that he was not able to participate in social conversations, even when other people had the time to talk, because he could not understand computer jargon. Language was evolving, as the technology was evolving, and he found himself increasingly isolated in conversations, just as deaf people might feel isolated. WallaceN could hear, but he was often not able to participate because the discussions were conducted using terminology that he did not understand. Therefore, the sense of isolation he experienced on retirement was further exacerbated by his Nonuser status.

This story shows that some who did not use computers considered themselves to be estranged from a society where computers are increasingly part of normal day-to-day life. In doing so, the story points to social inclusion as one of the ways a new technology may be diffused through a community who may have no practical need to use that innovation, but whose members may have a strong social need to feel part of the society in which that technology is being diffused (McKnight & Sutton, 1994). The story also supports Rogers' (1983) view that the use of interpersonal communication channels amongst near peers is a more effective method of persuading an individual to adopt a new idea than distributing messages through mass media channels. Appeals to social inclusion through the use of peer networks may thus be a more effective way to ensure the distribution of a technology amongst some demographic groups than claims that such citizens will be excluded from access to information or services (Phipps, 2000), or the basic entitlements of citizenship (Norris, 2001), if they do not computerise.

8.3.3.2 Family setting

Nonusers' stories indicated that, in various ways and with varying degrees of assertiveness, they found themselves encouraged to technologise. They considered themselves to be under siege in the family setting. However in this setting, more so than in the individual setting in which they only had themselves to consider, Nonusers had to work through their fears and anxieties about the technology, while also acknowledging the computer as a means of connecting with the grandchildren. In conducting these negotiations, Nonusers positioned themselves in multiple ways: as *guardians for the future, with-it for the grandchildren*, and as *targets of change*.

8.3.3.2.1 Guardians for the future

Like many Users, Nonusers expressed their concerns about computers in relation to the young, particularly in relation to the moral, physical, and social wellbeing of young children. AmarilloN offered one such story in relation to her family:

> *Well at the moment I've just bought a house that would be big enough to have my grandchildren and they have Internet and somebody's been on the Internet and got into some pornography, and now my grandchildren are not coming to stay because they won't leave the boy behind, the one who gets on to these sites. Things that I've never seen and I'm not young, and so it's more or less even stopping … it's like, you know, almost a breaking up of the family because they can't leave the boy behind because he's got older friends and they've seen things that they should never see at their age.*
> *(Story 20)*

In this story, the computer was portrayed not only as corrupting the minds and morals of the young and the innocent, but was also seen as disrupting opportunities for family members to be together.

In addition to the computer's corrosive influence on children's moral health and family togetherness, some participants had issues with the computer's negative effects on children's physical, mental, and social wellbeing. One group of women told their stories like this:

> *AmarilloN: Well I feel, by and large, especially for children, they're spending so much time in front of the TV, that I think it's affecting their health and they're not strong of limb. I mean*

> *they're not out playing … with a ball or up a tree and a lot of the time they're at the TV or if they've clicked off the TV they're into the computer and I think it's a big shame. I have a grandson in Australia who at 15 is a real computer wizard, like from very young he could fix the computers at the school, but he never sort of leaves his room and I think that's sad.*
> *BettyN: That's the sort of relationship thing I'm worried about…And then they chat on the chat room shows and they've got no way of judging because they've got no other relationships to judge them against.*
> *(Story 23)*

In this story, AmarilloN and BettyN expressed concern that children were being seduced by television and computers to the extent that they were becoming socially estranged and unable to develop healthy friendships, because such media had become their world. Buckingham (1997; 2002), Hill (2001), and Selwyn (2003a) noted similar concerns about the potential harmful effects of media, such as television and the Internet, on innocent children. These authors concluded that the construction of the innocent child as a victim of the new media was a means through which societal anxieties about the new Information Society, social change, and fears for the future, could be played out. This conclusion resonates with the way in which participants in this study, including Nonusers, narrated and performed their anxieties in relation to the potentially detrimental effects of the Internet, particularly in relation to children.

In a number of Nonusers' stories, not only were innocent, young children being seen to be morally corrupted by their exposure to inappropriate content on the Internet, such young people were also seen to be wasting their teenage years by engaging in morally reprehensible activities like gaming. A similar concern was expressed by Users such as WinnieU, in the *wasted time* story, in which she stressed that the computer had eliminated jobs, and young people, who had too much time on their hands, tended to waste their time being idle and getting up to mischief. One group of Nonusers discussed their concerns as follows:

> *FionaN: They've got these computer games. I mean to say you get some of the teenagers - they all get together and spend hours and hours, and they drink and they smoke and do all sorts of stupid things while they're waiting their turn.*

> *KayN: And they've got to have exercise. Your body just disintegrates and it's not exercise…if you haven't got your health well you can't use your brain.*
> *(Story 44)*

In this story, playing games on the computer was seen as an inappropriate use of time, as well as contributing to unhealthy minds and bodies. This sense of moral outrage about arcade games and video game parlours (Mackay, 1997) is grounded in a view of the world that associates play with idleness and laziness (Mansvelt, 1997) and draws on the puritan ethic of stoicism in which wasting time is not only dangerous, but "the worst of all sins" (Weber, 1978, p. 141). This world view is contrary to the conception of gaming as a constructive way to improve manual dexterity, and develop strategic thinking and team building skills (Beck, 2005). However, for many Nonusers their own pre-existing views only served to confirm concerns for the detrimental effects of the computer on children.

Additional concerns for children were also identified in relation to their inability to function adequately without the aid of a computer. One such story was told by ReginaldN and LauraN who expressed concern that children would become dependent on computers and would consequently lose the ability to think for themselves, leaving them vulnerable to subjugation by others:

> *ReginaldN: Children don't know how to work it out [calculating change]. So I think this is one of the disadvantages that the kids have got. They might be able to operate a computer but they can't spell, they can't write and half of them can't read.*
> *LauraN: What concerns me is they've got no ability to mentally work out what the answer could approximately be, so if I've keyed in the wrong number, they believe blindly what that print-out says and it could be that they've you know mis-keyed something and they haven't got the ability to mentally work out an approximate answer even. I quite agree with you, Reg. And they don't know how to count change back to you, which is a fundamental.*
> *(Story 122)*

In this story, computers were not seen as enabling as they were in the master narrative of the *enabling/elderly.* Instead, they were seen as disabling, as taking away fundamental skills that would reduce children to mindless, machine-dependent subjects. For these participants, there was no understanding of the technological

skills young people were required to have in order to function in the modern workforce; rather the younger generation was being compared unfavourably with the older generation, particularly in relation to the older person's acclaimed ability to calculate financial figures in their head without resorting to a calculator. For many Nonusers, such manual skills were not only fundamental, they were also a sign that older people, despite their lack of computer skills, could display themselves as more computationally competent than younger people.

Being seen to be competent was important for many Nonusers, in the family setting, because the children were more adept computer users than their aged relatives. ReginaldN talked about his experience this way:

> *I think if we don't [become computer literate], let's face it, our kids are going to beat us. Our grand-kids are going to beat us, because they can do it… Well I think it makes you look a bit dumb sometimes when your grand-kid can tell you, well that's how you do it Grand-dad, and I haven't got a clue.*
> *(Story 105)*

In his story, ReginaldN indicated that unless he learned how to use the computer his grandchildren would 'beat' him. In a similar way some Users had also expressed concern that the superior computer skills of their digital native (Prensky, 2001) grandchildren were potentially damaging to their grandparents' egos. Some SeniorNet members had also described themselves as energised by being able to tell their grandchildren how to do something on the computer.

As the above stories indicate, a large number of Nonusers presented themselves as concerned about the detrimental impacts of computer on children's physical, social, and mental health and wellbeing. Despite such concerns, a small number of Nonusers also indicated computers provided a way to bridge the generation gap, as SeniorNet members also found.

8.3.3.2.2 With-it for the grandchildren

For a few Nonusers, despite their reservations about the technology and its potentially detrimental effects on children, learning how to use a computer was seen

as a way to connect with the grandchildren. BettyN told her story about trying to keep up with the grandchildren this way:

> *One of the reasons I went to the SeniorNet classes was, with grandchildren coming on, I wanted to be able to understand what they were talking about, even if I didn't, you know, do it [use the computer]. So I could at least understand what they were saying and have communication with them.*
> *(Story 24)*

For BettyN there was a clear distinction between knowing enough about computers to understand her grandchildren's conversations, and using the computer for her own purposes. In making this distinction BettyN was able to negotiate a position for herself as someone who was prepared to be *with-it for the grandchildren*, while at the same time maintaining a sufficient degree of distance from the computer to comfortably accommodate her personal lack of interest in it.

For other Nonusers too, connecting with the grandchildren was seen as more important than their own selfish views about computers. AlexN told his story this way:

> *The grandkids at school have all got computers. They have all this knowledge and they can't understand why Nana and Granddad don't have that knowledge. The grandkids always come home and they say: What do you think Nana? What do you think Pops? What do you do? [on the computer]…My granddaughter in Australia she has been on a computer since she was 5. She was saying: Have you got a computer Nana and Pops, I want to send you a message? I feel the onus is on me to contribute. There is a tie there between us and I must not let anything come in between. If they say that Pop just doesn't understand, that's the last thing we want, because we are there for them and I think if there is a slight inconvenience in expense or in a piece of equipment or where are we going to put it? Well, if you care you're there aren't you?*
> *(Story 61)*

In this story the narrator showed that, not just learning how to use a computer, but also buying a computer was seen as important in order to keep in touch with the grandchildren. Being a *technological refusenik* (Selwyn, 2003b) was not as important as being a good grandparent. Adopting a *for the sake of the children*

posture enabled a previously unnecessary expense to be reframed as a necessity, avoiding any loss of face.

These *with-it for the grandchildren stories* also showed that grandchildren have been recruited as significant agents of change for the diffusion of the new technology (Gates, 1996). Grandchildren were particularly effective in this role because they forced many older people to put their personal biases to one side for the greater good of the family unit. Children, however, as the stories in the next section show, were much less effective in this same role.

8.3.3.2.3 Targets for change

Many Nonusers indicated that they resisted overtures from their children to engage with the latest technology. Some took a passive resistance stance, as RonaldN in *the computer in the den* story had done, where he talked about accepting a computer from his children but letting it sit in the den unused because he had no need for it. Others took a more active resistance stance. MavisN, for instance, presented as quite assertive in her opposition to such overtures:

> *I really don't want a computer - my daughter-in-law's been saying, "Mum you need a computer". "Mum you need a computer" and I've only got a two-bedroom unit. I have no place for a computer and if I did have a computer, I'd want it set up. But I really don't want one. What would I do with it? I love writing letters. I like walking down to the letterbox and collecting my mail. I have a fax machine which is wonderful to me, that you can get things there and back and I can handle that. But I don't want a computer. There's no way. I don't want it to do my banking or to pay my bills. That's all taken care of. Why do I need a computer?*
> *(Story 182)*

In this account, MavisN stated her opposition to the position that she *needed* a computer with some annoyance. She asserted that there were, in fact, a number of good reasons why she was not going to submit to such pressures. One reason was the computer's lack of relevance, a matter that Selwyn (2004) also identified as salient for a number of older people. Her second reason was that, like a number of other participants, she actually enjoyed the activity of writing, sending, and receiving letters—a process in which speed of delivery was not, for her, a critical factor. If,

however, speed was to be an issue, MavisN had a fax machine that she could use with confidence. Having a fax machine also served to indicate that she was not averse to technology, as Trocchia and Janda (2000) identified was often the case with non-users. She simply had no need for a computer and would not entertain having one.

In another similar story, FannyN indicated that she, too, had turned down requests from her daughter to use a computer.

> *I'm going to say to you what I say to my kids. I have a son who lives in Hamilton who has Sky and a computer. He's on my back to get Sky. My daughter lives in Blenheim she has a computer and Sky she's on my back to get a computer. And I have said to the kids on various occasions, I do not sit at home on my bum for my entertainment. Excuse my language. I don't want one! (Story 163)*

In this story, FannyN, asserted her position forcefully, as MavisN had also done. Because FannyN had an active social life, she had no need for a computer to distract her attention or occupy her time. Therefore, she was not an appropriate target for the *enabling/elderly* narrative.

In another such story, PaulN indicated that similar overtures had been made to him by family members. He, too, had no need for a computer because his life was fully occupied, physically, mentally, and spiritually. He talked about it like this:

> *My son offered me a computer when his firm was upgrading. But I turned him down; much to his disgust and to my daughter's also… But I find that my spare time is adequately filled at the moment with the things I like to do. I like to come along to bowls three afternoons a week. I then come along another afternoon to play bridge and on the fifth day of the week I go to swimming lessons … and in my other time I am keen on gardening and I'm very keen on reading non fiction books and I find that better for the brain and for the soul than spending my time out of the sunlight twiddling away at a computer. Now that doesn't mean that I don't like computers and don't have a use for computers.*
> *(Story 226)*

In this story PaulN, somewhat less stridently than MavisN and FannyN had done, presented as able to withstand the pressures exerted by family members to have a computer because he had no place for one in his life. This was not because he was anti-technology, but because time was a limited resource and he had made choices about how he was prepared to spend his time. He had worked hard to find an appropriate balance of mental, physical and social activities in his life, and he was not prepared for that balance to be disrupted by a computer.

The above stories indicate that, in various ways, families endeavoured to technologise their members. In addition, to pressures from family members, Nonusers also indicated that they were under pressure to conform to the ways of the computer world by organisational members, as the stories in the following section show.

8.3.3.3 Organisation/society

In the organisation/society setting, Nonusers, like some Users, associated the computer pessimistically with the future, particularly with the fear that people would become automatons. However, Nonusers also called on their experiences with computers in businesses and other organisations to show that their not-connected status defined them as different from the norm, that is, from computer users. As such they considered themselves to be alien to, neglected by, and discriminated against, by organisational actors.

One story of alienation was told by RonaldN, who shared his experience with a service organisation in the following way:

> *To me anyway, one of the scary things about the future is that more and more society will be committed to the use of them [computers] and … I think as older people who have not been exposed to the day to day usage of PCs we're going to come up against this commitment in more and more ways. I mean I've my own experience – I've talked to somebody who was a travel agent or something who was going to send me some information. Oh, you know, what's your email address and I say well I haven't got one and they look at you in horror as though you're from outer space or something and I think that more and more this is going to happen, where the society is going to become so accustomed to people being literate in computers,*

> *you're going to be an outsider. You're not going to be part of society…I see within the next couple of decades, supermarkets will disappear…and you'll be the only person standing at the checkout counter.*
> *(Story 4)*

In this story, RonaldN described himself as a kind of alien from outer space in the eyes of the travel agent he was dealing with because he did not own a computer and was not contactable via the Internet—a tool that was a basic piece of office equipment in the travel agent's world. For the agent, meeting someone who was not part of that world was equivalent to meeting someone from another planet. According to RonaldN, one the ramifications of widespread technologisation was that those, like him, who did not conform to the normal practices of society, were going to become increasingly isolated. Their transgressions would mark them as non-conforming, rule breaking, and deviant (Becker, 1963).

In addition to being marked as different from computer users, Nonusers were also being treated differently, as RobertN's story showed:

> *I have shares in companies and now I get information from them which says if you want to know more about such and such an activity of a company check it on the web, you see. But they don't say, you know, write to us and we'll send you the information because they wouldn't. So I've got to belt around and make phone calls and so on, find a broker and get their opinion and so on. So that's a disadvantage of not being connected.*
> *(Story 170)*

In this account, RobertN described himself as inconvenienced and disadvantaged by having to spend time and money finding out information that users would have had convenient access to. This story not only points to one of the ways in which organisations can be seen as achieving efficiencies with technology, that is, by passing on some of their costs to end users. It also points to the development of a two-tier structure of customer service in which computer users are advantaged over non-computer users because they are a more cost effective unit with which to communicate.

The construction of a hierarchy of customers based on computer use was a matter also taken up by another group of participants who described themselves as discriminated against by organisations because of their Nonuser status. Their conversation-story went like this:

> *SandraN: There's one thing that does upset me is when you see holidays advertised, you know, plane fares and they say its cheaper if you book through your computer. That really annoys me!*
> *NellieN: That annoys me too.*
> *GeorgeN: Yes discrimination. If you've not got a computer, you are discriminated against by other people, by having been sort of considered privileged to be able to get cheaper bookings and that sort of thing. So you are being discriminated against...*
> *ReinhardtN: It doesn't work out much cheaper if you've got to buy the computer to get cheap airfares.*
> *(Story 124)*

For this group of Nonusers, there was a sense of outrage that they were being actively discriminated against because they were not on the Internet, and therefore, not entitled to the same rights and benefits as computer users. The tenor of their discussion oscillated between being annoyed that they should be left out by the manoeuvrings of companies who offered 'Internet-only deals,' and rationalising that the fares were in fact not much cheaper if the price of buying the computer were factored in. Their emotional selves vented moral outrage at their exclusion. However, their rational selves reasoned that the so-called benefits of such deals were more apparent than real, and therefore, there was no justification for becoming computer users.

Although Nonusers did not use the terminology of the digital divide, many of their stories, told in this setting, reiterated some of the concerns raised in the digital divide literature, particularly, that computerisation would produce a digitally divided world (Doczi, 2000; Maharey & Swain, 2000; Norris, 2001; Phipps, 2000; Rogers, 2001). However, despite positioning themselves as occupying an less-favoured-customer status with organisations, these participants were not prepared to become computer users. Often, it would seem, because they could work around the problem using alternative methods, such as asking organisations to contact them by mail or telephone, or, alternatively, as the stories in section 8.2 showed, by asking family

members to conduct Internet transactions on their behalf. If such alternative methods of operation were no longer available, these participants might have to reconsider their position of choice as a Nonuser.

Paying attention to settings provided insights into the multiple ways in which Nonusers constructed their relationships with computers. In the individual setting, many Nonusers portrayed the computer as a potentially useful tool, but, one they had no particular personal need for. However, in the family setting, some Nonusers considered themselves to be targets for change, while others were prepared to rethink their self-centred position as a Nonuser in order to find a way to connect with the grandchildren. In the organisation/society setting, Nonusers found that their decision to be non-computer users positioned them on the fringes of an increasingly technologised society.

8.4 Conclusion

Nonusers' relationships with computers were explored in this chapter in relation to two areas: (a) master narratives, in particular, their acknowledgement of and resistance to the *enabling machine and /elderly individuals narrative;* their dismissal of the *desirable commodity and grey consumers* master narrative; and their partial acceptance of the *potential divider and senior citizens* master narrative; and (b) the three major elements identified in the production of their accounts.

In relation to the master narratives, Nonusers acknowledged that the computer was an *enabling* machine. However, many had no need for the functionality it offered and therefore resisted using it. In particular, many suggested that they had no need to avail themselves of such a facility because they were too young to need a computer, that is, they were not housebound or disabled. Others indicated that they were too old to be bothered using one at their time of life.

Nonusers' stories were also explored in relation to the three production elements of *orientation*, *identification,* and *settings*. Paying attention to these three elements showed that Nonusers identified the computer as a potentially useful tool, but also as a threat to established ways of knowing and being. Focusing on the element of orientation showed that Nonusers oriented to the computer using a long term or

wide-angle lens, contextualising the computer in relation to other technologies and events. This stance provided Nonusers, as it had many Users, with a largely critical perspective on the technology.

Nonusers, like Users and SeniorNet members, also drew on the old stories of stoicism and asceticism in their evaluations of the new computer. However, in the case of Nonusers, these stories served to protect them from the harm potentially posed by the computer. In holding strongly onto these *old stories*, Nonusers adopted a blocking strategy, rather than the filtering strategy employed by Users and SeniorNet members, in which their commitments to stoicism and asceticism helped them to organise and sort out their appraisals of the computer. For Nonusers, the strategy showed them that the computer was not a *desirable* item and was best avoided.

Paying attention to the computer in different settings provided opportunities to see Nonusers make sense of the computer in different ways for different purposes. In the family setting, for example, some Nonusers identified a need to re-evaluate their *disconnected* position in order to present as good grandparents prepared to connect with or keep up with their grandchildren. However, in the organisation/society setting, despite describing themselves as discriminated against and marginalised by organisational actors, Nonusers remained unconvinced of the need to change their non-user status.

This chapter showed that, Nonusers, unlike Users and SeniorNet members, chose to avoid the new computer, rather than engage with it. In doing so, Nonusers claimed agency by identifying the use/non-use of the computer as a matter of choice (Barley, 1998; Selwyn, 2003b). However, constructing the computer as a device of choice points, I contend, to their occupation of a somewhat privileged position. They had a choice because they were not in situations that called for computer literacy skills as a necessity, for example, for their employment (Crow, 2002). They also had a choice because, despite the increasing trend to automated self-service delivery mechanisms, there are, at the current time, alternative systems available for those unable or unwilling to use digitised service centres. In addition, Nonuser participants could afford to say no to computers because they often had access to others, usually family

members, who were prepared to access information on the Internet, or send and receive emails, on their behalf. Thus Nonusers, despite displays of resistance—standing in front of the metaphoric bulldozer and being prepared to place them selves outside the system—did not always stand outside alone; instead, they often relied on others to support them in their non-conformist behaviour. In taking such action, Nonusers displayed an independent-dependent relationship with computers, in that they did not need to own a computer because they could avail themselves of others and their computers as necessary. By comparison, Users preferred to be independent of others in their relationships with computers; while SeniorNet members presented as proudly interdependent and supportive of other SeniorNet members.

In the next and final chapter, I conclude the study by presenting a summary of the key findings and discuss the contribution this study makes to knowledge, theory, and practice.

CHAPTER 9

Conclusion

In this chapter a number of threads are drawn together to conclude the thesis. In section 9.1, I review the approach to the study. In section 9.2, the key findings are reviewed in relation to previous studies on older people and computers. In section 9.3, I discuss the contributions these findings make to knowledge and to theory. In section 9.4, the practical implications of these findings are outlined. Finally, in section 9.5, I point to possible areas for future research.

9.1 Reviewing the approach to the study

The study examined the ways in which members of the aged interpretive community storied computers and themselves in relation to computers, in order to understand how they made sense of the computer as an interruption event—an event they could not simply take for granted, but had to consciously evaluate and construct a meaning for in relation to their own lives.

The study is a situated, partial, and limited understanding. As with all interpretive projects, there are many different stories to tell and different interpretations of those stories are always possible (Denzin, 1994). This thesis is but one story of older people's relationships with computers. It is a narrative production in which I have interpreted, assembled, and presented the views and experiences of others. The result is a creative accomplishment (Denzin, 1994; Gubrium & Holstein, 2002) in which participants' stories have been interpreted and represented through the lens of a particular authorial perspective (Brown, 1998; Krieger, 1991) informed by a particular set of philosophical/theoretical assumptions, and methodological techniques, filtered through a gendered, aged, culturally–based subject positioning.

The approach to this study was underpinned by the social constructionist epistemological perspective that identifies social reality as a negotiated product of ongoing construction, interpretation, and meaning-making—a reality produced by

individuals inventing models and continually testing those constructions in the light of new experiences (Schwandt, 2000).

The specific form of social constructionism adopted in the study was that of narrative philosophy/theory. In particular, I drew on the work of Bruner (1990), Fisher (1984; 1985), MacIntyre (1981), Polkinghorne (1988), Somers (1994), Somers and Gibson (1994), and Weick (1995) and argued for the appropriation, construction, emplotment, and enactment of narratives from a repertoire of available representations, as a means of making sense of situations like interruption events, and of understanding how action is taken in relation to that sensemaking.

The social constructionist theoretical framework underpinned a methodological position that called for the investigative interpretive technique of getting close to subjects and listening to the ways they constructed the reality of their social world. In this case, I made use of focus groups conducted to investigate older people's perceptions of the barriers, benefits, and negative consequences of computers. These forums provided an opportunity to witness and explore participants' sensemaking/storying processes in action. The empirical material was analysed using narrative analysis—a combination of thematic and performative analysis developed specifically for this study. The method was developed to identify and map stories gathered from focus group data, specifically, the ways in which the narrators of those stories constructed and emplotted their relationships with computers in different settings, drawing on and enacting socio-cultural master narratives in the process.

Exploring older people's relationships with computers in terms of this narrative-based framework presented a significant and novel departure from much of the academic and policy literature which has focused principally on increasing usage of the technology (Wyatt et al. 2002). Specifically, in the case of studies on older people and computers, the predominant focus has been on overcoming problems of individual deficit—physiological problems, such as short term memory loss, and psychological problems, such as computer-related anxiety and negative attitudes—to enable uptake of the technology. By contrast, the framework adopted in this study moved the emphasis from deficit to agency, from use to meaning (Selwyn, 2003b). It also moved the focus away from the micro level, the primary point of interest in

previous studies, to an exploration of the relationship between the micro and macro levels, specifically, the individual, family, and organisational/societal settings and how participants' stories about computers and themselves in relation to computers were produced within a particular socio-cultural context by the appropriation and deployment of a particular set of master narratives about age and technology.

The approach taken by this study distinguishes it from the majority of previous studies on this topic in its underpinning epistemological position, its focus, and its emphasis on the process of storying. As a result, the findings from this study produced insights, not previously identified, into the ways in which older people relate to computers. A review of those key findings is presented below.

9.2 Reviewing the key findings

Stories proved to be a rich resource (Langley, 1999) for tapping into respondents' experiences and ways of representing the world. On close examination, many individual stories were rich in metaphor, while others demonstrated important inter-textual qualities drawing on socio-cultural narratives, the fictive literature and the popular press in the narrator's endeavours to make sense of the interruption event encountered. Identifying patterns across this database of stories provided a way to extend and develop the contextually rich, but conceptually thin contribution of the idiosyncratic, individual experience (Langley, 1999). Indeed, closely examining such patterns showed that three master narratives and three narrative production elements were important in participants' sensemaking processes.

9.2.1 Master narratives

The analysis identified that participants storied their relationships with computers by drawing on three master narratives: *the enabling machine and elderly individuals, the potential divider and senior citizens,* and *the desirable commodity and grey consumers*. The master narrative of the *enabling machine and elderly individuals,* in which computers were constructed as beneficent *enablers* assisting *older persons* to live enhanced and independent lifestyles, was predominant in participants' accounts. However, participants were not simply passive recipients of this narrative; they also engaged with it in terms of their own lives and negotiated their own responses to it. Users reproduced this narrative in their stories of the computer's utility and

convenience in connecting them with information and with others. But they also contested the validity of the narrative by evincing the detrimental effects of the computer on some individuals and, potentially, on societies of the future. SeniorNet members also reproduced the narrative, and for similar reasons. However, rather than contesting it, they found a way to engage with it in a community of like-minded individuals, thereby diluting many of the individual-level negative effects identified by Users. Nonusers acknowledged the narrative and the computer's utility, but they also identified that they had no personal need for or interest in using the technology.

The master narrative of the *potential divider and senior citizens* identified computers as necessary components of the information age, without access to which individuals would be marginalised. This narrative was not explicitly drawn on by members of the two computer-user groups, although it was identifiable as providing the context within which they constructed the need to become literate in the basic computational skills of the modern era. By contrast, Nonusers drew extensively on this narrative in recounting experiences of isolation and discrimination in a society where computer use was becoming the norm.

The master narrative of the *desirable commodity and grey consumers*, where computers were seen as important symbols of the modern age distinguishing and empowering those who used them, was called on by some participants and refuted by others. SeniorNet members drew on this narrative to construct the computer, in conjunction with their experiences at SeniorNet, as a desirable object enabling them to be energetic, modern, and competent members of the information age. By contrast, Users and Nonusers contested rather than accepted this narrative, as they endeavoured to evaluate the computer in relation to a set of values (old stories) that were seen as largely incompatible with the principles of a consumer culture (new stories).

Therefore, in addition to negotiating a position for themselves in relation to master narratives about age and technology, participants were also seen to draw on master narratives of prior socialisation—the old stories with which they identified strongly—in order to evaluate the computer and make sense of their relationship with

it. This i*dentification* with old stories was one of the three production elements found to be key factors in participants' sensemaking productions.

9.2.2 Identification

Paying attention to the narrative element of *identification* provided new insights into older people's engagement with computers, insights not available to researchers who identified age simply as a variable—a chronological marker distinguishing older people as different from younger people in their relationships with computers (Charness et al. 1992; Dyck & Smither, 1994; Loges & Jung, 2001; Marquie et al. 2002; Morris, 1994; Tapscott, 1998; Treguer, 2002). By contrast, this study identified age as a bearer of cultural meaning, enabling and constraining participants' sensemaking in important ways. Conceptualising age as a set of commitments or identifications, that is, as the evaluative frame or horizon from which individuals make decisions about what to endorse or oppose and what is good or valuable (Taylor, 1989), proved to be a rich resource for exploring participants' meanings.

The element of *identification*—in particular, the extent to which participants identified with old stories—points to significant ways in which participants endeavoured to make the computer interruption sensible through a process of alignment. Alignment was enacted at two levels. At one level, participants endeavoured to find a sense of fit between their personal values and the values they associated with the computer—between the stories they told themselves about themselves and those they told themselves about the computer. At a second level, participants endeavoured to find an alignment between their own conduct in using or not using the computer, and what they considered to be normative behaviour in relation to computer use.

In relation to the first level of alignment, the analysis showed that overall the three groups of participants identified with a set of *old stories* associated with stoicism and asceticism, in particular, with a concern for work, sobriety, and self discipline, and a low regard for materiality and waste—of time, as well as money. They used these *old stories* to evaluate their relationship with the new computer. However, while this set of *old stories* was found to influence participants' responses, it did not determine them. For instance, many Users emphasised the values of sobriety and self discipline

in their stories and these principles enabled them to find an accommodation with the *good/bad* duality of the computer. SeniorNet members emphasised the values of work and activity in their stories, particularly in the form of mutual help and support, and used the computer as an opportunity to enact these principles. By contrast, Nonusers' stories emphasised a low regard for materiality and a concern for self discipline over extravagance and self-indulgence. The strength of their identification with these old values blocked the transmission of new stories seen as largely incompatible with their existing principles. One of the more interesting findings from the study was the degree to which Users and SeniorNet members differed in their identification with the various master narratives, indicating that there are benefits to be gained from acknowledging the nuances of storying as between two groups who could both be legitimately classed as 'users.'

In relation to the second level of alignment—the individual's sense of fit with societal norms—Users and SeniorNet members both appeared to identify with the need to keep up the technology. Nonusers, on the other hand, felt much less need to do so. On the whole, SeniorNet members appeared to find the most satisfactory assimilation between these two levels of alignment, in that these participants responded to the computer in a way that evoked enthusiasm and positivity, while also recognising that their actions enabled them to keep up and stay connected to modern, technologised society. Users occupied an intermediate position, as they attempted to balance and accommodate a set of personal values that seemed partially incompatible with the computer, while also recognising the need to keep up with technologised society. By contrast, Nonusers experienced a more significant sense of misalignment between their values and those they associated with the computer, and they therefore opted for an avoidance strategy. However in doing so, they recognised that their conduct was out of step with the norms of an increasingly technologised society.

The narrative element of *identification* showed that participants evaluated their relationships with computers as interruption events by relating *new stories* to *old stories*. The second narrative element *orientation* provided insights into the areas on which participants focused their attention in their sensemaking processes.

9.2.3 Orientation

The production element of *orientation* was found to be influential in participants' storying. In particular, the analysis identified that those who related to the computer in isolation from other technologies or events tended to be more positive about the technology than those who contextualised it in relation to such factors. Some Users and most SeniorNet members focused attention on the computer in terms of its personal benefits and tended to neglect consideration of the broader, often more negative, social effects identified by many Users and most Nonusers. On the other hand, some Users and most Nonusers identified the computer as part of a succession of earlier technologies and tended to be either neutral or, more often, critical towards it. Some Users and many Nonusers also situated the computer in relation to events such as increasing levels of unemployment and social change, and tended to evaluate the technology critically in those scenarios.

Orienting to the computer by drawing on the wider societal context was a perspective largely neglected in previous studies on older people's relationships with computers, where the computer was predominantly constructed as benign and beneficial—particularly, in the context of micro level, often controlled studies (Baack & Brown, 1991; Charness et al. 1992; Cody et al. 1999; Czaja et al. 1993; Dyck & Smither, 1994; Kanayama, 2003; Lin et al. 2004; Marquié et al. 2002; McConatha et al. 1994; Morrell et al. 2000; Temple & Gavilett, 1990; Wright, 2000). The apparent bias in these studies—the tendency to reproduce only the *enabling/elderly* master narrative—was highlighted, particularly when such studies were compared with those conducted in relation to children and computers; the latter focusing—much more so than the former—on negatives, risks, and fears, particularly for the lost innocence of children (Buckingham, 1997, 2002; Selwyn, 2003a). Therefore, opting to listen to older peoples *own* stories and experiences with computers and surfacing the multiplicity of ways they oriented to the computer provided insights not previously identified in this body of literature and pointed to a bias-to-the-positive in the way in which the computer had been represented in those studies.

In addition to insights gained by attending to the narrative elements of *identification* and *orientation*, paying attention to the third element *settings* also provided new understandings of the ways in which older people made sense of the computer.

9.2.4 Settings

The narrative element of *settings* was an authorial device used to categorise participants' stories in different situations. One-on-one encounters between individuals and computers were categorised as taking place in *individual settings*; encounters with family members and computers as taking place in *family settings*; and encounters with computers in the wider context as taking place in the *organisation/society setting*. These three settings provided access to multiple contexts in which participants' relationships with computers were acted out. The multiple contexts approach adopted in this study can be contrasted with many previous studies in which older people's engagement with computers was studied in relation to a single site—the individual setting.

In this study, participants in the *individual setting* presented as the principal actors in their *own* stories rather than as subordinate actors in others' stories (MacIntyre, 1981). In this setting, participants displayed a sense of agency and autonomy in choosing to use or not use computers, as well as demonstrating an ability to overcome significant impediments to their enacting these choices. Users and SeniorNet members showed significant resilience in overcoming initial inhibitors to their learning to become, in the end, competent users of the technology, and SeniorNet presented as an effective and influential vehicle for accelerating the diffusion of computer technology amongst the older age group. On the other hand, Nonusers showed themselves as able to withstand concerted efforts from numerous others to conform to the norms of the information society.

In the *family setting*, participants presented as subordinate actors in others' stories. In this domain, participants focused attention on family members as agents of change for the diffusion of the new technology. Members of all three participant groups acknowledged email as a significant communication medium for young people. Users and SeniorNet members acquiesced to the use of this medium in order to keep in touch with family members. However, Nonusers preferred to use media with which they were more familiar—handwritten correspondence and the telephone.

In addition to family members' advocacy of email, and therefore, the necessity for older people to have a computer, participants from all three groups also identified

family members as proponents for the new technology in other significant ways. Some participants were encouraged by their children to use the computer for the purpose of mental stimulation and keeping up with the times. Parents were also seen as convenient places for offloading older machines when the children upgraded to newer models. In addition, many participants identified the computer as a way to maintain important interest-links with their grandchildren—being able to relate to the grandchildren in terms of the grandchildren's interests. Grandchildren were seen to have a greater influence on the choices made by familial elders, than were childrem.

In highlighting the interplay between older people and family members in relation to the technology, this study draws attention to an area neglected in previous studies—the recruitment of younger people to the service of the power elites who shape and fashion the technology for consumption by others (Sussman, 1997). In particular, the study identifies that younger people were involved in recruiting older people to the service of technology (Heidegger, 2003). Participants responded to this situation in various ways. Nonusers, either actively or passively, elected to resist overtures from family members to technologise. Users asserted their authority by pointing out the potentially damaging consequences of the technology on children. SeniorNet members formed their own SeniorNet family providing mutual help and support for each other.

In the *organisation/society setting*, participants were also seen as subordinate actors in others' stories. In this domain, Users occupied the high ground, reviewing the technological landscape as armchair critics. SeniorNet members kept their heads down, opting to make a difference at the inter-personal level, enhancing self-esteem and focusing on the connectivity benefits of the technology. Nonusers remained unrepentant nonconformists—though they also identified as feeling *left out* because of their principles. One of the ways in which this feeling was reflected in their stories was a perceived tendency by firms to shift a share of the transactional costs of doing business from the organisation to the individual consumer.

Paying attention to the *settings* in which participants performed and constructed their stories provided insights into older people's relationships with computers not identified in earlier studies, where older people's engagement with the technology

was studied only in terms of horizontal relationships with others, for example, with other older people (Alemain, 2005; Blit-Cohen & Litwin, 2004; Kanayama, 2003; Lin et al. 2004), or with younger people (Marquié et al. 2002; Tapscott, 1998). By contrast, taking a vertical slice through a number of different situations in which actor-participants found themselves in relation to others provided a rich, multi-layered perspective. It is akin to Boje's (2001) 'Tamara of storytelling' where the audience follows actors through multiple settings and interactions in the pursuit of the story. In this study, participants presented the technology and themselves differently in different settings—as enabled in the *individual setting*, as more constrained and experiencing more tensions in the *family setting*, and as constrained and somewhat resigned in the *organisation/society settings*. Attending to participants' stories in different *settings* enabled the author-actor-producers in this study to display more richness and depth than was apparent in previous studies in which narrowly constructed, one-dimensional characters (Loseke, 2003) performed their parts.

9.3 Contributing to knowledge and to theory

In this section I outline the study's contribution to knowledge and to theory. The contribution to knowledge, to a situated understanding of the ways in which older people relate to computers, was achieved principally through the adoption of social constructionist-narrative approach previously neglected in the literature on this topic. This approach focused attention on older people's constructions of computers, particularly on the stories they told about their experiences with the technology, and on the production and performance of those stories. Participants' storying, as the review of findings in section 9.2 indicates, produced insights into older people's relationships with computers not previously identified in the literature. As such, these findings contribute to the ongoing conversation on this topic.

The study also offers a contribution to substantive theory in two ways: (a) its detailed examination of the ways in which one particular demographic group constructed the computer; and (b) its explication of the narrative model of sensemaking used in that construction work. Each of these areas is discussed further, below.

The study draws on and extends social construction of technology (SCOT) theory by examining the similar and different ways in which members of one particular, but largely neglected social group, the aged interpretive community, negotiated their meanings for the computer at its adoption and use stage (Selwyn, 2003b; Silverstone, Hirsch & Morley, 1992) rather than its design and early development stage, which has been a particular focus of SCOT. The study also confirms SCOT theory in showing that the constructions of three different sub-groups of this community—Users, SeniorNet members, and Nonusers—tended to coalesce around a core set of meanings.

SCOT theory argues that computers are interpretively flexible, that is, that there is more than one meaning hidden within the technological artefact, but that over time this interpretive flexibility ends as multiple meanings stabilise around a particular set of meanings (Bijker, 1994; Bijker, 1995; Bijker, 2001; Pinch & Bijker, 1984; Pinch & Bijker, 1987). The findings of this study are consistent with SCOT theory in that members of the three participant sub-groups identified a range of meanings for the computer. However, Users' meanings tended to coalesce around the *Good Compute*r as a useful tool. SeniorNet members' tended to identify the *Good Computer* as an opportunity provider. Nonusers acknowledged the existence of the *Good Computer*, but also argued that they had no personal need for it. These findings point to a significant degree of closure around one particular set of meanings—that of the computer as a beneficial and enabling device providing those who used it with functional and connective benefits. However, closure is not yet final for this particular technology since members of the three participant sub-groups were also able to articulate some variation in their understandings of the technology, with Users and Nonusers constructing it in positive as well as negative terms, that is, as enabling and facilitative, but also as disabling and disruptive, and SeniorNet members constructing it, predominantly, as a positive and an empowering entity.

However, the study does more than simply identify *what* participants' meanings for the computer were. It also maps *how* those meanings were produced through the deployment of a sensemaking model that identified the construction, enactment, and appropriation of narratives as key (Somers, 1994; Somers & Gibson, 1994). In

particular, the research makes a contribution to theory, by identifying which narratives were drawn on and how they were deployed, as well as identifying other key elements in the sensemaking process.

Sensemaking in relation to interruption events was initially identified (see Figure 1, page 17) as a search for meaning in which individuals engaged by selecting narratives from a socio-cultural repertoire, evaluating those narratives for fit with their own experiences, and producing a meaning for the interruption event that enabled a response, consistent with that evaluation, to be taken.

This generic model of sensemaking was used as a template for making sense of the way that participants made sense of the computer-interruption. However, the analysis of participants' stories showed that sensemaking was a much less linear and a much more dynamic process than initially anticipated. It showed that the narratives drawn on for sensemaking purposes were neither entirely regurgitated nor were they totally discarded, but were, instead, assembled into a multi-layered product and called on selectively in different contexts. The complexity of this process is represented, diagrammatically, in Figure 2 and explained further, below.

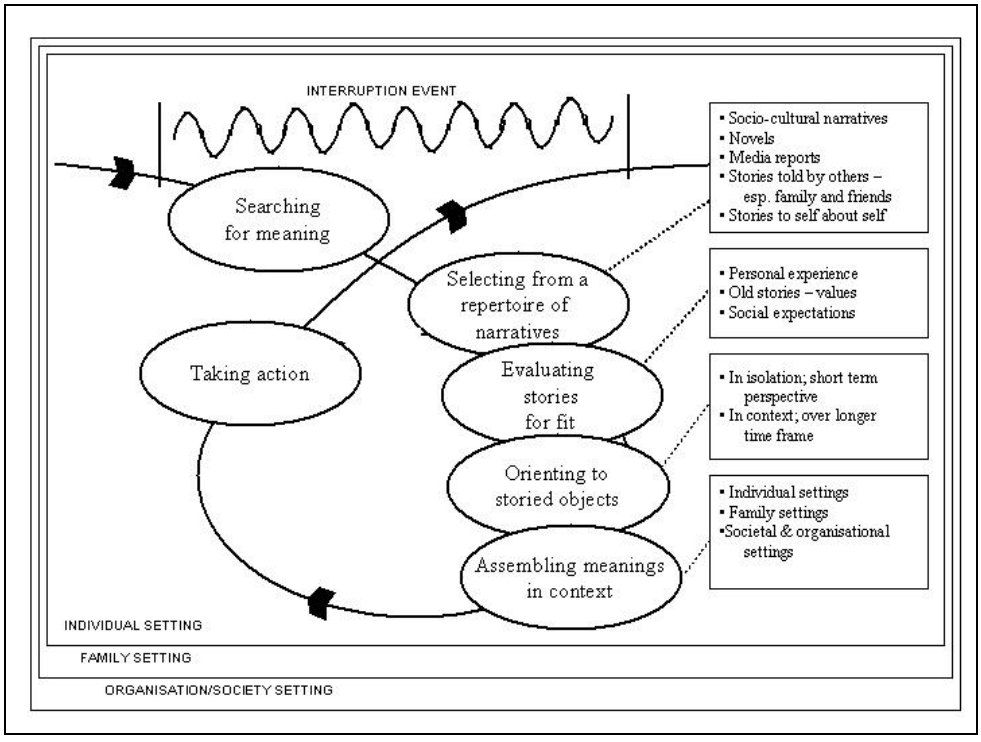

Figure 2: Expanded model of storying used in making sense of interruption events

Making sense of interruptions, that is, making an otherwise meaningless event meaningful (Littlejohn, 1992), intelligible, or sensible (Weick, 1995) was found to involve four key overlapping activities: an intelligence gathering activity (selecting narratives); an appraisal activity (evaluating stories for fit); a focusing activity (orienting to storied objects); and a negotiating activity (assembling meanings in context). Each of these activities is discussed briefly below, followed by an illustration of the sensemaking process as enacted in one of the participant's stories.

Searching for a meaning for the computer-interruption involved an intelligence gathering activity in which participants drew from a number of resources including from novels they had read, articles in the media, and stories told by others, particularly, family members and friends, as well as their own experiences, to compile a repertoire of narratives for sensemaking purposes. Those narratives included stories about the computer as an *enabling tool* and a *desirable object*, as well as narratives about the computer's detrimental effects, including stories about homogenisation, regimentation, and universal surveillance (Bromley, 1997). The extent to which such narratives, once selected, were found to influence decisions about use or non-use of computers depended on how they were evaluated.

Evaluations included the complex activity of fit-appraisal. This activity involved individuals in a data matching process—a search through the narratives selected during the intelligence gathering stage for a sense of fit with the narratives known to be true for those individuals in their own lives, that is, with their moral frame of reference (Fisher, 1984, MacIntyre, 1981). This frame acted as a filter and also as the horizon from which individuals were able to evaluate what to endorse or oppose (Taylor, 1989). Central to this appraisal process were the stories of a previous era that individuals identified strongly with, particularly, the values and commitments of stoicism and asceticism that provided the necessary coherency to guide their evaluations enabling them to fit the interruption event into a coherent story, thus making it sensible for them in terms of their lives.

Evaluations were also influenced by a focusing activity—that is, whether individuals oriented to the computer in isolation of other events and technologies or in relation to them. Relating to the computer in isolation tended to produce a relatively simplistic

understanding of the computer as a functional object, a neutral tool. On the other hand, contextualising the computer in relation to other, broader issues, such as social and technological change produced more variegated and critical understandings. For instance, those participants who evaluated the computer by identifying strongly with the values of stoicism and asceticism—as captured in the themes *moderation in all things, people before machines, needs not wants,* and *machines as good servants, but poor masters*—tended to orient to the computer in terms of a broader socio-historical perspective, often, associating the computer negatively with social change. Such individuals recognised the computer's actual or potential utility, but they tended to be less enamoured of its virtues than were those who oriented to it in isolation of this wider context. The latter group preferred, instead, to focus on asset-features, such as the opportunities the technology provided to keep in touch with others. Thus, the sense participants made of the computer-interruption was influenced by their evaluative frame, as well as their orientation to the object of interest.

The sense made of the computer through this evaluative process was not, however, fixed; rather, it was malleable and negotiable in relation to different contexts and different others. Such contexts included the societal and organisational setting in which the computer was identified as a significant object enabling those who used it to participate more easily than those who did not in this modern, technologised environment. Participants' evaluations were, therefore, negotiated in relation to a set of societal expectations about the computer's significance, as well as its increasing ubiquity.

Societal expectations about computers were experienced by participants in their day-to-day encounters with organisations, but they were also conveyed to them by others, particularly, family members. In the family setting, participants made sense of the computer as a means of keeping in touch with others, particularly younger family members, with whom many believed they might otherwise lose contact. However, the computer was also identified as contributing to the break down of the family unit and to the deteriorating physical, mental, and moral health of young people. Making sense of the computer in this setting was particularly challenging as many participants were forced to juggle a number of priorities, including their sense that knowledge of the computer was essential for young people, but that the computer

could also jeopardise their wellbeing, now and into the future. In addition, many participants identified learning to use the computer as a way to demonstrate being good grandparents, particularly by connecting with their grandchildren's interests, but they were also concerned about their own self-image, particularly their lack of computer skills relative to younger people. The push-and-pull, attraction and repulsion of the computer in this setting made sensemaking difficult and contributed to the construction of multiple meanings for the device.

By contrast with the challenges and tensions experienced in the family setting, participants made sense of the computer in the individual setting by charting a course using their values and commitments as a navigational reference point. In this context, participants were able to demonstrate self-competence and self-control in relation to the interruption event, whether or not they chose to use a computer.

The following worked example, Figure 3, illustrates the sensemaking process in action in relation to one particular account, Story 173.

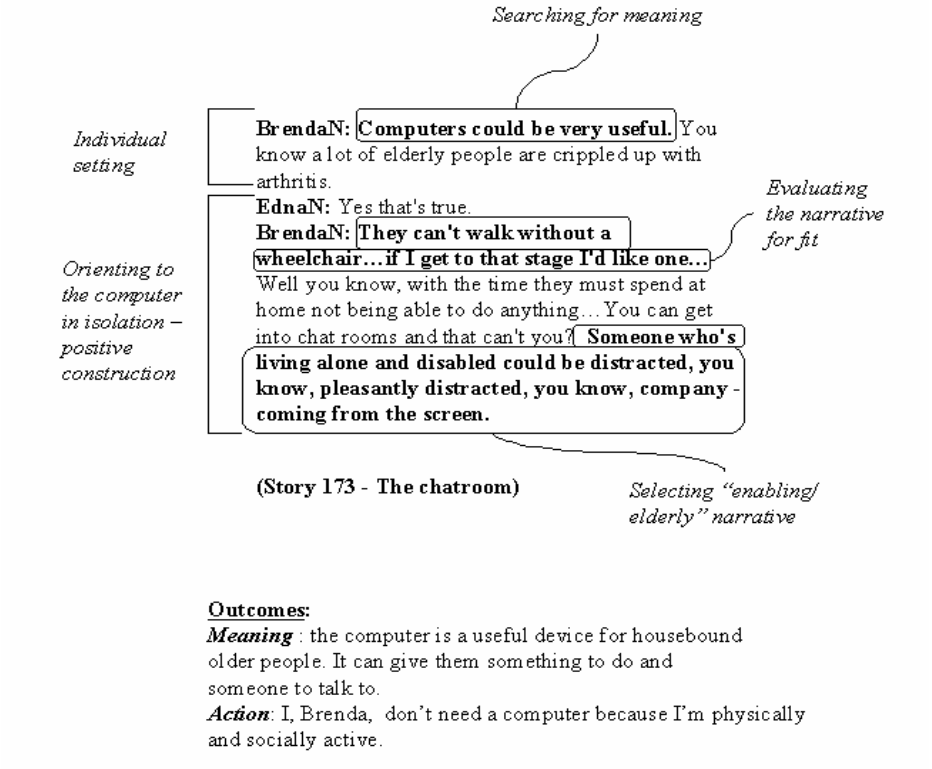

Figure 3: Sensemaking model illustrated

This example demonstrates how the sensemaking model was deployed, in the analysis, to map the process by which the computer-interruption was made meaningful. Sense was made by selecting a particular narrative—that of the computer as an enabling device for elderly persons—and the narrative was evaluated for personal fit, in this case, in relation to the narrator's self-conception as not old, and the computer was, consequently, appraised as having no immediate relevance. Through this process, the computer was rendered intelligible—as a useful device, but as having no immediate application for this particular storyteller.

Subjecting all the stories in the database to a similar analysis, the study identified that four activities were key in enabling sense to be made: the intelligence gathering activity of selecting narratives; the appraisal activity of evaluating stories for personal fit; the focusing activity of orienting to storied objects in isolation of or in the context of other events and technologies; and the negotiating activity of assembling meanings in relation to different others and different contexts. Mapping and explicating the specific dimensions of this model contributes to sensemaking theory and enhances our understanding of the ways in which technology-related interruption events are encountered.

In addition to making a contribution to substantive theory, as argued above, the study also offers a contribution to the theory of method by demonstrating that focus groups are sites in which stories can be exchanged and produced by research participants, and storying can be witnessed in action. Although the stories produced in the focus group context were limited in length, they proved to be a rich source of data for investigating the ways in which a technology is socially constructed. The study also argues that such stories can be meaningfully explored using a language-sensitive analytical tool drawing on thematic and performative analysis in combination to investigate participants' sensemaking processes.

9.4 Implications for practice

In addition to offering a contribution to theory, the findings also have important implications for practice. Making sense, this study argues, is a matter of finding an appropriate fit—a sense of alignment—among the various stories that social actors

encounter as they attempt to deal with interruption events. For this reason, individuals, governments, and organisations dealing with technology-related interruption events may find value in attending to stories and their alignment. In particular, finding ways to relate old and new stories so as to affirm and not negate the past, making a plausible connection between prior experience and the unknown future will also be helpful in enabling an interruption event to be made sense of and successfully negotiated.

The study suggests that peers and family members can act as important enablers for these sensemaking negotiations. Peer groups, such as SeniorNet, appear to be particularly effective for many, because they offer ways of successfully relating stories about the future to stories about the past by affirming both sets of stories, while also providing a safe space for the enactment of a positive aged identity.

Ironically, the findings from the study pose a challenge for SeniorNet organisations as they endeavour to adapt to the future. Provided SeniorNet can frame such adaptation as one of integrating new technology stories with old technology stories, the unitary world view that is such a feature of SeniorNet may be preserved. However, there is a significant threat inherent in the adaptation being framed as a new role for the organisation. Such an adaptation would create not *new/old technology* stories, but *new/old SeniorNet* stories, with the risk of fragmenting the organisation. If SeniorNet changes, it runs the risk of alienating loyal followers, many of whom may be comfortable with the current ways of doing things. Alternatively, if it fails to meet the needs of others—such as existing members who want new challenges, or new members who have come to the organisation with a more sophisticated knowledge of the technology than the early pioneer-members had in the 1990s—then it risks becoming irrelevant and redundant. This scenario suggests that, at least in terms of technology-related interruption events, there is a need to constantly review not only the relative positioning of old stories and new stories, but also their focus—what is paid attention to in those stories.

The study also identified that families, particularly children and grandchildren, played an important role in encouraging the take-up of the new technology by familial elders. However, the family-home context is not without its tensions in such

situations. In many ways, the family setting, as described by participants in this study, was a much more complex environment for learning and using the new technology than was SeniorNet, where a singularly supportive story was articulated by age-peers. On the other hand, in the family situation participants presented a web of relationships enjoined by multiple identity positions and sets of expectations in which the computer figured as a source of competitive rivalry between the old and the young, a means of inter-generational connection, and an avenue through which to keep up with the times and stay *switched-on* and *with-it*. The study suggests that, older family members need reasons to align old stories with new stories that assist them to negotiate successfully through a new technology interruption event. For some, keeping in touch with grandchildren or other family members is one such compelling reason.

The practical implications in the individual and family settings are significant for policy-makers. The effectiveness of peer groups in promoting technology take up suggests that Government support for initiatives such as SeniorNet would be an effective way to facilitate the social policy agenda. It would also seem to be an effective means not merely of ensuring the technology's diffusion, but also of generating enthusiasm for that technology.

However, while the government has focused some attention on SeniorNet as an important model for communities in relation to the adoption of ICTs, much less attention has been paid to families as a resource for the diffusion of the technology amongst members of the older generations. This is somewhat surprising given the government's recognition of initiatives such as *techangels* in which younger students have been identified as mentors for older teachers in school situations (Digital Strategy, 2005), and the Computers-in-Homes project (http://.www.computersinhomes.org.nz) in which computers have been introduced into the homes of low socio-economic families through an agreement between parents and schools. Despite the government's apparent lack of interest in the family as a promoter of technology for older people, the study points to family members as influential in this area. Indeed, for those individuals who are not interested in joining clubs and community-related initiatives such as SeniorNet, learning and making use

of a computer in the confines of the home and the family may be a more acceptable solution.

9.5 Areas for future research

Three broad areas for future research are identified: to extend the study into multi-cultural settings; to examine whether the characteristics of a particular technology (for example the extent to which it is perceived as being radically new) impact on the way it is storied as an interruption event; and to map the evolution of stories in a longitudinal study. Each of these areas is discussed briefly below.

The first area for future research concerns multi-cultural settings. One of the limitations of the present study is its lack of cultural diversity. As previously indicated, the recruitment process tapped into a predominantly white, middle class, well-educated group of older people. As a result, the study lacks ethnic and socio-economic diversity. This is a matter that future studies could address.

A second area of future research might focus on the relationship between the characteristics of a technology and the construction of stories that allow it to be negotiated as an interruption event. The focus of interest in this study was computers—other studies could look into the ways in which other new technologies, such as iPods and other handheld multi-purpose devices that exploit media convergence, are made sense of by older people and/or other demographic groups in the community. A further extension might focus on the way in which media convergence is itself storied.

The third broad area for future research would be an approach that followed-up with respondents, mapping how their stories might change over time, rather than taking a single snapshot at one particular point in time. How individuals choose to continue to engage (or not) with new technologies is an interesting area of research, one that reflects the play of intersecting micro level stories and macro level narratives, and one that will provide a never ending succession of opportunities for future study.

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Department of Management Communication

20 July 2001

Information Sheet for Participants - Barriers, Benefits and Downsides (Stage 1)

Overview
This study is part of a much larger research project funded by the Foundation for Research Science and Technology looking at the socio-economic impacts of ICTs (information and communication technologies) in New Zealand.

Who's responsible for this study?
Ted Zorn, Professor and Chairperson of the Department of Management Communication at the University of Waikato is supervising this particular study. You can phone him directly at (07) 838-4776, or email him at tzorn@waikato.ac.nz, or contact him at the address on the letterhead.

What's the research study about?
The study will ask SeniorNet members for their perceptions and experiences of the barriers which older people may face in learning and using computers and any benefits/downsides which they may have experienced personally in learning and using computers. Practices that have been helpful/unhelpful in learning and using computers will also be canvassed as well as the computer applications which people find most beneficial.

What will you have to do and how long will it take?
The researcher, on some occasions with her supervisor, will be conducting focus group discussions to ascertain participants' views. Focus groups will consist of 8-10 people. The sessions will take place at SeniorNet venues and will be approximately one hour in duration, excluding refreshments and introductions. Discussion topics will be issued in advance of the focus group sessions. All participants will be encouraged to express their views so that the fullest possible range of views is heard. However participants will not be pressured to say more than they feel comfortable sharing.

What will happen to the information collected?
The researcher will usually take notes based on her observations and group interviews. With your permission, discussions may be tape-recorded. These notes and tapes will be used to write a descriptive analysis of the discussions. Only the researcher and her supervisor will be privy to the notes and/or tapes. With participants' permission, summary data will be used to create a report for the funding organization (Foundation of Research Science and Technology). We may also want to write up our findings for presentation at a conference or for publication. However, in no case will this happen without the consent of SeniorNet.

Are all SeniorNet members expected to participate?
Only those people who wish to participate should do so. Each volunteer will be given this information sheet, will have their questions about the study answered and be asked to sign a consent form when they agree to participate. We absolutely do not want to pressure anyone into participating if he or she does not feel comfortable.

How about confidentiality?
We will do our utmost to protect the anonymity and confidentiality of participants. No one other than the researcher and her supervisor will see the notes or hear the interviews. No participants will be named in research reports, and every effort will be made to disguise their identity.

Declaration to participants
If you take part in the study, you have the right to:
Refuse to answer any particular question, and to withdraw from the study at any time.
Ask any further questions about the study that occur to you during your participation.
Be given access to a summary of the findings from the study when it is concluded.

Focus Group Questions for SeniorNet Members

Barriers to accessing, learning and using computers

Introduction –

- The objective of the project is to identify older peoples' perceptions of the barriers to and benefits and downsides of computer use by listening to their experiences and their views. Volunteers for the research project are being solicited through SeniorNet clubs in the Waikato and Bay of Plenty regions. Each participant will be provided with an information sheet about the project, a participant consent form and a list of the focus group questions in advance of the forum. When participants are satisfied that their questions about the project and their participation in it have been satisfactorily answered the following questions will be asked.

Questions -

1. Learning and use -

- Do you feel older people face any barriers in learning and using computers? What are they?
- Did you personally experience any barriers in learning and using a computer? What were they?

2. Benefits -

- Do you feel there are benefits for older people in learning and using computers? If so, what?
- What benefits did you experience in learning to use the computer?
    - Which aspects (e.g., software applications) have you found most beneficial? Why?

3. Downsides -

- Do you feel there may be downsides for older people in learning and using computers? If so what do you feel they may be?
- Did you experience some downsides in learning to use the computer? What were they?

4. Practices that have facilitated computer learning and use -

- What practices at SeniorNet have you found most helpful in learning and using computers?
- Which have been least helpful?

Are there any other issues about older people and computers which you would like to have an opportunity to raise in this forum?

Older People's Use of Information Communication Technologies

Questionnaire

The purpose of this brief questionnaire is to gather some basic background information on older people's use of computer based information communication technologies. The information collected in the survey will supplement the information that you provided in the focus group discussions. **Your responses to the survey are anonymous and confidential**.

Please tick [✓] the appropriate box in answer to each question or write your answer on the lines provided.

Thank you for your participation. Please post in the reply-paid envelope provided.

1. Please indicate how many years experience you had with computers before you joined SeniorNet?

   [ ] 0 years
   [ ] 1-2 years
   [ ] 3-5 years
   [ ] 5+ years

2. How did you hear about SeniorNet initially? (Please tick one only)

   [ ] Word of mouth from a friend or relative or neighbour…
   [ ] Newspaper publicity/advertising
   [ ] Promotional material in library/doctor's waiting rooms etc
   [ ] Other (Please specify)……
   ……

3. What was your prime reason for going to SeniorNet? (Please tick one only)
   [ ] To socialise with like-minded people
   [ ] To satisfy your curiosity about computers
   [ ] To keep up with modern technology
   [ ] To learn to communicate with family and friends via email
   [ ] To explore the world wide web for information
   [ ] To show the grandchildren you are just as smart as they are
   [ ] To learn how to do a particular activity e.g. send Christmas cards
   [ ] To learn how to use a particular programme e.g. word processing
   [ ] Other (Please specify)……..
   ……
   ……

4. Please indicate how many years you have been a member of SeniorNet?

    [ ] 0-1 year
    [ ] 1-2 years
    [ ] 2-5 years
    [ ] 5+ years

5. What do you appreciate most about SeniorNet? (You may tick more than one)

    [ ] The computer classes
    [ ] The manuals
    [ ] The support of like-minded individuals
    [ ] The social activities
    [ ] The fun
    [ ] Other (Please specify)
    ……

6. If there were one thing you could change about SeniorNet what would it be?
    ……
    ……

7. Please indicate which of the following SeniorNet activities you usually involve yourself in? (You may tick more than one)
    [ ] Attending classes - as a tutor/student
    [ ] Attending committee or related meetings
    [ ] Attending club days
    [ ] Attending social functions
    [ ] Other (Please specify) …….
    ……..

8. Do you have a computer at home?

    [ ] Yes
    [ ] No

9. If you do have a computer at home how did you acquire it?

    [ ] Purchased it - new
    [ ] Purchased it - second hand
    [ ] Hand-me-down from family/friend
    [ ] Other (Please specify) ……..…

10. If you do have a computer at home how often do you use it?

    [ ] Once per day
    [ ] More than once per day. How many times on average? …….
    [ ] Less than once per day. How many times on average? ……..

11. If you don't have a computer at home, how likely are you to purchase one in the next 12 months?

    [ ] Very likely
    [ ] Likely/possible
    [ ] Not likely/probably not
    [ ] Definitely not

12. Are you male or female?

    [ ] Female
    [ ] Male

13. To which age group do you belong?

    [ ] 55-60
    [ ] 61-65
    [ ] 66-70
    [ ] 71-75
    [ ] 76-80
    [ ] 81-85
    [ ] 86-90
    [ ] 90+

14. What is your highest education qualification?

    [ ] Primary School
    [ ] Secondary School
    [ ] Trade certificate
    [ ] University Degree
    [ ] Other (Please specify)
    ……

15. What do you mainly use the computer for? Please rank the suggested uses listed below from 1 ⇨ 4. 1 indicates the activity I use the computer for most often through to 4 indicates the activity I use the computer for least often. Use each number only once. *(For example – One possible answer would be - 1. Tool 2. Email 3. WWW searching 4. Hobby)*

    [ ] Email
    [ ] World Wide Web searching
    [ ] As a tool e.g. for word processing/accounting/etc
    [ ] As a hobby e.g. to play games

MANY THANKS FOR COMPLETING THE QUESTIONAIRE

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Department of Management Communication

16 July 2002

Information Sheet for Participants - Barriers, Benefits and Downsides (Stage II)

Overview
This study is part of a much larger research project funded by the Foundation for Research Science and Technology looking at the socio-economic impacts of ICTs (information and communication technologies) in New Zealand.

Who's responsible for this study?
Ted Zorn, Professor and Chairperson of the Department of Management Communication at the University of Waikato is supervising this particular study. You can phone him directly at (07) 838-4776, or email him at tzorn@waikato.ac.nz, or contact him at the address on the letterhead.

What's the research study about?
The study will ask older men and women, over the age of 55 years, for their perceptions of the barriers, benefits and negative consequences which older people may face in learning and using computers. Computer users and non-users will both be surveyed, but in separate groups.

What will you have to do and how long will it take?
The researcher will conduct focus group discussions to ascertain participants' views. Each focus group will consist of 6-8 people. The sessions will take place at agreed venues and will be approximately one hour in duration, excluding refreshments and introductions. The discussion topics will revolve around the barriers, benefits and negative consequences of computers and computing. All participants will be encouraged to express their views so that the fullest possible range of opinions is heard. However participants will not be pressured to say more than they feel comfortable sharing.

What will happen to the information collected?
The researcher will usually take notes based on her observations during the interviews. With your permission, discussions may be tape-recorded. These notes and tapes will be used to write a descriptive analysis of the discussions. Only the researcher and her supervisor will be privy to the notes and/or tapes. With participants' permission, summary data will be used to create a report for the funding organization (Foundation of Research Science and Technology). We may also want to write up our findings for presentation at a conference or for publication.

Who will participate?
We are interested in talking with approximately 200 people over the age of 55 years: 100 users and 100 non-users; approximately half of each group will be male, and half will be female. Only those people who wish to participate should do so. Each volunteer will be given this information sheet, will have their queries about the study answered, and be asked to sign a consent form when they agree to participate. We absolutely do not want to pressure anyone into participating if he or she does not feel comfortable in doing so.

How about confidentiality?
We will do our utmost to protect the anonymity and confidentiality of participants. No one other than the researcher and her supervisor will see the notes or hear the interviews. No participants will be named in research reports, and every effort will be made to disguise their identity.

Declaration to participants
If you take part in the study, you have the right to:

- Refuse to answer any particular question, and to withdraw from the study at any time.
- Ask any further questions about the study that occur to you during your participation.
- Be given access to a summary of the findings from the study when it is concluded.

Focus Group Questions for Nonusers

Background:

The objective of the project is to identify older people's perceptions of the barriers to, benefits, and negative effects of computers and computing by listening to their stories and their opinions. Volunteers for the research project are being solicited through Lyceum, Grey Power and Age Concern organisations in the Waikato and Bay of Plenty areas. Each participant will be provided with an information sheet about the project, a participant consent form, and a list of the focus group questions in advance of the forum. When participants are satisfied that their queries about the project, and their participation in it have been satisfactorily answered the following questions will be asked.

Questions:

1: What do you see as the advantages of computer based information communication technologies (ICTs)?

2: What do you see as the disadvantages of ICTs?

3: Which ICTs, if any, do you use and why?

4: Which ICTs, that you're aware of, do you not use and why?

5: What facilitates/impedes your use of ICTs?

6: What barriers do you see in learning and using computers?

7: What benefits do you perceive might accrue from learning and using computers?

8: What negative effects do you think might eventuate from using computers?

Seniors and Computers: Older Non-Users

Questionnaire

The purpose of this brief questionnaire is to gather some basic background information on older people and personal computers. The information collected in the survey will supplement the information you provide in the focus group discussions. **Your responses to the survey are anonymous and confidential**.

Please tick [✓] the appropriate box in answer to each question or write your answer on the lines provided.

Thank you for your participation.

1. How many years experience have you had with personal computers, if any?
   ……
   ……..

2. Is there a computer in your home?

   [ ] Yes
   [ ] No

3. If you have a computer in your home, who uses it?
   ……
   ……
   ……

4. If you don't have a computer at home, how likely are you to <u>purchase</u> one in the next 12 months?

   [ ] Very likely
   [ ] Likely/possible
   [ ] Not likely/probably not
   [ ] Definitely not

5. What are your preferred activities? Name the activities in which you most enjoy participating
   ……
   ……
   ……

6. What are the activities that take up most of your time?
   ……
   ……
   …….

7. Are you male or female?

   [ ] Female
   [ ] Male

8. To which ethnic group do you belong?
   ……
   ……

9. To which age group do you belong?

   [ ] 55-60
   [ ] 61-65
   [ ] 66-70
   [ ] 71-75
   [ ] 76-80
   [ ] 81-85
   [ ] 86-90
   [ ] 90+

10. What is your highest education qualification?

   [ ] Primary School
   [ ] Secondary School
   [ ] Trade qualification
   [ ] Diploma
   [ ] University Degree
   [ ] Other (Please specify)
   ……
   ……
   ……

MANY THANKS FOR COMPLETING THE QUESTIONAIRE

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Te Whare Wānanga o Waikato

29 January 2003

Dear

Thank you for agreeing to participate in the research project on "*Older People and Computers*." This letter confirms the details we discussed on the telephone today and gives you a few more details. The focus group will be held in the Cambridge Health and Community Centre in Taylor Street, on Tuesday 4 February, starting at 9am and finishing at approximately 10.30am. Please come to the front door of the main building, not the SeniorNet rooms at the rear. We will start with the discussion group for about an hour and follow with morning tea. You should be away from the Centre by 10.30am or so.

I have enclosed an Information Sheet explaining a little bit about the project, and also an Informed Consent form for you to sign prior to the interview. If you have any questions regarding the project that you would like answered before you come along, please do not hesitate to telephone me. If you need transport to get to the venue please let me know and I may be able to pick you up on my way into town. If you are unable to join us on the day please let me know.

I really appreciate your taking the time to participate in the project and look forward to seeing you on the day.

Kind regards,

Margaret Richardson

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Te Whare Wānanga o Waikato

4 February 2003

Dear ,

Thank you for making the time to come along to the focus group in Cambridge yesterday, and for participating so willingly in my research project on *Seniors and Computing*. I really appreciated your contribution, and really enjoyed the session. It is a tremendous privilege to have the opportunity to do this research and to meet so many interesting people because of it.

I will keep you informed on the research findings as events unfold. Thanks again.

Regards for now,

Margaret Richardson

Consent Form

Waikato Management School
Department of Management Communication

Project: Computing for Seniors: Barriers, Benefits and Downsides

I have read the information sheet for this study and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I also understand that I am free to withdraw from the study at any time, or to decline to answer any particular questions.

I wish to participate in this study under the conditions set out on the information sheet.

Signed:

_____

Name:

_____

Date:

_____

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