Everyday life amongst the oldest old
- descriptions of doings and
possession and use of technology

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Dedication

This thesis I would like to dedicate to two elderly people who were special to me.

First, my grandmother Jenny Evelina Larsson, I believe it was you who made me love and appreciate elderly people so that it became my area of interest and work.

And then, Werner Berns, my “grandfather-in-law”, who was the inspiration for the subject of the thesis as we had long discussions about daily life and how it was effected by high age. We also talked about research and since we realized you would not be around for the disputation you instead become “the cover boy” at the age of 92 just weeks before you passed away.
ABSTRACT

The general aim of the present thesis is to expand knowledge about the everyday lives of the oldest old (85+) living independently and to improve and deepen the understanding of their doings and possession and use of technology. The everyday lives of the oldest old represent, in many aspects an under-researched area, partly because this age group is seldom included in national surveys regarding living conditions and time use.

This thesis comprises four papers. In paper I the extent and direction of research regarding elderly people is investigated through an examination of articles published in six well-reputed and well-established occupational therapy journals. Fifteen percent of the articles published between 2001 and 2006 included elderly people to some extent. Only five articles were about the oldest old. Most articles had a quantitative approach and concerned instrument development and testing. The findings show that articles concerning the oldest old are sparse, especially regarding their subjective experience. The following three papers are based on data derived from an empirical project based on interviews and observations with 18 oldest old individuals. Paper II explores how individuals over 85 years of age themselves describe and experience daily life. ‘Doing everyday life’ is described through five overarching themes: ‘Experiencing being old’, ‘Doings in everyday life’, ‘Patterns of the day’, ‘Altered doings’ and ‘The importance of time’. The daily doings are described as consisting of the usual things that have always been done, although how the doings are performed have changed. To do something is stressed as important for well-being, and a strong motivation to manage everyday doings on one’s own is expressed. Paper III explores and describes the experiences and relations to technology in everyday doings of the oldest old as they themselves describe it. Four categories; ‘Perception of technology’, ‘Technology holdings’, ‘Handling technology’ and ‘Compensatory technology in old age’ emerged from the material. Technology needs to be integrated into the daily routines for it to be used. A modest and pragmatic attitude towards technology stands out, showing a discrepancy with public policy, which implies that technology will enhance independence and participation for elderly people. In paper IV, data from a younger group (~85) is included to describe, compare and discuss how elderly people belonging to different age cohorts (~85 and 85+) relate to their physical environment, primarily technological objects used in the home, and to examine how this is influenced by experiences and possession of technology over the life course. Possession and use of technological objects are similar for both groups over the life course from the parental home through the family time, although in the senior citizen time differences in technology possession and use appear. At higher ages the chronological age becomes a factor in deciding about upgrading or downsizing of the technology room; this is described as an ‘aging turn’.

The conclusions drawn are that to continue and perform the everyday doings as one has always done is important in old age. At high ages downsizing of the technology rooms is an important issue and new technological objects need to be incorporated in everyday doings in order to be used and perceived as beneficial.

Key words: oldest old, ageing research, everyday technology, gerontechnology, environmental gerontology, everyday life, ADL, occupational therapy.
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ORIGINAL PAPERS

This thesis is based on the following papers, which will be referred to by their roman numerals in the text:


III. Larsson, Å., Haglund, L., & Hagberg, JE. How technology is perceived in the everyday lives of the oldest old. Submitted.

IV. Larsson, Å., & Hagberg, JE. Ageing and the artefacts for living - Technology through the life course. Submitted.

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ABBREVIATIONS

ADL  Activities of Daily Living
CINAHL  Cumulated Index of Nursing and Allied Health
FSA  Förbundet Sveriges Arbetsterapeuter
       [The Swedish Association of Occupational Therapy]
IADL  Instrumental Activities of Daily Living
ICT  Information and Communication Technology
NISAL  National Institute for the Study of Ageing and Later life
OECD  Organisation for Economic Co-operation and Development
OT  Occupational Therapist
PADL  Personal Activities of Daily Living
PRO  Pensionärernas Riksorganisation
       [Swedish National Pensioners’ Organisation]
SKL  Sveriges Kommuner och Landsting
       [Swedish Association of Local Authorities and Regions]
SOU  Statens Offentliga Utredningar [Swedish Official Reports]
SPF  Sveriges Pensionärers Förbund
       [The Swedish Association for Senior Citizens]
WFOT  World Federation of Occupational Therapists
WHO  World Health Organisation
PREFACE

The present thesis is written by an occupational therapist engaged in postgraduate studies at the National Institute for the Study of Ageing and Later Life, NISAL, at Linköping University. NISAL is an interdisciplinary research unit whose researchers mainly represent social and humanistic disciplines (i.e. social gerontology, social work, sociology of technology, culture geography, etc). Coming from the medical faculty and the caring sciences it has been interesting, instructive and challenging to conduct doctoral studies in an environment that is mostly influenced by the arts and social sciences.

Both occupational therapy and social gerontology have inspired and guided the studies, which will be evident in the thesis as well as in the papers on which the thesis is based. Two of the included papers have been published in occupational therapy journals and two papers have been submitted to gerontology journals. However, standing between or in the midst of two different subjects is both positive and difficult, as one is constantly challenged and questioned. Hopefully this thesis will contribute to the development of knowledge in both fields and will also help to bridge knowledge between the subjects and contribute to development within both areas.

The subject for the thesis is the oldest old and their everyday life, with special focus on their doings and their possession and use of technology. Why is this interesting and worth exploring? When I commenced my postgraduate studies at NISAL the area of technology in old age was presented and immediately awoke my interest. For an occupational therapist, assistive devices and environmental adaptations are some of the professional resources used. Understanding how different technologies influence everyday life is important knowledge for the core of the profession. The specific questions this thesis intends to elucidate arose from a discussion I had with an old man, a 91-year-old retired medical doctor, who described a situation when he had to call the hospital because he felt his pacemaker was not functioning properly. He wanted to see his physician. When he made the call, a digital voice answered and gave him instructions to press different buttons depending on how he wanted to be connected and his reason for calling. The man, who had expected to talk to a person, found it hard to hear and understand these instructions. He also had impaired vision and tremors in his hands which made it difficult to execute the instructions. The fact that he had a telephone of an older type with a “spinning wheel” for the numbers and not buttons made it impossible to follow the instructions. Frustrated, he hung up without finishing what he wanted to do.

This incident, and similar stories, led to the questions investigated in the papers comprising the present thesis. The questions are: What kind of research with elderly people as participants is currently reported on (Paper I)? How is the everyday life of the oldest old perceived by the oldest old themselves (Paper II)? What technologies do the oldest old possess and how do they regard them (Paper III)? How do the technology holdings (landscape) change over the life course (Paper IV)?
INTRODUCTION

This thesis focuses on the everyday life of people over 85 years of age, especially their daily doings and possession and use of technology. The everyday life of elderly people has mostly been studied in terms of how to manage, and such studies are often related to disabilities or home help services and activities of daily living (ADL) (Tollén, Fredriksson & Kamwendo, 2008). Studies exploring activities of daily life in different forms, such as frequency or duration, or as time use have also been performed (see e.g.: Horgas, Wilms & Baltes, 1998; Hillerås, Jorm, Herlitz, & Winblad, 1999). However, the experience of everyday life among elderly people has been only sparsely researched (Tollén et al., 2008; Häggbom Kronlöf, Hultberg, Eriksson & Sonn, 2007; Gunnarsson, 2009) and has mostly concerned persons with disabilities or people involved in care or rehabilitation services (Borell, Lilja, Andersson Svidén & Sadlo, 2001; Tollén et al., 2008; Gunnarsson, 2009).

Studies focusing on the oldest old living and managing on their own seem sparse as most research regarding elderly people focuses on mortality and morbidity (Wilken, Walker, Sandberg & Holcomb, 2002). As the oldest old is a portion of the population in society that will increase significantly in the future (Statistics Sweden, 2008b), matters concerning their circumstances need further exploration. To understand how occupations affect a person, studies elucidating doing and the acting persons’ perspective are needed (Polatajko, 2010). In public policy great confidence is placed in technological solutions for enhancing elderly people’s independence and for helping them to continue to live in their own housing (SOU, 2003; WHO, 2002; OECD, 1998). How elderly people themselves experience their everyday doings, value different forms of technology, and look upon their remaining life is vital knowledge for how to plan and implement services and measures that will meet the needs and wishes of elderly people.

In this thesis, different terms are used to indicate different age groups of elderly people.1 When referring to people over 65 years of age the term elderly people are used. The age group that is the focus of attention in this thesis, people over 85 years of age, is called the oldest old or 85+. Another term used for people over 85 years of age is very old persons. This term is used primarily in the background in referring to research in which the referred authors use this term.

In using the terms technology objects and artefacts, technology objects is seen as an overarching concept including both artefacts (tools, utensils, appliances etc) and supply systems (electricity, water, drain etc) (Mitcham, 1994).

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1 The choices made for the use of different terms according to age are inspired by Wenger (2002).
BACKGROUND

To facilitate understanding of the focus and rational behind this thesis the theoretical background provides an overview of: The oldest old, Research about the oldest old, Everyday lives and doings from an occupational perspective, Environment and elderly people, Technology, everyday life and ageing, Theoretical perspective on everyday life and technology, The perspective of the individual, and Pre-understanding and context of the author.

The oldest old

In Sweden the age distribution has shifted and an increasing share of the population is composed of elderly people. In 2007, 17.5 % of the population was over 65 years of age and 2.7 % was over 85 years of age (Statistics Sweden, 2008a). In the near future it is principally the age group 65 – 79 that will increase but around the year 2020 the numbers in age group 80+ will rise (Statistics Sweden, 2008b). More people will reach very high ages as the expected number of very old people will be twice as many as now, and will reach 900 000 by the year 2050 (in 2005 the number was 487 000) (Statistics Sweden, 2006a). The average lifespan is expected to rise for both men and women, and in the year 2050 will reach 83.8 years for men and 86.3 years for women (compared to 78.9 and 82.9 respectively for men and women in 2007) (Statistics Sweden, 2007).

Most very old people reside in their own homes (not institutions), as shown by the fact that 83.2 % of people over 85 years currently have such living conditions (SKL, 2006). Of those over 80 years who live in ordinary homes, about 21 % have a home help service (Socialstyrelsen, 2007). Most of the oldest old thus live independently in their own homes and manage their daily life without the help of caring services from the local community.

There is limited knowledge regarding this group of elderly people. Time use studies describing everyday life activities (Statistics Sweden, 2003) and surveys examining living conditions (Statistics Sweden, 2006b) exclude informants over 84 years of age, thus facts about the age group over 85 are sparse. What is known is that the cost for care and services is mainly affected by the increase in the number of people over 80 (Statistics Sweden, 2008b) and the need for more assistive devices as age increases (Dahlin Ivanoff & Sonn, 2004). Research exploring and describing the everyday life and living conditions of the oldest old is vital, as knowledge in these areas is an essential factor for planning services and care of elderly people.

Research about the oldest old

Even if knowledge regarding the oldest old is sparse, several studies have been performed considering this age group. As the Nordic countries have high proportions of elderly people and a long tradition of welfare policy towards elderly people, several studies has been undertaken in these countries (Szehely, 2005). Longitudinal multidisciplinary research projects have been in progress since the early 1970s and have revealed important knowledge on both medical aspects and social factors regarding elderly people (Berg, 2007).
In studying aspects of occupational engagement among elderly people Nilsson (2006) found that the experience of occupational engagement can be described as experiences of activation and experiences of transformation. Very old people are most likely to endorse social and cultural activities and least likely to endorse ballgames and sports. Nilsson also found that engagement in leisure is a predictor for life satisfaction, that is, a person 85 years or older who is more engaged in leisure is more satisfied than a person of the same age who is less engaged in leisure. At the same time, leisure is the domain of life that very old people are least likely to be satisfied with. Nygren (2006) investigated the inner strength of people over 85 years of age and concluded that being healthy at 85 years or older means that despite diseases of different kinds and diminished strength and endurance it is possible to be strong and experience a good ageing. In order to perceive oneself as being active when amongst the oldest old, a wide perspective on activity is needed, where doings such as thinking back on past times are also viewed as activities. Hillerås et al. (1999) measured activity patterns in people over 90 years of age and found that the participants had variable but low activity levels over a day, and that there was a positive association between physical activity and well-being. Horgas et al. (1998) found that most activities were performed at home alone and that higher ages indicated less activity engagement.

In her thesis, Häggblom Kronlöf (2007) revealed that very old persons live a creative and varied life and handle the balance between abilities, limitations and environmental demands. Assistive devices are used to support daily occupations even if the devices are sometimes seen as negative. Very old peoples’ experiences of participation affect their self-image. The overall use of assistive devices related to dependence in daily activities for persons with macula degeneration was investigated by Dahlin Ivanoff & Sonn (2005). The results show that 82 % of the participants used assistive devices and 80 % of the device users were independent in ADL. From a European perspective, Löfqvist (2008) investigated the use of and need for mobility devices and found that higher proportions of elderly people in Western European countries used assistive devices as compared to Eastern Europe. Löfqvist’s study also showed that mobility devices, especially walkers/rollators, impacted on activity and participation as they offered support for transportation and activity performance.

Haak (2006) explored participation and independence among old and very old people in aspects of home and neighbourhood environments. Her studies showed that the majority of environment problems were perceived along walking routes. The most important public facility to visit for the old was the department store. Hinck’s (2004) investigation of the lived experience of rural oldest old concluded that continuing to live at home had a strong positive value even for the oldest old.

Investigating morale, health and living conditions in the oldest old in Northern Sweden revealed a high prevalence of hypertension, depression and hip fractures. A large portion of the oldest old have high morale. There are large variations in social, medical and functional variables within and between different ages and gender groups (Von Heideken Wägert, et al., 2005; 2006).

Phillipson, Bernard, Phillips & Ogg (2001) studied how family and community life in England impacted being old in the 1950s compared with in 1995. They found that most elderly people had family-based networks, although the family patterns had changed.
Support was both provided and received in these networks and the importance of independence in old age was stressed. The San Francisco 85+ study (Johnson & Barer, 1997) which investigated adaptation to daily challenges and competencies needed to survive and live in the community concluded that a large portion of the participants had difficulty with their activities of daily living but still continued to live more or less independently and regarded their health as good. They also found that family support was essential to continue living in the community.

Everyday lives and doings from an occupational perspective

Everyday life is something that in many aspects is taken for granted and it signifies different things for different people and thus gives a personal experience (Ellegård, 2001). Everyday life research includes many angles of approach and some aspects are more investigated than others. To describe what everyday life consists of the word ‘occupation’ is used. Occupation is described as “groups of activities and tasks of everyday life, named, organized and given value and meaning by individuals and a culture. Occupation is everything people do to occupy themselves (self-care), enjoying life (leisure), and contributing to the social and economic fabric of their communities (productivity)” (CAOT, 2002, p. 34). These areas are described by Kielhofner (2008) as three broad areas of doing, which are defined as activities of daily living, play, and productivity (work) (p. 5).

Activities of daily living (ADL) are defined as typical life tasks required for self-care and self-maintenance; play is activities undertaken for their own sake; and productivity includes activities that aim at providing services or commodities to others (Kielhofner, 2008).

To define the meaning of occupation, the concept ‘doing’ is widely used (Hasselkus, 2002). Wilcock (1999) establishes that ‘doing’ has become an increasingly used term and that is often seen as synonymous with ‘occupation’. Together with ‘do’, ‘doing’ is part of many definitions of the concept ‘occupation’. As early as 1922 Meyer wrote: “Occupational therapy contends that what people do with their time, their occupation” (Jarman, 2010, p. 83). A reference to time is also made by Kielhofner (1983) who says that ‘doing’ represents what a person does to occupy him or herself in time and space. Wilcock (1999) describes ‘occupation’ as a synthesis of ‘doing’, ‘being’ and ‘becoming’, whilst Nelson (1988) describes ‘occupation’ through ‘occupational form’ and ‘occupational performance’ and emphasizes the ‘doing’ as ‘occupational performance’ is the actual doing that takes place in a surrounding context (i.e. ‘occupational form’).

Using a philosophical phenomenological method McLaughlin Gray (1997) analysed the core of the concept ‘occupation’ and found that for an ‘activity’ to be considered an ‘occupation’ it must be experienced as a ‘doing’ for the individual. It should also be goal-oriented, have meaning for the individual, and be repeatable. The relation between ‘activity’ and ‘occupation’ is also discussed by Pierce (2001), who describes ‘occupation’ as a person’s personally constructed, one-time experiences in a unique context, and ‘activity’ as a more general, cultural shared idea about a category of acting. Both these authors (McLaughlin Gray and Pierce) thus see ‘occupation’ as more subjective than ‘activity’. Brasic Royeen (2002), who conducted a review of how ‘occupation’ is defined in English speaking occupational therapy literature indexed in CINAHL (Cumulated Index of Nursing
and Allied Health), suggests that ‘occupation’ should be seen as a process of ‘doing’ with meaning where ‘activity’ is the result. Participation is also viewed as an observable result.

‘Doing’ alone is thus not enough for it to become ‘occupation’. Wilcock (1999) accentuates that only ‘doing’ can be too much, there must be balance. ‘Occupation’ constitutes something more besides ‘doing’. CAOT (2002) notices that ‘occupation’ is used interchangeably with ‘task’ and ‘activity’ and that these concepts are placed on a level with each other; nevertheless the study takes the position that ‘occupation’ is wider and gives meaning to life. Brasic Royeen’s (2002) definition also includes a component of meaning.

In both Pierce’s (2001) and McLaughlin Gray’s (1997) definitions of ‘occupation’ the individual is to experience a ‘doing’. Hence, a subjective experience is decisive for what is considered to be an ‘occupation’. Kielhofner, Tham, Baz & Hutson (2002) say that the ‘doing’, among other things, is affected by the individual’s perceptions of the doing, a subjective element. Within lifeworld phenomenology the subjective experience is fundamental, a prerequisite or a requirement (Bengtsson, 1999). It is the subjective experience of ‘doings’ or ‘actions’ that helps us to understand the world around us.

Emphasizing the subjective experience of meaning, autonomy and self-determination is described as having an occupational perspective. The occupational perspective suggests that a person’s experience of meaning in an occupation is a key factor in the context of health (Hemmingsson & Jonsson, 2005). The subjective experience is stressed as important within occupational therapy as client-centred practice is emphasised both in major models of practice (f ex, Kielhofner, 2008; CAOT, 2002) and in the Code of Ethics (FSA, 2005) which states that occupational therapy service should be based on the client’s values and needs. Occupational therapy aims to enable the individual to participate in the activities of daily living (FSA, 2005; WFOT, 2004). Through occupation, health and well-being are promoted (WFOT, 2004). The measures that occupational therapists use to enable doings in everyday life for the individual are aimed at either the individual or the environment, and concern activities in daily life. These measures are to prevent, improve or compensate the individuals’ capacity to perform the preferred doings. Occupational therapists also recommend or prescribe assistive devices and investigate the need for alterations in the physical and social environment, and formulate suggestions for adaptations or modifications (FSA, 2005; WFOT, 2004). To improve the chances for elderly people to manage everyday life and to age in place, occupational therapists could contribute by either increasing their performance capacity and/or reducing barriers in the environment (Peterson, 2009).

Environment and elderly people

Everyday life is always related to the environment as doing takes place in the physical and socio-cultural context and is also influenced, and given meaning by it (Kielhofner, 2008). Environment is described as consisting of the objects used when doing things, the spaces within which things are done, the social groups encountered, and the occupational forms or tasks available, expected or required by the context, culture, and political and economic context (Kielhofner, 2008). The environment thus has both social and physical properties
The environment also demands particular behaviours and discourages or disallows others (Kielhofner, 2008).

Within environmental gerontology the study of home environments is an important area (Gitlin, 2003), even if there have been few recent studies in this field (Iwarsson, 2004). The home is the context for growing old as most elderly people grow old in the residence in which they have lived for a long time, and thus they can be said to age in place (Gitlin, 2003). There is a lack of research on the daily home life; research focus has been more on elderly people in institutional settings (Gitlin, 2003). For elderly people, the home is an environment where they can perform their daily doings. It is more than a physical and social environment - it is a part of the individuals' life that is inseparably connected with self-identity (Lilja, 2000). Elderly people have fewer life spaces than people who are working or at school. The home might be their only life space. The home can, when leaving work, be the only permanent spot there is (Gaunt & Lantz, 1996). Especially if elderly people have some kind of functional limitation they are more confined to their home compared to younger people (Lilja, 2000). Elderly people spend a vast amount of time and perform most of their everyday activities in their homes or in their close neighbourhood (Horgas et al., 1998; Gitlin, 2003).

One of the most used models in environmental gerontology is the competence environment press framework developed by Lawton and Nahemow (Scheidt & Windley, 2006; Gitlin, 2003; Wahl & Weisman, 2003). Lawton established that subjective interpretations of the environment affect how people behave, and also that the behavioural outcome depends on the individual's competence and the environmental press (Scheidt & Windley, 2006). The environmental docility hypothesis states that individuals with lower competence, such as frail elderly people, are more likely to experience environmental difficulties due to the demands of the environment (Scheidt & Windley, 2006; Iwarsson, 2004; Wahl & Lang, 2004). The concept of person-environment fit (Scheidt & Windley, 2006; Iwarsson, 2004; Wahl & Lang, 2004) emphasizes this relation between competences in the individual and the demands of the environment. Research focusing on the fit between elderly people and their physical environment has increased, and assessment tools for accessibility research has been developed (Iwarsson, 2004). Still more research regarding the individual's subjective experience of the environmental challenges and opportunities is needed. Wahl & Lang (2004) advocates integrating the physical and social environment because the expectations developed over life influence how the physical environments are experienced.

One part of the environment is the objects used in doing things. Objects thus influence the doings, and the objects we have in our living environment reflect who we are and what we do. The symbolic meaning of objects influences how we use them (Kielhofner, 2008). The objects in our home all have their significance and are parts of ourselves (Lilja, 2000). Objects thus have social and cultural meanings that complement their physical properties. Objects can be either natural or man-made (compare for example a stone and a chair). In this thesis the focus is on technological objects or artefacts, things that are created by man. One characteristic of man-made artefacts is that they are easily influenced by designers and inventors who develop new models and functions.
Technology, everyday life and ageing

The importance of technology for human occupation (i.e. doings) cannot be ignored since technology affects every minute of our daily lives (Smith, 2001). The dependence on technology has rapidly grown in all areas of daily life as new kinds of objects come into use and old versions of familiar objects are replaced by new ones. This could either support or discourage elderly people in their daily doings (Mollenkopf & Fozard, 2004). Technology advances have on one hand the potential to facilitate everyday life but on the other hand can also challenge the user, for instance by making it harder or impossible to do things in the way he or she is used to.

The term ‘everyday technology’ is defined by Hagberg (2008) as technical objects (artefacts and systems) which are used or designed to be used on a daily base, or more seldom but habitually. The term points towards doings in the household, during leisure or in the context of the individuals’ social network. According to Nygård & Starkhammar (2007) everyday technology is a concept that includes the variety of electronic, technical and mechanical equipment present in the everyday lives of people, and comprises both newly-developed and common, well-known technological artefacts and services. Within the area of elderly people and technology several different concepts exist and most of them have a focus on technology related to care and compensation of lost functions (e.g. disablement technology, medical technology, health technology for the elderly (see for example: Löfqvist, Nygren, Széman & Iwarson, 2005; OECD, 1998).

A scientific discipline that addresses a broader scope of issues regarding technology and ageing is gerontechnology (Mollenkopf & Fozard, 2004; van Bronswijk, 2004). However, there is an overlap between gerontechnology and assistive technology, as Colombo (2004) points out. Assistive technology is defined in the ISO 9999 classification of assistive devices as “every product, instrument, equipment or technical system that is used by a functionally impaired person and that is especially produced or universally available to prevent, compensate, supervise, alleviate or neutralize functional impairments” (Socialstyrelsen, 2003; Buning et al., 1998). Assistive devices are used by 10 % of the population in Sweden (Hjälpmedelsinstitutet, 2003). The need increases with age (Dahlin Ivanoff & Sonn, 2004). Approximately 70 % of all prescribed assistive devices in Sweden are prescribed to people over 65 years of age (Hjälpmedelsinstitutet, 2006). The use of assistive devices to manage daily activities increases strikingly between 70 and 76 years of age, from 20 % to 50 % (Sonn, 1995). In a study with a group of 85 year olds it was found that 77 % (three out of four) had assistive devices, and that the most common group of devices was bathing devices, followed by devices for mobility, and the most common device was a cane or walker (Dahlin Ivanoff & Sonn, 2004).

The high proportion of assistive devices prescribed to elderly people is reflected in the quantity of studies in the area. Studies regarding the use and need of different assistive devices for different groups of elderly people have been the focus of several theses (see for example: Sonn, 1995; Löfqvist, 2008; Brandt, 2005; Hedberg-Kristensson, 2006; Hägghblom Kronlöf, 2007). Elderly people do use the assistive devices they are equipped with, provided the user interface fits and proper training is supplied. Properly designed and perceived new tools could counter the hallmarks of frailty: the loss of muscle mass and strength and the functional decline that accompanies disuse (Colombo, 2004). Both ICT
and classical technology are constantly innovating assistive technology. Unfortunately not all innovations in assistive technology contain a well-functioning human-machine interface (Colombo, 2004).

Technological development needs to be followed to see what implications it can have for both the individual and for society in terms of participation, independence and social relationships. Research has been accomplished in the area of elderly people and technology (see for example the reviews by Steultjens et. al. (2004) and Dahlin Ivanoff, Iwarsson & Sonn (2006)), but this research needs to be supplemented with research that explores the lives and doings of elderly people in relation to technology. It is not only the technology itself that needs exploring but also how technology can facilitate everyday living. In Sweden, the Government’s Public Commission SENIOR CITIZEN 2005 – Policies for the elderly: a vision for the future (SOU, 2003) states that knowledge about elderly people as technology users needs to be visualized and improved by researching their everyday life and technology use. This research needs to be related to people’s technology use during the whole life course (SKL, 2005). Technology is implied to help elderly people to live independently and create both security and accessibility (SKL, 2005).

Theoretical perspective on everyday life and technology

In her report ‘Theories on technology and everyday life’ Tarja Cronberg (1986) develops a model for the interaction between technology and everyday life. The model offers a way to look at the individual’s opportunities to act in his/her environment that can be helpful in understanding how elderly people experience their existing everyday technology, and how it influences their possibilities for doings in everyday life. This model emphasizes the technological dimensions in everyday life. The analytical perspective is thus placed on the functions and meanings of different artefacts as the elderly themselves assess and comprehend them, and on how technology influences their doings and future plans. In this model the concepts of action force (power to act) and action space (space of action) are introduced. Cronberg proceeds from the stand-point that action is essential within all areas of everyday life. The space of action is defined as ‘the world within our reach’, what can be accessed or attained by the person. This ‘space of action’ is described as consisting of three parts: first the ‘field of action’ – the part that can be directly influenced by doings, then a part that can be immediately experienced but that cannot be affected by action or doings, and lastly the part that is within reach but that is neither affected by action or available for direct experience. The ‘space of action’ includes the home, the neighbourhood, the working place, the city or town, and changes within the life cycle as it is larger in active ages when participating in working life, politics, neighbourhood collaboration etc as compared to later stages in life when working capacity and participation in society decreases.

‘Power to act’ is the resources, knowledge and available tools (technological objects) the individual possesses. As everyday life changes, new knowledge is needed. In industrial society the pace of alteration has increased, which means that the individual needs to acquire new knowledge continually during life, whereas in the past, much of what was learnt when young was valid throughout life. Modern technology development has sharpened this relationship further as the access to tools and knowledge enhances the
'power to act'. However, the 'power to act' can decrease if improved design means that new tools replace the tools one possesses, or if one's knowledge becomes outdated. The 'power to act' also varies through life as some tools can be available for adults but not to children or elderly people (Cronberg, 1986).

Another way to describe the technological artefacts and systems that a person uses or meets in his or her everyday life and doings could be to focus on the technological landscape that surrounds the person (Hagberg, 2008). The character of the technological landscape is changed as the person moves around and also over the life course as different objects come within reach and others become less accessible. The technological landscape is a dimension of the person's 'time-space' as the artefacts exist in a specific time and space. The part of the technological landscape a person more permanently has at his disposal is defined as the technology room and relates to what is in the home and in the close surroundings that the person can shape (Hagberg, 2008).

The perspective of the individual
This thesis has the ambition of emphasising the perspective of individuals that are the oldest old. A way to get information about the subjective experience concerning a specific area is to study the individual's lifeworld, their lived experience (Merleau-Ponty, 1945/1997; Kielhofner, 2008). The aim of lifeworld research is to discover, analyse, clarify and describe the meaning of a specific area or subject. By describing the unique in individuals, in statements and situations, variations, similarities and differences will appear (Bengtsson, 1999). The point of departure within the phenomenological lifeworld perspective is the active person where the experience of the lived world is in the bodily presence in this world. One could say, in other words, that we experience our surrounding world through our bodies (Merleau-Ponty, 1945/1997; Kielhofner, 2002). 'Action' or 'doing' is considered important for the construction and experience of the world in which we live. It is one's own lived-in body that executes all actions. The human being lives as a subject in and through his body. The human being is his body (Kielhofner et al., 2002; Bengtsson, 1999; Merleau-Ponty, 1945/1997). The lifeworld is a prerequisite for everything that we do and through our experience of what we do we understand our surrounding world. Merleau-Ponty's lifeworld theory has a clear connection to how artefacts or objects are experienced and inserted in the lifeworld through the lived body. The lifeworld includes a person's experiences of everyday life and how the person relates to this. The lifeworld focuses on the experience dimension and is not just a description of the circumstances in which the person lives.

Pre-understanding and context of the author
As mentioned in the preface, the author of the present thesis is by profession an occupational therapist. Being an occupational therapist with extensive experience of geriatric rehabilitation both in hospitals and in home rehabilitation the author is used to making home visits to elderly people and to observing everyday doings. In the author's professional career as an occupational therapist she has prescribed and provided assistive
devices to clients. When meeting the participants included in the project the author presented herself as a researcher at the National Institute for the Study of Ageing and Later life and not as an occupational therapist. One reason for this is that focus was not to be placed on assistive devices, which could easily have been the case if the author had introduced herself as an occupational therapist. The conversations primarily concerned everyday life and doings and everyday technology. However, assistive devices were addressed in the interviews, but not as a main concern.

**Summary of background**

To summarize the background of this thesis, the oldest old in society is a group whose circumstances regarding everyday life have been sparsely researched, especially from the viewpoint of their own subjective experience. Great confidence is placed on technological solutions to enhance the possibilities for elderly people to remain independent and participate in society. Yet little is known about how the oldest old who live independently relate to and use the technology objects they possess. The relation between the individual's capacities and the demands of the environment are challenged as everyday technology rapidly develops.

Considering the technological landscape and technology rooms of elderly people there are large variations as elderly people are such a heterogenic group. However this subject has not been comprehensively researched; most studies have considered use and experiences of assistive devices or specific artefacts. How elderly people want to and can use technology in their daily doings are questions that need to be investigated. This area also needs to be analysed in light of the fact that those who are old today have lived through a period with many technological breakthroughs, what can be called 'an everyday technology revolution' (Hagberg, 2003; 2004; Östlund, 1995).
AIMS

There is limited research regarding the oldest old (85+), especially those who live independently and manage without, or with a minimum of service and help from society. Research emanating from the subjective experience of the oldest old regarding everyday life and home environment including everyday technology is lacking. This thesis has the objective of elucidating the living conditions of the oldest old from their own perspective. The motive is to contribute to the understanding of how the oldest old experience living independently. This could give indications about if and how they should be supported, and may help in enabling them to support themselves.

The general aim of the thesis is to expand knowledge about the everyday lives of the oldest old living independently, and to improve and deepen the understanding of their doings, and their possession and use of technology.

The specific aims of the different papers included in the thesis were:

Paper I – To investigate what kind of research that includes the elderly as participants is reported in occupational therapy journals.

Paper II – To explore how individuals over 85 years of age themselves describe and experience daily life.

Paper III – To explore and describe the experiences and relations (possession, use and approach) to technology in everyday doings of the oldest old as they themselves describe it.

Paper IV – To describe, compare and discuss how elderly people who belong to different age cohorts (<85 and 85+) relate to their physical environment, especially in regard to technological objects used in the home, and to examine how this is influenced by experiences and possession of technology over the life course.
CHARACTERISTICS OF, AND RELATIONS BETWEEN THE INCLUDED PAPERS

This thesis comprises four papers; one examination of published articles in OT journals (paper I), and three papers based on an empirical project including interviews and observations with elderly people aged 85 and above (paper II – IV). In paper IV the group of oldest old is complemented and compared with a younger group of elderly people (65-84 years of age) from a parallel project. See figure 1 for an outline of the included papers.

The relation between the different papers is that paper I is a point of departure as it gives an orientation about forms of research regarding elderly people, and what areas have been investigated within occupational therapy, and where gaps in knowledge occur. Papers II and III explore the doings (II) and technology (III) in the everyday life of the oldest old, and paper IV expands the technology perspective by including an additional group of elderly (65-83 years of age) against which comparisons are made. Paper IV also analyses technology over the life span of these two groups of elderly people. In table 1, an overview of the design, focus, data collection methods, material/participants and analysis in the papers is given.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Paper I</th>
<th>Paper II</th>
<th>Paper III</th>
<th>Paper IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Examination of articles</td>
<td>Descriptive/exploratory</td>
<td>Descriptive/exploratory</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Focus</td>
<td>Research with elderly in OT</td>
<td>Daily doings</td>
<td>Technology in everyday life</td>
<td>Technology over the lifespan</td>
</tr>
<tr>
<td>Data collection Method</td>
<td>Manual searches in selected journals</td>
<td>Conversation-like interviews</td>
<td>Conversation-like interviews</td>
<td>Documentation of technology Interviews</td>
</tr>
<tr>
<td>Material/Participants</td>
<td>212 research articles</td>
<td>18 oldest old (same as in paper II)</td>
<td>18 oldest old</td>
<td>2 groups of elderly people: 16 persons aged over 85 years from the 18 persons in paper II and III and 13 persons aged under 85 years</td>
</tr>
<tr>
<td>Analysis</td>
<td>Classification of material according to research strategy, age group, denomination of respondents and subject field.</td>
<td>Modified phenomenological method and Giorgis’ phenomenological method</td>
<td>Modified phenomenological method</td>
<td>Compiling of technology holdings at three turning points in life and searching for similarities and differences between the two groups</td>
</tr>
</tbody>
</table>
METHODS

Material, collection of data and participants in papers II - IV

Examination of articles (Paper I)
The material analysed in paper I comprises research articles from peer-reviewed occupational therapy journals written in the English language published during the years 2001 – 2006. The choice of occupational therapy journals was guided by whether they were 1/ indexed in Medline, or 2/ well-reputed (based on high circulation numbers). The journals chosen were the American Journal of Occupational Therapy (AJOT), the Australian Occupational Therapy Journal (AOTJ), the British Journal of Occupational Therapy (BJOT), the Canadian Journal of Occupational Therapy (CJOT), Occupational Therapy International (OTI), and the Scandinavian Journal of Occupational Therapy (SJOT). In total, the selected journals contained 1 368 articles. The title, abstract, key words and material sections of the articles were scrutinized to find articles matching the criterion of being empirically based and having respondents who were specified as elderly by using terms such as ‘old’, ‘elderly’, ‘aged’, ‘seniors’, ‘retired’ or ‘demented’ or where the age of the respondents was stated and included people over 65 years of age. In total, 212 articles were judged as being both empirical and on the subject of the elderly, and were thus included in the investigation. The selected articles were printed or copied in full depending on their availability on the internet or as printed versions.

Empirical project 85+ (Paper II, III & IV)
To recruit participants for the empirical project the local branches of the two major pensioner’s organisations in Sweden, the Swedish National Pensioners’ Organisation, (PRO), and The Swedish Association for Senior Citizens (SPF) were contacted. The chairmen of the organisations supplied lists of potential participants matching the criteria of 1/ being over 85 years of age, and 2/ living at home, that is, not in some form of institution. In total, 31 names were presented by the two organisations. An information letter which described the aim and method of the study was sent to all persons on the lists and they were then contacted by the interviewer by telephone and asked if they were willing to participate. Twenty-eight persons were reached by telephone. Ten persons declined to participate in the study. The reasons given for declining participation are described in table 2.

Table 2 Reasons for declining participation

<table>
<thead>
<tr>
<th>Reason</th>
<th>No (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time constraints</td>
<td>4</td>
</tr>
<tr>
<td>Not interested</td>
<td>4</td>
</tr>
<tr>
<td>Difficult to participate due to hearing impairment</td>
<td>1</td>
</tr>
<tr>
<td>Being “old and not well”</td>
<td>1</td>
</tr>
</tbody>
</table>
The eighteen participants are presented in table 3, which shows age, gender, pensioner association, marital status, number of children, grandchildren and great grandchildren, former profession and education. In all there were 10 women and eight men between 86-93 years of age (mean age 87.7 years [all ages based on the year 2005]). Six men and one woman, all married, were cohabiting with their spouse, whilst the remaining 11 lived alone. All lived in flats, although several had moved from their own houses to the flats. They had lived in their present lodgings for a long time, seven for more than 25 years, eight for 10-25 years and the remaining three for 5-10 years. Thus, they were all familiar with their neighbourhood. All participants were pensioners at the time of the interviews and had been so for 20 years or more. Many were still very active in different associations although some did not take any active part in associations.

### Table 3 Description of participants in empirical project

<table>
<thead>
<tr>
<th>Name*</th>
<th>Age</th>
<th>Gender</th>
<th>Association</th>
<th>Marital status</th>
<th>No of child/grandchild/grandchild</th>
<th>Former profession</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agnes</td>
<td>89</td>
<td>F</td>
<td>PRO</td>
<td>Widow</td>
<td>3/9/4</td>
<td>Shopkeeper</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Erik</td>
<td>93</td>
<td>M</td>
<td>PRO</td>
<td>Married</td>
<td>2/4/0</td>
<td>Fireman/electrician</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Anna</td>
<td>92</td>
<td>F</td>
<td>PRO</td>
<td>Married</td>
<td>2/4/0</td>
<td>Textile worker/Bookshop assistant</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Vera</td>
<td>90</td>
<td>F</td>
<td>PRO</td>
<td>Widow</td>
<td>1/3/1</td>
<td>Dressmaker</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Iris</td>
<td>89</td>
<td>F</td>
<td>SPF</td>
<td>Widow</td>
<td>3/4/5</td>
<td>Hairdresser</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Ulla</td>
<td>86</td>
<td>F</td>
<td>SPF</td>
<td>Divorced</td>
<td>3/6/11</td>
<td>Casual labourer in trade</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Astrid</td>
<td>86</td>
<td>F</td>
<td>SPF</td>
<td>Widow</td>
<td>2/3/2</td>
<td>Clerk/office</td>
<td>Secondary school</td>
</tr>
<tr>
<td>Ninni</td>
<td>87</td>
<td>F</td>
<td>SPF</td>
<td>Widow</td>
<td>0/0/0</td>
<td>Nurse</td>
<td>Nursing school</td>
</tr>
<tr>
<td>Alf</td>
<td>87</td>
<td>M</td>
<td>SPF</td>
<td>Widower</td>
<td>4/8/0</td>
<td>Medical Doctor</td>
<td>University</td>
</tr>
<tr>
<td>Ulf#</td>
<td>86</td>
<td>M</td>
<td>SPF</td>
<td>Married</td>
<td>2/5/0</td>
<td>Head of administration</td>
<td>Secondary school</td>
</tr>
<tr>
<td>Uno</td>
<td>87</td>
<td>M</td>
<td>SPF</td>
<td>Married</td>
<td>2/2/0</td>
<td>Bank official</td>
<td>Uppersecond. school</td>
</tr>
<tr>
<td>Ragnar</td>
<td>86</td>
<td>M</td>
<td>PRO</td>
<td>Married</td>
<td>2/4/0</td>
<td>Inspector</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Anders</td>
<td>86</td>
<td>M</td>
<td>PRO</td>
<td>Widower</td>
<td>4/3/3</td>
<td>Industrial worker</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Nils</td>
<td>87</td>
<td>M</td>
<td>PRO</td>
<td>Married</td>
<td>2/5/3</td>
<td>Blacksmith</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Linnea</td>
<td>88</td>
<td>F</td>
<td>PRO</td>
<td>Widow</td>
<td>1/2/2</td>
<td>Textile worker</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Lennart</td>
<td>86</td>
<td>M</td>
<td>SPF</td>
<td>Married</td>
<td>1/3/0</td>
<td>Shipping</td>
<td>Uppersecond. school</td>
</tr>
<tr>
<td>Inga</td>
<td>89</td>
<td>F</td>
<td>SPF</td>
<td>Divorced</td>
<td>3/6/7</td>
<td>Chiropodist</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Ulrika#</td>
<td>86</td>
<td>F</td>
<td>PRO</td>
<td>Widow</td>
<td>4/7/0</td>
<td>Caring, entertainment</td>
<td>Elementary school</td>
</tr>
</tbody>
</table>

* The names of the participants have been altered to secure anonymity.

# Ulrika did only participate in the first interview, and Ulf did not participate in the third meeting that is the second interview occasion.

1 PRO = Swedish National Pensioners’ Organisation

2 SPF = The Swedish Association for Senior Citizens

Most of the participants had former working experience as blue-collar workers but there were also those who had been self-employed (e.g. a hairdresser, a chiropodist, and a shopkeeper). Most managed daily life on their own. Two had help with cleaning every fortnight from home help services and three had regular help from their children at the time of the first interview.
Regarding health condition, that is complaints or functional impairments as defined by the participant, most said that they had good health. Illnesses and/or functional impairments were mentioned by all participants. Impaired vision and/or hearing were most mentioned along with heart conditions such as high blood pressure, angina pectoris or having a pacemaker. Other conditions that were mentioned were stroke, lung cancer, hip-replacements, Parkinson’s disease, pain in the feet, knees and hips, kidney failure, asthma and reduced strength.

The participants were visited three times in their own home by the interviewer over a period of 10 months in 2005 - 2006. The first and third meeting consisted of conversation-like interviews and the second meeting was an observation where the interviewer followed the participant through 5 – 7 hours of an ordinary day taking part in the doings of the participant.

In the interviews (performed at the first and third meeting) an interview guide was used to ensure that the following topics were touched upon in the conversations: background information, daily doings, everyday technology, the life course, and the future. Before the first interview round began, the interview guide was tested in an interview with an informant who matched the inclusion criteria in all aspects except age, as she was under 85 years of age (i.e. a member of PRO in the same area as the participants, living and managing on her own). As the guide seemed to cover the intended topics no alterations to the guide were made.

In the interview situation, the focus was on the everyday doings as this was the point of departure for the project. The first question thus was to describe an ordinary or normal day. The story told by the participant was then used as the point of departure to elucidate use of technology in everyday doings, and attendant questions were asked to clarify and deepen the understanding of the participants’ perceptions regarding these areas. All interviews were recorded on minidisk and transcribed verbatim by the interviewer.

During the observation an observation form was used to document the doings in terms of when (time), how long (duration), what (doing), which objects were used, with whom (persons present) and in what room or space (locality) the doings were performed. The conversation during the observation was recorded on minidisk. These conversations have not been transcribed but served, together with the observation forms, as a means to confirm, extend and nuance the descriptions of the daily doings presented by the participants in the first interview.

All 18 participants were interviewed in the first round. After the first interview, one participant declined to take part in the remaining meetings due to time constraints. In the third round (interview 2) 16 participants were interviewed. One participant had passed away in the interval between the second and third meetings. The interviews ranged from between 61 to 123 minutes (average 90 min) for the first interview, and 51 to 94 minutes (average 68 min) for the second interview. The two interview rounds thus gave a total of 42 hours of interview material.

The observations ranged from between five to seven hours in length except for one observation that had to be cut short due to ethical considerations (see ethical reflections in the methodological discussion). The total amount of observation time comprised approximately 87 hours.
Additional participants from a parallel project (Paper IV)

In paper IV, two groups of participants were included, 85+ and -85. Sixteen of the participants in the study reported in papers II and III (as mentioned above) that participated in meeting three constituted the 85+ group. The -85 group consisted of 13 younger elderly (63 - 83 years of age) from PRO who were participating in a parallel project conducted at NISAL (Hagberg, 2008). The two groups were thus made up of two different age cohorts.

The -85 group is presented in table 4, which shows age, gender, marital status, number of children, former profession and education. Both projects were qualitative and based on repeated interviews and observations. The participants in the -85 group were interviewed on three occasions by a research assistant. In the planning of both projects the interview guides were discussed between the two interviewers and a senior researcher supervised both projects. To a great extent the interview guides overlapped. In both projects a technology list in form of an open-ended questionnaire developed to gather information on life histories and relation to everyday technology over the life course was used to explore the possession and use of different technologies over the life course. The list was based on an examination of everyday technology development and spread during the twentieth century and was especially developed for these studies and included different artefacts and systems introduced to households from the 1920s and onward (Hagberg, 1986; 2008). The technology list was filled out during the interviews and thus the technology holdings throughout life were reconstructed as well as the present access to technology (in 2005/06).

The interview process was the same as that described for papers II and III. From the interviews, material from general questions on technology in everyday life and society, and material regarding possession and appropriation of technology objects, was obtained and then used in the analysis.
Table 4 Descriptions of -85 group participants in paper IV

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Marital status</th>
<th>No of Children</th>
<th>Former profession</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maja</td>
<td>72</td>
<td>F</td>
<td>Married</td>
<td>2</td>
<td>Clerk/office</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Gösta</td>
<td>84</td>
<td>M</td>
<td>Widowed</td>
<td>3</td>
<td>Workshop</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Agnes A</td>
<td>78</td>
<td>F</td>
<td>Widowed</td>
<td>1</td>
<td>Clerk/office</td>
<td>Secondary school</td>
</tr>
<tr>
<td>Ingrid</td>
<td>80</td>
<td>F</td>
<td>Married</td>
<td>2</td>
<td>Clerk/office</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Lennart A</td>
<td>82</td>
<td>M</td>
<td>Married</td>
<td>2</td>
<td>Technician</td>
<td>Secondary school</td>
</tr>
<tr>
<td>Britta</td>
<td>77</td>
<td>F</td>
<td>Married</td>
<td>3</td>
<td>School/daycare</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Alice</td>
<td>73</td>
<td>F</td>
<td>LAT#</td>
<td>3</td>
<td>Education</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Marianne</td>
<td>69</td>
<td>F</td>
<td>Married</td>
<td>2</td>
<td>Store</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Siv</td>
<td>68</td>
<td>F</td>
<td>Married</td>
<td>2</td>
<td>School/daycare</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Kjell</td>
<td>65</td>
<td>M</td>
<td>Married</td>
<td>0</td>
<td>Traffic</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Knut</td>
<td>76</td>
<td>M</td>
<td>LAT#</td>
<td>2</td>
<td>Store</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Axel</td>
<td>82</td>
<td>M</td>
<td>Widowed</td>
<td>1</td>
<td>Workshop</td>
<td>Elementary school</td>
</tr>
<tr>
<td>Arne</td>
<td>84</td>
<td>M</td>
<td>Married</td>
<td>1</td>
<td>Workshop</td>
<td>Elementary school</td>
</tr>
</tbody>
</table>

* The names of the participants have been altered to secure anonymity.

# LAT = living apart together, a term used to describe two persons that have a closed relationship but have separate homes.

Analysis of empirical data

Examination of articles (Paper I)

The articles included in the analysis were classified (Forsberg & Wengström, 2003) according to research strategy (qualitative, quantitative or mixed), age group and denomination of respondents (diagnosis or other description), and subject field. The denomination of respondents and subject field used in the articles formed the base for the classification. The classification was checked for trustworthiness as a random sample of one third of the material was classified by two of the authors. The agreement between the classifications of the two authors regarding 'subject field' and 'group of respondents' was 0.92. After a brief discussion between the two authors total agreement in the classification was reached. Data from the classification were presented in terms of number of occurrences and percentages in the different areas of the analysis.

Empirical project (Paper II, III & IV)

When knowledge about experiences within a particular area is sought, a qualitative method is deemed suitable (Malterud, 1998). In papers II and III a qualitative analysis method which was a modified procedure based on the phenomenological method was used to analyse the material (Malterud, 1998). The process of this qualitative method can be described as starting with the researcher first becoming familiar with the text (the transcribed interviews) by reading it through completely. Thereafter an interpretation and
comprehension phase takes place in which similarities and differences are sought, meaning units created and questions asked to the material. Lastly the material is reconsidered as a whole in a synthesis (Finlay, 1999; Giorgi, 1985; Öhlén, 1999; Dahlberg, 1997; Kvale, 1997; Malterud, 1998).

The analytical processes started with all transcripts being read through and the material was then coded using the text analysis software MAXqda2, version 2M. That is, portions of the text were marked as regarding or belonging to a certain subject. This coding was performed line by line and the units of text could be a single word, a sentence, or a whole paragraph, depending on the text content. The same text could also be assigned additional labelling in the coding process if the content was richly varied (the meaning of the unit could belong to more than one category). The denomination of the different subjects or categories grew out of the content of the different units in the category. As the subjects or categories originated from the material, the coding can be described as open since no preset categories were used. All interview transcripts were coded in this way and after the coding was completed different material was selected for further analysis, depending on the objectives of the different papers. For paper II, material regarding experiences and descriptions of daily doings was retrieved, and for paper III the material identified as relating to everyday technology in everyday life and doings was analysed.

The selected material was once again read through several times to form an overall picture of the content and themes of the material. The identified meaning units, which were sorted or grouped into different categories, were scrutinized and each category was then sorted into subgroups depending on the content of the meaning units. Finally, the subgroups were summarized and descriptions of the experiences were formulated and exemplified with citations from the material (Malterud, 1998).

To further elaborate on the daily doings of the oldest old, a picture of how a normal day was described by the participants was formed and presented in paper II, based on Giorgi’s phenomenological method (Giorgi, 1985). The procedure for this was that the different stories of the participants’ ordinary days were merged into a single account of everyday life. The selected material, that is the narratives where the participants described what they did in a normal or ordinary day, was first read several times to form a general impression of the content in all stories. Meaning units were then created and transformed into stricter language with emphasis on everyday doings, which was the phenomenon being studied. A story about the daily doings was then written for each participant and these condensed stories were finally synthesized into a single story of what was common - the essential (Giorgi, 1985).

The observations made at the second meeting were used to confirm the descriptions of the daily doings, as the story of what was done on a normal day was compared to the observations made by the interviewer. The observations can thus be said to validate the stories used in the analysis.

In paper III, three of the themes that emerged, with subgroups, were perceived as related, and a description of how they influence each other was formulated and illustrated.
Complementary analysis in Paper IV

In paper IV, material from both the interviews and the technology list were incorporated in the analysis. The mapping of everyday technology objects made through the technology list was studied in three different periods, or turning points, in the participant’s life course. The selected periods were: in the parents’ household, when getting married and starting a family, and the senior citizen period. The technology rooms, standard package, and defining artefacts in these periods were compiled, analysed and described in the context of technology development in society at large. The technological objects selected in each period were those that were emphasised in the interviews by the participants either telling specific stories about them or defining them as having special meaning.

Material from the transcribed interviews regarding technology was coded as described above for the empirical project. The open coding was also complemented with fixed coding based on the different technological objects. The main focus of the analysis was on the present situation as a senior citizen in 2005. In the analysis, similarities and differences between the two different age groups (<85 and 85+) were given special consideration as well as social background and gender. The perspective on future life with regard to technology use was also included in the analysis.

Translation of material

In translating material from one language to another, as was done in this thesis, one needs to be aware of some limitations. Nuances in languages can easily be lost in the translation process, and this can affect the analysis. In papers II – IV the analysis was performed in the original language (Swedish) before translation of the chosen citations into English. The categories are thus built on the original transcripts in Swedish, and then the text presenting the findings has been written in English.

Ethical considerations

Throughout the project the ethical principles outlined by Humanistisk-samhällsvetenskapliga forskningsrådet (The Council for Research in the Humanities and Social Sciences) (Vetenskapsrådet, 2002) were considered and followed.

All participants were informed both in writing and verbally about the project’s aims and methods as well as the methods to ensure confidentiality, and they were told that taking part in the project was voluntary and participation could be terminated at any moment. All participants gave oral informed consent which was recorded on minidisk in beginning of the interview.

Before the start of the project with the 85+ group (in January 2005) the contact person regarding ethical research questions at the Faculty for Health Science at Linköping University was consulted. This person judged that ethical approval from the ethical research committee was not needed for this project in accordance with the law on ethical approval (2003: 460) on research regarding humans, which states that no ethical approval from the ethical research committee is required if the participants have given informed consent to participate.
FINDINGS

Paper I. A review of research with elderly people as respondents reported in occupational therapy journals.

The paper examines research with elderly people as respondents presented in six peer-reviewed occupational therapy journals. The questions investigated were the number of articles published, research strategies used, age groups represented, subject area studied and denomination of respondents. Of the 1368 articles published in the selected journals during the investigated time period (2001-2006), 212 (15.5%) included the elderly as respondents to some degree. The numbers of articles regarding the elderly published yearly were quite stable over time, shifting between 32 and 40 articles a year. The Scandinavian Journal of Occupational Therapy was the journal containing the most articles about elderly people (35%), compared with the other journals where the rate of articles on the elderly was between 11 and 19%.

The classification disclosed that about two thirds (67%) of the articles had a quantitative approach, one quarter (27%) had a qualitative approach, and 12 articles (6%) had a mixed quantitative and qualitative approach. Regarding age distribution, most articles displayed a wide age span between the youngest and oldest respondent (up to 95 years). One third of the articles had an age spread that started below 50 years of age and one third had respondents who were all over 65 years of age. Only five exclusively addressed respondents over 85 years of age (2% of the total number of articles). There were also articles that only gave a mean (which had to be over 60 for the article to be included in the examination) and articles that used different denominations such as elderly care, elderly people, older adults etc. The most frequent subject field was instrument development and testing (15%). Other frequent subject fields were assistive devices/technical aids (12%), activity including ADL and IADL (11%) and programme and service evaluation (11%). In all, 24 different topics were found. In many articles the denomination of respondents was to a large extent vague or imprecise, as for example elderly or in-patients (24%). The most frequent diagnosis was stroke (including TBI and CVA) (21%). When combining subject field and denomination of respondents, studies regarding measurement of movements (normative data) in healthy elderly were the most frequent (7 studies/3%).

The examination thus reveals that articles that cover the elderly in the selected journals are mainly quantitative in nature and include respondents from a wide age span. The most common subject field was instrument development and testing. The denomination of respondents was in many cases indistinct. As the subjective experience is emphasised as being of such importance within the field of occupational therapy, it is noteworthy that so few studies elaborated on the subjective experience of elderly people. Furthermore there are still few studies regarding solely the oldest old, although there seems to be an increasing interest in this area since three out of five articles concerning this age group were published in 2005 and 2006. As the oldest old are a fast growing age segment in society, it is important to research their living conditions from their subjective perspective.
Paper II. Doing everyday life – experiences of the oldest old

The aim of this paper was to explore how 18 independently living oldest old (85+) described and experienced everyday life. The analysis was guided by questions on how they portrayed their everyday doings and what they described. Their experiences of their daily doings were also related to the context of being amongst the oldest in society.


‘Experiencing being old’ includes three subgroups: ‘the image of old age and the elderly in society’, ‘managing and staying healthy’, and ‘talking about everyday doings’. The participants described the images they perceived society has of elderly people, both negative images, such as feelings of becoming useless and worthless in old age, and positive images, i.e. elderly people as capable. To manage daily life independently and to stay healthy were emphasized as important. But at the same time there was an awareness that the condition could deteriorate. When talking about everyday doings the most common way to start was to describe the actual doings such as waking up, getting up and so on. However, five participants started to express more of a feeling or valuation of what their daily life was like. The idea they expressed was that life was similar from day to day – a situation which could be perceived as monotonous - and they expressed the view that the days had “become less and less”. Two participants voiced doubt about being able to describe an ordinary day, due to failing memory.

The theme ‘Doings in everyday life’ consists of the subgroups: ‘describing everyday doings’, ‘thoughts about the doings of the day’ and ‘the positive side of doing’. The first subgroup presents a fusion of all stories told. This joint story shows that the everyday doings were expressed as consisting of the ordinary. In spite of this emphasis on the ordinary, personal care and household chores (ADL) were not described in a comprehensive way in the narratives. Personal activities of daily living (PADL) were rarely mentioned and household chores were described as being done bit by bit, a little each day. Daily routines were stressed as important when the doings of the day were reflected on, and to “take the day as it comes” was an expression used by several of the participants in describing how they looked upon their daily doings. To do things was emphasized as important as it kept one happy and engaged. It was perceived as better to do a little at time by oneself than to get help from others, as one then felt the positive side of doing things.

In ‘Patterns of the day’ ‘going out and meeting others’ and ‘routines of the day’ constitute the subgroups. Taking a walk outside and meeting others stresses the importance of both physical and social aspects of doing things. Routines and habits helped in managing everyday doings. The expression to “stay in old tracks” was used to describe how the daily doings consisted of the ordinary things that they had always done.

‘Altered doings’ comprises the subgroups: ‘doing things in a different way’, ‘doings no longer performed’, and ‘reasons for restricted doings’. The participants elaborated on doing things in a different way in so far as they adjusted their doings by prioritizing what doings to perform, or by dividing them into smaller parts to make them easier to manage if they had reduced strength. They also adjusted their doings by performing them in an adapted way, for example, using a shopping trolley or a walker to carry home groceries.
Some doings were no longer performed. The doings could have been abandoned for different reasons. One person did not want to change the doing and perform it in an adapted way, or for others, physical limitations affected the doings (for example impaired vision made cross-stitching difficult). Illnesses or diseases were the main reasons for restricted doings, together with reduced strength. But questions of costs and age itself, as a limiting factor, were also mentioned.

'The importance of time' consists of one subgroup: 'time as a determinant for doing'. This category, and subgroup, emphasises that aspects of time were intertwined in the descriptions of everyday doings. The doings were described as taking longer time as the participants got older. Another aspect was that there was not enough time and there was also a feeling that time passed more quickly.

The conclusion regarding the doings of the day among the oldest old is that the daily doings are described as consisting of the usual things that have always been done, and that have not changed over the years. It is how the doings are performed that might have changed. To do something was considered important for well-being even if the doings have to be altered, and there was a strong motivation to manage daily doings independently. The findings from this paper imply the importance of diversifying the images of the oldest old. Studying their daily doings and experiences helps to reveal important aspects of life at advanced ages.

Paper III. How technology in everyday life is perceived by the oldest old

The aim of the paper was to describe the experience of and relation to technology (possession, use and approach) in everyday doings of the oldest old as they themselves express it. The findings were also discussed in relation to the perspective of public policies.

In the analysis, four categories emerged: ‘Perception of technology’, ‘Technology holdings’, ‘Handling technology’ and ‘Compensatory technology in old age’. The first three categories were understood to be related because ‘Perception of technology’ is perceived as an overarching category that influences both ‘Technology holdings’ and ‘Handling technology’ since it focuses on the participants’ view of technology. How technology is viewed affects what technology is acquired and how it is used. The relation also works the opposite way because ‘Technology holdings’ and ‘Handling technology’ influence the ‘Perception of technology’ insofar as the technology we have and use affects our view of technology. ‘Technology holdings’ and ‘Handling technology’ are also interrelated as it is the technology possessions that are managed.

The fourth category, ‘Compensatory technology in old age’, can be described as subordinate to ‘Technology holdings’ and ‘Handling technology’ as it deals with possession and use of technology that is regarded as assistive. This specific category is highlighted as it emerged so clearly in the analysis.

The category ‘Perception of technology’ comprises three subgroups: ‘technology in talk of everyday doings’, ‘technology style during life’, and ‘a doubtful attitude towards technology’. The first subgroup illustrates how technology is talked about in everyday life, showing that few artefacts are mentioned spontaneously when describing the doings of everyday life. The artefacts mentioned in the narratives were the TV, the radio, and the
telephone. Other artefacts were more commonly mentioned when specific doings were described, for example kitchen appliances were talked about when cooking was described. The technology style the participants have adopted throughout life is described as modest and pragmatic. Utterances indicating a more doubtful attitude towards technology were presented, or maybe more precisely, a doubtful attitude towards technology development and progress in society.

'Technology holdings' represents the subgroups ‘existing technology’, ‘acquisition of new technology’ and ‘discarding of technology’. This category thus elaborates on technology that the participants have, how they acquire their artefacts, and how they dispose of them. There are artefacts that all participants have and use such as the vacuum cleaner, radio, stove, TV and telephone. All also had access to washing machines. Even if not all possessed one of their own, there was access in the apartment building to a laundry-room. Acquiring new artefacts was described in a variety of ways. Two different stories regarding this concerned acquisition of the video recorder and the microwave oven. The video was commonly bought at the participant’s own request, whilst the microwave was usually provided by relatives or won in a lottery of some sort. Even so, the microwave was used more in daily life as compared to the video. There were several artefacts that the participants no longer had or used. Several of the participants elaborated on the car when discussing discarding technology objects. Their reasoning showed that different aspects influenced the decision to discard the object.

In 'Handling technology' the subgroups were: ‘changed use of technology’, ‘reluctance to adapt to new technology’, and ‘difficulties with technology use’. The participants said that they had not changed the way they used their technological objects. Neither did they express a wish to use them differently. When the handling of everyday doings was considered satisfactory the participants were not prone to change their behaviour by using new technology; they preferred to continue in the way they were used to. Difficulties with technology use were also elaborated on. One artefact that stood out regarding this was the video recorder as several participants talked about problems with too many buttons, trouble seeing the display, and complex systems.

‘Compensatory technology in old age’ includes the subgroups ‘assistive technology’ and ‘technology regarded as assistive’. Eyeglasses and hearing aids were the most common assistive devices, but also mobility devices such as walkers and canes were used by many. Only five participants did not have a walking aid. Several participants also described technological artefacts which they had acquired themselves and which they saw as assistive devices even if they had not been prescribed them as such. Examples are a wristwatch with a reminder, a hearing aid and specialised headphones.

The results show that the participants had a modest and pragmatic attitude towards technology. It is vital to integrate technology into the daily routines for it to be used. The relatives’ role in the acquiring and discarding of technology in elderly people's lives needs to be further explored as it seems to be of vital importance. In discussing the results from the perspective of public policy there is a discrepancy between how the participants regarded technology and how policy makers view technology for the elderly. In public policy, technology is described as something that facilitates independence and participation whilst the oldest old in this study themselves did not strive to make use of more or newer
technology. The expectation of benefit is crucial for technology to be incorporated into the doings of daily life. This must be considered in planning and implementing services for elderly people.

Paper IV. Ageing and the artefacts for living - Technology through the life course

The aim of the paper was to describe and discuss the relation (possession, use of and values) of two groups (age cohorts 85 and 85+) of elderly people to their physical environment, primarily concerning technological objects used in the home, for communication with others, or for transportation and leisure life. The article has three objectives: to examine how the present situation is influenced by actions and experiences during the life course, to indicate how elderly people consider their present holdings of artefacts toward anticipated future needs and interest, and lastly to identify everyday technological objects that have had or have special significance for the present generation(s) of elderly people (defining objects).

The technology rooms and defining objects at three separate times in the life course are presented, namely at the time in the parental home, when living as a married person with a family, and in the time as a senior citizen. In the first two phases the analysis concerned how the participants lived, what technological objects their household possessed and used, and how new technology was acquired. In the last phase, the senior citizen time, we also investigated which technology objects had become of less importance and what expectations the participants had for future use of technology.

The period in the parental home was remembered by the participants as being a time of simple circumstances and sometimes had a hard background. As the participants left their parental home between 1930 and 1955 depending on their age, there were substantial differences in the technology landscapes surrounding them. Despite this, all participants described their parents’ household in similar ways. Electric light and cold water was normally installed, and the radio and telephone made their way into the parental households. The technology landscape showed stability over time, with few changes in the technology rooms. The standard package was rather limited, containing, for example, electricity, radio, and treadle sewing machines that were used to mend and alter clothes.

The similarities between the two age cohorts are striking since the technology rooms at the parental time are described in much the same way. Later on, for some of the youngest participants, more technology entered the household, such as refrigerators, cars and electric washing machines.

During the family time (when they were married and living with children, in the period approx. 1940–1965), several everyday technologies became part of the standard package. The telephone, the refrigerator, the vacuum cleaner, the electric sewing machine, and the TV were all defining objects of this period in the life course. The TV had a very special diffusion pattern in the household as its spread was linked to the first major broadcast sport event in Sweden, the soccer World Cup in 1958. Several of the participants made the connection between the acquisition of the TV and the desire to watch the event. Socially, the push to buy a TV was great; parents wanted children to be at home in the evenings and not visiting neighbours that owned TVs. Later on in the period the car
became the object most households wanted and could afford. In spite of the differences in years of birth, the similarities between the two age cohorts are considerable during the family time.

In the senior citizen time, or more precisely in 2005 when the participants were well rooted as senior citizens, differences between the two groups become evident. Looking back, the technology rooms have been quite stable since the family time. The standard package includes the usual household appliances, and changes are more about if newer models have replaced or upgraded older established artefacts. Newcomers in the standard package during the late 1980s and 1990s were microwave ovens, personal computers and access to the Internet. The older age-cohort has less access to the defining objects at this time, and the difference is most pronounced regarding the car and the mobile phone. In the older group, 85+, only two participants still own a car and drive, the rest have disposed of theirs. In the younger cohort all but two still drive. Mobile phones show the same pattern; in the -85 cohort all but one person have one, whilst only four in the 85+ cohort have one. Those who have one are specific as they are the ones with the highest education in that cohort. The Internet is a defining object that few participants have; only seven in total have this service. Those who have it are the youngest in the -85 cohort, and once again, they are those with the highest education amongst the 85+. Only one defining object has an opposite pattern in access. The microwave is more common in the higher age cohort as compared to the younger one.

Not only the technology room over the life course but also the anticipated future is regarded as influencing the willingness to adapt to and acquire new technology. The expected remaining years of life as well as awareness of high age and the risk of reduced health seem to make the 85+ cohort more reluctant to plan ahead, and this hesitation also influences acquisition of new artefacts. Not wishing to change old habits also has an impact.

Conclusions drawn in the study are that even though the possession and use of technological objects were quite similar for both groups (-85 and 85+) during the life course from the parental home through the family time, there are differences in the senior citizen time regarding technology possession and use. An ‘aging turn’ seems to influence the perspective in higher ages as the chronological age becomes a strong factor in deciding about upgrading or downsizing the technology room.

Summary of findings
The overall aim of the thesis is to expand the knowledge about the everyday lives of the oldest old and to improve and deepen the understanding of their doings and possession and use of technology.

In paper I it was found that research articles including elderly people presented in six major occupational therapy journals focused only to a very limited extend on the participants’ subjective experiences or perspective (that is, the user perspective). This is notable as within occupational therapy the subjective experience of the client is stressed as important. Thus one would expect more research to emphasize how individuals experience their situation. This finding, together with the fact that there were very few articles which
included the oldest old, marks the importance of papers II and III. The two papers concentrate on the subjective experience of 18 oldest old regarding everyday life and doings (paper II), and technology possession and use (paper III). Paper II revealed that what is done during a regular day comprises the ordinary things that have always been done. However, how the doings are performed might have changed as the doings are adapted to match the strength and endurance of the person. To be doing something is seen as essential, and there is a powerful urge to manage on one’s own for as long as possible. In paper III, the participants’ attitudes towards technology were found to be modest and pragmatic - a technology style that they had had for their whole life. The participants have and use many artefacts, but there are also many they have stopped using and/or disposed of. Several also have assistive devices. Technological objects must be experienced as beneficial in order to be incorporated into the daily doings. Thus the participants do not have the same conviction about technology as public policies which see technology as facilitating independence and participation at older ages. In fact, the oldest old downsize their technology room.

To elaborate further on the findings from paper III, an additional group of elderly people was introduced in paper IV to contrast and render possible comparisons between two age cohorts of elderly people, those over 85 years and those under 85 years of age. The technology holdings during the life course between the two groups were compared. The situations for both age groups were very similar at the parental home time and at the family time. For the senior citizen time it became evident that the older group had less access to some of the investigated technologies (e.g. newer ICTs). At higher ages, age itself becomes a factor in explaining why new technologies that might be useful were not considered or incorporated in the technology rooms. This factor is called an ‘ageing turn’ and it is manifested in statements such as “when I was younger then it would have been…”, “now I am too old”. Another factor influencing the technology rooms of elderly people is relatives, as they both provide and service newer technologies.

The major findings are comprehensively described in figure 2. Papers II – IV are enclosed in a box as they all derive from the same overarching empirical project, involving the same empirical domain. In paper IV the material from the empirical project is complemented with data from a parallel empirical project. The arrows indicate relations between the results of the different papers as they verify each other in some respect, addressing different aspects of the phenomenon studied, everyday doings, and use of technology among the oldest old. Each paper thus contributes to the development of the knowledge base regarding doings amongst the oldest old (see Morse, 2001).
Figure 2 Summary of findings in papers I-IV.
GENERAL DISCUSSION

The findings presented in this thesis have contributed to enhanced knowledge on the oldest old regarding their perception of everyday doings and technology in everyday life and over the life course. As information regarding the oldest old from national surveys is limited, researching their circumstances contributes to better understandings of their conditions, which ought to have implications on how to plan and implement services and support for elderly people to enable them to maintain their independence and continue participation in society.

In this section, the findings from the four papers constituting the thesis will be further elaborated and methodological issues will be reflected upon. Further, implications for research and practice will be outlined.

Empirical and theoretical considerations

The picture of the oldest old in society

In this thesis, elderly people over 85 years of age are at the main focus. This group of oldest old who live and manage without or with a minimum of help and support from society, constitute a special group. They are still active, and consider their own health as good, and can thus be said to be in their third age (Laslett, 1996). For the most part, people over 85 years of age are considered to belong to the fourth age (Gunnarsson, 2009). Even if functional impairments and diseases increase at ages over 80, a large portion of the oldest old still live and manage by themselves, which needs to be recognised. More elderly people might be in their third age even at higher ages, but since most research focuses on mortality and morbidity (Wilken et al., 2002) the picture presented of the oldest old is that of dependence, frailty and death as in the fourth age. The findings in this thesis present oldest old people still in their third age, and this picture needs to be disseminated and incorporated in the basic data upon which political and societal decisions are made.

The participants says that they perceive that elderly people in society are seen as useless and worthless (paper II). This is something that needs to be recognised and opposed. The pictures presented in daily newspapers of elderly people often place them on a par with sick and disabled people (Nilsson, 2008). To give an alternative picture of how elderly people live and manage their lives is important to contradict those stereotypes and describe the everyday lives and doings of different groups of elderly people. Healthy individuals of high ages are seldom included in research. In paper I it was found that there were few studies including this group (healthy elderly) and these studies dealt with investigating measurement of movements to gain normative data in instrument development. Most articles involved respondents selected from different caring situations such as inpatients at specific wards or people enrolled in elderly care schemes (paper I), this have also been noticed by others (Gitlin, 2003; Steultjens et al., 2004).

Elderly people that still live and manage with or without minimal assistance are an important group on which to perform research as they can give important information on
how life at high ages is perceived. More knowledge is needed to understand the broad spectra of experiences that life at high ages can embrace. The experience can vary for one person in different situations, but also for different individuals in a given situation. Gunnarsson (2009) supports this notion as she argues that to understand the society we live in we need to understand what everyday life is like for elderly people.

The importance of doings in later life
Within occupational therapy, concepts such as occupation, doing, activity, action and task are central (Kielhofner, 2004; CAOT, 2002; Haglund & Henriksson, 1995). Occupations and doings are often described as including an element of subject experience (Pierce, 2001; McLaughlin Gray, 1997; Kielhofner et al., 2002) in contrast to activity which is described as a more general cultural shared idea (Pierce, 2001; McLaughlin Gray, 1997). In this thesis the concept of ‘doing’ is used. The reason for this is twofold; first, the subjective experience inherent in ‘doing’ is central in the thesis as the aim is to elucidate the oldest old’s own perspective, and second, using the concept ‘doing’ instead of activity in the interviews opens up a broader range of answers and descriptions. The concept used has consequences for what is seen and what is brought forward. It can be assumed that to ask someone to describe their doings, or to describe their activities, invites different responses. In describing doings, more mental phenomena and non physical activities such as reminiscing and resting can appear, doings that will probably not be mentioned when describing one’s activities. Both reminiscing and resting can be seen as occupations if the individual experiences them as doings and if they have a goal, for example to understand choices made during life or to regain strength (McLaughlin Gray, 1997). Within lifeworld phenomenology, activities normally regarded as mental are described as physical, for example, when reading, the body is doing the reading, the eyes see and the hand holds the book (Kielhofner et al., 2002); body and mind are not separate but are seen as a whole (Bengtsson, 1999). To elaborate on this idea that more mental activities are to be seen as doings, Mary Reilly’s classical quotation “That man through the use of his hands as they are energized by mind and will, can influence the state of his own health” (1962, p. 2) can be used. If the quotation is to be taken literally it is probably about physical doings, ‘the use of hands’, and more mental doings such as thinking and reminiscing are not included as the hands are not used for these doings. But if you look at it from a lifeworld phenomenological perspective, where the subjective mind and intention are a prerequisite for the physical doing, it is a mental doing that is being described ‘as they are energized by mind and will’.

In occupational therapy, activities of daily living are usually described in three areas; self-care, leisure/play, and work/productivity (Kielhofner, 2008; CAOT, 2002). These activities connote mainly physical and social activities whilst more mental or tranquil doings, such as reminiscing and resting, are seldom included or emphasized. In meeting people with diminished capabilities or reduced strength, who are limited in their ability to perform many physical or social activities, doings is a better concept to use than activity. Several studies regarding elderly people (Tollén et al., 2008; Häggbloom Kronlöf, 2007; Nygren, 2006) support the notion that the concept of activity needs to be expanded to include more mental and tranquil doings. Watching TV, or listening to the radio,
reminiscing about life, or fantasizing should all be acknowledged as important doings. The
description of everyday doings presented in paper II includes doings of this kind, and
stresses the necessity to embrace more serene and intellectual doings to get a more
complete picture of everyday life and doings at advanced ages. Everyday doings that were
previously taken for granted need to be acknowledged at higher ages as they take more
time and effort to perform. To be able to continue to perform daily doings on one’s own
terms is described as essential as doings give positive feelings of being happy and engaged,
help to keep one well, and also help to structure the day (paper II). As has been found in
other studies, to be occupied in the normal way is important (Johannesen, Petersen &
Avlund, 2004). It is important to recognize that engaging in the doings associated with
managing personal and household chores is vital at advanced ages. Elderly peoples’ choices
and experiences regarding daily doings need to be acknowledged and respected (Tollen et
al., 2008; Hägglom Kronlöf, 2007).

Continuity as a means to managing independently
As indicated in both paper II and III the participants said that they had not changed their
daily doings or their technology use or possessions. Remaining in one’s established routines
and patterns in the daily doings and in using the artefacts that one had had for a long time
was common among the participants and could be a contributing factor to their ability to
manage independently. To continue to do things as one has always done does not challenge
the capabilities to the same extent as learning new ways to perform the doings. Horgas et
al. (1998) found that as people experience age-related decline, they restrict their domains of
activities to concentrate their energy and efforts and thereby maintain and perhaps even
optimize performance in these activities. Doings were stressed as important by the
participants since they help structure the day; to do things in a habitual manner helps one
to remain active and enhances well-being, which is in accordance with the findings of
several other researches (Tollén et al., 2008; Gunnarsson, 2009; Johannesen et al., 2004).
Even if the day can sometimes be described as monotonous, to continue to carry out the
same doings as always is seen as a way of continuing to manage independently. To manage
independently is important as many participants feared the day when they would not be
able to manage by themselves any more. For example, not being able to continue to drive a
car was connected with fears of reduced freedom in everyday life (paper II).

The participants adjusted their doings and continued to use the objects they were
used to, and thus adapted their doings to their capabilities and requirements of daily life.
They made choices regarding their technology rooms so that their capabilities would be
met. To acquire new technology might challenge their capabilities. Patterns of habits are
not easily changed at high ages and thus the process of domesticating new technology,
which involves incorporating the objects in daily habits, can be difficult or might not even
take place. The participants preserved their ‘space of action’, so that their ‘power to act’ in
the home environment was consistent, although this choice made them vulnerable, as they
did not follow the changes in the surrounding society. So even if independence was
enhanced in that they managed their daily doings in the home, participation in society
might be threatened if for instance they could not access relevant information given through news channels, building on new ICT.

According to Christiansen & Townsend (2010) habits and routines in everyday life have mainly been studied from the perspective of behaviours that are antisocial and unhealthy (i.e. physical and psychological addictions) and they suggest that more studies on habits and routines are needed to understand the doings of everyday life. The descriptions of the daily doings and the apprehensions of the doings presented in this thesis show that everyday doings are of importance in the life of the oldest old as the participants emphasised the positive effects connected with doing something. The participants explained that doing things not only helped them to structure the day, it also helped them to forget their aches and pains, and contributed to feelings of well-being. These descriptions of how daily doings were perceived by people of high ages contribute to the science of occupation. To understand the phenomenon of occupation and daily doings, research based on the oldest old themselves is vital. The thesis findings also point to the importance of providing opportunities for doings for elderly people. Helping elderly people to maintain their independence by continuing to perform their doings, perhaps in an adapted way, contributes not only to the independence and well-being of the individual, it also postpones the need for help and support from society, which has implications for the cost of care for the elderly. Hinck (2004) established that understanding the perspective of the oldest old forms a basis for developing interventions designed to enable them to remain at home as long as possible. Horgas et al. (1998) points out that knowledge about everyday doings provides insight into elderly peoples’ goals and motivation.

The significance of technology in the everyday lives of the oldest old

The findings in paper III show that the participants did not have the same trust that technology development will enhance elderly peoples’ independence and participation in society as is advocated in public policy (WHO, 2002; OECD, 1998; SKL, 2005; SOU, 2003). The participants’ attitude was more modest and in line with the ‘ageing turn’ in that they had started to downsize their technology rooms (papers III and IV). The ‘ageing turn’ is presented in paper IV where the findings suggest that as the participants become older a new aspect becomes apparent when considering reasons to appropriate new artefacts or to alter habitual doings. This ‘ageing turn’ implies that age in itself becomes an argument not to acquire and adapt to newer technology solutions. Supporting results are also found in paper II as age itself is described as a hindrance to doings.

Very few of the participants acquired new artefacts, or replaced used artefacts with newer models. This affected their ‘power to act’ as their tools became outdated and perhaps did not function with newer developed applications or supporting systems. This is important to consider when new systems of information distribution are diffused in society. One argument often put forward regarding technology use among elderly people is that the coming generations of the oldest old, who have met and used ICT during their working lives, will not have the same disadvantages as the present generation of oldest old. Even if coming generations of elderly people are assumed to have higher access to technology and ICT than those who are the oldest old today, their technology rooms might
consist of old versions of the technological objects, which might not be compatible with the latest updates and will thus still create problems (Bouwhuis, 2003). When technology development evolves, every generation of elderly people to come might become bystanders if their technology rooms lack artefacts and systems that are new and vital for that time.

Not only does the ‘power to act’ diminish at higher age, the ‘space of action’ is also reduced as elderly people are more confined to their home and have fewer life spaces (Lilja, 2000; Cronberg, 1986). Most of their time is spent in their home or in the neighbourhood (Horgas et al., 1998).

Another finding is that the participants to a large extent made conscious choices about what doings to carry out, in what way they were performed, and also regarding the acquisition and use of technology. Even if technology to a large extent was exchanged between generations the participants clearly expressed their own conscious choices. The participants also stated that they were familiar with or at least had an idea of what new technology could be used for, and many of them had also tested different technologies together with their children or grandchildren. However, in the end they still preferred to continue to perform their everyday doings in the ways they were used to. One reason that was often given for this was the advanced age, the ‘ageing turn’ as described above. Technology objects must be of importance and be apprehended as contributing to the daily doings, otherwise they will not be used. Technology objects that are incorporated in the daily doings are used more than those that are not (paper III).

**Methodological considerations**

This thesis includes four papers; one examination of articles and three papers deriving from an empirical project consisting of interviews and observations with people over 85 years of age. In the fourth paper an additional group of elderly people below 85 years of age is included to enable comparisons between age groups (-85 & 85+).

The rational to beginning the thesis with a critical examination of research including elderly people in selected occupational therapy journals was to reveal possible knowledge gaps in the body of research, and also to map the existing research within the area. It has recently been suggested that doctoral theses should include a systematic review to enhance stringency and the scientific demands on the thesis (Rosén, 2008). However, it can be questioned why the examination is limited to occupational therapy and why these particular journals were selected. There are obviously other subject areas and other ways to view research about elderly people than from occupational therapy journals. As the overall purpose of the thesis was to focus on the subjective experience of the oldest old, with the activities of daily living as the point of departure for the interviews with the participants, occupational therapy was considered as a relevant subject area for the examination. In occupational therapy the subjective experience is emphasized, and the focus is on enabling activities of daily living for the individual (FSA, 2005; WFOT, 2004). Using occupational therapy journals also gives a picture of research connected to a professional field that deals with elderly people and technology (Smith, 2000).

The chosen journals are those that were deemed as the most established, well-known and well-reputed within general occupational therapy. There are specific journals targeting
different areas of occupational therapy, for example geriatrics (e.g. Physical and Occupational Therapy in Geriatrics), but since one research question in the examination was on how large a share of the published articles in the journals included elderly people it was considered that general journals would be best suited to the examination.

In the empirical project on which papers II – IV are based, interviews and observations were used as a means of data collection. Nygård (2006) suggests that combinations of interviews and observations can enrich data. To get a deeper understanding of how humans adapt to their life situation and their lifeworld there is a need to hear their stories about their own experience (Dalen, 2007). Interviews are recommended to gain an insider’s perspective and come close to understanding people’s subjective perspective (Gustavsson, 2000). An overarching goal for qualitative research is to gain insights about phenomena regarding people and situations in the social reality of these people (Dalen, 2007). A phenomenological attitude, in a general non-philosophical meaning, has been predominant within qualitative research. Many researchers build on phenomenology, meaning that they try to understand the social phenomenon from the perspective of the individual, and describe the world as it is perceived by them and presume that the relevant reality is what people apprehend it to be (Kvale, 1997). The phenomenological tradition also includes an interest in describing human experiences. The aim of this attempt is to create texts that are representative of, or substitute for lived experiences of the reader so that the reader understands (Öhlén, 1999). In this thesis the main emphasis is on describing the old individuals’ understanding of their life situation from their own point of view. In this respect the empirical work and analysis follow in this tradition.

For interviews to be compatible with lifeworld phenomenology, the interview needs to be open and flexible, like in a conversational situation (Dahlberg, 1997; Öhlén, 1999). To ensure that the interview covers the intended focus for the research, a list of question areas is usual. It is also normal to use a commencement question, from which the researcher starts out, asking the participant to tell more about, elucidate and give examples of the investigated subject (Dahlberg, 1997). The interview guide used for the interviews in the empirical project was structured in accordance with these principles, the commencement question being to describe the doings of an ordinary day, with question areas relating to everyday doings and technology. In researching the perspective of the participants it is their experiences that should be highlighted. Thus the analyses of the material are intended to be descriptive, not interpretative (Malterud, 1998; Kvale, 1997). To ensure that the participants’ experiences are presented in the findings, an effort was made to remain as faithful as possible to the interview material in the presentation, which is shown by the use of citations and the fact that both similarities and differences are shown.

The point of departure for the interviews was the doings of an ordinary day. To start with the daily doings when researching apprehensions regarding technology possession and use gives a different perspective to what is usual in studying technology or assistive devices. This perspective was chosen to elucidate doings as the main focus and to show that technology should be looked upon as integrated or connected to the doings. To proceed from the doings makes the stories reveal which technology is used and how this is perceived by the participants. Related to the earlier discussion on use of the concept of
‘doing’ the stories presented included more tranquil and quiet doings such as resting or taking a nap in the afternoon (paper II). Thereby a more complete picture of how everyday life and doings are perceived is hopefully presented.

Recruiting of participants for the empirical project

How participants are selected and enrolled in the project may of course have had an effect on the findings. The motive for using pensioner organisations in recruiting participants was pragmatic; it was an unproblematic way to reach elderly people still living and managing on their own who were not enrolled in some form of elderly care. One main criterion for participation was that the participants had to be living independently, which made knowledge about possible participants vital. The local branch of PRO had earlier indicated that they were interested in taking part in research and cooperation was already established between PRO and NISAL. However, to broaden the recruitment base, the local branch of SPF was also contacted. These two organisations appeal to slightly different groups of pensioners since PRO has mostly former blue collar workers as members whilst SPF have mostly former white collar workers.

When recruiting participants through organisations that have expressed willingness to participate in research one needs to consider how this affects the research process and findings. In this case one of the organisations had expressed a willingness to participate. Their contribution to the project was to provide lists of possible participants. Both organisations provided lists and the final participants became quite evenly distributed between the two organisations (ten from PRO and eight from SPF). After having provided the lists the organisations were not further involved in the research process.

It could be argued that choosing members of an organisation can be problematic as it might restrict the diversity of the participants. However, as these associations have such a large proportion of elderly people as members it is suitable to use them as a way to reach informants (see for example Dalen, 2007). Out of the 1.6 million elderly people in Sweden 900 000 are organised by five nationwide pensioner associations. The two major associations, PRO and SPF, together organise over 650 000 elderly people (PRO & SPF Homepages, 20080506). The participants had different levels of engagement in the associations; some were very active, taking part in and being responsible for different activities, and some were just members and did not participate in any activities arranged by the association.

The participants all lived in the same area, and the group was limited in numbers. All were members of a pensioner organisation, which made them a rather uniform group. As the group was so homogenous, it is impossible to know whether their life history resembled the majority in their age cohort or not. However, as they were part of the statistically most common group in their age cohort, those who live and manage on their own, researching their living conditions was of interest.
Quality and generalization in qualitative research

In texts regarding quality and generalization in qualitative research, issues such as trustworthiness, validity of interpretation and theoretical interpretation are discussed (Larsson, 1994; 2004; Kvale, 1997; Whitaker 2004). However, it is mainly the end product, not the research process per se, that is discussed. The quality criteria that Larsson (1994) presents concern quality in the written product as a whole, to show perspectives of awareness; that is to clearly describe pre-understanding and to show the research area’s theories of interpreting and personal experiences. The material needs an inner logic in which research questions, data collection and methods of analyses have to correspond. Ethical awareness is part of this quality criterion. Quality in the findings concerns content richness, to show nuances and to seize the essential. It is about having a good structure so that the findings will not be vague and will add to theory. In phenomenographical and phenomenological studies this is about developing descriptions for understanding. The validity criterion also includes empirical anchorage.

In this thesis, efforts have been made to follow these criteria for quality. The author’s pre-understanding is presented and efforts have been made to make the logic between research question, data collection and analysis easy to follow. Furthermore, ethical considerations are discussed and content richness and nuances are handled so that both similarities and differences in experiences between the participants are presented in the findings of the different papers. This also meets the validity criterion regarding empirical anchorage. To be close to the empirical data also enhances the transparency of the material. The presentations of findings in the included articles are consciously close to the raw data, with many citations and examples.

The interpretations of a qualitative study should be applicable within a larger area, or in other words, before generalisation can be made from a qualitative study, the question of whether if it is meaningful must be answered. If a case shows uniqueness, generalization does not come into question. When it comes to generalization of qualitative studies Larsson (2001) describes three different forms. The first is maximised variation – to try and find as many different understandings as possible. This focuses on sample selection and could be said to have some resemblance to random sampling in quantitative research. If a sample is selected that maximises the variation one has probably covered the existing variations. With the second form, context conformity the thought is that ‘the interpretation might be generalized to other cases where the context is the same’. It is a question about resemblance between the contexts. The third form, recognition of configuration signifies that the one using the research can use the interpretation to recognise another case (compare this with a physician’s use of symptom descriptions). Identification of patterns to recognise is used to distinguish the phenomenon in another study (Larsson, 2001).

Transferring this structure to choices made in the thesis, maximum variation is considered as the different apprehensions of the participants are accounted for in the presentations, even though they are a homogenous group. The sample selection is thoroughly described although it is not intended to secure maximum diversity among the participants in regard to background variables such as age, class, ethnicity etc. Regarding context conformity and recognition of configuration, these are more directed to the reader of the thesis. The phenomenological traditions that aim to create texts substituting lived
experienced for the reader (Öhlén, 1999) are in line with recognition of configuration. As the main emphasis of the thesis is to describe the participants’ apprehensions following in the phenomenological tradition, the findings are presented in a manner that helps the reader to make comparisons with other contexts or studies.

**Ethical reflections**

Ethical considerations need to be acknowledged when interviewing elderly people of this age group. It has been established through other research that many elderly people are suspicious about signing consent agreements in writing (Atwal & Caldwell, 2005; Brod & Feinbloom, 1990). In this thesis, recording of consent was used. The interviewer explained about the aim of the project and about informed consent and asked if the participant was willing to participate, and if he had understood the information given both in writing (in the information letter) and verbally (as told by the interviewer). This was then confirmed by the participant and this confirmation was recorded.

At advanced ages, functional limitations and decreased capacities are not unusual, which needs to be acknowledged and prepared for. One of the observations in this study had to be cut short due to one participant’s weakening health. Between the first interview and the observation round the person in question had been rushed to hospital due to heart infarction and thereafter suffered from angina pectoris. Even though he was medicated it was obvious that he was uncomfortable and in pain. As the man did not want to rest whilst the interviewer was present, the interviewer thus took the decision to discontinue the observation. However, efforts were made to gather information about what had been done during the morning and what was planned for the rest of the day to get a picture of the day. The participant later completed the third meeting (second interview round).
CONCLUSIONS

This thesis has presented findings that expand and deepen the knowledge on the oldest old's subjective experience of everyday doings, including technology possession and use. This knowledge contributes to a more diversified picture of the oldest old that needs to be recognised. This insight into how people over 85 years of age perceive their everyday doings and technology is important as it has implications for how to plan and implement services and support for elderly people.

To continue and perform the everyday doings as one has always done and in the way one is used to is important in old age as it contributes to feelings of well-being and helps structure the day. It is also vital that everyday doings in the form of regular habits and routines regarding personal care and household chores are acknowledged as important doings in old age.

For technological objects to be incorporated in everyday life they need to be integrated in the habits, in the doings. If this is not the case they might not be used. The participants 'power to act' and 'space of action' diminishes at higher ages, which is an important factor to take into consideration. When new information technology evolves and leads to new ways of gaining information, elderly people can be left behind and have difficulties obtaining relevant information in society.

Even if the technology rooms over the life course for people –85 and 85+ have been similar, differences appear between the two age groups as senior citizens. The older group has less access to newer technologies, especially ICTs.

At higher ages an 'ageing turn' appears when age itself becomes a reason for downsizing both everyday doings and technology rooms amongst the oldest old.

Enhanced knowledge regarding the everyday life and doings of different groups of elderly people is required as well as knowledge about their technological landscape and technology development in society in general.

Implications for further research

Research with elderly people who manage without or with a minimum of assistance from society needs to be further developed. The empirical project on which three of the papers in this thesis are based was carried out with a small number of the oldest old, all living in the same middle-sized town in Sweden. Further studies with participants from more diversified living conditions are vital to enhance knowledge on elderly people's circumstances in late life. Knowledge regarding everyday doings and technology use in old age must be expanded, especially from the elderly peoples' own perspective.

There should also be further exploration of if and how elderly people's experiences of doings can supplement measures of ADL to strengthen decisions on caring needs and home help services.

To study the opposite of acquiring new technology in old age, i.e. disposing of or sorting out technological objects, could also be of interest. Studies indicate that the disposal of technological objects gradually replaces the process of acquiring new artefacts at older ages (Chapman, 2006; Marcoux, 2001). These studies mostly consider this process at
specific turning points, such as moving to sheltered housing. How this process is perceived and experienced by the oldest old who are still living and managing independently in their own homes needs to be explored as the downsizing could result in a diminished ‘space of action’ and ‘power to act’.

The findings of this study show that relatives have a significant role in acquiring and disposing of technology for elderly people. How children and grandchildren impact and take part in these transactions are questions that need further exploration.

The ‘ageing turn’ found in the material needs to be further investigated. Is this ‘ageing turn’ a common feature in old age or is it specific for the areas investigated in this thesis, namely everyday doings and technology?

**Implications for practice**

The findings presented in this thesis have implications for practice in different areas. In particular, professionals in elderly care, occupational therapists, and people working with technology development should benefit from the following findings of this research.

- How everyday life is perceived by the oldest old themselves is important information in planning and executing care of the elderly. The services can thus be based on the wishes and desires of the oldest old themselves.

- To continue performing daily doings is important in old age as it helps structure the day, helps one forget about aches and pains, brings feelings of well-being, and is a way to remain independent.

- Future developments in society may influence elderly care and place demands on professionals working with elderly people to develop knowledge in areas such as how elderly people use technology. Understanding how elderly people relate to their technology enables professionals to adjust support and services, and to recommend suitable technological objects to acquire and learn to use.

- Knowledge about technology use and preferences among elderly people is vital so that adaptations and development of new and old technology will match the technological rooms of elderly people, as well as their knowledge and skills in using technology. Technological objects developed in such a manner can thus facilitate everyday life and doings of elderly people.

- Compensatory technology in old age needs to embrace more than assistive devices as more technology is developed. Technological objects that are not defined as assistive devices but that have the potential to resolve perceived problems in daily doings need to be incorporated in the measures used by professionals working with elderly people.
SVENSK SAMMANFATTNING

Forskning om de allra äldsta i samhället är begränsad, speciellt om dem som bor och klarar sig utan eller med minimala hjälpinsatser från samhället. Dessutom saknas forskning som har sin utgångspunkt i de allra äldstas subjektiva upplevelser om sitt vardagsliv och sin hemmiljö. Denna avhandling har till syfte att belysa de allra äldstas levnadsförutsättningar från deras eget perspektiv. En bakomliggande tanke är att förstå hur de upplever att bo och klara sig självständigt. Sådan kunskap kan ge indikationer för vilken form av stöd och insatser som kan möjliggöra för dem att fortsätta leva och klara sig självständigt. Stora förhoppningar finns på att teknisk utveckling och nya tekniska produkter ska leda till ökade möjligheter för äldre personer att förbli oberoende och kunna delta i samhällslivet. Trots detta finns det endast marginella kunskaper om hur de allra äldsta som lever och klarar sig oberoende av samhällsinsatser förhåller sig till och använder de tekniska artefakter de har. Relationen mellan individens kapaciteter och miljöns krav utmanas av den snabba tekniska utvecklingen. Om man ser till äldre personers teknikrum så har dessa stora variationer då äldre personer är en sådan heterogen grupp. Den befintliga forskningen har dock inte behandlat teknikanvändning och innehav på generell nivå utan de flesta studier har berört användning och upplevelse av tekniska hjälpmedel eller specifika objekt. Hur äldre personer vill och kan använda teknik i sina dagliga göranden är därför en fråga som behöver undersökas. Denna behöver analyseras mot bakgrund av att de som är gamla idag har levtt i en period med många tekniska genombrott, en vardagsteknisk revolution som pågått under hela deras vuxna liv.

Det övergripande syftet för avhandlingen är således att öka kunskapen om det dagliga livet för de allra äldsta som bor i eget boende samt att förbättra och fördjupa förståelsen för deras göranden och innehav och användning av vardagsteknik. Avhandlingen består av fyra delarbeten (artiklar) och en sammanfattande ramberättelse.

Syftet med den första artikeln var att undersöka vilken forskning om äldre personer som presenterats i sex vetenskapliga arbetsterapeutiska tidsskrifter under åren 2001 - 2006. Artiklarna klassificerades utifrån forskningsstrategi (kvalitativ eller kvantitativ), åldersgrupp på informanterna, benämning av informanterna, och ämnesområde. Av totalt 1368 artiklar inkluderade 212 äldre personer i någon mån (15 %). Cirka två tredjedelar (67 %) av artiklarna redovisade studier som hade en kvantitativ uppläggning, en fjärde (27 %) en kvalitativ och 12 (6 %) använde både kvantitativ och kvalitativa metoder. Analysen av åldersgrupp visade att de flesta artiklarna hade informanter i ett brett åldersspann; i en del fall skilde upp till 95 år mellan den yngste och äldste informanten. Ungefär en tredjedel av artiklarna hade endast informanter över 65 år och fem av dessa endast personer över 85 år. Klassifikationen av ämnesområde visade att instrumentutveckling och -prövning var mest förekommande (15 %) följt av tekniska hjälpmedel samt kartläggning eller bedömning av aktiviteter i det dagliga livet (ADL). Den vanligaste gruppen som undersökt var personer som haft stroke (21 %). De flesta artiklar hade dock en vag eller oprecis definition av sin informantpopulation, t ex intagen på en avdelning eller sjukhus, eller helt enkelt äldre. När informanter och ämnesområden kombinerades var artiklar om normativa data kring rörelsemöbler hos friska äldre, och stroke patienter och tekniska hjälpmedel vanligast.
förekommande. Slutsatsen av undersökningen är att mer kvalitativ forskning fokuserande
den äldre personens subjektiva perspektiv behövs, speciellt gällande de allra äldsta.

I den andra artikel var syftet att undersöka hur en grupp äldre personer över 85 år
som bor och klarar sitt dagliga liv självständigt upplever och beskriver sitt dagliga görande.
Intervjuer och observationer har genomförts med 18 personer. Upplevelsen av 'Doing
everyday life' (Att göra det dagliga livet) beskrevs i fem övergripande teman: 'Upplevelsen
av att vara gammal', 'Göranden i det dagliga livet', 'Dagens mönster', 'Ändrade göranden',
och 'Betydelsen av tid'. Informanterna beskrivs att det de gör en vanlig dag inte skiljer sig
mycket ifrån tidigare, men hur görandena genomförs skiljer sig åt. Framförallt tar de olika
görandena längre tid att utföra. Att vara sysselsatt och ha hälsan betonas som viktigt.
Minskad energi och funktionsnedsättningar begränsar görandet, men trots detta finns en
stark vilja att klara sig självständigt. Informanterna upplever att samhället ser äldre som
värdefulla och vanvändbara. Studier som beskriver hur äldre personer själva upplever sina
dagliga liv är värdefulla för att nyansera bilden av äldre personer och kunna erbjuda
interventioner och service anpassade efter de äldres behov och önskemål.

Den tredje artikeln belyser hur äldre personer uppfattar den teknik de använder och
mötter i sitt vardagliga liv. Arton personer över 85 år har intervjuats om deras uppfattning
om innehav, användning och attityd till teknik. Fynden delas i fyra kategorier: 'Uppfattning
om teknik', 'Teknikinnehav', 'Att hantera tekniken' och 'Kompensatorisk teknik i äldre
åldrar'. Trots att informanterna levit i en tid med omfattande teknikutveckling har de en
pragmatisk inställning till ny teknik. Om en aktivitet genomförs på ett för informanten
godtagbart sätt är denne inte villig att övergå till en mer teknikbaserad lösning. Policy
dokument kring äldre betonar teknikens betydelse för oberoende och delaktighet, teknik
anses kunna vara äldre personer till nytta. Denna uppfattning stöds inte av den attityd
informanterna i denna studie uppvisar gentemot teknik. Teknik måste uppfattas som
fördelaktig för att tas i bruk i det dagliga görandet. De äldres eget perspektiv är viktigt för
att förstå vilka tekniska lösningar som kan stödja äldre och undvika att de upplevus
stigmatiserande eller för komplexa för att använda.

Syftet för den fjärde artikeln var att undersöka äldre personers interaktion med
vardagsteknik från ett livsloppsperspektiv. I studien ingår 29 äldre personer, en grupp om
13 personer mellan 65 – 84 år (85-) och en grupp om 16 personer i åldrarna 86 – 93 år
(85+) (från samma grupp som ingått i artikel 2 och 3). Data samlades in via intervj,
när även en tekniklista omfattande teknik vid 1920-talet och framåt ifylldes. På så sätt kartlades
teknikinnehavet genom livet för informanterna. Analysen har koncentrerats till teknikinnehavet vid tre tidpunkter i livet: i föräldrahemmet, vid familjetiden och pensionär år 2005. Teknikrummet i föräldrahemmet och i familjetiden är
förhållandevis lika i de två grupperna. Det är först vid pensionärtiden år 2005 som
skillnader kan ses. Den äldre gruppen har då mindre tillgång till nåre teknik, speciellt
informations- och kommunikationsteknik. I högre åldrar finns en "åldersvändning" då
ålder i sig blir till ett argument för att inte införska nya artefakter eller använda viss
teknik. Beslut om hur teknikrummet ska utformas och användas skapas genom individens
tecknobiografi, behov, kapaciteter och framtida livsvänsningar.

Avhandlingens slutsatser är att bilden av de allra äldsta i samhället som
hjälpbehövande behöver utmanas och revideras då många av de allra äldsta bor och klarar
sitt dagliga liv självständigt. Den tredje åldern bör utvidgas till att innefatta fler av de allra äldsta i samhället, detta behöver också införlivas de basdata om äldre som ligger till grund för politiska och samhälleliga beslut kring äldre frågor.

För en äldre person är det viktigt att bevara sina dagliga göranden då det bidrar till upplevelser av välmående och hjälper till att strukturera dagen. Dagliga göranden i form av regelbundna vanor och rutiner för personlig vård och hushållsgöromål behöver uppskattas som viktiga göranden i högre åldrar.

För att nya tekniska objekt ska införlivas i det dagliga livet behöver de integreras i de dagliga vanorna, i det dagliga görandet. Om detta inte sker kanske objekten inte används överhuvudtaget. Deltagarnas handlingskraft och handlingsutrymme minskar i högre åldrar. När ny informationsteknik utvecklas leder det till nya sätt att nå information, detta kan missgynna äldre personer som inte har införskaffat den senaste tekniken inom informations- och kommunikationsområdet.

Även om teknikrummet varit liknande över tid, från barndomshemmet till familjetiden, för åldersgrupperna under och över 85 år så framkommer skillnader som pensionärer år 2005. Den äldre gruppen har då mindre tillgång till nyare teknik, speciellt informations- och kommunikationsteknik. I högre åldrar framkommer en ”åldervändning” där åldern i sig blir ett argument för att dra ner på både dagliga aktiviteter och teknikrum.

Ökad kunskap om dagligt liv och görande hos olika grupper av äldre människor behövs, såväl som kunskap om deras teknikrum. Detta behöver också sättas i relation till teknikutvecklingen generellt i samhället.
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REFERENCES


