THE DECONSTRUCTION OF A TARGETGROUP FOR IT-INNOVATIONS:

Elderly users´ technological needs and attitudes towards new IT

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1. Introduction

1.1 The aim of the paper

This paper adresses the problem of measuring old people´s needs and preferences in information- and communication technology (ICT). Should we regard them as users, or just as old, or by what they actually have in common? The aim is to describe established definitions of old people as a target group for innovation and design of ICT and contribute to a more precise and nuanced definition.

1.2 Unresolved problem

Since my interest in older users of ICT began thirteen years ago my work to make the users themselves visible has been an ongoing struggle. Technical support to fulfill old people´s needs and demands has created a challenge for the Swedish government, the European Commission and industry. Unfortunately, development has been very much technically driven and the problem of defining the elderly is still unresolved. Still, the interpretations of old people´s needs and demands in ICT have very little to do with the actual situation of the elderly themselves. As users they have been described as a homogenous group, reduced to a single category defined by age. I argue that it is more useful to define the elderly as both a homogenous group defined by age *and* as a heterogenous group defined by additional factors.

Christine Marketing, the director of Eurolink Age, a non-profit network for the promotion of good policies and practises on ageing within the European Union, says that

there are two general aspects on older people as users of technology dominating the discourse. First, we rely on our images of ageing and do not realise how little we really know about elderly people´s needs and demands. Second, we would not want anyone to make the same statements about our own age-group as we do about old people.

   By holding on to stereotypes of older ICT-users, and accepting a deterministic and technically driven approach, risks that we stigmatise old people and place constraints on their lives. In addition, planners, descision-makers, care-providers as well as industrialists fail to gain the knowledge they need to understand what older customers really need.

1.3 Methodology

This paper is based on my analysis of published literature, documents and conferences where old people are discussed as users of ICT. I focus on the way they are defined. The literature I refer to is produced within the field of technical research and development, medicine and social and philosophical research. Mainly I emphasise the way in which we can gain knowledge about older people in their every day living situation. My sample of books and articles is not a complete one but represents an attempt to analyse the interpretations of elderly as ICT-users in Sweden and Europe during the period 1989-2001.

   In this article it is assumed that theories used to interpretate old people´s needs of IT are insufficient and that there are alternative theories that can contribute to better results. There are reasons to question, however, whether it is fair to treat the approaches described below as theories. What I am calling theories reflects the assumptions and implicit hypothesis of those who have usually defined elderly ICT-users. A more formal theory would explain why old people should be defined as a homogenous group or why they should not.

2. Established theories and hypothesis

2.1 Defined by age

The picture of old people as a homogenous group with similar needs and preferences has guided technical development for the most part. Usually the age of 65 is counted as the first year at which one becomes classified, a number based on the retirement age in many western countries. One example is an early report on technology and the elderly funded by

the European Commission in 1992. In order to cover variation within groups distinctions are made between young elderly under 80 and old elderly, 80 and over, and differences based on gender (Cullen & Moran 1992). The age of 65 is reproduced in later reports produced by EU-projects (projects 219 and A5 within COST, see for example EU 1994 and Roe 1995) and European research initiatives and networks (EC Conference 1994, Gerontechnology 1994, DAN 1994, Graafmans, Taipale & Charness 1998).

   The habit of taking the age 65 as a starting-point for categorising old people and ageing is more or less explicit in most reports on ageing and technology and is also true for statistics on IT and old people (Andersson & Ortman 1995, Statistics Sweden 1997, Statistics Sweden 1996, Nordicom 1996, Swedish Institute for Communication Analysis 1996, Graafmans, Taipale & Charness 1998). There are also examples of taking the starting-point at the age of 50 or 60 as in the European Design for Ageing Network or Eurolink Age (DAN Newsletter 1994, ActiVAge 1996, see also Bond & Holst 1997).

2.2 Interpretations of needs

The needs of old people are for the most part interpreted as needs deriving from physical impairments as well as social losses and technology is regarded as a tool that can compensate for these losses and help maintain old persons independence. In most reports on ageing and technology decreased mobility, vision, hearing and memory are mentioned as objects of research in order to compensate for and prevent losses (Morris 1994, Graafmans, Taipale & Charness 1998). In some reports disability is defined as acquired by age (Nordic Committee 1993). Social losses refer to loss of family, spouse, friends or the possibility to interact with other people because of physical constraints (Graafmans, Taipale & Charness 1998).

2.3 Between disciplines

Usually the authors writing about old people as users of computers belong to the field of developing computer interfaces and design of computer applications. They are interested in the interaction between users and computers (Smith 1990, Csaja 1993, Saito 1994, Morris 1994). The development of categories of ICT-users is not , with a few exceptions, part of established discourse among social scientists or geronthologists (Östlund 1995).

2.4 Concepts developed

Old people as one category also appear in concepts used to express old people´s needs of technology, such as "technology for the elderly" (in Swedish: äldreteknik), "gerontechnology" and "successful ageing".

"Technology for the elderly" indicates that the concept of technology can be specially designed to fit old people. Concepts of similar significance are handicap technology or technology for disabled people, medical technology or communication technology (Östlund 1995). This understanding of making technology a linear process where certain technology is constructed and designed to fit a certain person or a certain purpose is not unusual. On the contrary it belongs to the mainstream understanding of use and users as a result of technology. In other words, needs and technology are expected to be put together as two pieces in a jigsaw puzzle.

The opposite understanding can be exemplified in Steve Woolgar´s description of technology as "frozen relations" (expressed in a presentation at a conference arranged France Telecom in Bordeaux 1999). In this context he means that technology made for old people is a materialisation of our images and expectations and as such, contributing to shape ageing.

The mainstream understanding of the relationship between old users and technology is implicit not only in the concept of "technology for the elderly" but also in the other two concepts mentioned above.

The concept of "gerontechnology" was developed in a European context in the early 1990s. It has an explicit view of the elderly emphasising compensation and prevention based on a theory about a system where technology more or less compensates for human deficiencies and for continous losses. This man-machine relationship encompasses physical as well as environmental aspects. With the help of various applications such as displays and controls and the demands from the perceptive and motoric status of the individual, a balance between the human operating system and the technical operating system is established (Gerontechnology 1994, Graafmans, Taipale & Charness 1998).

The concept of "successful technology" is not directly related to technology but to the design of old people´s environment. It has been developed in an American context and considers the life-span development which says that the design for the elderly would accomodate aspects of constancy and growth as well as decline. "Successful ageing" regards ageing as procedural[1] and balances the view that elderly people are necessarily dissatisfied, lonely or neglected (Smith 1990). However, the concept definitey refers to specific ideals that also goes for representations of technology in general in modern societies. It has a ring of Americanism by virtue of its focus on "success" defined as

optimal satisfaction with life, ability to coop with life-related changes, to remain young despite of old age and to remain productive (Torres 1998). Thus not all elderly can be successful, but those who catch up with developments such as with the development of IT, definitely are capable of being succesful.

2.5 Elderly as disabled

Hence, old people as potential users of IT or old ICT-users in statistics are, for the most part, discussed as a homogenous group of people. Ageing process is seen as a process defined by age and characterised by physical or social losses. Some nuances can be observed in the attempts to distinguish between age groups and between different kinds of physical constraints. For that reason needs for disabled people are often discused at the same time as needs for the elderly (Nordic Committee 1993, EU 1994).

2.6 Technophobic

Some problems expected to appear when old people are offered computers have given rise to discourses. Such a discourse is whether old people are technically illiterate or to what extent they suffer from technophobia. The task is to find out whether older adults have significantly higher computer anxiety than younger adults (Rosen & Weil 1995, Laguna & Babcock 1997, Flynn 1989, Dyck & Smither 1994). So far it doesn´t seem that computer anxiety corresponds to age. It is likely that there are other factors such as confidence and experience that influence attitudes and expectations towards computers (Baack, Brown & Brown 1991). Another question is whether physical capacities can be enhanced by computer use (Farris 1994, Morris 1992, Maren 1987). Despite this established discourse there is not enough research to draw any firm conclusions to support the premises on which these arguments are based.

3. Strenghts of established hypothesis

There is no doubt that the unique attention paid to old users of IT and problems related to ageing and technology can help advance work as a way to gain knowledge not only about old people but also about users in general. Besides disabled persons, old people are the only user group that is defined in research programmes on national level as well as in European research and development programmes (Bangemann 1994, SOU 1994 and 1995, Regeringspropositionen 1995/96:125, Swedish Handicap Institute 1997, Datainspektionen

1995). An assesment of user aspects in European initiatives from the 1994 Bangemann initiative and up to the present eEurope intiative shows that images of users reflect their status as consumers, citizens, young and old people and disabled persons (Bastelar 2000).

In general the individualisation of the use of IT and the demands to include all people in the IT-society make citizens as users more important for industry as well as for politisians. In this respect old people have been focused in order to prevent them from being left behind IT-developments (SOU 1992:52).

Another area of research focus is users in the field of computing - human-computer-intercation and systems analysis. Traditionally, social implications are something left over to social scientists. Even though technology, such as telephones or computers, are parts of old people´s everyday life and described as such, they are not part of the objects for research among social scientists or gerontologists (Sonn 1995). As a result computer scientists and behavoural scientists do not get much help in making the picture of old people more nuanced.

4. Weaknesses of established hypothesis

The weakness of established hypotheses or generalisations of old ICT-users as a homogenous group have serious consequences for the understanding of them as users and also the understanding of users in general. Most of all, it leads to a development characterised by ad-hoc descriptions where some applications work and other not. This generalisation is a result of a technology-driven development and a lack of empirical descriptions about who elderly users are and their potential and ability to use technology. This means that the hypotheses mirror the images of ageing and elderly people among engineers and planners, rather than reflect old people´s own articulation of their situation. The reason for why the images of ICT-users doesn´t mirror the images among geronthologists is that they do not seem to be part of the public discussion. Without a public voice, they become objects.

4.1 Reasons for criticism

With this discussion in mind, established hypotheses can be criticised for at least three reasons. First the categorisation of elderly lack a deeper reflection of their heterogenous state. We do not really learn who elderly users are. Second, the categorisation is based primarely with reference to technology. Technical applications and expectations of how these applications will be used are always described, while elderly as a user-group are not. Third, the hypotheses and resources that these hypotheses as policies create are not based on empirical studies. They are based on images of old people among young generations.

4.2 Retirement not accurately represented

The lack of reflection about who the users are lead to several problems. One problem is that the age that ususaly is used as a limit, (the formal age for retirement 60 or 65), does not correspond with the eal retirement age. Because of a variety of pre-retirement possibilities the real retirement age is lower, in Sweden it is as low as 58 for some groups (Grönkvist 1995, Aronsson & Kihlbom 1996).

Another problem is that retirement and ageing can mean different things to different people.The retirement structure in modern societies is the most obvious sign of the construction of social ageing and the ongoing reconstruction of welfare states will affect retirement ages as well as retired persons. One consequence will be an increased need to find a definition of ageing that not only corresponds to the politically accepted retirement age, but with a "lifecourse" that include labour and life conditions for groups and individuals (Guillemard & Gunsteren 1991).

The most important thing to remember is that retirement reflect an interdependency between generations and between age groups (Walker 1996). Hence, if social integration and IT are interdependent, then the provision of technical resources and technical training are distributed to people outside labour market becomes more important. This interdependence is of course culturally connected. This points to a third dimension, namely the way culture interferes with images of older users.

Studies of cultural influences on these images of elderly people point to the fact that the established cultural image do not change easily (Featherstone & Wernick 1995). For example, the study of Els-Marie Anbäcken shows, that the cultural grip is strong in one of the most technically advanced countries - Japan (Anbäcken 1997).

4.3 Normal ageing

Another problem is that the use of concepts such as ageing or old people as general concepts for design, are dependent on the existence of something that can be categorised as "normal" ageing, something that seams impossible. On the contrary, Swedish longitudinal geriatric studies point to the fact that individual variations are very large for old persons within the same chronological age and that this variation in physical ageing increase with age (Steen 1991).

Looking at a wide range of results from research on old people´s physical, cognitive and social status it is far from easy to make generalisations (Kungsholmen project). Causes of deteriorations seem to be affected by external as well as internal factors, all of which have not yet been defined (Svanborg 1993, Bergemann 1997). The critics point to the fact that causes of decreased mobility and physical constraints are often possible to affect and to

prevent. The factors cannot be regarded simply as age-related.

They also point to the variation of physical status and social circumstances among those accepted as a sample, and to the variation that exists within the same person. An individual may very well be regarded as "normal" in certain functions but not normal in others. Cognitive ability can, for example, be above average while the same person is mobility-impaired. The critics also point to the fact that what is normal or not normal varies between cultures and within cultures (Rowe & Kahn 1987).

In addition there is an established critiscism against the sampling of reference persons in order to define normal ageing. Within biological science, people with special diseases or living under certain circumstances are often excluded. General results derived from those left thereafter have been regarded as definitions of normal aging.

Results from geriatric studies in Sweden show that aging is definitely not a stereotyped downhill course and physical as well as intellectual aging seems to be delayed if a healthy life style and social contacts are maintained even though old people dominate some disability groups. The number of deaf and hearing impaired people in Sweden are, for example, approximately 800.000, and most of them are older. In addition more than 80% of visually impaired people in Sweden are above 65 years of age (Swedish Statistics 1992). Instead of a deterioration process, aging is a complex curve of improvement and deterioration. Thus one can influence the conditions during aging and delay loss of vitality and intellectual capacities. Results show, for example, that the elderly can perform roughly at the same intellectual levels as those of young adults. There are indications that these functions, even at an advanced age, can influence such intellectual development (Svanborg 1988, Berg 1992).

Based on geriatric and gerontological research showing variation among old people in terms of health, cognitive ability and social situation, it is impossible to define old people as a homogenous group in relation to the needs and use of IT. Consequently, it is impossible to define exact needs that can be translated from age or ageing processes into technological demands.

4.4 Categorisation to fit technology

In contrast to an unreflected categorisation of old users, the capacity of actual technical applications, functions and technical evaluations are ususaly very well described. The overall aim of developing technical solutions for old people is often based on the ambition to create a more effective communication, improved service and independence. Such projects include the development of telemedicine, smart houses and home shopping.

Indeed, these solutions might be very good. The problem is that when old people accept

certain technologies and when certain applications fulfill a certain need, we do not know why. At least we do not have sufficient tools and theories to draw the conclusions. Consequently we cannot use this experience to improve and develop new applications. Our lack of understanding about users limits our ability to fully understand where user´s needs are met and not met. When technology fails to meet needs or when it is not accepted, can also be problematic. How do we draw conclusions about failures and what can we learn from them?

4.5 Lack of knowledge

Swedish studies show within the care sector for example, failures in new technology very often derive from lack of knowledge among engineers, planners and descision-makers regarding the context in which technology will be implemented. Among care-givers and patients or care-recievers, use of communication technology is often a well established phenomena and already integrated in their relationship. As such established technology affects attitudes, expectations and evaluations of new technology. When new technology is implemented, it often changes the possibilities to perform care, service or contact in a way that is often unknown to people outside the caring situation (Östlund 1995).

I conclude that the technological push and the lack of user-involvement that still characterises this field will have severe effects on understanding of elderly people´s needs of ICT and other longterm effects. For this reason a discussion on the definition of old users is just the beginning.

4.6 Lack of empirical conclusions

The same studies also show that explanations of why old people do not use new technology are based on generalisations that they are afraid, not used to technology or that they didn´t get enough information about how to use the applications. These kind of generalisations are also present in the academic discourse about whether the elderly suffer from technophobia or are technically illiterate.

The fact that such hypotheses do not necessarily correspond with the perspectives among the elderly themselves is not a new phenomena. Previous studies point to the discrepancy between young and old people´s view of ageing and suggest that the interpretations of their needs, to a great extent, mirror a middle-age-perspective or an academic perspective (Tornstam 1981, 1991).

To conclude I argue that it is the expectations of ageing among politicians, engineers, designers, suppliers, care staff and reserachers that seem to decide constraints and

possibilities, not elderly people´s own articulation of their needs and demands.

5. Alternative theory

5.1 Signs of homogenity

To summarise, there are similarities that motivate the categorisation of old people as a homogenous group of ICT-users. First, because of retirement they are excluded from the labour market. Exclusion from the work force create obstacles for catching up with technical developments, such as maintaining technical skills and back-up. Second, they experience a discrimination in attitudes from younger generations such as children, caregivers and storekeepers, specially when it comes to purchase or asking questions about technology.

5.2 Signs of heterogenity

On the other hand, there are reasons not to regard them as a homogenous group. One reason is that ageing is a complex process with a big variation among groups and individuals even if old people dominate certain groups of disabled. Another reason is that the emphasis is on technology rather than on users. The limited research on old people as ICT-users that have been conducted so far confirm the variation except for the fact that ageing is an irreversible process that seem to effect the existential understanding of oneself as a human being. These factors in its turn seem to effect priorities such as learning and using new technology.

   Results from Swedish studies of users of information and communication technologies from the age of 60 and no upper age limit, confirm the heterogenity. The result show that age is not the only and not the most important measure for user´s access to IT or ability to use IT. Variations were based on access to technical resources in terms of funding, contacts and competence; ability to use IT based on present health status and former experience; expectations from the environment regarding their ability and interest in new technology; and the organisation of their everyday life (Östlund 1999).

   However, some differencies between younger elderly and older elderly could be observed concerning attitudes to novelties. In need of economising with energy and the experience of having most of their lives behind them, they no longer feel that they needed to catch up with developments for their future. It is important to emphasise though, that this attitude did not include a negative attitude towards technical development in general, but a changed

understanding of their own role in this development. This change can be explained by the theoretical approach of "gerotranscendence" developed by the Swedish Professor Tornstam. The theory describes changed life perspectives among elderly which effect not only the perspective of one´s own priorities but also the attitude to novelties and the meaning of catching up with developments (Tornstam 1993). To conclude, even though elderly people were "early adopters" of technology earlier in life, they may change attitudes during old age. This is not because they are afraid or because they do not approve with technical development, but because they have a new perspective on themselves as members of society, and as users of novelties.

5.3 Life perspective on the use of ICT

With this background I argue that old ICT-users, whatever their age, have to be understood and regarded both as old and as users not correlated to age. It seems that a life perspective would be more fruitful. This conclusion is not surprising to gerontologists who regard ageing from the perspective of the "lifecourse". However this view is not present in the field of ageing and technology.

   I explore the variations in access and use of IT that can be observed in order to provide more useful and precise theories around old people´s needs and demands of ICT. I found that the following differencies are important:

5.4 Socio-economic differencies

The access to IT might be one of the most effective measures of the extent to which a person is socially and economically integrated in modern societies (Wilhelm 2000). Important resources are financing, competence and contacts. A broad literature deal with the fact that differencies among social classes and individuals in modern society affect the possibilities to purchase technical equipment. Statistics show that 70% of the Swedish population have access to IT today but that access decreases with age (SCB 2001). Statistics from 1997 with no upper age limit show that 14 % of the population over the age of 60 had access to a computer, foremost in the age group 60-74 (Östlund 1999). Looking at the economic situation retired people seem to have had the best income development during 1990s in spite of an increased income segregation in general (SCB 1997).

   Differencies depending on worklife experiences however, are a key factor influencing ICT use and can be expected to remain or grow in the future. General differencies do not only include income but training and labour conditions among employees. For example, the share of blue collar workers in Sweden that use computers is 30% compared to white

collar workers 85% (Wiklund 2000). The access to internet in the homes of members of unions point to the same difference: LO 65%, TCO 85%, SACO 91%. The increase in access to IT among blue-collar workers has slowed. Today every fifth member of LO lacks any experience of using a computer. Besides differencies in income and access it is important to observe differencies in user-patterns. While some users experience computing as a part of a routinised work-situation, for example a storekeeper, others experience a more creative use, for example academic researchers (LO2000).

For old people the economic situation during retirement period is a direct consequence of earlier conditions. For some the economic situation create a good life with the opportunity to choose a lifestyle while others are dependent on priorities made by younger generations. This is certainly true concerning old men and women. General gender patterns in society also effect the economy as old for both men and women (Arber & Ginn 1991).

Studies of different groups of old ICT-users show that income and competence are very important in order to keep up with developments. The retired benefit from contacts with former colleques or children who can provide them with information and help solve technical problems. The lack of technical back-up seem to be one of the main problems for old individuals trying to be on-line. The advanced users - mostly male - that had both income, competence and contacts were those with the widest repertoire of communication possibilities with a range of technical equipment (Östlund 1999).

To conclude, access to IT and competence seem to be closely correlated to worklife and in its turn to competence, contacts and income, which is an association of variables that I assume will hardly change in old age.

5.5 Ability to use IT

The ability to use IT is affected by one´s health situation and earlier experiences. As noted above old people dominate some disability groups which can of course effect their needs of IT. Another change in old age connected to access and use of IT is a growing need of care and service, in the home or institutions. Such dependence often means that access to new technology depends on priorities made by care providers and on their understanding of what old people´s needs of technology are. Studies indicate that the level of expectations on old recievers of care at institutions are lower compared to expectations of old people living in their own homes (Östlund 1999).

Important for a persons self-understanding of her or his own ability to use new technology is earlier experiences in technology. Such an identity issue is whether a person experiences that he or she belong to the group of early adopters or not. For many middle-aged employees and those approaching retirement, the experience of not being among

those who get access to new technology occur when they are excluded from technical projects at work-places (Aronsson & Kilbom 1996). Some employees avoid new technology themselves when approaching retirement because they don´t think that they will have any use of the new technology as retired. In today´s society that might have severe consequences considering that retirement period can last for more than 25 years and in a highly technically-dependent society.

Earlier experiences are important not only for old users but also for younger users. For this reason the behavours of old users can be explained by the same theories as can the behavouirs of other age-groups. According to Ewerett Rogers, well-known Professor in Communication in New Mexico, a few factors can be considered to affect a person´s adoption of new technology. First of all the new technology need to have a relative advantage compared to already established technology or other kind of technology used for the same purpose. It also make things easier for the user if there is a pre-understanding based on earlier experiences which makes it possible for the user to assume what the technology should be used for. Knowledge about the function of a telephone can, for example, be useful when implementing similar technology such as a safety alarm.

Other factors that Rogers points out are that the new technology has to be understood as simplifying life compared to other alternatives and not make the user insecure. If the user recognises something familiar about the new technology at first sight, this will encourage the user to try out the technology. One of the most important factors according to Rogers is whether the new technology can be observed in the users environment. If it is it will decrease tensions and insecurity towards the technology and increase the possibilities for adoption (Rogers 1995).

5.6 Generation-based alues and attitudes

Studies on value-patterns among different generations raised under different circumstances show that values and attitudes are established early in life and remain more or less the same over the life course. This include values and attitudes towards new technology. The theory on value shiftes in modern societies is based on the fact that it is the access to basic needs that shapes the understanding what is attractive. For that reason materialistic values are dominating among generations raised under poor circumstances and postmaterialistic values among those raised with a surplus of materialistic goods. The oldest generations in Sweden today belong to the materialistic generation which means that they appreciate material values and safety. The consequences are that technology is regarded as something expensive and not really accesible for everyone (Pettersson 1988, Inglehart 1990).

The society that todays older generations grew up in is different with respect to living

standards, information flow, communication both locally and globally, mobility, hierachical structures and citizenship. All these factors will effect their attitudes to novelties such as new technology. There are even differencies within the group of retired people which consist of at least two generations.

These factors are also specific to every generation. Today, these differencies might be of increased importance because at least five generations, brought up during different time-periods, will live side-by-side and share the same resources in society.

5.7 Everyday life in shaping technology

The adaptation of IT into everydaylife is described as a domestication process which means that technology isgoing through a phase of acceptance, objectification and incorporation into daily routines and the interaction of the family (Silverstone & Hirsch 1992, Berg & Aune 1993). These kind of studies show that technology is always integrated into a local context. Consequently, the same technology can have a variation in effects in different contexts. Hence, knowledge about the local context is necessary for the implementation of useful technology.

6. Conclusions

Old ICT-users can be old by definition because of the definition used by the specific retirement system of a nation and the culture to which they belong. In addition, they are also ICT-users based on their lifelong experiences and present needs and demands. Today the definition of old people as a homogenous group does not correspond with reality. In order to get a complete picture we need knowledge about their socio-economic situation, their competence, health and gender. We also need knowledge about the local context in which technology will be implemented.

Old people as users have similar needs and demands as other age-groups, which is that technology needs to be useful, functional, useworthy and meaningful. Their access to ICT follows the same rules as for other groups including economy, competence, contacts, ability. There are also reasons to consider old people as old users.

One reason is their lifelong experience of technological change, which is always longer - even though it is more narrow or wider - than the experience of younger generations. This experience will effect their attitude to new technology in both ways. It will facilitate the uptake of new technologies that are familiar and complicate the uptake of new technology that is not familiar. This means that there is a potential for future use stored in their user-experience which will effect their attitudes to new technology. This also means that

whether a technology is useful or easy to use, is something that has to be defined from the perspective of the user.

Another reason for considering old ICT-users as old is that ageing for most people create a need to economise with energy specially if disabilities or frailty occur. The need to save energy will probably effect their choice of technology and their willingness to learn. This means that they tend to accept technology that saves energy and makes life easier. They become more pragmatic.

A third reason that should be considered is that older people have most of their lives behind them which might effect their existential perspectives and their priorities about what is important and not important. Even though they are positive about technology in general they might lose interest in being users of new technology. It is important to understand why an old person accepts or rejects technology in order to prevent negative generalisations about them as technically illiterate or suffering from technophobia.

A fourth reason worth while to consider is that many old people are in need of care in their homes or at institutions. This means that they become dependent on the priorities of care-providers, children or others.

Today, the definition of old ICT-users and interpretations of their needs and demands are characterised by prejudices, insufficient methods and poorly developed reflections unreflected perspectives on both ageing and technology. However, when observing the large interest in the field from a wide range of producers, researchers, designers, care providers and other actors involved in shaping older people´s lives, I believe there is good hope for a positive outcome. A key-factor is the need for cooperation among different actors and the adoption of multidiciplinary approaches within research on ageing and technology.

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