Laggards as Innovators? *Old Users as Designers of New Services & Service Systems*

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Involving users in the design process is increasingly discussed as the quickest and most reliable way to capture the needs of users and consumers. In parallel, the fastest growing population segment in Asia and the West is older people. This article asks whether their involvement in the design process could accelerate a growing service market and if so, how? It addresses a knowledge gap that constrains service provision for a growing market of older people and which underestimates older people's potential contribution in the early phases of the development of new services. The current role of older users is limited to that of test persons later in the design process or as objects of randomized samples that explore consumers' reactions to existing products. The present case study provides an empirical example of how old users can be involved in the early stages of service design. In doing this, the article questions the concept of old users as laggards. It suggests great potential to include such users – *been arounds* – as sources of innovation in the earlier phases of the design process if they have the right tools and opportunities to act. In identifying unsatisfied needs and potential market solutions, the inclusion of old users in user-driven projects can contribute to the generation of business ideas.

Keywords – Adopters, Laggards, Old Users, Research Circles, Service Design, Elderly Care.

Relevance to Design Practice – The article questions the concept of old users as laggards and shows how they can contribute to service design early in the innovation process. It shows the usability of the research circle methods.

Introduction

Involving users in the design process is increasingly discussed as the quickest and most reliable way to capture the requirements and needs of users and consumers (Östlund, 2011; Chen & Chan, 2011; Dickinson & Dewsbury, 2006; Habell, 2001; Kohlbacher & Herstatt, 2011). In parallel, the fastest growing segment of the population in Asia and the West is older people (OECD, 2010). A question, however, is whether their involvement in the design process can accelerate a growing service market and if so, how. This article addresses a knowledge gap, namely, the underestimation of what old people can contribute in the early phases of the development of new services. This gap is a major constraint to providing for a growing older population and a growing service market. The interest in older users appears to be limited to regarding them as test persons in the later part of the design process or as objects for randomized samples exploring consumers' reactions or use of existing products, adjustments and verifications (Chen & Chan, 2011; Chen & Lee, 2008; Chitturi, 2009; Dahlin-Ivanoff et al., 2010). In a broad sense, this recalls the discussion in design research on whether design should be carried out with or by users (Eason, 1995). However, there is a growing body of literature on human-centered design and user innovation that provides important insights regarding the potential of involving users in earlier phases of the design process (e.g., Bechenau & Fulton Suri, 2000; Davila, Epstein, & Shelton, 2006; Keikonen, Jääskö, & Mattelmäki, 2008; Snyder, 2003; Yoon, 2008).

The present study provides an empirical example of involvement of users in the third age (Laslett, 1991) in early stages of service design processes. The article uses the concept of the third age to avoid contributing to stereotypes based on calendar age and to focus on the actual living situation of people (cf. Silvers, 1997). It refers to the period when people fully or partially leave the job market, careers and the most demanding family obligations, but still live a life of relative independence from the support of others. Our study suggests that there is a great potential in providing such users – *been arounds* – with tools and opportunities to act as sources of innovation in earlier phases of the design process. It argues that such user-driven projects can contribute to the generation of business ideas by identifying unsatisfied needs and potential market solutions.

The case makes it clear that the contemporary market does not satisfy the needs of users of the third age. They do not share the needs of previous old consumer cohorts and they are not attracted by new products and services developed for young,

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technology-oriented consumers. The lack of attention to this state of affairs is noteworthy, there being important needs among old consumers that remain unsatisfied (cf. Östlund, 2005). These are not trivial needs such as new types of sunglasses or an updated iPhone. Their unsatisfied needs relate to fundamental aspects of a dignified life, such as being able to buy furniture they can use in their homes, being able to stay in their neighborhood in the center of town and in generally leading as independent and normal a daily life as possible. Older populations are segmented according to a range of life situations rather than chronological age and it is crucial to choose both the right segment and select the right method depending on what kind of service is being developed and what kinds of uses you want to attract (cf. Silvers, 1997; Szmigin & Carrigan, 2000).

At a more theoretical level, this case challenges the applicability of the established theories of Rogers (1995) and G. Moore (1991) among others in respect of their categorization of users. According to Rogers (1995), early adopters are the first to use new innovations, followed by the early and late majority. Once the early adopters start using an innovation, the majority will finally follow (G. Moore, 1991). The last consumers to adopt a new product are referred to as laggards. The understanding is that the point of reference for the laggard is the past and they are consequently of no use in developing technology (Rogers, 1995, p. 265). The argument goes that laggards buy new products only if they are more or less forced to do so (cf. G. Moore, 1991). Although acknowledging the merits of this conceptualization of users, we argue that it and the focus on early adopters may be deceptive and inaccurate in user innovation contexts as it implicitly assumes the existence of a given design or innovation that users may or may not adopt. In such contexts, early adopters or lead users may not be the most appropriate consumers to involve. On the contrary, such efforts may benefit more from engaging "ordinary" consumers who lack an interest in the "new" per se (Levanthal, 1997; Lunsford & Burnett, 1992; Schiffman & Sherman, 1991), but rather have an unsatisfied need. Future research will hopefully provide additional insight into the extent to which these theoretical indications and our findings in general apply in empirical contexts other than the single case studied here.

User Innovation and Co-design:
A Literature Review

Influential Theories About Who to Involve in User Innovation Projects

Rogers' (1995) seminal theory of the diffusion of innovations revolves around how to make the user or an organization accept and incorporate innovations into practice. For Rogers, this theory of adoption deals primarily with the uncertainty involved in deciding to replace existing designs with new alternatives. Rogers also categorizes adopters based on their assumed inclination to adopt new innovations: most people belong to the early majority or the late majority, about 13% belong to the early adopters where only 2.5% belong to the innovators, that is, those who are the

first to adopt innovations. The laggards, about 16%, are the last to adopt an innovation. According to the theory, laggards are often socially isolated and on the periphery of a social system. Drawing on Rogers' (1995) categorization of adopters/consumers, Moore (1991) argues that marketers should focus on one group of consumers at a time, using each group as a base for marketing to the next. Moore suggests that the most difficult step, on which firms should focus, is making the transition between visionaries (early adopters) and pragmatists (early majority), which he refers to as a "chasm". If successful in spanning this divide, a firm can create a bandwagon effect in which momentum for a product builds and it becomes a de facto standard.

Along similar lines, but with a much stronger focus on user innovation than adoption, von Hippel suggests that lead users have invented a large share of products in certain industries (von Hippel, 1988; 2001; 2005). The lead user concept overlaps with Rogers' innovators and early adopters (Magnusson, 2003). Von Hippel (1988) argues that firms should focus on involving lead users in innovation processes since they are the ones who "…face the needs that will be general in a marketplace, but they face them months or years before the bulk of that marketplace encounters them, and lead users are positioned to benefit significantly by obtaining a solution to those needs…" (p. 107).

We acknowledge the important difference between Rogers' focus on user adoption and von Hippel's on user innovation. However, their theories share one limitation, which is the focus on consumers who have a strong, well-developed set of needs and are keen to adopt novelty and change. These ideas have influenced the empirical user innovation literature, which we shall discuss next.

Empirical User Innovation Studies

Numerous technology-based applications enabling users to become co-creators have emerged in the last decades. Examples are blogs, video sharing (e.g., YouTube), photo sharing (e.g., Flickr), collaborative content (e.g., Wikipedia), social gaming (e.g., SecondLife), shared service development and users creating services for emergent needs (e.g., Habbo/Habbo Hotel, PatientOpinion) (Pascu & van Lieshout, 2009). Most studies of such user innovation contexts focus on understanding why users contribute to these online forums (see Chu & Chan, 2009; Wiertz & de Ruyter, 2007).

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A few empirical studies in the services literature explore the value of contributions made by users in other contexts. These studies suggest that consumers are a potential source of important new ideas (Alam, 2002; von Hippel, 2005; Wikström, 1996). Still, to the developers of new products and services, it is not obvious whom to involve when seeking user input. For example, Magnusson (2003) investigates the contribution made by user involvement during the early phases of inventing new services for mobile telephony. The 52 users recruited were young (mean age 25.5, range 20-45 years) and well-educated (all had completed at least two years of university) from a university campus in Sweden. They were frequent users of mobile phone communications. A comparative experimental design was applied where the users' proposals for new ideas were compared with those of professional service developers. The results showed that the service innovations suggested by the users were more creative and useful than those suggested by the professionals. Magnusson (2003) explores if enabling users to consult experts during the idea creation process can lead to better service proposals. This led to more producible ideas, but the originality deteriorated significantly, indicating that users can learn "too much" about technical limitations.

Similarly, Kristensson, Gustafsson and Archer (2004) deployed three different types of young users in a user innovation experiment: professional developers (employed by the telephone operator), advanced users (computer science students who had mastered java programming) and "ordinary users" (university students). In line with Magnusson (2003), they found that advanced users generated fewer original ideas than the ordinary user group, "possibly due to the restrictive effects of their greater prior knowledge of mobile phone systems" (p. 12). The authors conclude that ordinary users may have displayed more divergent thinking because they were less inhibited by earlier knowledge of what was technically producible.

On the other hand, Matthing, Kristensson and Gustafsson (2006) conclude that potential lead users, identified as the set of consumers with the highest technology readiness scores, are more capable of generating a large, diverse and original set of new service ideas compared to consumers with a lower technology readiness score, based on an empirical study. Along the same lines, Morrisson, Roberts and von Hippel (2000) investigated the occurrence of spontaneous innovations among the users of a library information search system in Australia. They found that 26% of users had made some modifications to suit their own needs. They distinguished between modifying and non-modifying users, the modifying users having more technical capability.

The notions of early adopters (Rogers, 1995) and lead users (von Hippel, 1988) have influenced the choice of users involved in user innovation studies as the majority of participants are young and technology-oriented. Contemporary thinking on design, innovation and old consumers too often rests on the view of old people as passive receivers of innovations who are often in need of help to understand new designs. This view is epitomized in the field of gerontechnology, which is technology driven and dominated by studies employing old consumers to test already developed products (Moore, 2006; Graafmans, Taipale & Charness, 1998). The marketing literature has further tended to reinforce the profile of older consumers as being among the last to adopt innovations (Bowe, 1988; Gilly & Zeithaml, 1985; Szmigin & Carrigan, 2000). In general, there is a widespread view of old consumers as technophobes, negative to the novelty in today's society (Östlund, 2005). As such, older consumers do not easily fit into von Hippel's category of lead users or Rogers' early adopters. Using Rogers' terminology, they would be labeled as laggards with theory stipulating that suppliers should reach them by attracting early adopters and the early majority (Moore, 1991). As Szmigin and Carrigan (2002) argue, "Why older people have been perceived as less likely to accept innovation is not altogether clear and may say more about cultural attitudes to older generations than be based in current factual evidence" (p. 509).

Recent studies have shown that products adopted by younger early adopters are not easily transferred to the older consumers, who are typically viewed as resistant and laggards as a result. Results related to new information and communication technologies, technical aids and transportation technology indicate that although such innovations could play a promising role in the lives of old people, current offerings do not quite match their needs (Östlund, 2005; Borghans & ter Weel, 2002; Parker, MacDonald, Sutcliffe, & Rabbitt, 2001; Wagner & Wagner, 2003). This suggests that reaching consumers viewed as laggards through the early adopters may not always work.

There is an emerging and important debate regarding the extent to which advanced users who are technically competent and interested are more effective to engage in user innovation processes than ordinary users. However, the applicability of Rogers' (1995), G. Moore's (1991) and von Hippel's (1988) models in user innovation contexts is rarely explicitly questioned. Magnusson (2003) represents an important exception, arguing that:

> According to Rogers' theory of innovation diffusion, von Hippel's lead users would only represent approximately 2.5 per cent of the total number of customers. These figures imply that lead users might not be a good representation of the remaining 97.5 per cent of the market. … Accordingly, involving various categories of users seems like an attractive approach to co-opting different users' attitudes, wishes and needs. (p. 229)

The present paper seeks to extend these ideas by exploring if and how laggards – the last user category to actively target according to Rogers (1995) and G. Moore (1991) – can be an effective group with which to start. Porter (1998) characterizes successful innovation processes as focusing on customers or users who present intractable problems, have high requirements, offer resistance, but still have the patience to stay on. The design literature neglects this option.

How to Involve Users

Designing user innovation processes is not merely a matter of choosing what kind of users to involve. It is also a matter

of determining how they should be involved. The innovation literature provides numerous methods concerning how to listen to consumers (cf. Jeppesen, 2005; Kaulio, 1998), but there are few models suggesting ways to enable design by consumers. Design by consumers implies that they take part not only by relating their problems and wishes, but by being actively included in the process of developing solutions to their own problems (Kaulio, 1998). The most influential approach to design by consumers is the lead user method of von Hippel and colleagues (Herstatt & von Hippel, 1992). The lead user method suggests that firms should outsource key need-related innovation tasks to their users, after equipping them with appropriate user toolkits for innovation. When developing user toolkits, providers should modularize their traditional product or service development tasks to concentrate on need-related problem solving within just a few tasks and assign those tasks to consumers. Von Hippel argues that a toolkit for user innovation should enable users to carry out complete cycles of trial-and-error learning. The overall purpose of providing such toolkits is to enable users to create and test design for services and products that can then be produced "as is" by manufacturers. Users should be able to test their designs by running them, for example, in a computer simulation, and then be able to improve upon them iteratively.

These ideas resonate with work reported in the design literature, various approaches supporting designer and user collaboration being suggested (e.g., Davila et al., 2006; Sanders & Willam, 2001; Vaajakillio & Mattelmäki, 2007). Generative methods (Sanders & Williams, 2001), experience prototyping (Bechenau & Fulton Suri, 2000), probing (Gaver, Dunne, & Pacenti, 1999) and prototyping via 3D models are discussed as vehicles for collaboration (cf. Snyder, 2003). A recent example is Keikonen et al. (2008), who propose a model that starts with designers looking into the design opportunity, creating alternative solution hypotheses and making mock-ups. The designers then prepare probe kits and provided them to a set of prospective users. The kit contains self-documentation and self-reflection tasks that focus the users' attention on the interests of the design project. The self-documentation material is then used as input in the design process. This is an excellent study. However, in their model designers define the problem and set the first solution hypotheses for users to respond to. Keikonen et al. (2008) further emphasize that their study deals with product design. Projects involving complicated service systems will offer different challenges.

How to apply the above ideas to encourage old consumers to design new services and services systems to satisfy their own needs is somewhat puzzling. The empirical examples that illustrate the user toolkit, prototyping or mock-up concepts are often taken from product industries such as construction, food, computer games, or high-tech semiconductor components (e.g., Herstatt & von Hippel, 1992). Enabling consumers to combine modules in new ways, thus creating a new version of a given product that can be produced "as is" by a pre-defined vendor, appears easier than when seeking to develop new services for a new consumer segment as new markets. Indeed, in such contexts, there may not even be an obvious provider or modules available to depart from.

Exploring the potential value of involving older consumers in the third age, the present paper tried research circles, a less provider-oriented approach (Östlund, 2008). Here, researchers and consumers collaborate and providers may or may not be involved from the beginning. In contrast to existing studies, which typically involve consumers for a brief period (e.g., Kristensson et al., 2004; Magnusson, 2003), this method encourages collaboration over several years.

Method

The study was based on empirical material from a project (case) in which older users were involved in a design process. The case provided rich data about an unusual phenomenon and was chosen for theoretical reasons (purposeful sampling), enabling us to generate new theory (e.g., Eisenhardt, 1989; Yin, 2003). By using case studies, theoretical and practical knowledge were combined. The theoretical knowledge contributed primarily to generating hypotheses that could be evaluated in relation to the practical changes the participants wished to achieve. This case study thus shows that design and theoretical development can be mutually reinforcing and that the relevance of a case must be judged in light of its context (Flyvbjerg, 2006). An exemplary case study is not what comes out of methodological rules, but what produces important insight into social processes (Yin, 2003).

One of the authors was involved in initiating the project and served as a project leader. The other author was involved in the analysis of the case.

Research Circle

The project was organized around research circles (Östlund, 2008), a Scandinavian-based method originally developed to democratize citizens. It resembles the method of involving users in the early phases of the product design process proposed by Cinciantelli and Magdison (1993) and Ulwick (2002). The goal of achieving social change is, however, more salient in the research circle approach. It was initially driven by the interest of labor unions to become involved and increase their participation in the democratization of the workplace.

The research circle has a research interest and, as such, emphasizes a systematic development of knowledge. It is an organized attempt to contribute to theoretical development as well as change in social practice. In this sense, research circles are related to action research, especially in their respect for participants' ability to understand and prioritize what is important to them and their environment (Brydon-Miller, Greenwood, & Maguire, 2003). Research circles are related to study circles, but with an important difference, the research circle always has a research interest. The method involves a long-term collaboration between researchers and users or consumers and aims to uncover contextual and subtle needs and wishes (sticky information). This differs from von Hippel's more provider-focused notion of repartitioning existing products and providing consumers with toolkits. The researcher is responsible for the structure of the work while the main task of participants lies in reflecting and actively

participating in the follow-up that leads forward. On the whole, the process is generic, but it is also very important for participants to clearly understand the objectives and make a commitment to being involved. In this case, they signed a written commitment to participate during a given period.

Research Circle Versus Focus Group

The difference between research circles and focus groups is that the former rests on the participants' will to change. A focus group is a method to get feedback from people on their attitudes towards new products, services or ideas. It is led by a moderator and seeks to gain information on user's views e.g. before marketing a product, or as a method in research to get information about ideas and values. This is often preferred to individual interviews because of the opportunity for the participants to enrich each other's thinking.

A research circle is not meant to get a response. It is instead a way for the participants together with a researcher to find adequate support for something they want to realize or a problem they want to solve. In this case, questions were not elaborated beforehand, but were developed during each meeting. The researcher compiled notes during every meeting and made them available to everyone in the group. Both participants and the researcher had assignments for the next meetings. The researcher's role was to find useful knowledge for what they were trying to achieve. The participants' role was to read or provide examples from their own experiences and those of others. Table 1 describes the eight stages and milestones of the process. It illustrates the researcher's role in helping to set the goal, maintain the structure, and find relevant publications, technology and resources to support the effectiveness of the process.

The Case: *A Research Circle Involving Old Users in the Design of Services and Service Systems to Enable Them to Age in the City Center*

The project focused on supporting a group of retirees from central Stockholm who wanted to remain in the city center where they had lived a good part of their lives when their need for assistance increased, rather than moving to a nursing home. The project aimed to enable the participants to articulate what they wanted to do, the support that was desirable, but unavailable in the city, and then to develop such support. Twenty individuals between the ages of 63 and 89 participated. The project was funded by the Church of Sweden and was located in the Adolf Fredrik Parish, the church board having noticed that their old parishioners were no longer attracted to the same activities as those of the previous two generations.

The data generated in the research circle was analyzed in relation to the objectives set and suggested the next step. This was the procedure in each meeting. For example, when the group realized that there were no services organized to satisfy their demands and no technology that matched their competence, the researcher explored possibilities for them to be part of a design

process and collaborate with an IT company interested in learning about older users. The participants received feedback and discussed whether the process was on target in meeting the research circle's goal. The documentation of discussion in the research circle was very important because it formed the basis of how fast one could progress. As such, the design process became both descriptive and explanatory; explanatory in that it revealed the causes underlying the participants' lack of appropriate services, how they solved the problem in spite of that and what they were prepared to demand and pay for.

One of the authors observed the participants during all the meetings, which occurred every second week, totaling approximately 40 meetings between 2006 and 2008. Field notes were taken at all meetings. In writing the present paper, both authors discussed and analyzed the field notes in relation to existing literature. Starting out with the user concepts of von Hippel and Rogers in mind, we experimented with different themes and codings before concluding that these theories were not fruitful in our context. We decided to use the term 'been arounds' instead. Hence, our analysis considered theory as well as empirical material in a cyclic process (Alvesson & Sköldberg, 2008). The following section presents selected vignettes of the empirical material as relevant to our aim (Miles & Huberman, 1994).

Empirical Illustrations of the Value of Involving Been Arounds

Explicating Unsatisfied Needs

The project was driven by the practical aim of the participants to influence their own future. More specifically, participants were driven by the question: What can we do when housing for old people does not exist or is not attractive? During the meetings, the old consumers and researchers found it difficult to liberate themselves from stereotypes of how old people are expected to live. It took a year before the old consumers were able to start explicating their wish to be able to stay in the city center as they aged. To make this possible, they would need various services related to everyday life. They carried out their own investigations through contacts with the municipality, advertising and what local businesses had to offer. It became obvious that the existing markets offered services that were too standardized, targeting stereotype consumer segments that the old participants could not identify with.

On four occasions, the old people met to contribute to products and services through the following questions: 1. What kind of services do we have today? 2. What kind of services do we need? How should they be organized? 3. What kinds of technologies are needed to underpin these services? The participants carried out an investigation of the range of services available on the market and from the local government. The results showed that the supply did not meet the demands of people who were old and frail, but still relatively independent and who wanted to tailor support services more freely than is currently possible. The participants realized they had to accept they are categorized

according to obsolete stereotypes of ageing and need to meet their own demands by combining municipally-financed home help service, the private sector, the black market and relatives and friends.

They were particularly critical of the municipal elderly care service. It was not the old people's needs, but rather service providers' priorities that governed the help people could receive. Nor did the commercial market offer the services for which older people foresaw a need. All public services appeared to target either seniors in the fourth age with substantial care needs or the commercial market offered services to young people only. Demands among people in the third age are characterized by the fact that they decide, pay for and use the services themselves. This triggered the seniors to really think about and formulate their needs. By this stage they had become used to speaking of what "I" want in the future, as opposed to speaking about elderly in general. The shift from talking about the elderly in general, to more subjectively perceived needs was important and was made possible by focusing firstly on the milestones the participants had achieved and then on joint interests (see Table 1). At this point, various ideas began to emerge in the discussions, revealing two main themes: 1) the need for an increased social network in the neighborhood to allow people to continue residing there as they aged; 2) the need for actors who provided local services that were currently not offered by the tax-funded welfare system or the commercial market.

The participants felt they were somewhere in between, expecting their own future needs to revolve around various local support services rather than medical care services. They developed a joint proposal for a business idea – local support – to prolong their independence. By February 2007, the group had gained the confidence to approach the most relevant provider in this context, inviting the responsible local city planning politicians and church representatives to a meeting to express their demands and desires. The participants noted that when the politicians spoke about older

people they referred to nursing and care in the traditional sense. The group received no answers to their questions about how the local authorities planned to respond to the demands of older people who do not fit the image of being passive receivers of care and other services. The participants then decided to investigate the possibilities of organizing local networks in which they themselves were involved as co-producers in the performance of services.

More specifically, the seniors expressed a desire for greater flexibility in service arrangements. They wanted to be able to pay for a slot of time and decide themselves the tasks on which the time should be spent. For example, they might need help carrying the laundry down to the laundry room, but could take care of the washing itself. They might need help to set up the ironing board, but could do the ironing themselves. They might want company when shopping for clothes or to go to a concert. This kind of service is not available for purchase today in Sweden; old people rely instead on the close relationships they have with family, friends and neighbors. This was considered a good thing now and then, but being able to have a neutral business relationship without any other obligations involved was regarded as liberating. The participating seniors agreed that they would be willing to pay for the provision of such services by non-family members. The question was: Who could supply these services? The seniors were positive about the idea of providing the services themselves by collaborating. A prerequisite for this arrangement was a space where they could get in touch with each other and other providers of services. This generated a discussion about the kind of platform through which the desired services could be provided in the future.

Discussing the Potential of Using an ICT Platform as a Virtual Service Market

Several alternative technologies were discussed. The Internet was rejected as many seniors do not use computers. The researcher

Table 1. Stages applied based on research circle method and milestones achieved in the project 2006-2008.

Stages applied based on the research circle method	Milestones achieved in the project 2006-2008
Setting the goal.	The group wanted to stay in the city center even when their need of assistance increased.
Describing the problem or challenges; becoming an actor.	Expressed individual expectations for later life. Articulated a joint interest to receive or purchase support. Joint interest of establishing a social network.
Investigation of available community and commercial services.	Available services mapped and compared to individual expectations and joint interests.
Investigation of political interest to meet their needs and demands.	Hearing organized with local elective officials and the church board.
Investigation of technical applications to meet their needs and demands.	Available technologies to support a local social network. Available research on technology and social change among old people. Matching existing technologies and their own competence and experiences as users.
How do you influence technology and design?	Reported experiences of the lack of old people's influence on technology and design. Contacts with a company interested in combining their needs and experiences with new technology.
Becoming part of a design process.	Innovation and design took place with a participating company. Concept developed based on convergence between old people's TV viewing and mobile network services.
Fund raising for collaboration between participants, research and development.	Iterative development of a communication device took place in 2007.

suggested using the TV instead, a tool with which many seniors are familiar. A producer was contacted who had developed a prototype system based on the technological convergence of mobile network services such as MMS, SMS and e-mail and a television terminal. The prototype device allowed for communication with these services between a mobile phone and television and between a computer and television. This brought the project to a new phase, where a specific product, *ippi,* was used to try new services. At this point, seniors were still discussing the idea of participating themselves in the provision of local support services, depending on individuals' health and capabilities. A collaborative project with the producer was initiated, where the prototype was tested in people's homes in terms of service content and interface design. This process made the participants even more aware of how to use a variety of technologies and how to improve them. Today this prototype is a fully-fledged product marketed among municipalities in Sweden to provide services and contact among older citizens. The pastor of Adolf Fredrik's parish is also considering investing in a number of *ippis* to support the social network based on this project.

In general, the results are being followed up today in collaborative projects involving the old participants, researchers and entrepreneurs trying to meet the demands for new services by means of evolutionary technologies that start from the experience of the users.

Lessons Learned

Several aspects were important in this context. To attract old users and get them to participate in the first place, the researchers were clear about the amount of time required, starting with a trial period of six meetings, for example. After that, each user was asked if they wanted to continue. A genuine interest in listening to the users was also imperative to attract and keep their interest. Being used to stereotypic views of the elderly, participants were worried that they would be "talked about" rather than "listened to". The researchers kept the meetings somewhat orderly, ensuring that the participants took turns and did not interrupted others. The meetings never lasted more than 1.5 hours, as the participants lost concentration after a while. These issues contributed to the elderly participants being able to provide valuable contributions for a long period, over two years (and they are still doing so). They worked hard without any financial compensation. They had remarkable patience and were very loyal to the project, showing up virtually every time and actively contributing.

Discussion: *Who Are the Laggards, We or They?*

Although claims abound about the potential inherent in the demographic development and associated exploding senior market, few product or service providers have as yet introduced new offerings in this context. Studies on technology development in this field indicate that innovation has been slow, partly due to the widespread view of elderly people as "technophobes" and as negative to novelty, thus constituting a difficult rather

than rewarding market segment to approach (Essén & Conrick, 2007; Östlund, 2005; Szmigin & Carrigan, 2000). Indeed, older consumers have implicitly been categorized as laggards in Rogers' (1995) sense (i.e., consumers who are negative to innovations and late to adopt innovations), a market segment that should be reached indirectly through lead users (von Hippel, 2001; 2005) or early adopters (G. Moore, 1991; Rogers, 1995). This view of older consumers is implicitly supported by the contemporary design and service innovation literature, which shows virtually no interest in involving older consumers as active and forward looking in the early phases of service and product innovation. A similar situation prevails in the marketing literature, although there is a nascent body of literature underlining the importance of a shift (e.g., Silvers, 1997; Szmigin & Carrigan, 2000).

The present paper critically examines this assumption and Rogers' theory by including older users in the early phases of the design process. Referring to older users as resistant and critical was irrelevant, as in this case the process did not depart from a specific product that the old users may or may not adopt. The aim was rather to identify needs that have previously been unattended to by service providers. The critical and creative input we received indicates that older users are a valuable source of new service design and service system ideas. They are a neglected market segment with an unrealized potential, upon which industry and the public sector have been late to act. According to our empirical material, Rogers' categorization is more applicable to the service providers, who we increasingly saw as laggards as they were the ones who were late and resistant in sensing the need for new service development targeting these old consumers.

In general, the theoretical implication of our analysis of Rogers' model is that it is in need of revision to fit into a user innovation context. Rogers' concepts have proven very useful in marketing products and services for consumers. In a user innovation context, however, we need new concepts that help create value with and by consumers (Kaulio, 1998). It is misleading to assume that certain consumers are lead users, innovators or laggards (i.e., possessing a permanent trait of being late to adopt new offerings). Of course, consumers may be resistant to many new offerings on a market, but that does not necessarily mean that the consumer is "guilty" of being a laggard. The providers may be equally to blame for the situation of a mismatch between supply and demand on the market in focus. As Szmigin and Carrigan (2000) argue, "Clearly there are many products that older consumers will not be interested in but it is important to recognize that resisting innovation is not something particular to older consumers" (p. 509).

New concepts and perspectives are needed on user innovation in theory and practice. Our work particularly emphasizes the need for an attitudinal shift regarding old consumers. If we continue to use stereotyped images of old consumers as laggards, we can force them into a role as passive recipients of products and services instead of involving them as active consumers and users of all kinds of services, including, but not limited to, nursing care. We suggest the notion of "been arounds" as an alternative term that will inspire other scholars to view old consumers as a resource

for rather than the recipient of innovation. There is vast potential for organizations that have the courage and competence to engage in this situation by collaborating with been arounds to learn about their wishes. Several other long-term approaches are also interesting and promising in this context, such as living labs (e.g., Pascu & van Lieshout, 2009). Although living lab projects have not yet produced any new conceptual models for how to enable innovation by consumers, there is potential in this approach. The notion of social innovation (Nambisan, 2009; Mumford, 2002), which suggests that the most pertinent problems in society call for cross-sectoral innovation, also holds great promise. This is where private, non-profit and public organizations collaborate to design new services based on voluntary as well as paid labor. These are avenues for further exploring new models of open innovation that aim to satisfy unmet needs in today's society.

Methodological Implications – How to Go About It

Using research circles as a design method is promising and an opportunity to involve old users in design more effectively, but it also requires some considerations to be successful. Key issues are that the will for social change is truly in the hands of the users and that the division of labor between the researcher and the participants is clearly stated. It is well known that needs often appear as problems. With this method, designers should look for problems and political challenges as a start for innovation. Another key issue is the pedagogical skills of the researcher, including the kind of intuition that sometimes turns designers into artists. The method reinforces design work in these respects.

Research circles are time consuming, but they are a way to discover hidden demands and activate consumers. The efficiency lies in the fact that solutions are truly user centered for the participants because they give them support for something they really need. As already pointed out, the main difference from focus group methodology is that the questions are not elaborated beforehand and that the process is less predictable. The participants are also given the opportunity to reflect on and describe the life they want to live in old age, not what they internalized from others. This is only possible if individual experiences are brought to the fore and separated from general discussions and common interests.

In the management of the design process, documentation is as important as practical matters and activities, as are pedagogical skills. The needs of users involved in our case were often expressed in terms of problems rather than a demand for specific products or services. At the same time, they expressed that they were more pragmatic than they had been earlier in life. The challenge in taking on users is to support them when they take actions to solve a problem or give them the tools to do so. They are on the verge of becoming innovators and need encouragement to go forward. Our results suggest that the participants were interested in discussing systems where they can participate in the distribution of services. By virtue of their life experience of managing the home and themselves, they were good at expressing what they needed, a behavior that merits attention in itself. The project produced many

ideas that can be realized. Unlike many other projects involving consumers, this one is still in progress, which increases the likelihood of the ideas actually being implemented in one way or another.

In spite of these good ambitions, the meeting between academics and non-academics is not necessarily friction free. The conflicts between different perspectives that easily occur in research circles have given rise to the concept of perspective knots. Another potential problem is the difficulty of introducing a critical perspective into traditional environments or contexts where changes are desirable, but difficult to carry out (Holmstrand & Härnsten, 1995). This is a central aspect considering the stereotypes of older people and normative perceptions of ageing. The question remains as to what extent is it possible to work for change and to pave the way for old people's active participation in view of the traditions of care giving and the role expectations of society in general.

Limitations

The aim of the present study was not to provide generalizable findings, but rather to demonstrate the feasibility of involving old users throughout the design process. The case was selected not for being representative, but rather to provide the greatest possible amount of information on the phenomenon of involving old users in early stages of service design (theoretical sampling) (e.g., Flyvbjerg, 2006). It is important to note some of the specifics of the case studied. First, the old consumers participating in the project were in the third age (Laslett, 1991), which means that they all live a relatively independent life in their own homes, as opposed to users in the fourth age who need more help and support. More than 80% of the Swedish population over 65 (Swedish National Board for Health and Welfare, 2002) and a large share of the European population over 65 are in the third age. Many live in the third age until the end of their lives, while others enter the fourth age prematurely. Second, our case represents a very challenging empirical service setting characterized by a non-existing market and a lack of interested providers. Third, the old users were designing services for themselves, not for any consumer on the general market.

Conclusions

The present study has provided an empirical example of how old users in the third age can successfully participate throughout the service design process. The concept of been arounds seems to be a more adequate label than laggards for describing the participating old users, since they are not passive recipients of services, but are proactive in demanding what they need. They are ready to self-organize until they are in need of greater services in the fourth age. To discover their will to participate in the design of services may contribute to the solution of how society should manage to provide for a growing older population. It is not necessarily a problem, rather an issue of a growing service market. The most important prerequisite for generating business solutions early in

the innovation process is to realize that the task of the consumers is not to adopt, but to provide information. In other words, a true shift from producer-driven to consumer-driven design and innovation.

Acknowledgements

End Notes

[1] Neither Rogers (1995) nor Moore (1991) argues that old users are laggards. Rather, the association appears to be made by actors on the market and implicitly in the research literature.

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