Dissertation

Susanne Bisgaard

Coping with emergent hearing loss

Expectations and experiences of adult, new hearing aid users

An anthropological study in Denmark

Coping with emergent hearing loss

Expectations and experiences of adult, new hearing aid users

An anthropological study in Denmark

Inauguraldissertation
Zur Erlangung des Akademischen Grades
einer Doktorin der Philosophie (Dr.phil.)
Im Fachbereich Sprach- und Kulturwissenschaften
der Johann Wolfgang Goethe-Universität
zu Frankfurt am Main

Vorgelegt von Susanne Bisgaard
Aus Kopenhagen

2008

Table of contents

1. THE ROAD TO THE FIELD

1.1. Introduction

My occupation with hearing loss and its rehabilitation came about after discussions with a psychologist, Anne-Mette Mohr, about the special character of the impairment. She herself has specialized in hearing-related ailments like hearing loss, tinnitus and Menière's disease (a disease of the inner ear). Among other activities, she arranges open house sessions once a month, where people can drop by if they need to discuss themes related to their ailment. Typically, for people who are hard of hearing, these coud be problems with their hearing aids, how they can cope with difficult situations in their work-place or problems of a more social character. The open house sessions thus meet the demands of people with mild to severe hearing loss, people who consider acquiring a hearing aid but find they do not receive sufficient help from the public health care system or people who need to talk to others in the same situation as themselves. The staff is made up of volunteers who are either hard of hearing or suffer from Ménière's disease or tinnitus, or experts. The staff comprises a psychologist, a psychomotor and relaxation therapist, people with technical knowledge of hearing aids and social advisers. In the autumn of 2001, I started joining the open house sessions, and for a few years I participated regularly.

It was my first experience with voluntary work; moreover, I had no personal knowledge of hearing loss. Elderly members of my family were or had been hearing aid users, but my experience with them was restricted to my annoyance or desolation when communication became difficult due to technical problems with the devices.

I had written my dissertation for the Magistra Artium at the Institut für Kulturanthropologie und Europäische Ethnologie at the Johann Wolfgang Goethe-Universität. It was titled "International Communities – Highly qualified British, Danish and German migrants in Frankfurt, Copenhagen and London in search of a community" (Bisgaard 2001) – a subject which lies quite far from the problems that hard of hearing people have to deal with. Studying someone or something implies using one's own position to understand the conditions of the other. However, I found it difficult to relate hearing problems to the anthropological knowledge I already had and to find the paths it seemed reasonable to follow. The turning point happened for me on 11 September 2001. Normally, 30 to 50 people turned up for the sessions, but on that particular day, most people sat in front of their televisions watching the destruction of the Twin Towers. There were only about eight persons present, most of them staff. We turned the television on and off to follow what was happening, we discussed it and were as shocked as everyone else. It was not until the next day that I learned that one of the participants, a woman with a severe hearing loss, had been extremely annoyed that we had watched what she thought to be a pathetic movie on television. Only when she read the newspaper the following day, did she realize that she had been watching reality on television. This made me aware of the isolation that hard of hearing people experience in group relations, not to mention the danger they could be in because they cannot hear alarms or warnings. They may have learned – in order not to appear stupid or ignorant - not to ask questions about what seems obvious to everyone around them.

When I met the group the first times, I learned about their predicaments, and they openly answered my questions about what it was like to be a hard of hearing person. In their narratives, I recognized the apprehension of being different, lonely and excluded from a social group and this became my starting point for understanding their situation. Like most people, I have had several, similar experiences at different stages of my life and in the strange places I have lived; but as a normal hearing person, usually, in time I have obtained the recognition I wanted or I identified myself with other groups where I did not have to struggle for acceptance.

Being hard of hearing may thus be a state of being the permanent stranger – not in the sense of Simmel's Fremde (1908) who is seen as the objective and sometimes disinterested stranger who does not share the common sense of a lifeworld circle[1] in which she is involved. Since she has not been part of the history and thus the previous conflicts of the circle, it may be possible for her to be a future ally in the eyes of the members if she is not characterized by a difference against which they are prejudiced. Then, she could be met with openness. But in the context of the hard of hearing, such openness would last only as long as she responds to the interaction in a manner that convinces the others that they have mutual interests and a common basis of understanding. This basis of common understanding may be difficult to achieve for hard of hearing people, in as much as they often ask to have things repeated or pretend to have understood what is being said. It thus requires a high awareness on the part of the hearing person, as well as the hard of hearing person, to overcome the communication problems, or for a circle to integrate hard of hearing people (Morgan-Jones 2001). The risk remains that the other would marginalize them because of their lack of adequate response to approaches.

---

[1] I define the lifeworld as a social organization of meaning. The lifeworld includes circles that are open and overlapping with other circles consisting of the individuals and institutions that shape and are shaped by the individual. I return to a more detailed definition of the concept under "The lifeworld and its circles".

Measured on a global scale, however, the hard of hearing in Denmark are privileged in that the welfare state has established a hearing health care system that distributes free hearing aids and free batteries. I define the welfare state as a state that assumes primary responsibility for the welfare of all its citizens.[2] The above-mentioned open house sessions were my first step toward understanding the procedures of the rehabilitation system. I also became aware of the realization process many hard of hearing go through to recognize their own physical deficit.

Another result of my initial research was that studying hard of hearing persons is not the same as studying a lifeworld circle, which is what anthropologists often do. Michael Herzfeld (2001:5) notes that a favoured object of study is the marginal community, and that the very marginality is used to ask questions about the centres of power. Hard of hearing people have the common denominator of hearing deficit, but as described in the thesis, the majority of hard of hearing people do not see this factor as a uniting one. Studying hard of hearing people thus entails studying individuals who struggle to varying degrees to remain part of their lifeworld circles. In this respect, the ability to ascribe a common meaning to these can be said to belong to a centre of power to which the hard of hearing may have limited access.

1.2. Object of study

Taking part in the open house sessions gave rise to the first speculations that were to become the empirical object. Following the Danish anthropologist Kirsten Hastrup (2004), it is not an easy process to delineate the empirical because it is always possible to draw up new causal relations and find other preconditions. Human beings, ideas and concepts are dynamic entities that are seen in different perspectives and are acted upon in different ways. The crucial point is where to cut the right segment out of the possible empirical material in order to make the project form a whole. At the same time, I was aware that in order to provide an understanding of the subject matter, it is not possible to separate the hard of hearing from the systems that categorize them as such. Thus, it was also necessary to look at the rehabilitation system and what the others say about hard of hearing persons.

The segment that has become my object of study is new, adult hearing aid users in Denmark with an emergent hearing loss. The aim is to establish their expectations and

---

[2] The responsibility includes health care, education and protection. According to the OECD 2007 Dataset: Social Expenditure, Aggregated data, in 2003 Sweden headed the list of welfare expenditure in percentage of Gross Domestic Product amounting to 31.3%. France was second by 28.7, Denmark third by 27.6, Germany fourth by 27.3%.

experiences. With focus on the users, this means that I from an anthropological viewpoint aim to describe:

- the interaction between the new users and the lifeworld including the strategic contemplations in the process of becoming and being hearing aid users;
- the interaction between the new users and technology;
- the interaction between the new users and the hearing health care system.

1.3. Method and research design

1.3.1. Qualitative research

Being a cultural anthropologist who has only applied qualitative research in the form of interviews, participant observation and research of existing material on the topic in question, I was predestined to use qualitative research for this dissertation.

Quantitative studies have provided excellent background material for the study. The hallmark of quantitative studies is to provide answers within predefined categories. However, I find qualitative studies important to give a more exhaustive background regarding the way the hard of hearing negotiate their position in their lifeworlds. To this end, I investigated the production of meaning as experienced by the hard of hearing themselves. At the same time, the ambition is not only to give the findings validity within the studied environment, but also to make the results transferable to other settings. The study thus provides anthropological knowledge in a reflective and systematic process on such aspects as the individual construction of the necessity to hear, the construction by the welfare state of the hearing aid user, and the interaction between the individual and the hearing aid technology.

However, in line with qualitative research methods, my position and perspective as a researcher disputes the role of a neutral observer - not because it is my aim to do so, but because – in line with Donna Haraway (1991b) – knowledge is situated in the sense that the perspective of the observer is always limited and shapes the section of the world that can be seen. Also, I had actively to delimit the field of interest in order to focus on some aspects while excluding others (Hastrup 2004:10). Hence, the problem of objectivity is not to establish whether I influenced the research but rather to reflect on and account for the unavoidable bias.

To enter the world that I had designated as object of knowledge, I had to find an open space in which to meet the hard of hearing I wanted to learn about. Moreover, I wanted to look at people with an emergent hearing loss with no previous experiences of hearing aids and thus different from those who mostly came to the open house sessions. From previous field work experiences and in accordance with the anthropologist Helle Bundgaard (2004), I had learned that in some cases it makes sense to take the position of an apprentice, who does not yet know the world in question but is trying to learn about it in practice. According to Kirsten Hastrup (2004), the way to anthropological knowledge is to establish a position as colleague or adviser. Whatever the starting point, it is in the incision between being a total stranger and being familiar with the subject that I could construct the knowledge and presumably show the way to new understanding in cultural anthropology. The many hours spent in the studied world helped me distinguish between important and unimportant factors. Thus, the relationship between me, as a researcher, and the respondents was an attempt to find common notions and conceptions in the meeting and the dialogue. I acquired ideas of possible relations, which may be unknown and cannot be proved, but I have rendered them probable by relating the empirical material to the chosen theories.

1.3.2. Finding respondents

In order to find the potential hearing aid users, called "respondents" in the study, I contacted two public hospitals in the Copenhagen area, as well as private institutions. The staff at both hospitals were extremely accommodating when I approached them, which resulted in 24 respondents. Only one of them was previously known to me as a father of an acquaintance. He had happened to make an appointment with Bispebjerg Hospital at the time I started my study. At Bispebjerg Hospital, my contact person, the audiologist Michael Bille, sent an invitation to the patients to participate in the study along with a letter informing them of the first examination at the hospital. At Gentofte Hospital, the folder I had produced was given to the patients during the first examination. Accordingly, I had the opportunity to follow the users at Bispebjerg more closely since I was able to interview the respondents before the first appointment and could thus participate in the examination, whereas I did not meet the Gentofte respondents until they actually were to acquire their hearing aids.

It was far more difficult to find the seventeen new hearing aid users who acquired their hearing aids through the private sector. I placed folders with ear, nose and throat surgeons and the private dispensers in the Copenhagen area and explained to them what I wanted to do. However, this resulted in only three respondents. It is difficult to interpret the lack of enthusiasm to participate in the study, but one reason could be that no one gave the folders directly to the users in these places. It could also be that people who acquire hearing aids through a private dispenser perceive themselves to be customers rather than patients and do not want to be bothered by an anthropologist asking questions about their private lives. According to the anthropologist Anne Knudsen (1995), this category of people are not used to being study objects. Furthermore, the dispensers may have been uncertain of what I wanted to do with the acquired information. Even though my starting point is respect and acknowledgement of the respondents' point of view, one can encounter difficult and quarrelsome individuals, and if I happened to follow one of these, it might give the dispenser a poor image. An exception was Widex, a Danish hearing aid manufacturer, that showed no restraints in helping me. Widex has its own service centre where they sell hearing aids. Their main business is the hearing aids they export or sell through private dispensers or to public hospitals in the home market. They could hardly see me as a threat to their business. Through Widex I had contact to six respondents. One of these told another about my study which led to one more respondent. Another participated because friends of his had read an interview with me and had referred him to me. The last six respondents I found through a free advertisement, which I had inserted in the health publication, "Helse", these respondents provided a broader representation of the private hearing health care market.

Over a period of about a year, I started up the contact period with the 41 new users (21 women and 20 men in the age group 42 - 92 years) with a mild to a moderate hearing loss. In March 2003, I interviewed the first user in his home, and the last one to enter the study was interviewed for the first time in March 2004.

24 of the respondents were retired and 17 were still working. For the latter group, the motivation to acquire a hearing aid was related to their occupation. Most of the retired people represented a highly active group with a wish and need to participate in the activities of their lifeworlds. The occupations of the respondents included clerical staff, shopkeepers, medical staff, teachers, managers, a military officer, a professor, a lawyer, a bus driver, a social worker, an artisan and a technician.

I had informed the institutions that the users had to be new, adult users with an emergent hearing loss. I had made no conditions as to their profiles other than they should be participating in one way or another in social life. To ensure that the patients felt they were under no obligation to participate, they were to contact me instead of me approaching them. In other words, the users had to make an active decision to participate in the study. Consequently, the respondents are not a one-to-one reflection of typical Danish hearing aid users. I my view, those who offer to participate in a study like this one are active persons with a curiosity to learn more about their situation. Possibly for that reason, I only had to turn down the offer of participation from three persons. The reason why I did not include them in the sample was that they had previously used hearing aids, or that I suspected that they would be too difficult to interview due to what I thought might be dementia.

The respondents are all Danish with the exception of one Swede, who has lived here for many years and speaks Danish perfectly. Otherwise, no foreigners volunteered to participate in the study. If they had, their knowledge of Danish would be decisive for their participation since I would interpret lack of language fluency as a complicating factor that would affect their general participation in their lifeworld. It would in that case be difficult to separate the problems of hearing loss from lack of understanding the language.

1.3.3. Interviews with the respondents

When the first contact had been established, we made an appointment for a qualitative interview that was recorded on minidisk and later transcribed. Exceptions are (63/M/74/2/PH Orla; 64/F/82/2/P Lotte) for whom I wrote a report based on my memory of the interview. The respondents knew, of course, the area about which I wanted to gain knowledge, and, consequently, I tried to make them talk about the issues that were of greatest priority to them with regard to their hearing loss. As the interview evolved, I asked questions to focus on and amplify certain themes. Following Professor of Educational Psychology, Steinar Kvale (2002:164-187), I sometimes condensed and interpreted certain aspects of what the respondent said in order to give them the possibility to elaborate on certain themes. At the end of the interview, I checked the interview guide to see whether we had covered all the relevant themes.

I promised the respondents confidentiality, and their names do not to appear in the thesis. Their names are of course known to me. I pointed out to the respondents that I was neither an expert on hearing aids nor did I have any physiological knowledge. Most of the interviews took place at the respondents' homes. Some took place at my house, and three at Bispebjerg Hospital where a room was made available for the interview. In ten cases I also had the opportunity to meet the spouse of the respondent, which provided insight into family attitude towards the hearing loss.

The aim of the first qualitative interview was to clarify the motivation of acquiring the hearing aid. The questions aimed to establish:

- the individually constructed relevance of hearing;
- engagements in activities that require attendance in meetings and easy perception of discussions;
- any redefinition of relations to other people due to the hearing loss;
- meanings ascribed to being hearing impaired and a hearing aid user;
- perceived reactions of friends and family to the hearing impairment/hearing aids;

- motivation to acquire a hearing aid at that particular time;
- expectations and their source.

1.3.4. Participation in the interaction between the users and the institutions

Whenever possible I attended the appointments at the hospital and at the dispensers. This gave me insight into the procedures followed at the institutions, and also gave me the opportunity to get to know the respondents better. An appointment at the hospital could often last two hours. It was an opening to revert to questions of doubt or ask further questions about certain matters. I have kept field notes of these meetings.

When the respondents had received their hearing aids, I contacted them at intervals to learn about their experiences and whether there was any change in the meaning ascribed to hearing aids. Sometimes the contact was by telephone, sometimes e-mail. After a year to 18 months, I contacted them for the last time to learn how they had adapted to their hearing aids. This was done either through a qualitative interview or by telephone.

1.3.5. Expert interviews

Another source of information used in my research was expert interviews with representatives of public health care, private hearing aid dealers, politicians, the hearing aid industry and a user organization. The interviews were carried out to establish how representatives of the various groups perceive the state of Danish hearing health care, and how they legitimize their various positions.

1.3.6. What other people say

In Denmark, it seems to be a cultural specificity that people ask each other about their profession (Bisgaard 2001). Thus, when asked about what I did, it was natural to discuss my research because almost everybody knows somebody who has a hearing loss. These discussions provided broad insight into what people in general think about hearing aids. The persons who have contributed such information, I have called "informants". Their attitudes ranged from astonishment that anyone could choose hearing aids as an object of study because they found it unimportant, boring or perhaps even repellent or, at the opposite end of the scale - they welcomed information and openness on the subject. The latter group were either hard of hearing themselves or had a significant other who suffered from hearing loss. Since those who openly said that hearing aids are troublesome, revolting and/or annoying whistling devices could also become hard of hearing and need hearing aids, I find that their statements reflect the process which some of the new hearing aid users in my study go through in becoming accustomed to hearing aids.

Collecting "what other people say" is an unsystematic research method, yet I find the material essential for the overall picture of societal attitudes towards hearing impairment. I have recorded these encounters in my field notes. They are important statements about the predicaments of hearing loss, and the societal attitudes towards hard of hearing people and hearing aids. Another access to unsystematic data collection was the job of being the editor of the Danish Ménière and Tinnitus Association magazine, a job that lasted from the autumn 2003 to summer 2007. The magazine was published four times a year. The job was voluntary and the magazine was on a "budget-light" with a correspondingly "workload-heavy" for the editor. In this capacity, I have participated in meetings with hard of hearing people. I have communicated with them on practical and personal matters and travelled with them through Denmark. It allowed me to be part of their social world and emphasized the extra precautions it is necessary to take if one is to communicate with hard of hearing people.

1.3.7. The media

I have followed the debate in the media as regards hearing aids. Throughout the research period, there have been debates on hearing aid advertisements and the use of hearing aids, of the role of the public hospitals, the private dispensers and the hearing aid industry.

1.3.8. Analysis of data

In order to organize and manage the large amount of data acquired during the research period, I have used the software product NVIVO and I have coded most of the written material in line with the studied segment.

The analysis implied abstraction and some degree of generalization in the sense that I have used components from the respondents' histories and expressions to gain knowledge applicable to others. Thus, the analysis of the data collected has involved a decontextualization and recontextualization. The decontextualization has allowed parts of the subject matter to be lifted out and investigated more closely and to be seen in relation to other elements across the material that involve similar issues. The recontextualisation ensured that the patterns still agree with the context from which they were collected in order to prevent reductionism and to maintain the connections between the field and the respondents' and informants' accounts of their perception of reality.

1.3.9 Relationship between respondents and researcher

The usual distances that exist between people who do not know each other are to some degree suspended in the qualitative, professional interview situation. As a researcher, I have become accustomed to the role of the stranger who asks questions of a nature that are not normally expected from strangers. The replies would mostly fall within a range which, as the research period progressed, made up a "normality", in the sense that I arrived at a point of diminishing returns. I seemed to have collected reflections on expectations and experiences that were representative of new users of hearing aids. In this process, empathy was a valuable tool with which to gain insight into the lifeworld of the respondents and the differing meanings they ascribed to their hearing loss and hearing aids. The meanings were variations on a theme that made me respond internally in various ways. Empathy, is thus not the same as sympathy, but I could always follow their train of thought: what they told me was familiar and comprehensible as I would recognize it from other human conditions and relationships. However, I could not always sympathize with their ideas as they sometimes focused on human difference that disregarded the integrity of the individual.

Some of the respondents have expressed that they were pleased that I followed them through the process, and two women said that they would have given up on hearing aids, had I not been in contact with them to hear how they progressed. Consequently, the study cannot provide reliable information about how many out of a certain group are likely to discontinue the use of hearing aids, but it is a reliable testimony to the fact that it sometimes requires a substantial effort to become a satisfied hearing aid user.

One anthropological tool is participant observation where the researcher examines many aspects of the life of those studied. At the same time, this method will have to give way to the field, which means that I can only witness the present. Much of the information, the respondents gave me, refers to the years leading to the decision to become a hearing aid user, and consequently I have not personally witnessed the incidents that have triggered this decision. However, I have no reason to deem their information invalid since it is confirmed by my own observations of other hearing impaired people in similar circumstances or by the literature on hearing impairment. During the process of adaptation, I had opportunity to talk to the respondents several times, either in direct meetings that sometimes included their spouses or by e-mail or telephone. There is no generic hard of hearing identity, but the instances they described to me were similar to the victories, defeats, complications, frustrations and joys described by other respondents or informants in other and similar situations would describe to me. My observation of fitting the hearing aids or dialogues with spouses was situations in which my participation was natural. If I had participated at the work place or in social activities, my presence could have highlighted hearing aid acquisition. This is exactly what most hard of hearing persons would detest since it would lay open what most would prefer to keep hidden from the world. Consequently, I deemed that my presence in other situations than those referring to the fitting procedure and encounters with spouses would affect the behaviour of those involved. I did, however, meet two respondents in other circles; one was Stine in whose course I participated and Jesper whom I met at family gatherings.

My contact with the respondents was asymmetrical in the sense that the number of contacts differed from one respondent to the other. This was partly based on the history of their adaptation period, whether for example there were any complications that needed extra visits to the dispensers and partly on differences in the respondents' personalities. It would have been impossible for me to participate in all contacts between the dispensing staff and the respondents. Thus, sometimes they would after a contact tell me what had happened, at other times, I would know about the contact when I approached them to hear how they were progressing. Other respondents saw me as a sparring partner and asked me for advice, which I could give if the question involved such basics as: "Do you take the hearing aids off at night?" or "Where can I get the tools to clean the hearing aids?" But I was very much aware of the limits of my own knowledge and referred them to the dispensers if the questions were more complicated. The balance between being completely neutral in the process and having some influence is difficult. If I did not ask questions about the development of the process, how could I learn anything about it? It is obvious that questions lead to reflection by the users. After the acquisition of the hearing aids, it could not be avoided, that my questions resulted in reflections about whether or not the hearing aids functioned satisfactorily. A case in point is my question whether the hearing aids whistled – this could give rise to a discussion as to whether this problem could be avoided or not and whether the respondent should approach the dispenser. The respondents knew that I had acquired more knowledge of hearing aids than they had themselves, and if my response to a problem like whistling had been completely neutral, their reaction could have been acceptance of the situation. So even a completely neutral response would influence the course: Consequently, I responded to a problem like whistling by saying that they could consider approaching the dispenser to have the problem fixed.

I inevitably became part of the adaptation process that involved the dispensing staff as well as the respondents. Sometimes this happened directly like in the case when a technician half jokingly said: "Why do things always go wrong, when you are present!" Sometimes the interaction was more indirect, but there was a tacit awareness that a third person was present in room. In my interpretation, the interview and observation situations were characterized by a friendly and optimistic atmosphere which again may have had a positive influence on the attitudes of the respondents towards the process. If a respondent said she was unhappy about her hearing aids, I did not see it as my role to dispirit the user, but I tended to encourage her to continue the habituation process. It is impossible to say what the outcome of these cases would have been, if I had not followed those users. In my interpretation, it may make the study less representative of the normal adaptation processes, but still, the study is a clear statement that it sometimes requires a considerable effort to become a contented user.

1.4. How to read the thesis

A chapter overview is presented in the final conclusion to the thesis. But it is helpful to know when reading the thesis that I have structured the findings into three pillars. Thus, the chapter on "History and factual information connected to emergent hearing loss in Denmark" is followed by the theoretical chapter which is divided into "The first pillar - The hard of hearing and their interaction with their lifeworld", "The second pillar - Interaction between the hearing aid users and institutions" and "The third pillar – Embodiment, bodily perception through technology". The fourth chapter contains the empirical findings which again are divided into three pillars "The hard of hearing and their interaction with their lifeworld", "Interaction between the hard of hearing and the institution" and "Interaction between the hard of hearing and the hearing aid".

Each respondent has been assigned a name as well as a references number, e.g. 35/F/79/1/H which consists of interviewnumber/sex/age/monoaural or binaural fitting/public or private dispenser. Thus 35 is the interview number. F (or M) refers to the sex of the respondent. 79 is the age, 1 (or 2) indicates whether the fitting of the hearing aid is monoaural or binaural, i.e. whether the respondent has been given one or two hearing aids. H (for hospital) refers to a public dispenser whereas P refers to a private dispenser.

For the non-medical experts I use the term technician which covers the staff fitting and adjusting hearing aids. Their education differs widely, they may be teachers, psychologists and ear plug technicians. My reason for doing so is to offer these persons anonymity.

In the chapter on the interaction between users and dispensers, some users experience a problematic adaptation process. In these cases I have decided to anonymize the dispenser because I in some cases only have one user from an institution. Thus, an unfortunate case from one dispenser could discredit that institution. Moreover, some of the institutions have been extremely forthcoming and open. It is obvious that the very openness reveals a wider variety in the findings. It is not my aim through this thesis to destroy confidence in some institutions; rather it is my hope that unfortunate fitting procedures and negative user experiences can give rise to preventive action.

Another issue that I should perhaps mention here is a gender issue. I myself had not considered it an issue until a kind reader pointed it out to me. When writing about a non-specified person, be it a stranger or a user, I usually refer to the person as female, but sometimes as male. It is correct that I could have written she/he, but I choose not to do this, as I find it clumsy. There are no hidden gender political statements on my part on the issue – but I see no reason why I should choose only the male form when no gender is specified and to alternate rigorously between the sexes would be too complicated. I could have chosen the female form only, but it is not my aim to exclude the male sex from my thesis. Therefore, I have left the text as I initially wrote it.

1.5. Conclusion of chapter one

Chapter one describes the road to the field and includes a description of the objective of the study, which is to investigate the production of meaning as experienced by the hard of hearing themselves. At the same time, the ambition is not only to produce validity within the studied environment, but also to make the results transferable to other settings. The aim is to provide anthropological knowledge in a reflective and systematic process on such aspects as the individual construction of the necessity to hear, the construction by the welfare state of the hearing aid user, and the interaction between the individual and the hearing aid technology.

Moreover, the chapter makes observations on the qualitative research design, which includes qualitative interviews and participation in contacts with the various institutions as well as research into the media and the vast material available when talking to communication partners. It also explains the distribution of the sample and how the respondents were found.

2. HISTORY AND FACTUAL INFORMATION ON EMERGENT HEARING LOSS AND HEARING AIDS

This chapter presents a historical overview of the development of Danish Audiology. It is written as a comment on present-day conditions of the hearing health care system and thus shifts from past to present in a manner not normally found in historical texts. In addition, the chapter presents statistics, epidemiology, definitions and other items of interest in connection with the hearing sense, hearing aids and the hard of hearing especially in Denmark.

2.1. Danish Audiology

Audiology as a discipline covers hearing, its preservation, and the possibilities of rehabilitation in medical, technical, educational and psychological respects. Audiology was mainly developed in the USA during World War II as a result of developments within electro-technique, which led to improvement of the diagnostic apparatus as well as of hearing aids (Ewertsen 1976). In Denmark – in contrast with some other European countries - the profession of audiologist has remained within the medical area, requiring training as a medical doctor with specialization as ear, nose, throat surgeon (in the following called ENT) and additional training as an audiologist. Consequently, the authority to prescribe hearing aids with a state subsidy has remained within the medical profession. This may seem to be a reasonable division of power as long as audiologists do not profit financially from dispensing hearing aids – but less so when they also become sales persons who benefit financially from doing so, which is increasingly becoming the case in Denmark. Of course, there are ENTs who have a high moral standard and a profound knowledge of hearing aids, but it is not a self-evident truth that medical doctors have a higher moral standard than other people (Kleinman 1998), nor does a general ENT necessarily have much knowledge of hearing aids (personal communication with Gitte Engelund, PhD). A filter of control between the one prescribing the hearing aid and the one making a profit on it would consequently be a measure that could prevent misuse.

Organizations representing the hard of hearing were behind the initiative which lead to the "Tunghøreloven" (the Hard of Hearing Act), which in 1951 led to the opening of institutions dispensing free hearing aids to Danish citizens. The Danish hearing health care system was then based on an interdisciplinary approach, which included physicians, engineers and hearing therapists. Over the years the organization has changed, resulting in the present subdivision into three politically, administratively and economically separate sectors: health, educational and social sectors. The audiological centres in Denmark have all organized their structures differently but for the users, the division generally means that they have to contact the hospital for acquisition and maintenance of the hearing aid technology. Training in the manipulation and management (and sometimes also adjustment) of the hearing aids, especially after the initial acquisition is undertaken by educational staff at hearing institutes or communication centres. If additional facilitators are required to compensate for the hearing loss, the educational staff approaches the county to apply for the financial means to cover the costs.

A British Act of 1948 providing citizens with free hearing tests and state-manufactured hearing aids had inspired the idea of Tunghøreloven of 1951 (Ewertsen 1976; Oticon 2004). The Danish government set up an organization consisting of representatives of the users, manufacturers of hearing aids, public health insurance and lip reading schools. 25 years after the founding of Danish Hearing Health Care in 1951, three of the founding fathers of Danish Audiology wrote:

> "Denmark is a small, well-organized society with a tradition for a human and social attitude. At the same time, financial means have been sufficient to materialize these factors in measurements to benefit the hard of hearing people. Thus, Denmark can be seen as a test laboratory. Such an institution cannot operate and thrive on financial means only, but requires a number of enthusiastic, highly competent and industrious experts, who are given adequate means to progress in the right direction. Test laboratory Denmark is thus indebted to many: patient organizations, politicians, professional experts within a number of fields, and not least a skilful industry which has supplied the necessary tools to run the laboratory." (Bentzen, Ewertsen, and Salomon 1976) (translated by Susanne Bisgaard).

Thus the three ENTs, H.W. Ewertsen, O. Jordan and G. Salomon, not only had their eyes on test laboratory Denmark, but saw the Danish Hearing Health Care System as an institution that ideally was to be copied on a global scale. At that time, highly successful research was being carried out in Danish Hospitals. At the beginning of the 21st century, however, audiological research in Danish Hospitals is only being carried out on a small scale and the hearing aid industry has to rely on research carried out in institutions abroad (personal communication with Claus Elberling, Oticon). None the less, in the above quote it is possible to trace the origins of what was to become a highly successful Danish hearing aid industry. As opposed to Great Britain, which founded the hearing health care system on state manufactured hearing aids, the Danish system furthered private industry, which developed into a profitable export adventure, with exports amounting to €628 million (Statistikbanken 2006). In 2005, the global market share of the three hearing aid companies that are traditionally thought of as having their origins in the Danish market is 45% on a wholesale basis. William Demant (Oticon) has a market share of 19%, GN ReSound 16% and Widex 10%. In comparison, the German Siemens has the biggest market share with 20%, Swiss Phonak 16% and US Starkey 10%

whereas other hearing aid companies account for 9% (Jakobsen 2005). The Danish market for hearing aids is by no means reserved for the Danish manufacturers, but as indicated by the figures below, the Danish welfare state has remained an important customer of the hearing aid industry. In 2004, Danish counties' expenditures on hearing aids amounted to about €36 million (the 2006 figure was €42 million) out of a total budget for facilitators of about €506 million. The latter amount includes expenditures on commodities, housing, transport, care of dying persons and close relatives.

In 1951, however, there were only two Danish Hearing aid manufacturers (Oticon 2004), Danavox (later GNResound) and Oticon. The new public service policy was not only a secure distribution channel. In the beginning it became difficult for the industry to earn a profit in the domestic market since the hard of hearing's organization had promised the government that they could handle the market for government-issued hearing aids reducing the sales prices drastically. It was thus necessary for the industry to rely on exports to survive during first years, until the development of the technology allowed cheaper production of hearing aids. In 1956 the third hearing aid manufacturer, Widex, was founded by previous Oticon managers. The Danish hearing aid industry is thus a case in point of how traditions, knowledge and skills are indispensable factors when it comes to the development of an industry. In the day and age of globalization, when time and space seem to have become separate factors and information, technology, goods and capital can be only a mouse click away, competitive advantages often lie in local factors like knowledge, relationships and motivation, but also in competition and even strife as fruitful factors (Porter 1998).

2.2. Dispensing hearing aids

As will be described later the majority of hearing aids are dispensed through the public hearing aid dispensers. The public dispensers represent the Danish public health system and the capability of the welfare state to provide the best possible service in terms of cost, performance and design. Moreover, the sector stands for medical science and the institutionalized provision of care. On the one hand, it has to cope with the increased medicalization of society and increased longevity of the population. On the other hand, political and administrative pressure is exerted on the public dispensers to reduce the waiting lists and to propel the highest possible number of patients through the system. In an attempt to meet the budget requirements, readjustments and counselling at the post-acquisition stage are limited to a minimum. It goes without saying that the public hearing health service has no interest in increasing the number of public patients.

None the less, the users are provided with good digital hearing aids and free batteries. The hearing aids are not always up to the very latest technological development, but they are of reasonable quality. The aim of the government is to shorten waiting lists and to give the users the freedom to choose between the private and the public sectors. Allegedly, the general trend for the health sector is to become demand-regulated instead of supply-regulated[1]. However, to modernize the system, it would seem appropriate to analyse the hearing health care system, create a debate and adapt the system to the contemporary needs of the population and the general financial situation. Instead, the government has left the understaffed public sector to fend for itself. The technology used to measure the users' hearing is not certified which means that the quality of the equipment in the public sector could be questionable. Moreover, the government has strengthened the private sector by subsidizing the acquisition of hearing aids through a private, certified dispenser, which means that each hearing aid acquired privately releases a subsidy of €685. The difference in the requirement of certification in the public and private sectors could be seen as competitive advantage for the public sector. But at the same it could be interpreted as negligence towards the needs of the users who choose a public dispenser which in the long run could mean a competitive edge for the private dispensers.

As the waiting lists in the public sector grow, staff at all levels are leaving their jobs for higher salaries in the private sector. This has complicated the situation for those users in need of powerful hearing aids with no financial means to acquire a powerful hearing aid privately. In addition, the private sector is not geared to intervene on behalf of those users who for example suffer from noise-induced hearing loss that entitles them to compensation. Nor does the private sector interact with social authorities and with the labour market to find the best solutions for the hard of hearing with severe hearing loss (Interviews carried out with representatives of the public sector, for example Finn Mogensen, Holstebro Sygehus and Jørgen Hedegaard, Gentofte Hospital).

Although there is heated debate in the Danish media about the poor standard of the public health sector, confidence in the public hearing care system seems to be considerable. About 80% of the hearing users see their ear specialist, are referred to the public hearing aid dispenser and obtain their hearing aids there. The users can influence what they obtain from the public sector, but in order to choose the most suitable device, it is necessary to know what the choices are, which again requires experience in choosing.

---

[1] Uffe Thorndahl, politician, at a meeting arranged by LBH (Danish Federation of the Hard of Hearing) 13 Nov 2003 in Hillerød.

The interviews, I have carried out with representatives of the private sector (including Henrik Haack, Center for Bedre Hørelse; Birgit Johnsen, Den private Høreklinik; and the public sectors (Michael Bille and Konrád Konràdsen, Bispebjerg Hospital; Jørgen Hedegaard, Gentofte Hospital), reveal a competitive attitude. Both sectors see themselves as the advocates of the users and have ready arguments to legitimize their positions. The arguments of the private sector are that they do a better job than the public sector at lower costs for the welfare state. Moreover, the same person usually follows the user through the adaptation process, which makes the process less complicated for the user. Also, an appointment is usually made when the hearing aid is delivered in order for the user to return for readjustment. The private sector has a vested interest in increasing the number of users and thus relies on promoting a good reputation. As stated elsewhere, about 250,000 Danes are potential hearing aid users, which is a significant market potential. The public sector, on the other hand, urges the government to discontinue the subsidies to the private sector. Advocates for this sector claim that their services cost society less. They stress the importance of the non-commercial prescription of hearing aids, noting the commercial interest of the private sector in selling as many hearing aids as possible, and implying that people, who do not need hearing aids, receive them anyway. They also claim that the involvement of medical specialists ensures more thorough examinations of the users, and that hearing aids should remain a health benefit of the welfare state. The number of follow-up visits during the adaptation process is limited to a minimum in the public sector. In order to shorten the waiting lists, the public sector has no interest in increasing the number of patients. Otherwise, administrative and political pressure on the audiological ward would increase. Thus, the sectors have in some respects opposing interests, in as much as the situation exemplifies the conflict between the welfare state's policy of equality of service as opposed to the wish of the individual to acquire the best possible hearing aids.

The above may give the impression that my conclusion is that the private sector is doing a better job than the public sector, but that is not necessarily the case. It could be argued that the private sector has the better conditions to provide good service, but the human factor plays an important role. In the public sector, some staff members provide excellent service, and in the private sector there are cases where greed motivates the sale of a hearing aid.

The power struggle between the public and the private sectors is only natural. But the policy pursued by the government seems to tip the scales in favour of the private sector. For instance, the Minister of Health attended the opening of a new outlet of a hearing aid chain store, whereas it is difficult for the public dispensers to attract governmental attention when they celebrate an achievement (Personal communication with Lone Percy-Smith, Gentofte Amtssygehus).

2.3. The fifteenth most serious health problem

At the IFHOH (The International Federation of the Hard of Hearing) World Congress in Helsinki in 2004, WHO presented a report listing adult-onset hearing loss as the fifteenth largest contributor to the global occurrence of disease[2]. 4.2% or 250 million people worldwide suffer from a disabling hearing loss whereas 340 million have mild hearing loss, adult and child-onset.

The World Health Report (WHO 2004) ranks adult-onset hearing loss as the fifteenth most serious health problem in the world after perinatal conditions, respiratory infections, HIV/AIDS, depression, diarrhoea, heart disease, strokes, malaria, road accidents, tuberculosis, maternal conditions, chronic lung disease, congenital anomalies, and measles. The method of calculation takes into account the years of healthy life lost due to premature mortality, and the years lived with disability. Different methods may be used to measure health. One such method excludes mortality and instead focuses on the years lived with disability, which ranks adult-onset hearing loss second with 4.6% of the total years lived with disability.

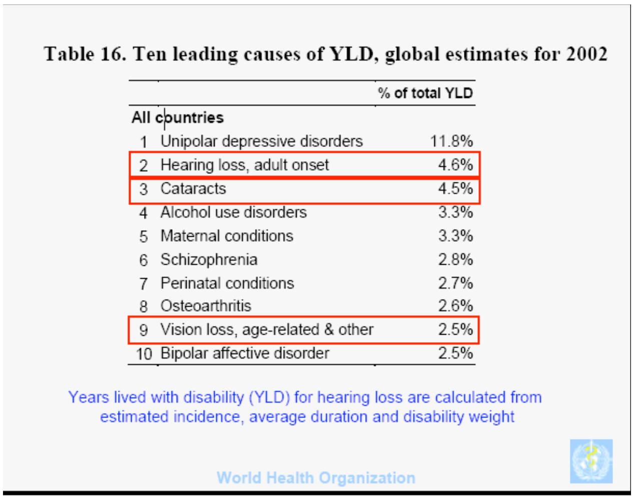


Table 16. Ten leading causes of YLD, global estimates for 2002

		% of total YLD
All countries		
1	Unipolar depressive disorders	11.8%
2	Hearing loss, adult onset	4.6%
3	Cataracts	4.5%
4	Alcohol use disorders	3.3%
5	Maternal conditions	3.3%
6	Schizophrenia	2.8%
7	Perinatal conditions	2.7%
8	Osteoarthritis	2.6%
9	Vision loss, age-related & other	2.5%
10	Bipolar affective disorder	2.5%

Years lived with disability (YLD) for hearing loss are calculated from estimated incidence, average duration and disability weight

World Health Organization

WHO addresses the general lack of knowledge of the consequences of hearing impairment at all levels of society. The affected persons themselves as well as their interaction partners are often not aware of the communication barriers that arise from hearing impairment. This applies to individual and social suffering, costs for society, and the existing prevention and rehabilitation possibilities.

---

[2] Most informants and respondents did not see themselves as diseased because of their hearing loss. However, in order to define the extent of the problem, it is necessary to relate hearing loss to other physical ailments.

Hearing impairment has been called the hidden common ailment (Clausen 2003). There are several reasons for this, one is that the exact number of hearing impaired people in Denmark is not known because there is no central registration for this type of ailment. Thus, the figures below (VCDDH 2006) are estimates based on studies of smaller parts of the population and on foreign studies. VCDDH is the Danish national information centre for the Deaf, Deafened and Hard of Hearing, and it is financed by public funds (interview with the head of the VCDDH, Jette Kjeldsen). I have decided to use their figures in this context, but I would like to point out that figures in different Danish studies vary because the definitions of hearing loss differ for each one. The differences prompt the following questions: At what level does a hearing loss affect the functioning of the individual? At what frequencies is the hearing loss measured, i.e. is it in the frequency area in which most consonants are located or at a level where the understanding of speech is less affected by a loss of hearing? Is the hearing loss measured as an average of both ears or is the better or the worse ear used as the reference ear? Moreover, since some studies are financed by parts of the hearing aid industry, there could be an interest in indicating a high number of hearing impairments. However, it is easy to cast suspicion on the industry. According to personal communication with Søren Hougaard, CEO of the Swiss Phonak hearing aid in Denmark, the aim of the manufacturers is, of course, to increase the number of hearing aid users, but at the same time, there is a genuine need for general information about the meaning of hearing impairment. When the manufacturers attempt to fill the gap, they are not considered to be trustworthy.

The following figures are quoted from the Danish VCDDH (2006) (Information Centre for Hearing Impairment and Deafness) in order to provide information on the extent of hearing impairment in the Danish population of 5.5 million.

Approximately 800,000 persons suffer from hearing loss in Denmark. This figure covers all kinds of hearing loss.

Approximately 6,000 persons suffer from a severe hearing loss.

Approximately 5,000 are born deaf.

Approximately 100 children are born every year with hearing loss that requires treatment.

Approximately 1,500-2,000 are deafened (signifies persons who have developed normal speech before normal oral communication became impossible due to hearing deficit).

Approximately 0.1% in the age group 0-19 years have a hearing loss.

Approximately 50% of all persons above 75 years of age has a hearing loss – the percentage increases as people get older.

Approximately 250-300,000 persons use hearing aids or other technical hearing facilitators.

Approximately 100,000 hearing aids (for 70,000 individuals) were dispensed through public and private institutions (2004)

The average age for the new hearing aid user is in the USA 69.7 (according to Gitte Engelund, Oticon). In this thesis the average age is slightly lower, 67.9.

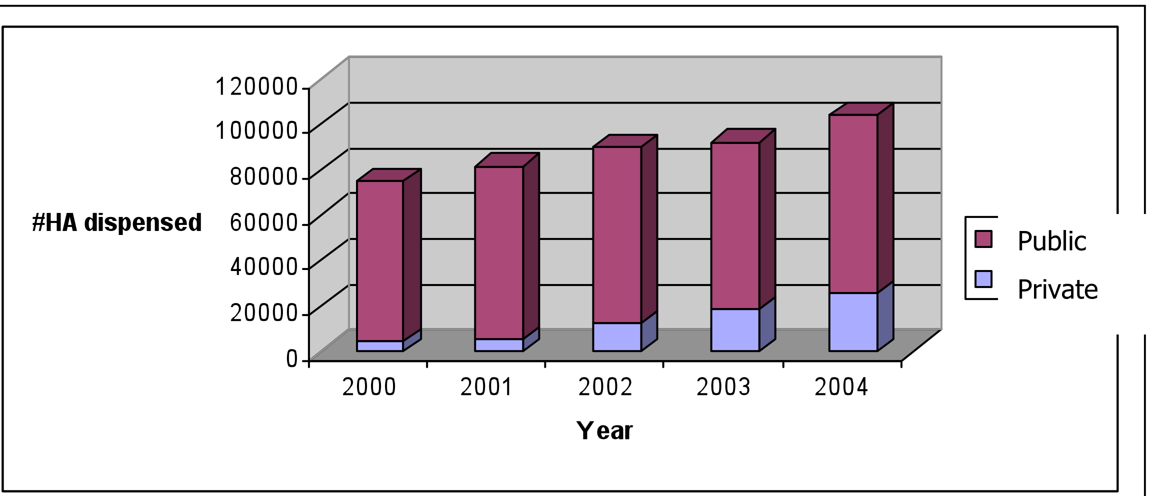
Monoaural fitting (one hearing aid) takes place in about 60% of the cases in the public sector, 40% in the private.

The number of hearing impaired people is not likely to be reduced in the foreseeable future. Today, about every 6th European (or 37 million people) has hearing problems. Professor Adrian Davis of the British MRC Institute of Hearing Research estimates that in 2015, 70 million out of 700 million Europeans will suffer from a hearing loss of more than 25 dB (Hear-it 2006b). Examining this point in more detail, a study by the Swedish association for the hard of hearing, (Hörselsskadades_Riksförbund 2005), indicates that the number of hard of hearing people with an occupation is increasing. The lifestyles of Danes and Swedes do not differ to a degree that would indicate that the trends for Denmark would be any different. 60% of all Swedes with a hearing loss are below the age of 65, which indicates a 9% rise in hard of hearing within that age group since 1996. About 13% of the Swedish population aged between 16 and 84 has hearing problems. The number of people with noise-damaged hearing has doubled for the 34-44 age group since the beginning of the 1990’s. During that period, there has been a general increase in the noise level of recreational activities that involve loud music and technical devices. For the first time ever, more women than men have hearing loss. In the 20-54 age group, 8.1% of the women and 7.6% of the men suffer from noise damaged hearing. This could indicate that in the past, noise-damaged hearing used to occur in industrial work places where men usually work, but, through noise-protection measures, the damage has now been reduced, whereas noise related to activities other than work have risen drastically, thus affecting the whole population. According to Claus Elberling from Oticon, tobacco and hormone treatment also seem to have an effect on the sense of hearing. Changes in lifestyle could consequently be responsible for a different distribution of hearing loss in as much as the female proportion of smokers is higher now than previously and hormone treatment for a number of years was common. This does not mean, however, that noise is no longer is a problem in the working environment. In 2005, about 11% of the incidents reported to the Arbejdstilsynet (the Danish Working Environment Authority) (2006) were noise-induced hearing problems making this the third most often reported work injury after motor injuries and psychological damage. Moreover, it is known that many cases of hearing damage and tinnitus were never reported due to a general lack of knowledge about these two problems and a lack of understanding of their consequences for the individual and society.

The hearing health care systems of Sweden and Denmark are differently structured. A comparison between the hearing aid users in the two countries shows that the number of hearing aid users is similar, but the Danish population numbers 5.5 million and the Swedish population 8.9 million (expert interview with Konrád Konrádson, head audiologist at Bispebjerg Hospital. In Sweden, hearing-impaired patients can be treated differently from one county to the other. Some counties pay for all the expenses while others have a fixed limit of subsidies, typically in the range of approximately €340-400 per hearing aid. Private clinics/dispensers do exist, but patients must pay their services themselves, as it is not possible to use public subsidies at private hearing health care clinics. (Hear-it 2006d).

In Finland, the size of the population is 5.2 million, but only about 14,000 hearing aids are distributed per year (without payment through the public dispensers; no subsidies for the private dispensers) whereas the same figure for Denmark, as shown in the graph below, is about 100,000 (private and public dispensers). There could be several reasons for the difference. One is that the users in Finland are only given new hearing aids every five years and the fitting is mostly monoaural. The Danish users are entitled to receive new hearing aids every four years and about 50% of the fittings are binaural. Moreover, the presence in Denmark of three global players in hearing aid production (Oticon, Widex and GNResound) could focus public interest on the hearing issue. A fourth reason could be that the Danish language is characterized by blurred pronunciation (Bleses and Basbøll 2003), which accentuates the communication problems for the hard of hearing and thus the need for hearing aids.

In Denmark, the number of dispensed hearing aids has shown a rising trend for public as well as private dispensers (Delta-Acoustics 2006).



	2000	2001	2002	2003	2004
Private	4181	5322	12748	18789	25743
Public	71026	76279	77122	73411	78011
In total	75207	81601	89870	92200	103754

There is no precise figure for the use of the 250-300,000 hearing aids in circulation in Denmark. Estimates of hearing aids that are not used vary. The public hearing aid dispenser Bispebjerg Hospital sent out 805 questionnaires of which 645 were returned. Of these 98.6% used their hearing aids in some contexts, 92.7 used their hearing aids an hour or more a day and 49% used their hearing aids more than 8 hours a day (Michael Bille, medical audiologist at Bispebjerg Hospital). According to Birgit Johnsen, medical audiologist and private dispenser, her estimate of unused hearing aids is about 50%. A recent study that only includes new hearing aid users in one Danish county, Ringkøbing Amt, gives the result of almost 60% of hearing aids are in daily use, whereas approximately 30% are used less frequently and approximately 7% are never used.

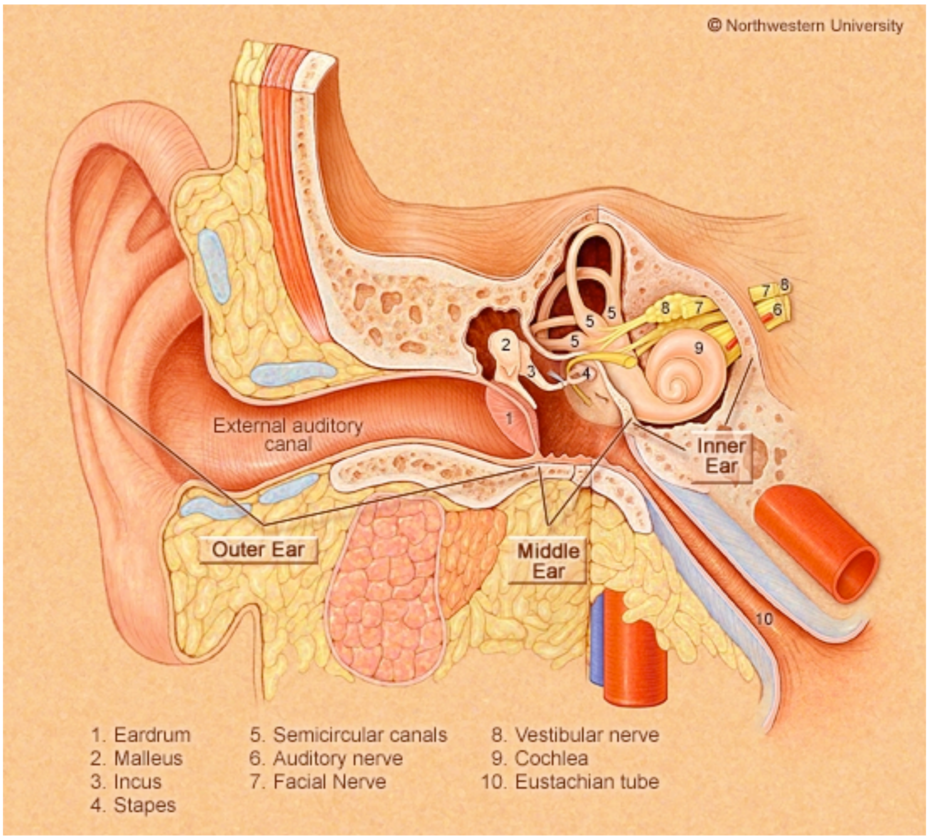
How often do you use your hearing aid? Replies in per cent

	Daily	Weekly	More rarely	Never	No reply
Public dispenser Sent to 47 persons	55	17	15	6	7
Private dispenser Sent to 414 persons	59	15	15	7	4

Source: (RingkjøbingAmt 2006)

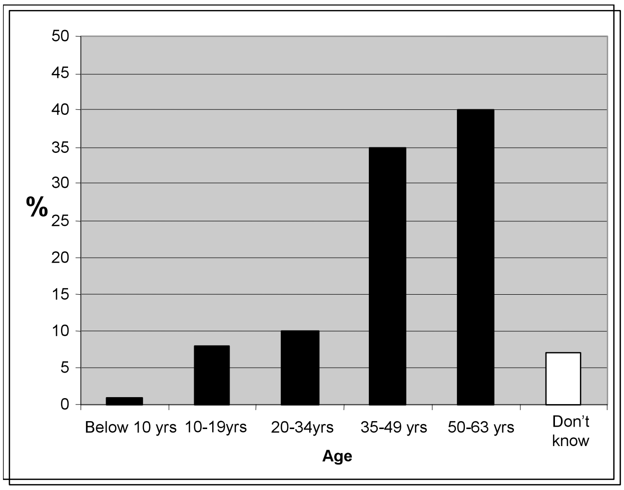
2.4. The passage of sound

Most of the everyday sounds we hear reach us through vibrations of air molecules. Meaningful sounds can thus be seen as systematic waves of air molecules entering the outer ear. From there they pass through the ear canal, reach the middle ear where the air sets the ear drum and the three tiny bones, the hammer, the anvil and the stirrup in motion. The footplate of the stirrup acts as a piston conducting the vibrations to the fluids of the inner ear. The inner ear, the cochlea, is shaped like a snail shell. It is a cavity of canals and fluids lined with the 30 mm long basilar membrane on which the hair cells are located. When a sound is perceived, the basilar membrane vibrates – high frequencies will make the part closest to the stirrup vibrate, the medium high frequencies will cause the middle turn to vibrate and the low frequencies the top of the cochlear. The hair cells in the basilar membrane are connected to nerve fibres, which release electric stimuli through the auditory nerve to the main brain centre for hearing, the auditory cortex. When arriving here, the stimuli trigger a sense-making process through the socially and culturally constructed coding of our individual and collective life histories.



At all the above stages, something can obstruct the passage of all or some frequencies or sound levels. The impairment can occur at all ages, but becomes more frequent in later life. Damaged hair cells do not regenerate which makes the likelihood of hearing impairment increase with age. Moreover, the causes of hearing loss may be genetic, age related, disease or illness, medication, physical trauma, or even our deliberate or unconscious exclusion of some sounds we do not want or need to hear. The various causes may interact. People, who for genetic reasons have ears susceptible to hearing impairment, have suffered from ear infections and work in noisy environments, have a high probability of acquiring hearing impairment. The graph below showing self-reported figures for the occurrence of hearing problems is from the report "Uhørt" (Unheard of) (Christensen 2006) based on a study of 2400 respondents.

The below graph illustrates the age related frequency of the failing hearing sense



(Christensen 2006)

2.5. Categories of human construction

The sound waves or vibrations are exposed to other categories of human construction because of the concept of normality they are subjected to. Thus the young, normal human ear can perceive vibrations at frequencies between 20 and 20,000 per second – 20 being the lowest note. The measure used is Hertz (Hz) named after Heinrich Hertz 1857-1894 who discovered the electromagnetic waves. Normal speech lies within the range of 100 – 8,000 Hz. Another important factor in classifying sound is the standard adopted to measure the strength of a sound relative to the faintest sound that approximately can be detected by humans. This measure, called the Sound Pressure Level (SPL), is given in decibel (dB) named in about 1923 in honour of the telecommunications pioneer, Alexander Graham Bell, 1847-1922. This decibel scale operates within a range of -10 to 140 dB SPL. Normal speech lies at about 65 dB SPL and ordinary street noise at about 70-80 dB SPL. In Denmark the legal limit for noise exposure in the work place is 85 dB SPL; 120 dB SPL causes discomfort and 140 dB SPL is painful. (Elberling and Worsøe 2005; Widex 1995).

People categorized as normal hearing persons can easily perceive large differences in sound pressure. Their hearing is used to bench-mark normality which lies within the range of the normal threshold of hearing from the lowest sounds a human being can hear to the threshold of discomfort. If a person needs 40 dB of amplification to obtain the same hearing threshold as a normal hearing person, he is said to have a hearing loss of 40 dB HL. HL means Hearing Level using the normal hearing threshold as reference. To give an idea of what it means in terms of hearing, a person with a 40 dB hearing loss requires a 100 times amplification to be able to hear the same faint sound as a young normal-hearing individual.

The external view on the hard of hearing focuses on the deficit in comparison to the young, unimpaired ear whereas many hard of hearing people use their own starting point as a reference for normality thus blaming the other for not speaking loudly or clearly enough. The attitude of the respondents is often characterized by a twofold attitude towards the problem: the curve of their audiogram tells them that they have a hearing deficit; at the same time their self-understanding makes them use the many situations of their everyday lives when they can hear as valid proof that the problem is of a transient nature and that the deficit lies with the speaker (e.g. 25/M/79/2/P; 30/M/57/2/H; 59/M/66/1/P). This finding of the twofold nature of the problem could be part of the ongoing process of acknowledgement of hearing loss, which many of the respondents goes through. At the same time, it is important to remember that a hearing aid is an aid, but it does not repair the deficit: the hard of hearing person even with a hearing aid is mostly dependent on clear speech and suitable acoustics in any given space.

2.5.1. The audiometry

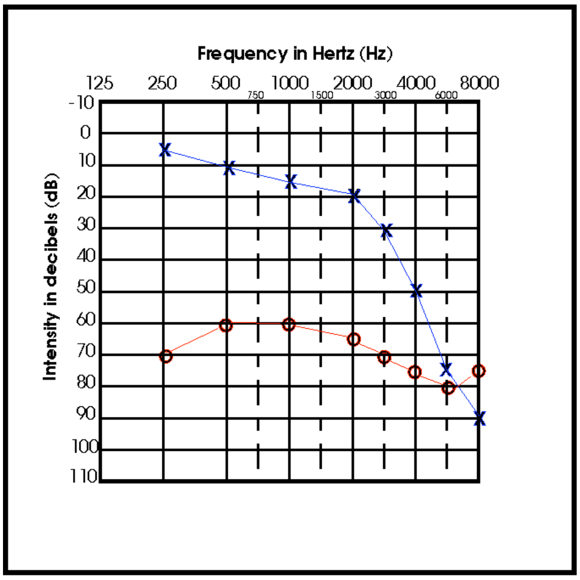
In all the initial examinations in which I participated, the person in charge of the examination starts by asking about the complications the respondents experience in their daily lives due to their hearing sense. The answer gives an impression of the individual's perception of the necessity to hear. Then, the ear is examined with a hand-held instrument, an otoscope, which is used to examine the ear canal and the condition of the eardrum. It can also detect a build up of wax in the ear canal, which caused embarrassment to quite a few of the respondents (e.g. 23/M/53/2/H; 60/F/74/2/H; 65/F/74/2/P). If, during an interview, I asked about their attitude to matters connected to hearing aids such as earwax, the respondents would rationalize the issue, seeing earwax as a perfectly natural thing. However, many felt their cleanliness questioned if they were found to have earwax in the canal or, later on, in the hearing aid. Thus it seems that the presence of earwax is one of the parameters people in Denmark notice when it comes to establishing the degree of cleanliness of the other. The connection between hearing aids and earwax is obvious and is probably part of the explanation as to why some people find that hearing aids offend their aesthetical sense (e.g. 25/M/79/2/P; 30/M/57/2/H; 31/F/57/2/P).

The next step in the examination for hearing impairment, audiometry, requires the participation of two individuals, the examinee and the examiner. Pure tone audiometry is the major and most commonly undertaken part of the examination to establish whether the examinee has a hearing loss. As it is based on the conscious response of the examinee, the outcome is subjective. Its validity is based on reproduction of the results, i.e. that the examinee reports when hearing the same sound frequency/decibel several times (Mogensen 2000).

The examination is carried out in a soundproof booth built to exclude background noise and make the diagnosis more precise. The examiner uses an audiometer, which can be controlled to emit sounds of 1-2 seconds' duration and of varying frequency and decibel. The examiner places headphones connected to an audiometer over the examinee's ears and asks her to respond, usually by raising her hand, each time she hears a sound. One ear is tested at a time.

2.5.2. Classifying hearing loss

The result of the test is recorded in a graph that depicts the audiogram i.e. the hearing of the individual. The various frequencies, Herz (Hz) are plotted on the x-axis and the loudness measured in decibel (dB) on the y-axis. The hearing threshold is thus measured in dB at various Hz – indicating how a certain sound frequency has to be in order to be heard – the higher the dB, the poorer the hearing. If an examinee is categorized as having a normal hearing sense, the threshold values are mostly within 0 dB – 20 dB throughout the range of frequencies.



The blue X's indicate the thresholds for the left ear, and the red O's indicate the thresholds for the right ear. The audiogram above represents the hearing of an individual with normal hearing in the low frequencies sloping to a severe high frequency hearing loss in the left ear and a moderate to severe hearing loss in the right ear (Mehr 2006). The hearing on the left ear is thus much better than that on the right ear. However, the curve for both ears shows that the higher the frequency (Hz) the higher a sound level (dB SPL) is necessary for the person to hear. When the audiogram has been made, a classification of the hearing loss follows. The definitions below are taken from Hear-it (2006b) and are an example of how this can be done.

Mild hearing loss: On average, the quietest sounds that people can hear with their better ear are between 25 and 40 dB. People who suffer from mild hearing loss have some difficulties keeping up with conversations, especially in noisy surroundings.

Moderate hearing loss: On average, the quietest sounds heard by people with their better ear are between 40 and 70 dB. People who suffer from moderate hearing loss have difficulty keeping up with conversations when not using a hearing aid.

Severe hearing loss: On average, the quietest sounds heard by people with their better ear are between 70 and 95 dB. People who suffer from severe hearing loss will benefit from powerful hearing aids, but often they rely heavily on lip-reading even when they are using hearing aids. Some also use sign language.

Profound hearing loss: On average, the most quiet sounds heard by people with their better ear are from 95 dB or more. People who suffer from profound hearing loss are very hard of hearing and rely mostly on lip-reading, and/or sign language.

The classification of hearing loss described above provides an indication of the severity of the problem the individual may encounter when communicating with others. Research shows, however, that different people experience their hearing sense differently. Some individuals with a mild hearing loss say their hearing is impaired in some soundscapes whereas others with a moderate hearing loss will say they have no problems. One explanation is that this classification does not include an evaluation of the frequencies at which the hearing loss occurs. Thus, if for example the worse ear is affected by a hearing loss at the frequencies of consonants, the loss is likely to make the hearing experience difficult in some soundscapes. Another factor could be that the ability of the hair cells in the inner ear to distinguish simultaneous sounds is impaired. Some audiological and technological researchers are aware of this point and criticize the fact that hearing tests are made in a quiet environment with no interference from other sounds which in many cases give a false picture of the hearing (Personal communication with Karl-Erik Spens, D Sc, on hearing aid users' common complaint about the inability to follow a conversation when several people are talking. He and his research partners have specifically investigated how the physiological state of the human auditory system affects the ability to detect and analyse sound).

It is beyond the scope of this thesis to evaluate different methods of audiometry; however, it is interesting to look into disagreements surrounding fitting procedures in order to highlight the negotiable character of audiometry and the fact that the methods used within the scientific community may be based on the traditional ways of operating in the established institutions. Another perspective on measuring and fitting procedures is the one by Søren Louis Pedersen who in 1996 took part in the development of Oticon's first digital hearing aid, Digifocus. Later he started on his own and in 2003, when he developed the "personal sound device", Microsound, which involves a paradigmatic difference in the fitting of hearing devices. The surveillance and control implications of traditional audiometry, in which the user places her trust in the experts, and depends on her own ability to explain to the expert what she hears is replaced by the user's direct interaction with a Microsound "Eartuner". This allows her to find the most comfortable level of loudness and sound quality. According to Søren Louis Pedersen, the traditional fitting procedures are based on "religion" by which he means that there is too much inaccuracy involved in the method. His method, however, places the user in the centre and allows her to operate according to her needs.

It may sound like a truism that the users are better at finding out themselves how much amplification they need in order to hear. According to Claus Elberling, research at Oticon shows that it is not necessarily what the users prefer. Some users have more trust in their own perceptions, whereas others have more trust in the findings of the experts.

A study, "Uhørt" (Unheard of) that includes the hearing of 2400 Danes (Christensen 2006) concludes that the clinically measured hearing test only provides part of the picture of how the individual experiences and functions with her hearing sense. The study introduces the concept of the functional hearing sense, which allows a more subjective approach to the hearing loss. It looks into coping strategies of the individual, the dependency of the individual on her hearing sense and the individual attention on hearing. By including the functional hearing sense, it can explain why two individuals with similar audiograms have different degrees of hearing problems in their everyday lives and ascribe different value to their hearing sense. Social, cultural and psychological factors thus become important elements in the individual's negotiation of a hearing loss.

Hence, it can be said that both the hearing sense and its measurement are negotiable and different parameters are used to establish the degree of hearing loss and the impact it has on the life of the individual. Hearing loss may be the result of a wide variety of diseases and conditions affecting the hearing sense. As explained in more detail in other chapters of this thesis, individuals have differing experiences of their hearing loss and medical science bases its categorization of hearing loss on a variety of methods.

2.5.3. Hearing aids

The overview given below of different types of hearing aids is from http://www.oticon.co.uk/eprise/main/Oticon/UK_en/SEC_AboutHearing/Learn-AboutHearing/CNT03_DifferentStyles

The types apply to all brands of hearing aids.

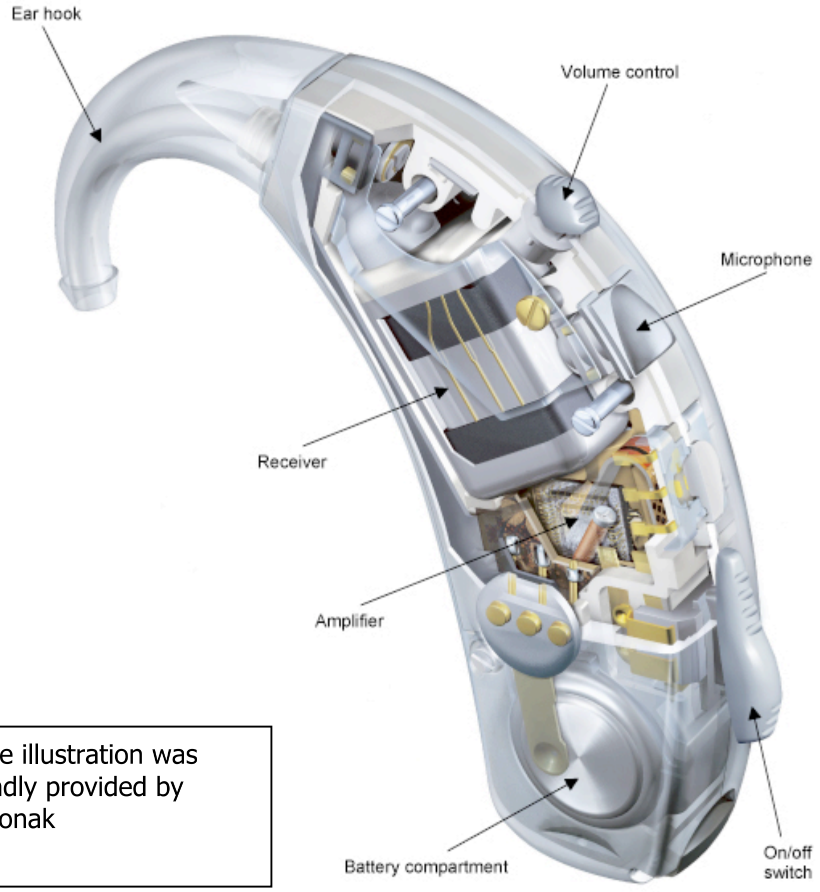
Completely-In-the-Canal (CIC) hearing instruments
This is the smallest type of hearing aid available and it is almost invisible in the ear. All the components are housed in a small case that fits far into the ear canal. This takes advantage of the ear's own anatomical design and ability to collect sound naturally.

CICs are custommade for each ear; however, these hearing aids are restricted to people with ear canals large enough to accommodate the insertion depth of the instrument into the ear. Also, the CIC style uses a very small battery that requires good manual dexterity. This type of hearing aid is not suitable for people with severe hearing losses.

In-the-Canal hearing instruments (ITCs)
A little bigger than the CIC, the ITC hearing aids also fit far into the ear canal. Canal hearing aids use a slightly larger battery than the CIC style. This style is used for mild to moderate hearing losses. Due to their larger size, ITEs can accommodate larger sound amplifiers and more features such as a telephone switch. They are also easier to handle for many people.

Behind-the-Ear hearing instruments (BTEs)
In BTE hearing aids, the electronics are housed in a case that fits behind the ear. Tubing and a custom-made earmould direct the sound to the ear canal. BTE hearing aids can provide more amplification than smaller devices due to the stronger amplifier and

larger battery. This style is available in several colours to match people's hair and skin tone, or in bright, fun colours.



The illustration was kindly provided by Phonak

Hearing aid components

The main components of a hearing aid are a microphone, an amplifier, a loudspeaker (receiver), a battery and a telecoil.

Microphone: The hearing aid microphone picks up sounds and converts them to electrical signals. From the microphone, the signals are sent on to the amplifier of the hearing aid.

Amplifier: The amplifier increases the level of the electrical signal that is delivered to the hearing aid's receiver. More amplification is provided at frequencies with more hearing loss and less amplification at frequencies with less loss. The sound enters the amplifier in the form of electrical signals from the microphone and is sent to the hearing aid receiver via the amplifier.

Receiver: The hearing aid receiver changes electrical signals (from the hearing aid amplifier) back into sound that can be heard by the user. In principle, it is comparable to a loudspeaker in a radio transmitting music or speech.

Battery: The hearing aid battery delivers power to the electronic parts of the instrument.

Telecoil: The telecoil is an integral part of the hearing aid. Some places with a lot of background noise – such as cinemas, churches, theatres and lecture rooms are equipped with a loop system. For the hearing aids fitted with telecoil, it is possible to connect to such a loop system by placing the program switch on the hearing aid in telecoil position. (Widex 2006)

2.6. Literature on the subject of hearing impairment and hearing loss

The following overview of the literature on the subject of hearing impairment and hearing loss is listed according to the scientific fields in which they appeared. It is typical for the below studies that they cover specific topics that are important for hearing impaired persons. It is the attempt of my study to look into the entirety of problems that effect adult individuals with an emergent hearing loss. It can thus be said that the below studies are highly essential pieces in the jigsaw puzzle that make up the problem field of the hard of hearing.

Anthropology

There are not many anthropological studies of adult persons with an emergent hearing loss and their rehabilitation. However, a thesis that has been of special interest to me is "The Cultural Work of Hard of Hearing in Sweden" by Alison Stratton (2003), who wrote her anthropological dissertation at Columbia University. Her research was carried out in Sweden and describes the societal efforts to define and regulate people with hearing loss. Being hard of hearing is approached as a social position – a series of moments and places in which hearing difficulties become marked and remarkable, and in which action is taken by a variety of personnel to define, regulate and maintain hearing difficulties in culturally-relevant ways. Sweden is a welfare state that in many instances provides cradle-to-grave health care, assistive technology and access to society. State-organized construction of hearing loss may be difficult to escape, but at the same time the state cannot control the strategies the individual chooses to live with the loss – strategies that include ignoring, hiding or embracing the loss.

Alison Stratton's thesis covers the immediate period of time around the acquisition of the hearing aids. Her conclusions around the meaning of the hearing aids to the individual and what they can achieve leave open questions in as much as she remains inconclusive as to whether hearing aids are actually the facilitator that hearing impaired persons need in order to remain integrated in their lifeworlds. I have attempted to follow up on these questions in my research because I look into the factors that seem to be decisive for the extent of failure or success of the adaptation process.

Dr. Ruth A. Morgan-Jones's study, "Hearing Differently. The impact of hearing impairment on family life", is a qualitative, psychosocial study drawing on the anthropological ideas of Elizabeth Bott, which stress the importance of the primary groups. "Hearing differently" looks into the complex interaction between the hearing world and the world of the hard of hearing. The qualitative interviews were conducted in Great Britain and focus on hearing loss, families and social networks as well as social policy issues. The study describes the challenges in relationships where one partner has a hearing loss and the other hears normally. Instead of making hearing loss a black and white issue, the study exposes the many hidden shades of grey in the problem, which many other studies have not uncovered. Although in some cases, marital difficulties are exacerbated, Morgan-Jones also finds that hearing loss can facilitate relationship development, in as much as the strategies required to communicate successfully with hearing-impaired persons can also lead to a deeper understanding of the partner and more intense dialogue, instead of the more superficial and quick forms of everyday communication. In connection with my thesis on the expectations and experiences of new hearing aid users, I find it highly probable that with the proper training individuals can achieve such positive effects in their relationships; however, I have not found similar evidence in my thesis. According to my data, hearing loss tend to divide people in stead of uniting them.

Audiology and Audiologopedics

Torborg Arvidsson writes her master's thesis in Audiology at Göteborg University, Faculty of Medicine, Institute of Selected Clinical Sciences, Department of Audiology, with the title "From denial to integration. A qualitative study on women's attitudes before attending audiological rehabilitation." She uses a phenomenographic didactic method developed at the Göteborg University, which involves "a description in words or pictures of that which shows itself" and is based on a qualitative research paradigm. Arvidson interviewed 14 employed women who felt that their hearing loss affected their lives in almost every aspect. They classified hearing as a presupposed characteristic of everyday life that involved their perception, interaction and very existence. Not-hearing was categorized within a variety of attitudes according to the individual personality, ranging from denial of the hearing loss, as an integrated part of the self, as somebody else's responsibility, as shameful, stigmatizing, excluding, as something which made the person dishonest. The interaction with the rehabilitating institution led to a number of reactions, including counter reactions, and they included self-reliance in personal capabilities to solve the problem; confidence in trusting the competence of the institution; uncertainty in relation to procedures; resistance to accepting the hearing loss; autonomy involving a need to be in charge of one's own existence; confirmation involving the need to be understood. A major conclusion of the study is the necessity to adapt the rehabilitation process to the individual's interpretation of the personal situation. It is thus a didactic undertaking to support the required change and learning process in order to achieve better results in audiological rehabilitation.

Arvidsson's study is substantial evidence about the diverse factors the individual deals with before going into rehabilitation. It focuses on a limited period of time and does not give information about the time after the actual acquisition of the hearing aids.

A PhD study that I have been able to follow at some distance is Gitte Engelund's (2006) research for a PhD thesis, "Time for hearing – recognising process for the individual", at the Department of Nordic Studies and Linguistics Audiologopedics at the University of Copenhagen and the Oticon Research Centre, Eriksholm. Her method of conceptualization is based on the grounded theory method of Barney G. Glaser. The thesis links various types of knowledge, i.e. audiological, linguistic, psychological and sociological, and it looks into emergent hearing loss and the problems individuals often have recognizing the loss. People with hearing loss go through the process in different ways depending on their personality and the effect of their relational and personal tribulations. Engelund defines four stages in the process: the first is "attracting attention", when people with emergent hearing loss start to draw attention to themselves because of communication disturbances. The next stage, "becoming suspicious", is characterized by increasing awareness of the individual affected by the hearing loss. The third stage is "sensing tribulation", when people recognize the consequences of hearing disturbances and have emotional and behavioural reactions. The fourth stage, "jeopardizing fundamental self", implicates that people have to seek help for their condition in order to preserve who they are. The study gives examples of the perception of loss of status, attractiveness and youth, as well as the conflict potential of hearing impairment expressed by her respondents. Engelund concludes that people with an acquired hearing loss should be treated as people in process rather than people in a state of being stigmatised, in denial or not motivated.

The definition of the various stages the potential hearing aid users passes through is in my interpretation adequate as headings for the obstructions the individuals meet in the process. But I find it difficult to use the stages as a practical tool in hearing aid adaptation. As Engelund herself writes, the different stages she has defined may be overruled because of differences in personality, because of relational differences or by incidental and random factors.

Psychology

The three below psychological studies all form important background knowledge for the study on the expectations and experiences of new hearing aid users. Each of them forms a whole within the researched field. The first one concerns the need to see the hearing impaired person as a whole individual and not only address the hearing loss as a factor apart. Lillemor Hallberg's study depicts hearing loss as a communication barrier that affects the sender as well as the receiver of information. The last study, Raymond Hétu's study especially looks into shame attached to hearing loss.

Mildrid Brandt writes her master's thesis at the Institute for Psychology, the University of Copenhagen, with the title, "What? – hearing impaired and isolated", about the use of hearing aids. She stresses the need to acknowledge the requirements and experiences of the users. Everybody has the wish to lead a life without more complications than necessary. But the price the hearing-impaired person has to pay for the uncomplicated life varies considerably from one person to the next. The psychological challenge lies in the fact that a hearing impairment is not a psychological problem, but psychological issues play a considerable role when rehabilitating the impairment. Thus, psychological training and supervision of the audiological staff administering the adjustment of hearing aids is of utmost importance.

Lillemor Hallberg, Department of Psychology, Göteborg University, has looked into the effect of hearing loss on conflicts in the family, in the article: "Occupational Hearing Loss: Coping and Family Life". She sees hearing disability as a mutual communication barrier, which must be taken into account by sender as well as receiver of information. Professional counselling and support are required to ensure quality of life. All the members of a family group must be included in the process at an early stage of the impairment. Through this approach, the negative consequences of denial and withdrawal from social interaction can be alleviated.

The psychologist, Raymond Hétu, Group d'acoustique de l'université de Montréal, University of Montreal, Québec, writes in his article, "The stigma attached to hearing impairment", about the mechanisms leading to feelings of inferiority and shame among the hard of hearing. People perceive their hearing loss as a threat to their social identity – not least in a social setting where a position within a social hierarchy and belonging is of importance. Social control operates within social groups to ensure appropriate behaviour and to define boundaries of belonging. The negative consequences of revealing a hearing loss result in a reluctance to recognize one's status. The focus of rehabilitation programmes is on compensation of reduced abilities, but instead, a systematic description of socio-cultural as well as of psychological factors should be instigated.

2.7. Conclusion of chapter two

Since the 1950's, it has generally been possible to acquire a hearing aid free of charge on the basis of an audiological examination. Especially in the 21st century, in addition to the public offer, it has been possible to acquire a hearing aid from a private certified dispenser with a government subsidy sufficient to acquire a basic hearing aid free of charge. The Danish government policy has been to give the users the freedom to choose between the public and private sectors.

The chapter contains epidemiological information including Swedish material. The passage of sound from the soundscape to the brain is explained and the institutional construction of the hard of hearing. An audiogram may release a hearing aid, the functioning of which is explained. At the end of the chapter, an overview of scientific literature on the topic is given.

3. THEORETICAL FRAMEWORK

This chapter presents the theoretical framework for the thesis concerning the expectations and experiences of new hearing aid users, based on various anthropological approaches. The choice and use of the theoretic framework reflect theories of anthropology, medical anthropology and science and technology studies, which together define the sets of meaning that I have used to construct the anthropological knowledge of this thesis. In my interpretation, it is not possible to understand the process of hearing aid adaptation as a phenomenon relating to technology or physiological factors alone, it is also necessary to include the hearing sense as a cultural and social factor in the attempt to explain why hearing aids reflect notions of difference in a modern welfare state like Denmark. To this end, I discuss three theoretical pillars that relate to the concepts relevant to new users of hearing aids:

Being hard of hearing is not a constant condition and its consequences may therefore be difficult to anticipate in all situations. However, a common denominator is that hard of hearing persons experience recurring complications in connection with the exchange of ideas, concepts, attitudes, feelings, knowledge as well as anything else that can be transmitted through general conversation or more instituted forms of oral communication. The forms of human interaction just mentioned as well as the ascription of meaning to them, are important ingredients of definitions of culture. Does this mean that a hearing deficit affects the ability to be bearer of culture? If our starting point is that culture is dynamic, we relate it to ongoing processes and negotiate its meaning in a dialogue between individual and lifeworld, it is plausible that a hearing impairment will have some impact when it comes to internalizing an updated cultural inventory of a lifeworld circle. Thus, the first pillar involves the reflection of the meaning of hearing in the language and the social and cultural construction of shame. To reflect on these matters, I have found it relevant to include theorists who do not normally occupy themselves with the senses or impairment, but who are highly relevant to explain why hard of hearing people are at a disadvantage when it comes to making sense of their lifeworld. One of these is the Swedish social anthropologist Ulf Hannerz, who is well-known for his work on urban societies, local media cultures, transnational cultural processes and globalization. In "Cultural complexity, Studies in the social organization of meaning", Hannerz looks into the redirection of a cultural flow (1992) and the individual and collective ascription of meaning to factors in a complex society. The Norwegian anthropologist Fredrik Barth (1969) is essential for the understanding of culture as being maintained in communication with other cultural groups and thus stresses the interactional perspective of social anthropology. In connection with this thesis, I apply Fredrik Barth (2002) to clarify how knowledge is distributed in society and why the hard of hearing are affected through relational processes of inclusion and exclusion.

The second pillar concerns the interaction of the new user and the hearing health care system in which the user is constructed as a hard of hearing person. In this respect I apply the prominent American psychiatrist and medical anthropologist Arthur Kleinman, who not least is well-known for his studies of mental illness in China (Kleinman 1998b). However, of specific interest to this study, Kleinman (ibid. 1998a) has also scrutinized the western world to describe the ever-increasing hunt for efficiency in modern health care that affects the experiences of patients.

The administration of health care as a moral process which I see in connection with Gregory Bateson's (1999) theory of learning. I also present my own development of a theory on the strategies employed by the users of the hearing health care system.
The human existence has always evolved around the material world, but the border between the human and technological worlds is becoming increasingly blurred. Hence, the third pillar is a reflection on the interaction between human beings and technology where technology extends the hearing sense. It is a case in point of the dependence of the modern human being on technology as well as the societal attitudes to a technology that not only extends the human faculty to perceive the lifeworld but also is an emblem of deficiency. It involves a discussion of concepts by Don Ihde, Andrew Pickering, Gary Lee Downey, Bryan Pfaffenberger, Michael D. Jackson, Donna Haraway and Bruno Latour.

3.1. The hard of hearing and their interaction with their lifeworld

3.1.1. Experiences and expectations, definitions

The title of this thesis is "Expectations and experiences of new hearing aid users", but what do I actually mean by experiences and expectations in an anthropological sense? The word experience holds different sets of meanings that all are relevant in relation to the process that a new hearing aid user goes through. Experiences can be substantive and encompassing, but they are more likely to be transient and boundless in as much as the meaning ascribed to them fluctuate. Arthur Kleinman (cf. 1998a: 359) defines experience as the felt flow of interpersonal communication and engagements that occur intersubjectively through practices and negotiation. Experience has a history, and we are born into its flow where collective and individual processes run together. In this process, social interaction and ascribed meaning form the subjectivity of the lifeworld circles that is made up of the networks, family, and other institutions that shape and are shaped by the individual.

An experience is what is apprehended through the senses, which also include objects, ideas and emotions. Experience according to Michael D. Jackson (1996) covers the outstanding, isolated event as well as the routine, average and established. Seen in relation to the acquisition of hearing aids, experience is thus the actual event or totality of events that makes the hard of hearing person a hearing aid user and that leads to the accumulation of knowledge and skills. Experiences thus play a substantial role throughout the thesis – they are reflected in the interaction between the individual and the lifeworld, between the individual and the institutions as well as between the individual and the technology.

Contemplating the relationship between expectation and experience, the latter is the source of our expectations and most decisions. Thus experience is characterized by its practicality with regard to handling imponderable and concrete elements of everyday life (Kleinman 1998a: 360). We cannot have expectations without experiences. Together, they concern our past, our present and our future. When the elapse of time turns our expectations into experiences they become the starting point for new expectations.

It would make it much easier to predict the outcome of a hearing loss if the world were made up by archetypes and fixed concepts. But the consistency and predictability with which they appear are neither constant nor stable. In spite of the practicality of experience, expectations and decisions are characterized by a degree of contingency, which is reflected in the varying degree of priority individuals give to certain elements of an experience. Contingency can be defined as the fundamental unpredictability of the course of the human existence which makes the individual in relation to self and other experience an ongoing negotiation of worldview, reactions and starting points for future action. Consequently, our life situation constantly modulates the experiences and expectations of self as well as self in relation to other.

Hierarchical, political, gender and individual differences shape different cultural spaces within the same time and geographical space. Consequently, people may choose what seem to be opposing strategies, even when it comes to reacting to a certain element in the lifeworld (Kleinman 1998a: 361). Thus the social circles occupied by the respondents are characterized by heterogeneity and complexity. Experience and practice, i.e. how we react to experiences and the expectations that arise from them are about what we have in common and what separates us. A common issue is that status, others, immaterial and material resources, one’s being-in-the-world all matter and that they have a collective as well as an individual meaning.

For the respondents, the acquisition of their hearing aids has a meaning in relation to the social and sometimes also professional lives they lead. They see their hearing aids as a means - not to an end – but as something that should lead to further activities and involvement with their lifeworld. Likewise, it can be said that the acquisition of hearing aids in itself is not the answer to the problems of a hard of hearing person. But what happens in the process is decisive to the outcome, e.g. what form does the active, interpretive and constitutive power of human subjectivity take? How is bureaucratic authority exercised? Does the power mechanisms of industry play a role? Are there physiological and technological limits to the issue?

3.1.2. Meanings of hearing loss and hearing aids

Emergent hearing loss is a bodily impairment, but it has no physical expression that can be perceived by other people. It does not cause physical pain, and it can rarely be cured. Its consequences are cultural, social and existential, since it hinders the exchange of ideas and knowledge, communication and the identification of sound, e.g. danger signals. Being hard of hearing is not a static, objective condition. It is dependent on the soundscape, the personal knowledge of the communicated themes, the knowledge of the spoken language or dialect, the condition of the hearer: i.e. is she fit and rested or exhausted and finding it difficult to concentrate on the matter at hand? Prescribing hearing devices is not something that easily remedies a physical defect. Hearing aids may be accepted, rejected, generate stress, become an object of family strife, be seen as helpful or as a nuisance, as degrading and shameful or as something that symbolizes new and greater technology and thus an object used to negotiate social status.

A hearing impairment, as such, cannot be defined as an illness. Thus, it is not quite compatible with the concept of illness as a form of body praxis (Scheper-Hughes 1994:232) referring to the reaction of the *'mindful body'* to environmental stress factors. In this kind of reaction, establishing a relation between cause and effect requires an analysis of the societal power relations and their representation in the form of the illness. For the hearing impaired person, the link between cause and effect is more direct. Hearing impairment can be caused by hereditary factors, by excessive noise, by serious ear infections, medicine or by other causes. The various causes may interact. People, who for hereditary reasons have ears susceptible to hearing impairment, who have suffered from ear infections and who work in a noisy soundscape, have a high probability of acquiring hearing impairment. In other words, genetic disposition interacting with the environmental factors of society leave their mark on the hearing ability of the individual.

3.1.3. The International Classification of Functioning

The cultural meaning embodied in hearing aids is reflected in the way the respondents ascribe, negotiate and redefine meanings in connection with hearing aids. As a starting point, new users often consider it shameful to be dependent on a technological device the purpose of which is to overcome a physical deficit. To define the factors involved in a hearing impairment, it may be useful to look at The International Classification of Functioning (ICF) (WHO 2001), according to which a physical impairment cannot be isolated from its social and cultural consequences. It is only in the encounter between the individual suffering from the impairment and society that the impairment takes on significance – hence the meaning ascribed to the deficit can be seen as a cultural construction. The consequences for the individual are influenced by the way society perceives and treats matters of impairment. Hearing impairment entails restrictions on social participation, and the domains involved are learning and applying knowledge, communication, interpersonal interactions and relationships, major life areas, community, social and civic life (domains listed in ICF applying to hearing impairment, the choice of domains is undertaken by me) (ICF 2001: 14).

The ICF does not distinguish between handicap and age related impairment in as much as the distinction is of no consequence when coping with everyday difficulties. However, there seems to be a difference in the way the respondents perceive handicap and age-related impairment. Based on the empirical data of this study, I would preliminarily define handicap as a loss of function the individual is born with or something that could happen due to an accident or disease during a person's lifetime. Age-related impairment, on the other hand, is for most people unavoidable. The "politically correct" body is constructed as the lean, strong, androgynous, physically fit form (Scheper-Hughes and Lock 1987: 87) quoting (Pollitt 1982). A physical defect, here in the form of hearing impairment, is thus a condition that for some is likely to be ignored as long as possible. The study will look into the respondents' perception of their impairment.

3.1.4. The cultural construction of perception

The subject of this thesis is not the senses as such. All the same, I find it important to look at the hearing sense in some of the anthropological, psychological and philosophical literature and relate it to a cultural construction of perception. Thus, the German philosopher Georg Simmel was familiar with a vast field of knowledge extending from history to philosophy and from psychology. He received his doctorate in philosophy in 1881, but during his lifetime, he remained an academic outsider. Still, he has left his mark in the debate on almost any issue of interest to society. He notes in his "Exkurs über die

Soziologie der Sinne" (On the sociology of perception) (1908) that the senses are the bridge to recognition. According to the Canadian cultural historian Constance Classen (1993) who has published extensively on the senses, perception is widely thought of as a physical and a pre-cultural entity rather than a cultural act of collecting information which is the starting point for the anthropologist Michael Herzfeld when he says that the senses are

> "heavily encoded instruments that translate bodily experience into culturally recognizable forms. They thus frame and mediate perceptual experience in accordance with a balance of personal idiosyncrasy and socially prescribed norms" (2001: 244).

Michael Herzfeld has made a huge impact in the fields he has studied, which mainly are within social theory, history of anthropology, social poetics and politics of history.
The cultural construction of the meaning we ascribe to the items perceived through our senses implies that our culture is a starting point for what we recognize as valid. Thus our hearing sense involves not only the physical perception of sound, but a question of what we make of it. A powerful example of the influence of communicative action on the sounds we perceive is the development of the brain. Within the first year, infants begin to have reduced ability to perceive differences between phonetic contrasts that are not used in their language environment (Logan 2003).

There is further interaction between brain and culture in that the speech over time may become less distinct if a person acquires a severe hearing loss. Sound signals that do not reach the brain will be forgotten with time and can only be reproduced through a conscious effort that has to be taught. This confirms that our participation in a socio-cultural context is dependent on interaction and renewal to remain intact.

The question is whether this point can be compared to the mechanism at work when some hard of hearing persons deem some of the themes they cannot hear to be irrelevant in relation to their lifeworld. There is a difference, however, in that in the first case, the elements of speech the brain cannot hear will be discarded through a physiological process. It is thus not an act of will, but rather a loss of memory of what the words sound like. With regard to relevance of themes, it may not be a conscious act of will, but rather a part of the individual's unaware attempt to remain in control of her lifeworld. A hard of hearing person may be right when she says: "People talk so much unnecessary rubbish that I don't have to hear!", but she may do so because it is extremely tiring for a hard of hearing person to listen. In order to cope with the imponderables of daily life, we choose some elements that we need to know about and others that are less important to us. Depending on the individual and the situation, the topics in the lifeworld can be constructed to contain the elements that are considered worth the hearing effort – or they may be deemed irrelevant. The consequence may be that the individual withdraws to some degree from social life. Another consequence may be a destabilization of a circle identity – a common example is the family circle identity, the measure of which is the solidarity among members (Hallberg 1996). The consequences of the "loss of memory'"and "the loss of relevance" are the same in that the hard of hearing person experiences a reduction in the possibilities of negotiating a social position in her lifeworld.

Over time, the emergent hearing loss makes hearing less relevant since the hard of hearing no longer have a clear perception of the things they cannot hear. When the sounds are muffled, the construction of reality tends to be based on an individual rather than a social interpretation. As a consequence, the hard of hearing may consider the hearing loss to be insignificant because it only makes itself felt in relatively few instances. After having received the hearing aids, the hard of hearing person will perceive the soundscape differently. The hearing aids have a varying capacity to translate the input of sounds to something that creates meaning for the user. They may be seen as a bridge to the social world, but this bridge stipulates its own terms and conditions. How reality sounds is dependent on the nature of the hearing loss, the soundscape of the user, the state of the technology, the ability of the professional staff to adjust the hearing aid and the luck or determination of the user in making the hearing aid work.

3.1.5. Lend me your ears

It is part of the Western ideological tendency to focus on the predicaments of the individual. However, the consequences of hearing loss make themselves felt in the intersubjective space between the hard of hearing person and the interaction with her lifeworld. It makes the issue an interpersonal experience in which the hard of hearing person and significant others are affected by the condition.

Moreover, we have been socialized through our hearing in the intersubjective space where we become members of a hearing culture. It is important to stress that Deaf[1] people, who are born Deaf and have not developed a spoken language, often use sign language and in many cases identify themselves with an independent Deaf culture. Their aim is to be recognized as a minority culture with the same rights to use their language as the hearing culture. They are thus by no means cultureless (Sacks 1991). To define cultureless, I refer to the American anthropologist Clifford Geertz (1973), who claims that human beings as biological creatures are unfinished. Culture allows us to give our be-

---

[1] The use of the capital D in Deaf is based on the identification of many Deaf people with their culture and language.

haviour an orientation and organize our experiences. Accordingly, communication is the starting point for concepts, contexts and symbols that become our focus of orientation.

A societal perspective on the meaning of hearing with regard to identification with lifeworld circles is reflected in the language. Michael D. Jackson argues that metaphors are the connective tissue of the lifeworld, and their meaning lies in their disclosure of the interdependency of body and mind, self and world (1996: 9). The following metaphors show common approaches in the English, German and Danish languages. In our daily use of "hear" and "listen" (German: "hören" and "zuhören" / Danish: "høre" and "lytte") we, in varying contexts, fuse three different phenomena and concepts, 1) the physical/neurological perception, "to be able to hear", 2) "to listen to" (zuhören/høre efter), in the sense of obeying and 3) "belonging to" (zuhören/tilhøre) in the sense of understanding what goes on in a certain soundscape[2] as well as being recognized as belonging. The physical possibilities for hearing that our bodies allow become the starting point for our being in the world since we organize meaning according to what we hear and how we act on it. The hearing sense is thus an important cohesive factor in the way we interact with others. Going back in ancient history, it is revealed that in Sumerian script, the logogram for intelligence, possibly knowledgeable about tradition, contains long ears (written communication with the Norwegian Sumerian script expert, Alexander Lange Ziesler) which links hearing and the distribution of knowledge in the mainly illiterate society. The also modern expressions "lend me your ears" and "to have someone's ear" are not only the starting points for the exchange of words but also attention, association and involvement. An adequate response to "lend me your ears" could be "we're all ears"/"vi er lutter ører" which again confirms the connection between involvement and hearing. The same goes for the following expression that exists in several European languages – only here, the attempt for contact has failed: "To fall on deaf ears", "auf taube Ohren fallen", or "tale for døve ører" all express the frustration of not being able to reach the other in communication.

The Danish adjective "lydhør" is made up of "sound" and "hear" and means to have someone's ear. In German and Danish there is often another immediately traceable connection between hearing/listening/belonging to/paying attention to/obeying than is found in the English equivalents. "Belonging to" is "gehören" which can be interpreted as something that follows its owner, the same applies to the Danish word "tilhøre". At the same

---

[2] I define soundscape as the acoustic environment in a person's lifeworld. Whereas a landscape is perceived through vision and processed through a cultural filter, the soundscape is perceived though the hearing sense and likewise processed through a cultural filter which provides it with a meaning based on the previous experiences of those in the lifeworld.

time, gehören/tilhøre are associated with belonging/not belonging which divides us into those who speak with one voice, and those who do not share the same values. The same aspects are found in the corresponding nouns: Zugehörigkeit/Tilhørsforhold/Samhørighed which contains meanings of solidarity and affinity.

To shout "hear-hear" (in Danish "hørt") indicates agreement. "Unheard-of" (in Danish "uhørt", in German "unerhört") expresses something which does not comply with the norm and is thus unacceptable. "Unheard-of" is also used to organize meaning since most people define themselves according to the "heard". Hard of hearing persons often develop strategies that make them respond in neutral terms when they are unsure of what was meant by the other. This makes their commitment to an issue more tentative in as much as their experience has taught them to be cautious. They know the probability exists that they will be objects of ridicule or lack of understanding if they respond in a manner that is outside the norm.

All three languages have the proverb: "He who will not hear advice, must suffer," (or "if he won't listen, he has to learn the hard way") "Wer nicht hören will, muss fühlen!" "Den, der ikke vil høre, må føle". In Danish the word for obedience (the Latin roots of obedience are to hear and listen to) is connected to the word sound, "lyd", which is the root of several words, such as the adjective "lydig" (obedient), and the verb "adlyde". In German, the word "gehorsam" contains the root "hear".

"Listen!"/"Hör zu!"/Hør efter!" are not so much commands to hear but rather to be willing to concentrate and meet the demands of the speaker. The anger and annoyance which parents and other persons of authority expose children and other dependants to when they demand that they shall act according to a norm or when they expose themselves to danger may be conscious and unconscious attempts to arouse shame because of deviant behaviour. Not being able to listen may be linked to not being smart enough to understand and react to what is being said. A hearing loss thus forces the hard of hearing to challenge both their own and other people's assumptions that they do not understand because they are not paying sufficient attention. This is a lose-lose scenario. The hard of hearing not only feel ashamed of their hearing loss, they also have to cope with people's irritation with them for "not listening properly" (Boisen 1989).

An idiomatic expression for advocating a topic is "to sound it out", "slå til lyd for" (in Danish) which reflects that sound is used as a connective factor in the attempt to create common ground in a social group. The socially and culturally constructed interconnection between the biological and neurological processes of hearing and the consequences of (not)hearing and (not)listening in a social and cultural sense is probably a contributing cause of the low status of hearing deficiency. The message seems to be that if you do not hear us, you do not belong to us. If you do not obey the cultural definitions of our social group you cannot hold your position in our hierarchy. In relation to this context, it is important to remember that hearing loss is experienced very differently. Some users in this study have taken action themselves and have acquired a hearing aid. For other users, social control made the hard of hearing comply with the norms and made them become hearing aid users.

The American anthropologist Alison Stratton, whose main research interests are in medical anthropology, disability studies and technology and society, and who wrote her PhD thesis on the Cultural Work of Hard of Hearing in Sweden, expresses her findings on the topic as follows: not only the hearing loss but also the hearing aid reflects social notions of hearing loss and categories of human difference (Stratton 1999). These categories could include lack of faith in the technological development and aversion towards techno-medical power. Another category could be that hearing aids according to the American anthropologist Robert Francis Murphy (1990) become a social stigma symbolising decrepitude, impairment, lack of intelligence due to the assumed "spread" of one impairment to other faculties, and the loss of status and gender identity. To Murphy illness became a personal experience because of an impairment of his central nervous system of which he died in 1990. He was a Professor of anthropology at Columbia University, New York, and a diverse thinker and productive writer who engaged ideas from a wide range of anthropological theory, psychology, sociology and philosophy. Prior to his illness he was especially well-known for his work carried out in cooperation with his wife, the anthropologist Yolanda Murphy, which involved travels into the South American Rain Forest and Sahara and writings on the matrilineal society with patrilocal residence patterns.

3.1.6. The social construction of shame

The Canadian psychologists Raymond Hétu, (1996) and the Swedish Lillemor Hallberg (1996) describe the feelings of shame and guilt attached to a hearing loss. Not least, audiologist Torborg Arvidsson (2000) describes the feelings of shame attached to a hearing aid.

Even if an objective analysis can find no personal guilt attached to becoming a hearing aid user, the apprehension of the new users is obvious. According to the "father of psychoanalysis, Sigmund Freud, guilt is an attack of the superego and shame arises from the opprobrium of others – "both lower the self-esteem and undercut the façade of dignity we present to the world" (quotation from Murphy 1990: 93). The Swedish developmental psychologist and psychoanalyst Erik Homburger Erikson is well known for his theory on social development and the commonly used phrase "identity crisis" suggests that shame occurs when someone is rendered "visible and yet [is] not ready to be visible," (Erikson 1980). This can explain why the transition from a situation of passing as a normal hearing person to the situation of a hearing aid user may arouse shame. The materialization of the hearing loss which reveals a secret can be understood as a disqualification, as a sign of the lack of bodily and psychic integrity, which can be negatively sanctioned (cf. Schilling 1996).

In my interpretation, admitting a physical defect through using a hearing aid can make us vulnerable and gives us an inferior starting point in the competition with others. I would explain aversion against a physical defect through the assumption that our being in the world is subconsciously guided by the knowledge that if we do not pay attention, we could suffer a physical defect – knowledge which provides the possibility to take precautions against accidents. As children we are often scolded that we should take care not to fall. If we are too wild, we will get hurt. If we do not listen and obey, it is because we do not concentrate and possibly because we are disobedient. Thus a socially constructed and culturally relative pattern of behaviour leads us to feel shame if we do not manage to protect ourselves. The hearing impaired person as well as the lifeworld will have this cause of events as one of the unquestioned preconditions of our existence.

3.1.7. The lifeworld and its circles

A primary definition of the lifeworld is that it consists of everyday goals, social existence and practical activity (Jackson 1996b: 8 quoting Dewey 1980). It can be said to be a social organization of meaning that comprise circles that are open and overlapping with other circles, much in the sense of Georg Simmel's concentric and non-concentric circles (1992 [1890]) that connects individualization and complexity with "intersecting fields of social action" (Herzfeld 2001: 149). The circles contain the elements the members have in common. He divides them into concentric circles and circles that exist as individual forms but intersect in the individual. The concentric circles are a natural fact of most people's lives. We are born into a social setting in space and time. If the circles consist of individual, family, Copenhagen, Denmark, Europe, the concentric character of the circles will make the membership of the first circle a precondition for a membership of the other circles. These circles do not contribute to the cultural complexity of which Hannerz speaks. The opposite applies to the membership of the non-concentric circles. Even young children can participate in a number of non-concentric circles such as kindergarten, sport and music activities. Throughout the life of the individual, the number of intersecting circles is likely to increase as we choose a profession, a partner, become part of an in-law-family, take up new activities and become a member of associations that may be connected to a profession or leisure activities. In these different circles, we hold positions of varying status, in that we may hold a very central position or a marginal one.

Whereas the individual is born into the concentric circles, membership in the non-concentric circles is connected to the capabilities and world view of the individual. Membership in each new circle adds new facets to the personality, and the more circles individuals participate in, the higher the degree of cultural complexity in society. Simmel says that individuals create society; society creates individuals. Herzfeld also has an interesting interpretation of this issue:

> "With the growth in scale, people tend to invoke patterns of common culture (which is predicated on replication and therefore can be recognized in someone one has never seen before), displacing the face-to-face emphasis on social relations (which is relational and therefore does require a degree of intimacy). Yet I believe that the idea of an intimate space, to be defended from outsiders (sometimes including anthropologists!) and enjoyed in the company of insiders, persists into these larger spheres, making ethnography not only possible but a matter of greater urgency than ever before" (2001: 149).

It is thus obvious that the free formation of circles allows the individual a high degree of freedom to choose a lifestyle that is liberated from cultural "enforcement". And yet, we remain externally recognizable as a social or cultural type of individual. This may be connected to the assumption that even if we no longer are members of circles that have ceased to be relevant for us, i.e. the preschool we went to, the ideas, concepts and knowledge that were imprinted on us in a certain temporal and spatial context, may be decisive for the sense we make of the circles we come across in our later life.

Throughout the text I have chosen to use the term lifeworld and lifeworld circles even if the authors, I refer to, do not use those terms in their own definitions of comparable concepts. I have done so to reduce the complexity of different definitions.

3.1.8. Ulf Hannerz's concept of complexity of culture and knowledge

> *Homo sapiens* is the creature who makes sense".
> She literally produces sense through her experience,
> interpretation, contemplation, and imagination,
> and she cannot live in the world without it.
> The importance of this sense-making in human life
> is reflected in a crowded conceptual field: ideas,
> meaning, information, wisdom, understanding,
> intelligence, sensibility, learning, fantasy, opinion,
> knowledge, belief, myth, tradition …
> ***Hannerz 1992***

3.1.8.1. The making of sense

According to Ulf Hannerz, to study culture is to study the meanings people individually or collectively ascribe to the events, facts and imponderables they are presented with in their daily lives (Hannerz 1992). Meaning may range from being left open, accepted or rejected in ongoing negotiation with the circles or individuals we encounter in our daily lives. The process is individual, collective and social, in as much as it concerns the externalization of ideas, experiences, feelings and the process of making them available to the senses and thus to the internalization in those belonging to a lifeworld circle. My interpretation in connection with the hearing sense is that the sense-making process is the internalization of an individual or collective worldview. In order for the process to take place, instrumentation is required - in connection with this study, the instrumentation would be the hearing sense.

Culture may be expressed through public, meaningful forms that any tourist passing through a country like Denmark on a one-day visit would notice, e.g. a flag, the way we dress or our language. Typical of this part of the world, these items are perceived through our eyesight or our hearing sense and less through the senses of smell, taste and touch. These very obvious forms are not the ones that seriously affect the hard of hearing persons included in this study.

There are, however, much more subtle expressions of identification with a lifeworld, which make it complicated for hard of hearing persons to follow modifications in attitudes. Missing out on these clues may be expressed by the comment: "People speak so much unnecessary rubbish that I don't need to hear!" Or the opposite attitude can be expressed with a different strategy: "I feel isolated when the acoustics are poor because I can't follow the conversation."

The above quotes show that we differ in relation to paying attention to what is being said. Individuals thus experience differing relationships of power (ibid.: 56) between the self and the other. But not only that, we may also have different attitudes to the issues in question in different contexts whether we are in a private, social context; a professional context where we need to uphold an expert image or a context that involves the state authorities. Agency and dependence on the other may differ in the different contexts, which in turn influences the attentiveness towards cultural sharing with the context in question. Thus, views, feelings, ideas and attitudes evoked in different contexts depend on the meaning that we as human beings individually and collectively, and in different roles ascribe to these forms. The person above who says that other people speak so much unnecessary rubbish, for example, may take that attitude in contexts to which he ascribes no meaning, whereas he will turn on his hearing aids in other contexts because he depends on upholding a powerful position in relation to the other. This makes it necessary for him to maintain the instrumentation to perceive what is going on.

As already said, Ulf Hannerz's starting point is that a precondition of the human existence is the possibility to make sense of our lifeworld. It is not the subject of this study to give a detailed description of Danish culture with regard to ideas and modes of thought in relation to being hard of hearing. But it is important to describe the *mechanisms* of culture in order to credit to the complexity that characterize a society like the Danish, seen in relation to the difficulties hearing impaired persons encounter and the meanings they ascribe to their hearing loss. In saying "the complexity that characterizes a society like the Danish" I, like Hannerz - refrain from a discussion on globalisation and the degrees of complexity in societies at the beginning of the 21st century. Denmark and the European countries with which we compare ourselves are not characterized by a uniform culture that is shared by everyone everywhere (Bisgaard 2001). Consequently, I find it safe to follow Hannerz in saying that complexity makes it impossible to say that culture is a process of "the mind" or of "the public forms" but rather that culture "is in particular ways in particular minds; and when it is public, it is made available through social life by particular people, to particular people" (Hannerz 1992: 7). Consequently, when I say "the mind" it is a simplification of the different, complex ways in which individuals perceive and interpret the innumerable public forms of our lifeworld.

3.1.8.2. The distribution of meaning

Meanings are thus differentially distributed among different people in different contexts. Hannerz (ibid.: 7) lists three points that are important to understand the cultural complexity involved in the transportation of meaning.

- *Ideas and modes of thought* as entities and processes of the mind – the entire array of concepts, propositions, values and the like which people within some social circle carry together, as well as their various ways of handling their ideas in characteristic modes of mental operation;

- *Forms of externalisation* as the different ways in which meaning is made accessible to the senses, made public;
- *Social distribution* as the way in which the collective cultural inventory of meanings and meaningful forms – that is, (1) and (2) together – is spread over a population and its social relationships.

Points 1. and 2. above make up the core concepts of culture but in order to account for cultural complexity, it is necessary to include the question of distribution. In a society consisting of different cultural groups, the individual does not necessarily relate to an extensive cultural inventory. But numerous interpretive patterns of meaning are likely to give the individual less access to the total cultural inventory of a society. This means that if a society is characterized by a high degree of distribution of ascribed meanings, it will take more intensive negotiations within lifeworld circles to uphold a culture understood as a collective structure of meaning. In connection with this study, I find that a probability exists that a high degree of complexity influences the possibilities of the hard of hearing to participate in the negotiation of a collective structure of meaning.

3.1.9. Fredrik Barth's concept of the distribution of knowledge

As already stated, to uphold a position in lifeworld circles, it is necessary to be able to ascribe a meaning to its contents. Since these contents also consist of knowledge, I would like to discuss Fredrik Barth's knowledge concept. Some aspects of knowledge are very much in line with culture, and yet it is possible to distinguish between the two. According to Fredrik Barth, knowledge provides members of a culture with the material to reach a goal. The knowledge material is made up of such items as expertise regarding how to conduct a medical examination, celebrate traditions, operate a machine, do research on a given topic or how to adjust hearing aids. You could say that the same knowledge can be accessible to any culture, even if it may be used differently. The willingness to accept the produced knowledge as valid may thus be dependent on the culture of a social circle or even a population. Moreover, knowledge is unevenly dispersed in a population in that some social relationships have the capacity, possibility and willingness to share knowledge with others just as the target groups must possess the same qualities in order to receive the knowledge. The *forms of externalization* (Hannerz 1992:7) of culture vary as well, but as distinct from knowledge, culture is ubiquitous and unavoidable as long as we to some extent can speak of a shared meaning in a lifeworld circle. Access to the shared meaning also requires knowledge about the established social practice in relation to hierarchies, rights and duties. Culture can thus be seen as the setting in which specific knowledge operates. Barth notes:

> "Knowledge provides people with materials for reflection and premises for action, whereas "culture" too readily comes to embrace also those reflections and those actions. Furthermore, actions become knowledge to others only after the fact. Thus the concept of "knowledge" situates its items in a particular and unequivocal way relative to events, actions, and social relationships" (Barth 2002:2)

Just like Hannerz's listing of cultural complexity in relation to its transportation of meaning, Barth lists three points essential to knowledge, which likewise refer to a content, an expression and a distribution. They are:

- Any tradition of knowledge contains a corpus of substantive assertions and ideas about aspects of the world.
- Knowledge must be instantiated and communicated in one or several media as a series of partial representations in the form of words, concrete symbols, pointing gestures, actions.
- Knowledge will be distributed, communicated, employed, and transmitted within a series of instituted social relations.

The above three characteristics of knowledge - or faces of knowledge as Barth calls them – are interconnected and they mutually shape each other. Their mutual determination occurs through actions when human beings within lifeworld circles present important items of knowledge through communicative media.

Following Barth, knowledge is made up of the elements a person uses to interpret and act on the world. It is the basis of reflection and the premise for action and is directed towards items relative to events, actions and social relationships. Barth includes feelings, attitudes, information, embodied skills, language and concepts, which, in total, form the reality we perceive. In order to understand and act on the imponderables of our daily lives, we have to hold them up against our knowledge. Knowledge thus forms the structure of our experienced lifeworld, and it enables us to manage our daily existence in a meaningful way.

The quantity and quality of knowledge in any population vary at all levels. It is produced in individuals and populations in the context of the maintained social relations, and it varies according to the positions its members hold with regard to profession, sex and age. At this stage I wish to stress that knowledge may be what we need to ascribe a meaning to something, but very often our knowledge is based on what "our" lifeworld considers valid and this again leads to the interconnection between knowledge and culture.

If we examine the interaction between individual knowledge and shared knowledge more closely, it seems that knowledge is linked to the experience of the individual – our individual knowledge consists of what we infer from what we have seen, read and heard. There are many elements in our lifeworld that we have not directly experienced ourselves such as the thoughts of other people or the earth's past history. It is common sense that on the whole we accept these elements as valid. By accepting these elements without question we also accept the validity of inference from one event to other events - e.g. I have heard something similar myself; therefore it seems like common sense to accept a related event as valid.

> "By this acceptance, I commit myself to the view that there are valid processes of inference from events to other events - more particularly, from events of which I am aware without inference to events of which I have no such awareness" (ibid.: 3).

By accepting inference as a valid means of acquiring knowledge, trust in what other people tell us about their experiences becomes an important motivation to act. It is thus the people we know and trust who provide us with the experiences on which we act. Most of our knowledge is consequently not something that we can claim to be our personal property. It could be argued that it is less an item than a relationship, in that it is maintained in dialogue and negotiation to test its present and future validity. We thus construct our knowledge within the social settings in which we participate. It is obvious that the acquisition of knowledge may be dependent on the ability to hear what is going on. As described elsewhere, being hard of hearing is not necessarily a static condition, but may vary according to the soundscape. It is, however, obvious that details, whole or parts of communication are either not heard or are misunderstood, and for this reason hard of hearing persons are disadvantaged in the general acquisition of knowledge in society.

3.1.9.1. Knowledge based on written materials

Not all our knowledge is based on inference and experience. Barth refers to an academic prototype of "knowledge" we find in textbooks, encyclopaedias and dictionaries. This kind of knowledge is separated from its context and an exchange of views and ideas with other people. Relatives of hearing impaired people say that they often regret that the hard of hearing either talk all the time or they stay out of the conversation entirely. One wife of a hearing impaired person complained that when they had visitors, her husband would either give a lecture on some topic he had just read about, or he would not participate at all. This could indicate that the kind of knowledge some hard of hearing people acquire is likely to be the kind that can be obtained though visual activities like reading or experiences acquired through manual activities.

3.1.10. Ulf Hannerz's concept of the cultural flow

To visualize the cultural process, Hannerz uses the metaphor "flow" (1992:3) which runs between two loci represented by the externalized form of the cultural item and the human mind that interprets and ascribes a meaning to the item. The expression cultural flow is not to be understood as an uninhibited supply of meaning, but rather as a complicated, ongoing negotiation of meaning between internal and external loci. These loci make contributions to and use the flow as input for interpretations. This makes the flow an important factor in the creation and re-creation of a social system in as much as the flow carries any kind of messages which can range from clear instructions on how to conduct our daily lives to blurred, indecisive points of references to help us find our orientation –

> "In a process both cumulative and interactive, people make indications to one another about who they are and what other kinds of people are in their habitat, what is suitable conduct and what are desirable goals in life, and how to relate to other human beings and to the material world" (ibid.: 14).

This means that members of a social system will have to be part of a cultural flow which they both rely on and negotiate in order to recognize and be recognized in their validity claims.

Again referring to Hannerz, the cultural flow does not take its own course. Like a river, it is embedded in a temporal and spatial context, which finds its trajectory on the basis of previous interpretations and how these have been externalized. Some degree or quality of meaning will be ascribed to anything or anyone in our lifeworld, which means that culture is ubiquitous to the extent that through our senses and ability to communicate, we are accessible as well as interpretable to the flow of communicative action. Accessibility and interpretability are interdependent and possible through physical presence or through the extension of technological devices. In relation to this point, I find it inevitable to speak of the possible lack of accessibility of hearing impaired people as well as the possibility of extending the accessibility through hearing aids. Another point is of course that the lack of accessibility due to hearing impairment also makes us less interpretable to others, since we lack the input to be able communicate on certain items.

3.1.10.1. Organizational frameworks

Ulf Hannerz (1992) has worked out patterns in which common culture can be displayed – they are organized in four types of organizational frameworks, i.e. "form of life", "market", "state" and "movement". It is essential to keep in mind that there may be factors in people's lives that do not fit into these frameworks and also that the various frameworks play essential roles for each other. One framework cannot be contemplated without the other, e.g. in European countries, the family as we know it cannot exist without the state and vice versa. It may rightly be asked how framework is defined in relation to lifeworld. In my interpretation I would define framework as taking its starting point as an overall societal structure, whereas the starting point of the lifeworld is in the existence of the individual. That means that there is an ongoing negotiation between the frameworks and the lifeworld circles which can be illustrated by the cultural flow of which Ulf Hannerz speaks.

3.1.10.1.1. Form of life framework

Looking at the example of the respondents in this study, *form of life* would encompass the activities that go on in their daily settings – it is very much about the routine of doing, seeing and hearing the same things every day in work places and homes. As long as the framework for these activities remains more or less stable, alterations in the cultural flow are not likely to take place. How does the framework of *form of life* affect hard of hearing persons? The people in this study have grown accustomed to their hearing impairment, and it is quite likely that they will maintain that within this framework they have no hearing problem, and that they know what the other is going to say. It is typical of interactions within *form of life* that people have a strong awareness of common sense and that the same meanings are applied to the same contexts, which makes it far easier to guess what the communication is about. The severity of the hearing impairment is possibly not of a degree that requires hearing aids when the speaker and the topic is known and only one person speaks at a time. But it may also be that the communication partner with a normal hearing sense finds the hearing loss troublesome and that the misunderstandings and the loud TV are a burden for the relationship. Even if Hannerz claims that there may be "a vulnerability to boredom" (ibid.: 47) within *form of life* and thus not much of a challenge, I would claim that the production and reproduction of cultural matter that take place in most *forms of life* require the ability to hear what is going on in order for the processes to run smoothly and for all members to participate. In *form of life*, Hannerz also includes the work place. However, it is a characteristic for most of the working or professional respondents that communication in the work place is not very predictable. This is described in more detail under "Individually constructed meaning of hearing".

3.1.10.1.2. Market framework

The *market* framework involves the meanings that are transported when commodities are moved – I take it as an axiom that goods are only produced if a meaning can be attached to them. However, some of these commodities have factual meanings and the informational, intellectual, aesthetic or emotional appeal they carry for the average consumer is insignificant. Other commodities, however, can be seen as signs of specific lifestyles, and news about these commodities is often spread visually through advertisements, which does not affect the inclusion of hard of hearing people very much. However, in contemplating how the respondents made the decision to become hearing aid users, it is obvious that they often heard about hearing aids from someone. Information about commodities is thus also spread through everyday communication, which also means that communication that is not directed toward a hard of hearing person in a face to face dialogue in a quiet soundscape, but transmitted – say – during the lunch hour in a noisy canteen would be very likely to escape the ears of a hard of hearing person. It is obvious that the cultural flow with respect to hearing the news in the market will flow less freely for hard of hearing persons.

Another issue of interest for the *market* framework, the hard of hearing and hearing aids is that hearing aids can be seen from three different viewpoints, as: 1) as factual commodities of interest to investors; 2) as "convivial tools" as described by Bryan Pfaffenberger in the sense of techno-medical devices the cost of which is covered by the welfare state and 3) as carriers of intellectual, aesthetic or emotional appeal.

There is a remarkable discrepancy between the image of hearing aids as a sophisticated piece of technology, and a profitable business undertaking against the image of hearing aids as facilitators that people plug into their ears, where they whistle and become covered with ear wax. The former image stems from the financial pressure on the hearing aid manufacturers to obtain a return on their investments in research. New hearing aid technology is usually presented at the congress of the American Academy of Audiology (AAA), which is an institution for professionals to whom hearing aids are carriers of technological and financial meaning. Thus, the reception of the technology is decisive for the global success of the hearing aid, as described by Søren Kragballe (2005) in the Danish newspaper Jyllands-Posten concerning the success of a new GN ReSound hearing aid.

A different perspective of the market is that of new hearing aid users. Some have the memories of old fashioned hearing aids and often think in terms of whistling hearing aids covered in earwax. Others may have heard of the new technology, but for them the main issue is hearing aids as carriers of intellectual, aesthetic, emotional, age-related and health-related meaning.

Hence, for the industry, the dependence on success in the market not only triggers technological research to convince investors of the profitability of a new hearing aid. It also requires providing the potential users, retailers, technical and medical staff with information on hearing aids. In a country like Denmark, it also requires political lobbying to make hearing aids continue to be a free benefit. The information activity and lobbying not only takes place through the industry-financed organization ”hear-it”, but also marketing strategies are aimed at deconstructing the common symbolic meanings of hearing aids: deficiency, unattractiveness, age and handicap. Thus, advertising for hearing aids attempts to create a narrative about the good life of a hearing aid user which mainly covers information, construction and deconstruction. Information takes place though text which the users often find it difficult to relate to because especially new users have no experiences with hearing aids or because the technological information provided is difficult to understand. An important tool to convey the message to the users is thus advertising images directed toward construction and deconstruction of the signals carried by hearing aids. The aim is to make the viewers understand these images with reference to their involvements with the world. If the viewers pay attention to the images, a narrative may unfold which according to Cheryl Mattingly and Linda Garro "can shape future actions in decisive ways" (ibid. 2000:18). Both the American theorists have decisively influenced the discourse on the narrative and its influence on illness and healing. In "Narrative as Construct and Construction," they apply their reflections on oral or written narratives, whereas I apply them on the narratives carried by images. When designing the setting for an image, the creators promote a certain life style in an attempt to persuade others to see some part of reality in a certain way. It succeeds as an action, if it can provoke certain effects in the viewer, e.g. to think in more positive terms about hearing aid users or even about acquiring the devices. Whether or not the images convince the target group depends on whether they create a meaning for the viewer. The target group can thus accept or reject the visions and ideas promoted by the images. They have power as actions, only by developing a particular kind of relationship between image and target group, i.e. a relationship in which the viewer comes to care about the events that are presented (cf. ibid.: 11).

These events comprise a narrative about basic human values like proximity, acceptance, recognition, love and harmony. At the same time, it is a narrative about the real or imagined problems the hard of hearing and hearing aid users face. The advertisements reverse the sense of exclusion, age and deficiency and construct a vision of the happy life with hearing aids. The advertisements also deconstruct the symbol of hearing aids as a sign of sexual unattractiveness and age. In the part of the thesis presenting the empirical material, I will look closer at some advertisements.

3.1.10.1.3. State framework

The state as provider of services

The *state* as an organization is the third framework of cultural process. One representation of the state is the Danish authorities. They have many faces in that they are e.g. responsible for the welfare state and thus provide possibilities for the citizens for health care. In line with the French philosopher Michel Foucault (1926-1984), who had an extensive influence on sciences like history, philosophy, psychoanalysis and sociology of knowledge, it can be said that the medical examination represents the aim of the health care system that the citizens participate in the modern state. Seen in relation to the hearing health care system, the institution is responsible for the registration and documentary accumulation, represented by the medical examination. Its starting point is normality, and the aim is to define the degree of the hard of hearing person’s deviation from the norm. The examination establishes visibility in relation to the individual, through which she is differentiated and judged (cf. Foucault 1977: 184). As in any medical examination, this involves an objective attempt to establish the cause and degree of the affliction. There is mostly no cure for the type of hearing loss described in this thesis and the purpose of the process is thus to rehabilitate the person, i.e. to re-establish a degree of normality. Intense registration and documentary accumulation is an outcome: statistics, patient files to follow the evolution of the hearing loss which all serve the purpose of classifying, categorizing, establishing norms and averages.

For some respondents, the examination seems like a test of their qualifications to see whether they are clever enough to pass (e.g. Walter 21/M/59/2/H; Inga 29/F/63/2/H; Astrid 52/F/65/2/H). As mentioned earlier, I find a parallel between being able to hear and being able to understand and respond adequately. Some respondents and informants said that they thought they heard everything during the test, which indicates the negotiable character of a hearing loss (e.g. Inga 29/F/63/2/H). From their point of view, their hearing is within the range of normality, and, if they have not heard anything, it is because there was no sound.

At the same time, to differing degrees, examiners stressed the evaluation aspect of the examinee’s willingness to comply with the examiner and the situation. Some said they had to press the examinees in order to get the expected responses from them; another said that she would observe the examinee’s eyes in the test situation. If she saw that the examinee’s eyes went to the side when the examiner just had just given a stimulus, and the examinee did not respond by raising her hand, it was a sign that the examinee had heard something, but for some reason would not reveal it and was possibly cheating.

Seen from the point of view of the examinee, the hearing test is not as easy as it sounds. She might suffer from tinnitus, which makes it difficult to distinguish the sounds from one another. Also, when being tested for the very weak sounds – or weak for the examinee - it may be difficult to know whether or not there was a sound. The examinee is thus placed in a field of surveillance (ibid.: 1977) during the hearing test. The responses are used to construct the examinee as normal or as hard of hearing.

A predominant motivation for the welfare state's free dispense of hearing aids is to maintain the social norms of equality. However, to keep down the costs of hearing aids, the devices dispensed through the public dispensers are mostly not of the latest and highest technological standard. Parallel to the public system is the state- subsidized private system which enables people either to acquire free basic hearing aids or those with financial means to acquire the more sophisticated hearing aids. In both the public and the private systems, the construction of the hard of hearing person takes place in reciprocation between the aim of society to have participating and communicating members and the individual's experienced relevance of hearing. Hearing aids can thus be seen as a means of inclusion and at the same time as a representation of social control.

An important point, however, is that the respondents are not without agency, and they know how to oppose the pressure exerted on them. Often they seem to counteract the disciplined body in the sense of "The Foucauldian question": "What kind of body does society want and need?" (Scheper-Hughes 1994:132). Even if the initial degree of confidence in the chosen system – be it public or private health care - is high, the individuals gain experience with the hearing aids and the intangible becomes palpable. Questions may be asked, strategies can be developed to embody the idea of being a hearing aid user – or the hearing aids may be rejected.

Outside of the hearing health care system, the state plays a role in giving advantage and disadvantage to the hard of hearing. Some incidents of the exertion of state power aim at giving advantage to the hard of hearing, but sometimes to little avail. One case in point is the consultations that hard of hearing people may have with the authorities. Many state institutions have installed assistive listening devices to facilitate communication with hard of hearing people, but it is a common complaint that they much too often are out of order, which is a matter of great frustration for the hard of hearing (personal communication with Finn Konradsen, former chairman of the association of the hard of hearing).

Another case in point was explained by a social worker specialised in sight and hearing impairments, Susanne Glück, at a symposium on 28 January 2006: The great majority of social workers who deal with hearing-impaired persons have little or no knowledge of their needs. According to their knowledge, hard of hearing persons are rehabilitated when they have hearing aids which is not the case since hearing aids do not turn hard of hearing people into normal hearing people. It goes without saying, that the above incidents are a disadvantage for hard of hearing and contribute to marginalization of these people. Another case in point, which works toward the same consequence, is the following incident that I have witnessed several times. It involves staff working directly with a hearing impaired person. They should be expected to be aware of the necessary communication strategies necessary to meet the users' needs. During the making of the impression for ear moulds, the technician would turn his back to the potential user in order to prepare the materials and talk to her at the same time – or he would talk to her when her ears were stuffed with the material to make the mould.

The state and the construction of national identity

The state plays further roles for its citizens. Legally, it provides us with a nationality. Historically, certain cultural values are attached to being Danish, a process, which by no means seems to be outdated. Thus the state also represents the construction of a Danish nationality, which is echoed in the media. While writing these lines "Danish values" and "freedom of speech" are part of an ongoing battle for the right to define Danish cultural specificity in a globalized world – a debate that in my view takes Danes as far as showing contempt for the symbols of other religions. In this respect I think of the cartoons of the prophet Mohammed that were printed by a Danish newspaper on 30 September 2005 allegedly to further dialogue and freedom of speech in Muslim communities. In the Muslim world, it lead to several deaths of demonstrators, some Danish embassies were set on fire and to boycotts of Danish commodities in February 2006. It is important to note that the paper that printed the drawings is independent and that the state as a legal institution is unable to interfere in the freedom of the press. All the same, the political views of the liberal paper, Jyllands-Posten, do not contribute towards a redirection of the mainstream cultural flow in Denmark for which reason I find it justified to include the incident in the state framework.

It is difficult to say what effect it has to be hard of hearing in relationship to the construction of Danish culture seen in the light of the Muhammed drawings. One of the aims of the organization of the hard of hearing has been to install a speech recognition programme that would allow the texting of the news on the Danish state television channels DR1 and DR2. One may argue that the hard of hearing can read the newspapers the following day – but it is unquestionable that they are at a disadvantage when it comes to spontaneous and immediate discussions on these subjects. Also the crisis caused by the Mohammed drawings developed at such speed that the situation changed from one hour to the next, which also points towards a marginalization of the hard of hearing since they are unable to follow the communication of crucial events.

3.1.10.1.4. Framework of movements

The last framework that is a factor for cultural processes is *movements.* These may be associations for women, for the protection of the environment, and of course the association of the hard of hearing. According to Hannerz, it is a characteristic of *movements* that they are directed toward society at large and toward missionizing (Hannerz 1992: 50). To become a success they must be able to mobilize the *form of life* framework in order to exert pressure on the *market* and *state.* Their aim is usually to achieve changes or prevent them, in as much as the founding idea is to transform meanings of the general public or negotiate their policies with the authorities in order to turn them into the legal structures of the state, thus providing them with legalized agency as opposed to the agency of a pressure group (movement). They could be said to be a destabilizing element of culture, as their aim is to redirect the cultural flow, which is not the case to the same the same extent for form of life, market and state – at least not in a country like Denmark.

In the empirical part of the thesis I write in more detail about the framework of movements and that hard of hearing people rarely form a lifeworld circle. They do share the common denominator of being hard of hearing. Moreover, there are patient organizations for the hard of hearing people, which could be described as one of Simmel's non-concentric circles, but they do not nearly reflect the numbers of hard of hearing people in the Danish society. The social cultural anthropologist Paul Rabinow is well-known for his scientific approach "an anthropology of reason" in which he seeks to establish the knowledges that constitute human beings and help them to understand themselves and their environments. Part of this approach is the concept of biosociality (ibid. 1996:102), which he understands as the social dimension of the biomedical sciences. Biosociality is thus the networking activities undertaken by patients to exchange knowledge and experiences about a given physiological condition and its consequences (Müller 2005; Rabinow 1996). The cultural anthropologist Gisela Welz has carried out extensive research on the production of knowledge in a number of fields. In line with that research, she in the introduction to "Gesunde Ansichten" (2005) (Healthy Attitudes) describes the increased focus of health insurance companies, public health care and the patients themselves on "responsible patients", who are expected to reduce health risks through preventive action, seek information about the medical development and act responsibly on the basis of information.

Gisela Welz (2005) conceptualizes the "responsible patient", which I have put in quotation marks due to the disciplining connotation attached to the term. It describes the ideal citizen, which seems to be a prerequisite if one is to find one's way in the health care systems of the 21st century. At the same time, and for other medical practitioners and specialists in the field, the concept of the "responsible patient" is a horror vision owing to the pseudo-knowledge the patient may acquire and expect the experts to relate to.

3.1.11. Conclusion of the first pillar of the theoretical framework

The first pillar defines experiences as the concrete acquisition situation of the new hearing aid users but at the same time as the transient and boundless elements that flow into the life histories of individuals and form their world view and expectations. Moreover the pillar defines the implications of hearing loss as constructed by WHO as well as by the metaphorical use of the hearing sense in the daily use of the language and its implications for the self-understanding of the individual. Ulf Hannerz's concept of the individual's production of sense of the world and Fredrik Barth's concept of knowledge are used to show the implications of hearing loss for the individual.

3.2. The Interaction between the hearing aid users and the institutions

3.2.1. Arthur Kleinman's concept of administration of health care as a moral experience

At the Tanner Lectures on Human Values at the Stanford University in 1998, Arthur Kleinman (1998a) presented papers on suffering and the issues at stake for the involved parties. The topic of his lecture is not hearing loss, but all the same, I find it relevant to parallel the suffering he describes to the suffering of hearing loss in as much as it can threaten our identity, i.e. how we perceive ourselves, our relationships, our occupation, our being in the world, even our survival.

In Kleinman's definition, experience has to be seen as a moral process. The risks attached to hearing loss structure the moral processes that influence existence. He uses the term moral which in his definition

> "is the medium of engagement in everyday life in which things are at stake and in which ordinary people are deeply engaged stake-holders who have important things to lose, to gain, and to preserve." (ibid.: 362).

He defines "moral process" in relation to "ethical discourse", which he sees as an "abstract articulation and debate over codified values." (ibid.: 363) Ethical discourse takes place at an intellectually elitist level and concerns principles of a meta-theoretical category. Its aim is to establish universal values, i.e. a contextual objectivity of no specific geographic or cultural origin – it concerns the view from nowhere, which may have an addressee but no sender. According to Kleinman, ethical discourse emphasizes cognition and rationality rather than the lack of coherence, control and predictability most people experience in their daily lives. As opposed to ethical discourse, moral experience concerns practice in a local setting that carries a specific cultural, political and economic meaning. It is about interaction between parties acting on the basis of specific events and relationships in a given framework.

My understanding and application of Kleinman with regard to the offer of the welfare state to provide hearing aids to hard of hearing persons is as follows. As ethical discourse, the welfare state and the provision of equal opportunities for everybody is an unquestionable ideal for the majority of people. However, the enactment of the welfare state and in this case the provision of free hearing aids leads to hegemonic structures which for some hard of hearing people turn accommodation into negligence. Thus, it is the question of the moral processes involved in the administration of power that is important in relation to the dispensation of hearing aids rather than an ethical discourse on the benefits of the welfare stare vs. private enterprise. The purpose of the welfare state is to provide equal care to all members of society. In some cases, however, the welfare state does not address the problem of suffering, but focuses on the medical or scientific perspective. The technical and medical aspects of a hearing loss do not relate to the problems of bewilderment and loss, which may be inherent in hearing impairment. A hearing impairment is not a psychological problem, but it sometimes requires psychological insight to guide the users to obtain a successful result (Brandt 2001). According to Robert Francis Murphy (1990:88), what goes on inside a patient's head is of little concern in the medical model of impairment. The focus is on the physiological disorder that can be alleviated by a hearing aid. If the patient lapses into a condition of distress, the next station is the psychologist and medication.

Neither public nor private dispensers are always capable of addressing the needs for guidance of the hearing impaired. The new users sometimes have inaccurate expectations of what they can expect from the hearing health care system. Some of the respondents of the study have expressed their suspicion that the aim of private enterprise would be to make a profit and not to provide the best possible hearing aid. Other respondents cherish a deep suspicion against the public hearing dispensers and state that they themselves have no influence on the hearing aids they are provided with and that the service is poor. In this respect, I find Kleinman's "moral experience" relevant. An ethical discourse at an idealistic level on the welfare state vs. private enterprise is not meaningful. But a debate on the moral response to hearing loss is highly relevant to address the pitfalls and strengths of the welfare state as well as private enterprise. It is important to note that both the dispenser and the hard of hearing person administer agency . In other words, what is of interest in this study, is the moral process that is negotiated between two or more parties in relation to a specific situation.

According to Kleinman (1998a: 409), we are living through a managed care revolution, by which he means that an ever-increasing hunt for efficiency has modified the doctor-patient relationship to rigorously regulated time of slots. He speaks from an American standpoint, but according to the expert interviews I have conducted with doctors of medicine, the situation in Denmark is similar (expert interviews carried out with Konrád Konrádsen, Head of the audiological ward at Bispebjerg Hospital and Jørgen Hedegaard, Head of the audiological ward at Gentofte Hospital). For the rehabilitation of the hard of hearing the consequences may be negative: there is far too little time to follow-up on the social and technological issues that constitute the predicaments of being hard of hearing. More time is necessary to engage user and expert in a dialogue on emotional, family and work issues.

Some users find it stressful or even painful to listen to the world through their hearing aids, which complicates the adaptation of hearing aids. In this, I see a parallel to Kleinman (1998a:410) who writes that it particularly is in the management of pain that professional standards fall short. The person suffering from the increased sensitivity may be disabled by the problem whereas the degree of suffering cannot be measured by professional standards and thus tend to lapse into the world of the speculative.

Hard of hearing persons have stopped using their hearing aids because of the problems they cause them. They also feel mistrusted when they express their discontent with their hearing aids. The professional side will often express their frustration over the hearing aid users and their lack of patience when it comes to adapting to hearing aids. It is obvious that some people are more sensitive than others, but degrees of suffering do not lie within

> "the rational technical detection of truth or deception. Acknowledgment of the words and feelings of the other in pain is what is called for. ... Failure to acknowledge the other's condition is a moral (and cultural) failure." (Kleinman 1998a)

3.2.2. Gregory Bateson's Theory of Learning

It is not my intention to depict some staff members in private or public institutions as morally deficient. There are very logical reasons for the communication problems between expert staff and new users. Thus, in order to explain why the dialogue between new hearing aid users and the expert staff that is there to help them comprise differing contingency factors in the adaptation process, it is useful to include elements of Gregory Bateson's theory of learning (1999: 293). Bateson was a British anthropologist and social scientist intersecting with other fields of science. In the following his theory of learning is of special interest in order to understand the dynamic and complex relations that arise between the learning individual and her interaction partners.

Bateson sees learning as a means to obtain change, which is what the new users hope for when acquiring hearing aids. They usually know nothing about the procedures and technology connected with becoming a hearing aid user, and they are in a transient position, where it is complicated to gain knowledge about procedures and technology due to the complicated structure of the hearing sector. From that position the new users expect to move on to a position as a hearing person. Within the expert staff that is to accompany the users through the transient position, there are different motives for their presence and they experience the process differently. They may cherish an enthusiastic wish to help hard of hearing persons, but their presence is also connected to existential purposes like making a living and repetitive working routines that sometimes cause frustration. Sometimes they see themselves as gatekeepers to the expert world with power to grant benefits to some and refuse them to others. All these motives may be present at the same time.

According to Bateson, patterns of interaction between human beings in his terminology “minds” connect through communication forming the basis for change, which may involve extensive alteration of the parties involved. To understand what learning according to Bateson implies, it may be helpful to consider three of his four classes of learning, i.e. learning 0, I and II, which are the most common and exist in one form or other exist in the human field of learning. I will leave out Learning III because - according to Bateson - that class is difficult to achieve for any human being. In brief, learning III involves the ability of the individual to a radical shift between different perspectives of learning.

The various classes are not to be understood as a hierarchy but rather as conditions for learning that apply to human or animal behaviour. Also, in the sense I use Bateson here, it would be typical that the same individual in contexts other than those concerned with hearing aids, could be in different classes of learning.

3.2.2.1. Learning 0

Learning 0 is the stage that requires the least reflection about any occurrence, and it is unlikely to produce any or only minimal change in the person subjected to a sensory stimulus – be it of a basic or multifaceted nature. It can often be described as the result of identical, repeated events. Applied to hearing aid users, it could be used to describe the stage in their adaptation process when they have become completely familiar with the use of hearing aids and the users are habituated to the soundscape the hearing aids construct. It is very much a matter of a foreseeable chain of occurrences. Learning 0 is not dependent on the situation in which it occurs – an identical reaction would result in another setting. My hearing aid beeps = I “learn” that the battery is flat. The occurrence cannot be reversed and it is unlikely that it is the starting point for reflection. Learning through trial and error is not involved in learning 0, and there is nothing situational about the process.

3.2.2.2. Learning I

Learning I is what is generally thought of as learning. Through this kind of learning, it is be possible to trace a development in the way the individual approaches a given project. It is thus a characteristic of hearing aid adaptation that the new user finds out how to handle the hearing aid, and with time makes it routine. The user also learns in which soundscapes the hearing aid is useful, and in this way becomes habituated to being a hearing aid user.

As opposed to Learning 0, Learning I allows a revision of choice within a fixed system, i.e. this kind of learning takes place within a repeatable context, which makes new responses possible. A case in point is when a new hearing aid user spends time with other people and tries to figure out when the devices are helpful and when they are not. It could also include learning the different options when removing hearing aids in the evening. They may go directly into their box, or the user may decide it is time to order new batteries.

The question is how we recognize the repeatable context? To this end, Bateson introduces "context markers", which are signals or labels that allow a classification and differentiation of more than one context. These context markers can consist of the fact that we usually make preparations either to go out or receive people at home, and that we in this connection observe a certain routine which allows us to improvise and choose between new alternatives that again trigger a change in us and the way we approach the context.

3.2.2.3. Learning II

Learning level II corresponds to the situation of the professional staff guiding the new users through the adaptation process. It takes the learning process one step further than Learning I and includes learning about learning as a mostly unconscious phenomenon. It gives the individual the possibility to choose between alternatives and classify segments and contexts by way of context markers. It is characterized by a "corrective change in the set of alternatives from which choice is made," which includes

> "changes in the manner in which the stream of action and experience is segmented or punctuated into contexts together with changes in the use of context markers" (Bateson 1999:293).

Learning II represents the internalization of the ideas, notions, procedures, details and other imponderables of daily life with which we need to interact in a given lifeworld circle. Occurrences and the experience of them are stored as contexts and changes in context markers. These phenomena are largely unconscious and allow us to economize when we encounter something we need to address. Culture, knowledge, hierarchies and work procedures of a certain profession often appear to be self-evident once internalized.

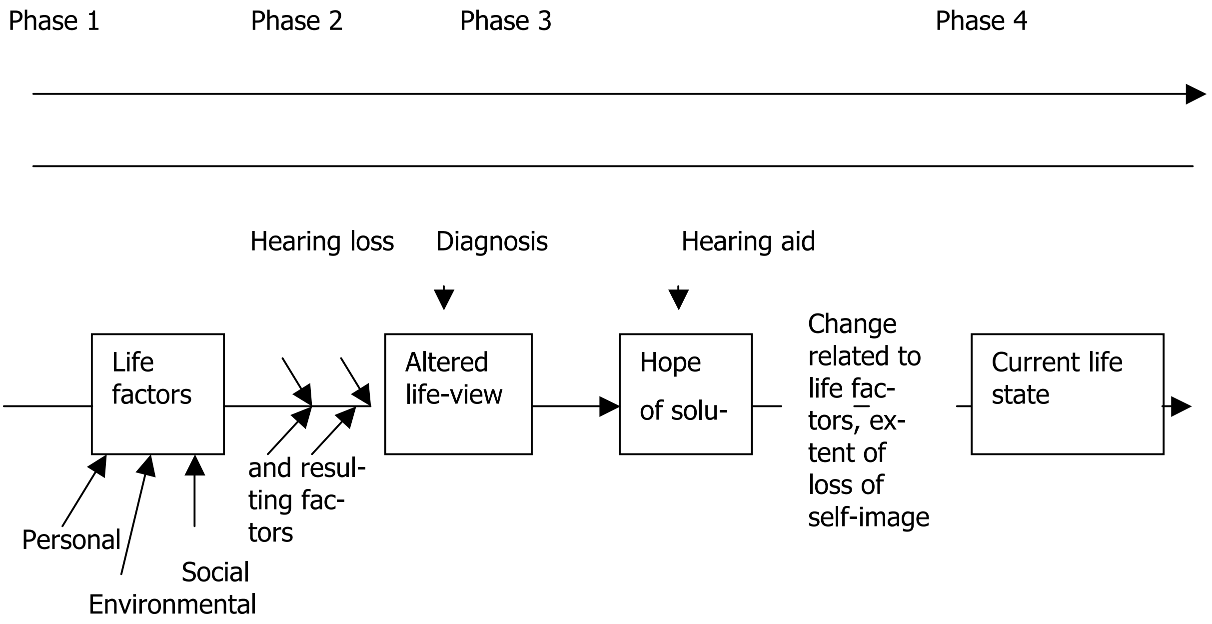
If we need to confirm or revise our ideas in these contexts, this is done within the given frameworks. To save time and energy when having to make a decision, we store some items of knowledge at a level where they can be reproduced without reflection. According to Bateson, we consider these items to be unchangeable even if the lifeworld circle alters. Such items could be the procedure of a hearing test or of handing out the hearing aids. Other items are less controllable and are stored where they in punctuated form can be retrieved for reflection and adaptation to specific occurrences. A case in point is certain types of hearing loss, e.g. noise damage, which require specific kinds of hearing aids.

We may be aware of what we are doing when learning an activity, but learning the process of problem-solving in Learning II is often an economization of the thought processes of Learning I. While Learning I is learning about something e.g. how to put on a hearing aid, Learning II is the process of learning to take items, procedures and hierarchies for granted. Having internalized these, we are likely to try to shape whatever follows according to the already undertaken punctuation. The process tends to confirm itself over and over again which makes it difficult for the persons involved to disregard what has been internalized. Consequently, an unconscious manipulation of the perception of the lifeworld will take place to meet expectations, which also hampers new learning. This does not mean that the individual involved is barred from replacing the premises in a certain case and thus considering a case from more than one viewpoint. Thinking in Learning II, however, is likely to be based on the concepts we have already internalised.

I would argue that many of the problems of hearing aid adaptation stem from the two different learning levels of new users and staff. Whereas the users approach the new situation with no previous knowledge, the technicians have often internalized the procedures as self-evident and forget to see the new user as a whole personality who has no experience of the repetitive work routines of hearing aid adaptation.

3.2.3. Lesley Jones: The stages of hearing loss

As opposed to the above outlined learning process by Gregory Bateson, Lesley Jones (1987) has specifically looked into hearing loss. She is a doctor of medicine as well as a social researcher whose main topics are deafness and sign language, disability and politics, ethnicity and health. As shown in the below model, also here, an interaction between external and internal factors is essential for the outcome of a process. According to Jones an acquired emergent hearing loss gradually leads to changed existential conditions in a number of fields in as much as the hearing loss leads to a process of change as to meaning, attitudes and relations. The driving force behind the change is the basic need of the individual to regain the degree of control that applies to normally hearing people. The following model (ibid.: 218) shows four essential stages the person may pass through. The model is to be seen in relation to stage of life and the meaning the individual ascribes to the hearing loss.



Phase 1 concerns the time before the subjective debut of the hearing loss, that is the time between birth and experienced debut. The phase represents the socialisation when the individual is formed through social and cultural influence; the phase can be seen as the reference frame that decides how the individual deals with the hearing loss. Phase 2 includes the time between the experienced hearing loss and the diagnosis. Many hearing impaired persons remain in phase 2 and their hearing loss is thus never diagnosed. The hearing loss makes it difficult to fulfil social norms, and it is in this phase that the person experiences a partial loss of control of the existence. Consequently, strategies are developed that can handle the difficulties a hearing loss entails. It is common to place the cause of poor hearing outside oneself by denying or hiding the hearing loss. In some cases these strategies are drawn into the possible following stages. It is typical that the person in question seeks help when the problems get too substantial.

Phase 3 represents the time between the acceptance of the problem and the beginning of the rehabilitation. The phase may be characterised by uncertainty and passivity and the person waits for the advice of the experts. There is a hope of alleviation. Phase 4 is the time after the rehabilitation. It includes a continued, lifelong process that may cover a wide range of strategies. In some cases the person learns, mostly through hearing aids and technical equipment to make the hearing loss a part of the identity, but the rehabilitation may also be discontinued.

Seeing hearing loss and a need for hearing aids as a recognizing process is in line with Gitte Engelund's (2006) research for her thesis "Time for Hearing" - recognising process for the individual. Engelund defines four stages in the process: the first is "attracting attention", when people with emergent hearing loss start to draw attention n to themselves because of communication disturbances. The next stage, "becoming suspicious", is characterized by increasing awareness of the individual affected by the hearing loss. The third stage is "sensing tribulation", when people recognize the consequences of hearing disturbances and have emotional and behavioural reactions. The fourth stage, "jeopardizing fundamental self", implicates that people have to seek help for their condition in order to preserve who they are. Engelund concludes that people with an acquired hearing loss should be treated as people in process rather than people in a state of being stigmatised, in denial or not motivated.

The definition of the various stages the potential hearing aid users pass through is in my interpretation adequate as headings for the obstructions the individuals meet in the process. But I find it difficult to use the stages as a practical tool in hearing aid adaptation. As Engelund herself writes, the different stages she has defined may be overruled because of differences in personality, because of relational differences or by incidental and random factors.

3.2.4. Synthesis and original approach

The way in which people acquire hearing aids and integrate them into their lives is the result of a complex web of personal characteristics and factors in the lifeworld. Acquiring and using hearing aids can thus be seen as a means to maintain or improve one's position within one or more lifeworld circles. My starting point when examining human interaction is that people have points of orientation, but these various points of orientation are not equally important in all the individual's lifeworlds circles. While it can be said that most people strive for recognition, it is not so that all people strive for recognition by all people. The data indicate that different persons focus on different social circles when constructing the priority of their points of orientation. The priority falls between the one extreme of collectivism, where any sound is of interest, and the other extreme of individualism, where it is of little importance to know what is going on in the soundscape. User priorities thus reflect various points on this individualism-collectivism scale, indicating the points of orientation (more individualistic/more collectivist) at which a hearing culture can maintain its flow (Hannerz 1992) and make society possible.

In order to develop categories to systematize and analyze the data, I have developed a theoretical instrument that helps me identify the meaning-creating elements that serve as motivation to exercise agency to counteract contingency in connection with the acquisition of hearing aids in a welfare state. In doing so, I have drawn on several theorists in the social sciences to be discussed below. The ideas of these theorists, however, have been modified and adapted to the situation of hearing aid users of the welfare state, who, like all clients, must navigate between a range of opportunities and limitations.

As regards points of orientation, these are categories that can be observed in the daily interaction with other people. At a theoretical level, however, the concept of the human orientation in a certain space is applied by the German cultural anthropologist Ina-Maria Greverus (1994). As concerns the basic needs of recognition, I have also drawn on Ina-Maria Greverus (1995), although the human need for recognition, recognizing and being recognized varies according to the contexts in which the individual communicates. Also Michael D. Jackson (2002) speaks of points of orientation when mentioning the basic human struggle for health, wealth, power, position, prestige, recognition, knowledge, dignity, happiness and love (Jackson 2002: 335).

Another of the anthropologists I have drawn upon is Ulf Hannerz (1992), who speaks of the cultural process that takes place in the interrelation between a set of public meaningful forms (ibid.: 4) and the human mind that contains the instruments for their interpretation in the sense that human beings can see, hear, smell, taste and feel the world. The interaction between the public forms and the human mind (ibid.: 5) are mutually interdependent and shape the outcome of a process. Based on individual experiences, the public meaningful forms have been perceived by the senses and thus passed through a culturally coded filter (Herzfeld 2001) forming the points of orientation and the characteristics of the individual human mind. In section 3.1.8, I examine Ulf Hannerz's conception of cultural complexity in more detail. However, the public meaningful forms of which he speaks are the external cultural items that can be perceived by the senses, and I thus see them as the totality of the material and immaterial world which human beings interpret and on which they act in order to lead a meaningful existence. In my adaptation of his theory, these public forms are thus the collective factors mentioned below. To make them an operational tool in connection with new hearing aid users and the welfare state, I concentrate on those items that are of direct importance to the adaptation process.

Similarly, the individual human mind in this conception is viewed through the individual characteristics, specified below, that are essential in a certain process.

Stefan Beck (1996) deals with the routine, everyday praxis that individuals develop in their interaction with technology, whereas I study the acquisition of a new and unaccustomed item that is integrated into everyday routines. Beck refers to the praxis of acting that takes place in a negotiable con-text that can be defined as a reference system of interaction partners. However, Beck's concept of the interaction between con-text (that in my application of his theory is the institutional and political frameworks, the actual technology of hearing aids, myths pertaining to hearing aids and the existential circumstances and social life of people who are hard of hearing) and the dimension of meaning that Beck defines as a co-text characterised by compound and complex social praxis, world views, meanings and values that may be interwoven, parallel or contradicting each other. Thus, Beck's model contains the elements of interaction between various forces in the development of praxis. As referred to later, in my application of an interaction model, the starting point is the direct interaction between collective and individual factors of the users when contingency interferes in the process. One might object that the model I have developed has little to do with Stefan Beck's model. All the same, he and the other theorists have formed a background for the concepts developed in the following.

Contingency

In the hearing aid adaptation process, stumbling blocks may occur, which I group under the label 'contingency'. In this respect I use contingency in a very concrete sense that deviates from the way it often is used by other theorists in the sociological field. For example Niklas Luhmann (1927-1999), the German sociologist who especially influenced social systems theory in which modern society is described as self-governing and autoreferential systems. Contingency in this respect conceptualize the different starting points and unanticipated actions in the interaction between different parties. According to Luhmann, the observation of the other will over time through trial and error lead to a creation of meaning, the so-called social system – if no such creation of meaning takes place, the social system will fail and cease to exist (Luhmann 1998).

My definition of contingency comes closer to the apparent simplicity of the definition that is attributed to Aristotele (quoted from Luhmann 1998), that goes "anything is contingent that is neither necessary nor impossible" which would cover the unanticipated occurrences that may happen in a process. Ideally, contingency should play no role in the adaptation process of hearing aids. Users should leave the hearing aid dispenser and have no further reason to return to have it adjusted. However, it is unlikely that technology, its users and experts will ever manage without contingency playing a role in as much as contingency reflects the fundamental unpredictability of the course of the human existence which makes the individual in relation to self and other experience an ongoing negotiation of worldview, reactions and starting points for future action (see also section 3.1.1. 'Experiences and expectations').

From the above definition, it is obvious that contingency also may have positive consequences. However, in relation to this study, I define contingency as unforeseeable negative incidents, defective or lacking technology, insufficient information, inadequate adaptation of the software, poor fit of ear mould/shell, mistakes and misunderstandings on behalf of the users as well as interaction problems with the lifeworld that may require additional visits to the dispenser. Contingency thus comprises the occurrences on which action has to be taken in order for the new users to integrate the hearing aids successfully into their daily lives. I would like to stress that contingency is *not* the physiological factors which are not always evident prior to the adaptation of the hearing aid. They may make it impossible to achieve a positive outcome of the adaptation process and they thus lie outside the realm of human interference.

Constant factors, collective factors and individual factors

As noted above, contingency may be the barrier in the individual's efforts to obtain a point of orientation. However, human beings are not without agency, and they choose different strategies to counteract contingency. Human agency is subject to and delimited by the factors that I define as *constant factors, collective factors* and *individual factors*. These factors interact, sometimes supporting, other times counteracting each other, and it is in this process that contingency may impede the adaptation process.

The constant factors consist of the here studied hearing impairment which cannot be healed as well as the hearing aid technology that does not replace normal hearing. It could be said that constant factors are non-negotiable, but at the same time, they may be strategically invoked by the users when constructing their perception of their hearing loss as well as hearing aid use.

The existence and impact of *the collective and individual factors* are largely culturally and socially constructed in the lifeworld circles that attract and promote the activation and mediation of the collective and individual factors. These factors are decisive for the strategies that the individual applies in the process of achieving a goal within a "cultural flow" (Hannerz 1992) of social interaction. The factors may change their impact and interrelate according to the context.

The collective factors are made up of the individual's lifeworld circles. On the one hand, they are the legally institutionalized system that society has set up in order to rehabilitate the individual and control the consequences of hearing loss. The system may in itself be advantageous or disadvantageous for its users, but in a welfare state, society is supposed to act in solidarity with its citizens through the allocation of financial resources through which premises, staff and technology are made available for the users. The intentions of society are to achieve the best possible outcome for the user, and with its set procedures, the health care systems should be characterized by predictability.

On the other hand, the collective factors also consist of those communication partners with whom the individual deals in everyday life. Their influence covers a wide range of intellectual, empathic and relational factors that emerge in the interaction between the other and the new hearing aid user. The other may take a caring attitude and thus support the hard of hearing person. Or the opposite may be the case if the other do not understand the degree of suffering or the possible contingency of the adapation process, which may lead to conflict in a relationship.

The individual factors are made up of those characteristics that can be mediated by the individual and used to negotiate the effect of contingency. They can thus be seen as meaning-creating elements that serve as motivation to exercise agency in order to improve a situation. They consist of faculties, worldview and self-understanding as well as health. The meaning-creating elements are explained in more detail in the introduction of chapter 4, the empirical findings of the study. To be able to achieve a point of orientation in a certain cultural setting, specific individual characteristics are important to create a desired outcome. Moreover, these characteristics are created in and by a cultural setting for which reason I find it difficult to draw a clear division line between the cultural and the psychological.

The effect of contingency

Analyzing the empirical material of the thesis, it is evident that contingency may play a decisive role when the various individual factors negatively support each other. A case in point is when low tolerance of bodily discomfort is linked to low social awareness and little focus on intellectual appearance, in which case the three elements together would counteract the habituation. Another constellation could be when the elements counterbalance each other, for example when somebody has a high bodily awareness, perhaps even a low social awareness, but at the same time holds a professional position that requires high intellectual performance which in this case may be decisive for counteracting contingency.

The individuals who become hearing aid users without any complications may harbour a high degree of such characteristics as tolerance of bodily discomfort, social awareness and awareness of intellectual appearance, which makes them highly motivated hearing aid users and will see them through any minor beginner's difficulties. But it may also be a matter of sheer luck that no contingency occurred in the process. It is difficult to establish how such a person would react if contingency is substantial. Consequently, it is difficult to split the respondents up without reference to contingency into users who take action to make their hearing aids work and those who do not.

Being prerequisites of the human existence, individual and collective factors mutually activate each other resulting in various actions. The effect of contingency, however, could be greatly reduced through human intervention - for example if the dispensers were allowed to pay more attention to the quality of the hearing aids, spend more time adjusting them and explaining the users what it takes to become a hearing aid user.

3.2.5. Conclusion of the second pillar of the theoretical framework

The second pillar of the theoretical framework looks into Arthur Kleinman's concept of administration of health care as a moral experience. The new hearing aid users start a process of adaption to a technology the outcome of which has serious implications for their future interaction with their lifeworld. The ever-increasing hunt for efficiency in the health care sector has also hit the rehabilitation of the hard of hearing who approach the learning process of becoming a hearing aid user with no previous experiences. In this respect, Gregory Bateson's theory of learning is relevant to explain the differences in approach between the new users and the dispensers.

The theory of meaning-creating elements explains the interaction between the individual and the dispensing systems which may operate smoothly in which case the users do not have to apply any strategies to counteract contingency. However, if contingency interferes in the process, a number of user characteristics will be required to make the acquisition a success.

3.3. Embodiment, the bodily perception through technology

In using the term embodiment in relation to hearing through the technology of a hearing aid, I define embodiment as bodily perceptions that flow into the construction of the self and the lifeworld. In this respect, the American postphenomenological philosopher, Don Ihde, is an influential theorist in the field of science and technology and has especially focussed on the relationship between human beings and technology in the interaction situation and how the individual relates to the world through technology. According to Ihde (2002:XI), we *are* our body, in the sense of our motile, perceptual, and emotive being-in-the-world. We can directly touch, see, hear and smell the world around us. Through technology as a mediator, we can to an increasing degree experience an extended world – be it through clothes or eyeglasses or electronic transmission. The clothes could be the gloves used as protection against to protect myself from the heat of an oven while allowing me to take hold of a hot object; the eyeglasses enable me to see a sign in the distance; and the telephone neutralizes distances and makes it possible to communicate globally without delay. In this connection, hearing aids are a powerful case in point, in as much as they are an extension of the body and if they function, they enable the participation in lifeworld circles.

When I first started this study, I found it difficult to understand the seeming and frequently met aversion against a technology like hearing aids, which could actually help people with a hearing problem. I am a technology freak, and if necessary, I would act like one of my informants who is 84 years old, has an artificial hip, uses hearing aids and has had cataract surgery and thus an artificial lens. She teaches a German class five days a week, visits museums and goes to the theatre. What would her life be like if she had turned down the offer of modern technology? I thus see the machine as an extension of me in line with the American historian of science Donna J. Haraway, who originally earned her degree in zoology and philosophy. She decisively influenced the debate on Women's Studies and Social Studies of Science and is moreover a prominent thinker about the love/hate relationship between human beings and technology. I quote

> "Intense pleasure in skill, machine skill, ceases to be a sin, but an aspect of embodiment. The machine is not an *it* to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment" (Haraway 1991b:180).

Another theorist who has occupied himself with the interaction of human beings and technology is the German Stefan Beck, who has written on topics within ethnology and anthropology, especially the anthropology of knowledge, perspectives of comparative culture as well as media and culture. Beck defines everyday artefacts as a stabilizing element of social life. They are not culture as such, but they are factors of social and cultural contingency management. Individually and collectively, they are the enabling condition of everyday life (cf. Beck 1996: 296-297). When acquiring new technology, we enter into a relationship that we have a varying capacity to change. Could we even say that there is a varying degree of symmetry (Latour 2002) in the sense of equality between us and the artefacts we acquire? I define the question of symmetry as the user's possibility to interact with an artefact, seen in relation to its intended functionality to meet the user's needs – or the needs of those who have appointed us to use it. An artefact like eyeglasses, for example: we may be able to adjust the frame, but the eyeglasses themselves cannot be changed once we have collected them from the optician. There is a certain kind of practicality connected with my perception of symmetry between me and my eyeglasses. The practicality lies in the fact that in this day and age, we are not meant to interact with the technique of eyeglasses. They fulfil my idea of what eyeglasses are and they allow me to see the world. The relationship works. The symmetry of user and hearing aids differs from that of eyeglasses and user. Hearing aids can only to a very limited degree be an object of status, and only if they are the newest technology. The process of personal recognition of the physical deficit and the financial, physiological and technical procedures leading to their acquisition are far more complicated than those of eyeglasses. Once they are collected from the dispenser the real work often begins. A reconstruction of what is perceived to be a natural soundscape has to be made.

3.3.1. Hearing aids – the organization of physical and social difference

Margaret Lock and Nancy Scheper-Hughes (1987: 27) ask whether our humanity is being compromised in the process of being incorporated into the machine of modern technology, which could explain why so many hard of hearing people reject the use of hearing aids and it could be argued that the hearing aid challenges the integrity of the body. Moreover, the empirical material of this study shows that technology does not comprise neutral objects around which our lives evolve. They are culturally constructed in that they are seen as reflections of their users. Alison Stratton (1999) says that hearing aids

> "are consequential, marked and remarkable, serving as artifacts of the various ways in which humans have organized physical and social difference through culture and technology".

Most people have limits to socially accepted technology. Ihde (2002) looks into this theme in respect to people who had expressed the desire to be permanently wired into their computers, which to him was incredulous. The reason for this desire was based on physical or social impairment, but the fact that most people would find it necessary to explain the desire to get wired may also explain why hearing aids are not the obvious answer in the negotiation for a better position in the social hierarchies. Hearing aids, seen from an existential viewpoint, are an embodied technology with positive and negative aspects. On the one hand, they represent an extension of the hearing sense – but on the other hand, it is hearing through instrumentation. They are linked to a desire for transparency in order to escape the limitations of material technology. For the hard of hearing person, there is consequently an inherent contradiction in the wish to hear. The user wants what the technology can give, but not the image that the technologically extended body implies. "There is a fundamental ambivalence toward the very human creation of our own earthly tools" (Ihde 2002: 14). People do not want to display what they consider a physical or even cognitive deficit.

3.3.2. Human and material agency

The human being as a new hearing aid user is the focal point of this study. However, the use of hearing aids leads to a temporal decentring of the human subject when technology to some degree has the capacity to mediate what and how its user hears. In that respect, I follow the British sociologist and historian of science, Andrew Pickering (1993), who has made a substantial impact on the conceptualization of the interaction between human beings and technology. According to Pickering (ibid.), it is possible at a semiotic level, to speak of material agency, which emerges temporally in a practice that varies from one device to the next depending on the quality of the device and its adjustment, and depending on the individual's perception of sound. The material and human agencies of which I speak here may have the same consequences. They both delimit our field of action, while they extend our possibilities to act:

> "The trajectories of emergence of human and material agency are constitutively en--meshed in practice by means of a dialectic of resistance and accommodation" (ibid.: 567).

Applied to this study, it means that persons have agency as regards hearing aids. Human beings develop, market, sell, programme, adjust, use and/or reject hearing aids. The material agency of a modern hearing aid is expressed in the way it amplifies and suppresses sound. It may be tuned to hear music, speech, suppress background noise, amplify or reduce sounds coming from a certain direction and produce unwanted noises such as whistling or buzzing. It may be tuned to the user's normal soundscape in as much as the latest generation of hearing aids can be set to "remember" the user's previous settings. Some users may see this as an advantage, whereas others express that they feel objectified by the device. The latter group may decide to regain agency of their life through rejecting the use of hearing aids or enter a dialogue with their hearing aid which to a certain extent is technologically possible, e.g. through a remote control device. When the use of hearing aids is successful, it could be said that material and human agencies are mutually and emergently productive of one another (cf. ibid.).

There are situations when users of hearing aids experience their devices as imbued with agency. It is e.g. not a matter of course that the users can control the volume of their hearing aids. They may have different programmes for different soundscapes, but then they are mostly preset to a certain output. You could thus say that the designers of hearing aids have endowed them with agency in as much as they attempt to define our soundscape and construct the output of our hearing aids accordingly. Etymologically, the word agency belongs in a human context and is linked to the intentionality of a human subject. The American Gary Lee Downey, who trained as a mechanical engineer and cultural anthropologist and who has been instrumental in developing the interdisciplinary approach of Science and Technology Studies, sees the issue this way:

> "Having agency has generally meant being able to exercise will in a conscious, deliberate, choosing manner. Without subjective consciousness, machines could make no choices, exercise no will, and therefore, have no agency, by definition" (Downey 1998: 238).

And they cannot. But the experience remains that users rarely have the possibility of mediating what they hear through their hearing aids. The users have to rely on the expertise of the person who adjusted the technology, and they will have to become accustomed to what they perceive. Thus the consequences of human and material agency may be equally important, but – as Pickering (1993) puts it – the sticking point is intentionality. It is human intentionality acting through human agency that has provided technology with its functionality.

The anthropologist Michael D. Jackson is strongly influenced by existential-phenomenological thought and has made extensive and global research and published widely on everyday issues that characterise human life in every society. Like Downey, he addresses intentionality in as much as he accepts to a certain degree the existence of material agency, but does not accept the abolishment of the subject-object dichotomy, which the French philosopher and anthropologist Bruno Latour purports. Jackson's starting point is the human being and her existence in the world:

> "I take it as axiomatic that all human beings need to have a hand in choosing their lives, and to be recognized as having an active part to play in the shaping of their social worlds. As a corollary, I approach the meaning of what people say and do in terms of the degree to which they accomplish a balance between controlling their own fate, collective or otherwise, and accepting that which cannot be decided by human will or subjected to human designs. To define meanings without reference to this intersubjective dynamic is, in my view, practically meaningless" (Jackson 2002: 333).

Jackson's quote is from an article examining the ways in which our experiences of, and interactions with, new technologies are grounded in the strategies and metaphors of reciprocity that govern everyday social life. He alleges an inevitable dissolution of the boundaries between nature and culture, humans and machines, even if he from an objective viewpoint sees a person and a machine as manifestly different entities. As already stated above, intentionality cannot be ascribed to the hearing aid as an actor, but for the user of the hearing aid, the effect may appear the same. The way we experience and interact with new technologies is based on the strategies and metaphors of reciprocity that govern everyday social life (Jackson 2002). My empirical material shows that not least the initial human interaction with hearing aids is linked to a varying degree of the basic human pursuit of coming to terms with "the new, the strange and the other". The individual not only includes the other in notions of subjectivity; the conception of otherness also reaches into the extra-human sphere making artefacts, words and concepts factors that require a certain form of interaction. The outcome of this interaction is not always foreseeable and the extra-human sphere consequently seems to have its own will and consciousness.

Another point Jackson makes is that Being and intersubjective relations are characterized by ambiguity and the struggle for such things as health, wealth, power, position, prestige, recognition, knowledge, dignity, happiness and love. Access to and control of such 'symbolic goods' are obtained through interaction with the other, who is a "source of fulfilment, of Being and non-Being" (Jackson 2002: 335). Depending on the situation, our existence may be sustained or impaired by our relations with both the human and the extra human worlds including persons, animals, institutions and artefacts. For most human beings it is at times a source of concern that the significant other is not an extension of ourselves, and that the distant other observes a different set of rules than those of our own.

The unpredictable relationship between self and other is transferred to our ambivalent attitude toward technology. In the case of hearing aids, the users may see them as an indispensable extension of themselves and as a device to fulfil their needs. However, in other situations or to other users, they are alienating, subjugating devices that question notions of orientation and identity.

The hearing aids are thus able to evoke emotions of frustration or satisfaction just like any human relationship. When the relationship 'works', the hearing aid is experienced as an extension of the self. In other cases, the relationship remains an antagonistic one in which case the users develop counter-strategies "whereby they seek to recover their own lost or compromised Being" (ibid.: 338).

The counter-strategies can be applied in the interaction with hearing aids. If the technology, on which we are dependent, does not perform in the way we expect, we may get frustrated and feel reduced to the status of an object. In order to regain a sense of control over the situation, we may curse the device or put it into a drawer. This will of course not mend our relationship with the device, but it does allow us to regain our sense of control and our status of a subject.

3.3.3. Bryan Pfaffenberger's technological drama

Another aspect of seeing technology as a factor taking influence on the existence of the individual is the American anthropologist Bryan Pfaffenberger who decisively has influenced the debate in an interdisciplinary field of science, technology and society not least through his Technological Drama (1992). He sees the application of technology as a social system based on a historical discourse in which technology is developed, produced, acquired and adapted. One of these processes, "the technological regularization", he defines as follows

> "a design constituency creates, appropriates, or modifies a technological artefact, activity, or system that is capable of signifying and coercively implementing a constructed vision of a stratified society, one in which power, wealth, and prestige is differentially allocated. This social vision arises reciprocally and recursively in interaction with the technological design process. These production processes or artefacts or both are projected into a spatially defined, discursively regulated social context, which is crucial to actualizing the technology's constructed cultural and political aims" (ibid.: 291).

In Pfaffenberger's observations there is an underlying assumption that the production of technology shifts the balance of power negatively for those using it. Denmark – like any other society – is a stratified society, but at the same time the aim of the Danish welfare state has been equality for all citizens with regard to health care and education. It would consequently be beside the point to proclaim hearing aids as a means to uphold a "system that is capable of signifying and coercively implementing a constructed vision of a stratified society, one in which power, wealth, and prestige is differentially allocated" (ibid.) inasmuch as hearing aids are produced to prevent marginalization of individuals. In this respect, hearing aids are thus an empowerment of the users. That does not mean, however, that industry, i.e. the design constituency, does not participate in the social control inherent in the prescription of hearing aids. By social control I mean the processes and structures through which a society or social group attempts to make its members follow its norms. In this case the norm would be the capability to hear. Moreover, the industry participates in the construction and deconstruction of myths in discursive interaction through the media. Hearing aids are thus projected in a discursively, regulated social and cultural context that is based on equality and a low tolerance towards people who are different.

All the same, I will categorize hearing aids as in their nature being convivial tools (ibid.: 305). Pfaffenberger's definition of conviviality is a bit ambiguous when quoting Illich

(1973) for saying that scientific and technological innovations at first produce great social benefits, but that their success produces adverse affordance. Thus modern medicine prolongs the lives of medically dependent people thereby consuming huge amounts of social wealth. I do not seriously think that Pfaffenberger is of the opinion that medically dependent people should pay their own medicine or not be allowed to use it, but he uses the example as a case in point for the lack of conviviality in most inventions. He concludes that most tools are "centralized, hierarchial, differentially distributed, administered by professional elites, and restricted to the purposes of bureaucracy" (Pfaffenberger 1992: 305). At the same time he defines convivial tools as "decentralized, egalitarian, universally distributed, controlled by users, and open to the purposes of the individual" (ibid.). My question is whether they can be both at the same time - which may sound as an absurdity. My empirical material will show that some of the respondents of this study will support the latter statement in as much as they perceive the Danish hearing health care system as egalitarian, open to the purposes of the users and that they themselves have – perhaps not total control – but some influence on the system that distributes hearing aids. At the same time, there are other users who perceive the system as administered by staff unable to meet the needs of the users.

3.3.4. Donna Haraway's concept of cyborgs

Bruno Latour (2000), Michael Jackson (2002), Andrew Pickering (1993), Donna Haraway (1991a), and Don Ihde (2002) all agree that human beings and technology are interwoven. But Haraway and Latour take their argument further, in that they advocate the idea of a fusion of the human and non-human worlds.

Looking at Haraway (1991a) and her proclamation that we are cyborgs, thoughts of Schwarzenegger's science fiction movie robot comes to mind. The fusion of technology and the human body evokes nightmares mingled with fascination about the integrity of the self. In Haraway's version, we are products of science and technology, in as much as our daily lives are held together by machines that we either operate directly or machines that are involved in what we eat or wear or what kind of technology such as eyeglasses, hearing aids or pacemakers we need to stay in touch with our lifeworlds. To find a dividing line between the natural and artificial is of no interest to Haraway. "Our machines are disturbingly lively, and we ourselves frighteningly inert" (ibid.: 152). It is not that Haraway does not see a threat in the cyborg world, which could impose a grid of control on the planet; but seen from another perspective, a cyborg world could be about lived social and bodily realities, which acknowledge a relationship with animals and machines living partial identities and with contradictory standpoints.

Haraway questions notions of "natural" phenomena – for example: For generations women were given the roles of housewifes and mothers and if this is natural, it is also unchangeable. Thus, in Haraway's definition, the cyborg is not the isolated individual living her life in front of a computer, rather, anything goes with the right technology. "Technology is not neutral. We're inside of what we make, and it's inside of us. We're living in a world of connections and it matters which ones get made and unmade" …

> "Human beings are always already immersed in the world, in producing what it means to be human in relationships with each other and with objects" (Kunzro 1997).

In relation to hearing aids, I find Haraway's position highly relevant when it comes to staying in touch with the lifeworld. But the identification with technology we see in Haraway, is not a position that speaks out of my empirical material. In my interpretation, however, those who have a successful relationship with their hearing aids have nearly all entered into a dialogue with their devices.

3.3.5. Bruno Latour's concept of "Research as collective experimentation"

The French sociologist of science and anthropologist Bruno Latour has worked extensively and published widely in the field of Science and Technology studies. He has taken an interest in the destruction of the environment, and in an attempt to overcome its consequences, it has been his aim to model a new understanding of the interaction between humans and non-humans. To this end he and other theorists developed the actor-network theory that is known for its ascription of agency to nonhumans in the sense that it maps relations between elements of the material and the immaterial world that make up a network. The following discussion of Latour's work is mainly based on his book: "Pandora's Hope" (2000). Here, he opposes the idea of science as

> "the ideal of the transportation of information without discussion or deformation … it is *not* a description of what scientists do" (Latour 2000: 258).

Moreover, research

> "is uncertain; open-ended; immersed in many lowly problems of money, instruments, and knowhow … Research is best seen as a collective experimentation about what humans and nonhumans together are able to swallow or to withstand" (ibid.: 20).

So much for the objective scientific truth and a clear separation of the sciences and everyday human practice. In other words, we have to accept that the reason why hearing aids are designed the way they are, and how they are adapted are not only the result of isolated, purified knowledge of scientific truth. They are also the result of research traditions and preconceived assumptions about what hearing aids should look like and be able to achieve for their users. It is important to note that Bruno Latour sets the agenda for a different understanding of the relationship between human beings and technology. Semiotically, there are thus parallels between Haraway's cyborgs and Latour's hybrids. But the idea that the machine is us in the same way as we are our bodies is not the same as Latour's interchangeability of humans and nonhumans. Thus the following quote of Latour's (2000: 192) is symptomatic for his thinking:

> "A body corporate is what we and our artefacts have become. We are an object-institution. … There is no sense in which humans may be said to exist as humans without entering into commerce with what authorizes and enables them to exist (that is, to act). … Purposeful action and intentionality may not be properties of objects, but they are not properties of humans either. They are properties of institutions, of apparatuses, of what Foucault called dispositifs. Only corporate bodies are able to absorb the proliferation of mediators, to regulate their expression, to redistribute skills."

Seen from the perspective of Bruno Latour, purposeful action and intentionality are thus not properties of human beings but properties of a unity of human beings, the institutions and technology with which they interact which places the individual in a position without agency to negotiate an individual outcome of process. I would like to compare Latour's quote to Jackson's

> "As a corollary, I approach the meaning of what people say and do in terms of the degree to which they accomplish a balance between controlling their own fate, collective or otherwise, and accepting that which cannot be decided by human will or subjected to human designs" (Jackson 2002:333).

Michael D. Jackson's starting point is the individual human being who has to navigate in her lifeworld in order to achieve the best possible conditions and must accept that which does not succeed. Considering the adaptation period of the new hearing aid users in this study, I find Michael Jackson's starting point more relevant than Bruno Latour's. It is true that some of the users fell victims to negative contingency, but none the less they displayed purposeful action and intentionality, in as much as they individually decided on the usage of their hearing aids. Even though I find that Bruno Latour does not render his concept with respect to individual agency probable, I still find that he presents highly interesting aspects with regard to the interaction of human beings and technology, which I discuss in the following.

3.3.4.1. Corporate bodies

It is not the focal point of this study to look into research in connection with the production of hearing aids, and consequently I only consider this aspect when it is of consequence for the users. Latour is, however, highly relevant for this study when it comes to looking into the relationship between technology and user. In this respect, Latour defines the world as made up of corporate bodies consisting of humans and non-humans. Taken separately, neither human beings, technology nor nature have ever been only factual or discursive. Rather, they are actors that operate in networks alongside financial resources and written materials such as instruction manuals, scientific texts and legal documents.

For heuristic reasons, these networks disregard the traditional distinction between human beings and artefacts. The relationship between the different actors is based on symmetry, which reflects the increasingly blurred boundaries between human beings and technology.

The assumption of symmetry abandons the object-subject dichotomy (Jackson 2002) because it prevents the understanding of collectives which Latour defines as symmetrical associations of humans and non-humans.

> "Symmetry is a series of competences and of properties that agents are able to swap and keep constant by overlapping with one another through transformations" (Latour 2000:182).

As I understand Latour, the symmetry between a user (agent 1) and her hearing aid (agent 2) would be that the user is enabled to hear and the hearing aid is chosen, turned on, adjusted according to the needs of the user. Their swapping of properties and competences is kept constant through a transformation, which is the process agent 1 and agent 2 go through to form a composite whole. An expression of this is when the respondents of the study say that they perceive the world as quiet without their hearing aids or experience a high degree of annoyance or even panic when they realize they have forgotten to put their hearing aids on or the battery runs out.

3.3.4.2. Interference

Latour folds humans, non-humans and time into one another in a process of technical mediation and lists different ways this can happen. Of these interference, composition and the folding of time and space are discussed here. Applied to hearing aids and their users, this means that interference (cf. ibid.: 178-180) is experienced by a person in her daily activities, in this case a hearing loss. To pursue her goals, she attempts to regain her status as a hearing person, and she enlists another agent, i.e. she acquires a hearing aid. She does not acquire *any* hearing aid, but one that is moulded to fit the shape of her ear, and it is tuned to fit her hearing loss. This means that the hearing aid is modified to fit only her - just as she is a different person with a hearing aid. It is carried around in the world, it is "on", it is adjusted to a certain hearing loss – it enters a relationship with its user. The symmetry, according to Latour, lies in the fact that user as well as hearing aid are transformed in the process while their properties and competences remain constant.

I can follow Latour this far. However, when analyzing the empirical data of this study, I find the idea of symmetry and the subject-object dichotomy equally important for explaining the factors involved in becoming a hearing aid user. The symmetry as explained above applies. But the respondents tend to enter a relationship with their hearing aids that goes more in the direction of a swapping of a subject-object role (Jackson 2002) in the sense of a relationship that works or does not work. The respondents may see their hearing aids as a prolongation of themselves. It is possible to make models of the interpenetration of user and technology. However, following Jackson and Pickering (1993), I find it meaningless to remove intentionality, accountability and responsibility from the sphere of human beings and place it within a corporate body made up of humans and non-humans. Even if a beep of a hearing aid may trigger the user to change the battery, it is still the user who has to take action to change it. I am still the one who is taken to court if I do not observe my financial obligations in connection with my hearing aids. I can take the hearing aid dispenser to court if he has violated the sales act – but not the hearing aids. It is I and other humans that ascribe various meanings to hearing aids making them emblems of e.g. high-tech, impairment or old age. Accepting that the non-human world has lost its material and objective character (cf. Latour 2000: 202) disregards intentionality, accountability and responsibility as factors that preserve humanity.

3.3.4.3. Composition

The second meaning of technical mediation is the *composition.* By this Latour (ibid.: 181) wants us to respect the mediating role of all the actors that are mobilised in a series of actions. Here again, Latour speaks of symmetry. Agent 1, in this case the hard of hearing person, is enabled by agent 2, the hearing aid, to achieve her goal. I can follow Latour when he claims that action (in this case hearing) "is not the property of humans *but of an association of actants*" (actants are humans as well as non-humans), a composite whole. The goal of the actors making up the composite whole may include several subprogrammes that stipulate the possible range of actions within the larger network of actors. Applied to hearing aids, the obvious range of action is to allow people to hear better, but the owner can decide to use the device in all her waking hours – or she can also use it in selected circles, e.g. in professional circles which make the hearing aid a means to earn a living, in political circles to influence the lifeworld and in purely social circles to remain part of social networks. This point is clearly illustrated in the empirical part of this thesis. Another subprogramme could be the meanings ascribed to hearing aids. They can act as emblems of age or disability, but they can also act as means that prevent people from appearing slow and ignorant.

3.3.4.4. The folding of time and space

The folding of time and space is the third meaning of technical mediation: The problem is the measuring of the mediating role of techniques that are connected with the seamless application of a hearing aid. Latour defines this as the blackbox in which the different actants will present themselves as a unity. Only at the moment when one of the actors experiences a difficulty do the details of their composite whole become of interest. It is necessary to unfold the space and time – i.e. it is necessary to separate device and user to establish the origin of the problem. Possibly the hearing aid must be taken apart and the history of earlier translations from one stage to the next towards the blackbox must be traced. When the problem is fixed, they may once again become a unity into which time and space is folded.

Another factor is involved here. Some modern hearing aids can be programmed to store the sound levels and settings of the soundscapes in which they have previously been used. Through setting up various programmes, each aimed at coping with a specific soundscape, the device is able to set itself to this environment without the interference of the user. Again time and space are folded into the composite whole of user and device. However, some users object to being overruled by their hearing aid. They get stressed and frustrated when their hearing aids change between different programmes. They prefer to keep the initiative in their own hands. As one informant said:

> "The hearing aid warns me through beeps that it is changing its programme. But when I stand beside my running tractor, I can't hear the beeps, I don't know where I am, I only know that what I hear, is not what I want to hear. I consequently need a remote control that easily allows me to set the device where I want it to be." (Experienced user when I presented a paper on 6 Nov 2005 at Castbjerggård).

3.3.6. Conclusion of the third pillar of the theoretical framework

The third pillar looks into the interaction between new hearing aid users and technology. In connection with a hearing loss and its remedy, a hearing aid, a practice arises out of the interaction between user and technology. Through technology as a mediator, we can to an increasing degree experience an extended world – and in this connection hearing aids are a powerful case in point, in as much as they are an extension of our bodies and if they function, they enable the individual to be part of her lifeworld circles. The pillar thus discusses various approaches of anthropology and science and technology studies towards the interaction between the individual human being and technology.

4. EMPIRICAL FINDINGS

Introduction

In this chapter, I would like to present the data collected in connection with the study of new hearing aid users. The three pillars reflected in Chapter Three, the theoretical chapter, are also found here, but the divisions between the chapters are more blurred. From this three pillar perspective, we can focus on (1) the interaction between the users and their lifeworld, (2) between the users and the hearing aid dispensers and (3) between the users and the technology. However, there is not only an interaction between the users and three pillars; there is also more indirect interaction between the lifeworld, the technology and the dispensers. The data indicate that a successful hearing aid adaptation also may depend on the empathy, understanding and skill of friends and family, a work place and the dispensers and how these groups relate to the technology. Hence, in some cases, it is persons in the user's lifeworld who have encouraged him or her to obtain a hearing aid. In the post-acquisition phase as well, it is essential for those in the user's lifeworld to know something about the functionality of the hearing aid, and what it can actually do for the users. They also need to know that there may be acoustic environments where a hearing aid is more of a nuisance than a help, and the maintenance of the device may require the assistance of significant others. Consequently, it is in effect impossible to focus on one pillar without considering the others.

The meaning-creating elements

In the theoretical section, I outline a theory to systematize and analyze my data. To this end, I have developed a theoretical instrument that helped me identify the meaning-creating elements that serve as motivation to exercise agency to counteract contingency in connection with the acquisition of hearing aids in a welfare state. I would like to stress that contingency is *not* the physiological factors which are not always evident prior to the adaptation of the hearing aid. They may make it impossible to achieve a positive outcome of the adaptation process and they thus lie outside the realm of human interference.

The data reveal a complex web of points of orientation and user characteristics that lead people to acquire hearing aids and to take the necessary steps to integrate them into their daily lives. The acquisition and subsequent adjustment can thus be seen as a means of maintaining or improving one's position within one or more lifeworld circles.

When examining human interaction, it is essential to look at the individual's points of orientation, and at the same time to realize that these are not equally important in all lifeworld circles – in other words, most people strive for recognition, but not all people strive for recognition by all people. It is a common issue that different persons focus on different lifeworld circles when making priorities about their points of orientation. The priorities fall between the endpoints of collectivism, where any sound is of interest, and individualism, where it is of little importance to know what is going on in the soundscape. The individual's negotiation between various degrees of individualism and collectivism signifies the points of orientation at which a hearing culture can keep its flow (Hannerz 1992) in motion and make society possible.

Seen as detached from physiological features, the choice of not hearing versus hearing may revolve around whether there is a real need to hear, a desire for peace and quiet, lack of desire or inability to concentrate on a given topic, and/or giving higher priority to the needs of the self as opposed to those of others. Connected to the latter point is the individual's opposition to yield to the social control that requires the hard of hearing to re-establish normality and hear.

When the individual singles out lifeworld circles on which they focus when constructing the meaning of hearing, I have found that the circles on which the respondents choose to focus may not be identical with the circles which have been prioritized by their significant others. Moreover, the points of orientation may change as people pass from one stage of life to the next. Consequently, a new job, retirement or marriage may imply a shift of focus to other lifeworld circles. These processes interact with the points of orientation, which, of course, do not differ from those of normal hearing people. However, hearing impairment makes the points of orientation more difficult to achieve, whereas hearing aids can be seen as a means to obtain these immaterial and material values. The following examples used to illustrate the points were derived from issues mentioned by the respondents.

Health: Not only being healthy, but also looking healthy and attractive in the eyes of the self and the other.

Economic security can partly be seen as a means of securing the existence in the present, partly as a means of ensuring the future. In this respect, hard of hearing people are often at a disadvantage when it comes to holding a job.

Recognition: Everybody wants to be recognized in their validity claims and also to be able to recognize and assess the validity claims of others.

Autonomy: Everybody needs to have a degree of independence in being able to exercise and maintain influence over their social environment.

Belonging: The individual's group membership could be questioned if the hearing-impaired person is unable to follow along the traditional communication of the group.

Dignity: Users might feel that their dignity was threatened if their hearing aids whistle or if they must manipulate them in public.

Love and friendship: A hearing aid might affect an existing relationship, or even prevent a future relationship from developing normally. The acquisition of the hearing aid can be seen as a tool for conflict management in an existing relationship.

Insight concerns the knowledge, ideas, information, narratives and rumours that are spread through oral communication.

Contingency

As already noted, the above points of orientation were present to different degrees in the data the respondents presented to me. The achievement of the points of orientation was subject to the interaction process with the lifeworld. Looking specifically at the occurrences in the adaptation process of the hearing aids that may be stumbling blocks, I have defined these as contingency. Ideally, contingency should play no role in the process. The users should leave the dispenser and have no reason to return to have the hearing aids adjusted. However, it is rather unlikely that technology, its users and experts will ever manage without the fourth player in the adaptation, i.e. contingency which can be defined as the fundamental unpredictability of the course of the human existence which makes the individual in relation to self and other experience an ongoing negotiation of worldview, reactions and starting points for future action (please also see section 3.1.1. 'Experiences and expectations, definitions').

In relation to this study, I define contingency as unforeseeable negative incidents, defective or inadequate technology, insufficient information, inadequate adaptation of the software, poor fit of ear mould/shell, mistakes and misunderstandings by the users and interaction problems with the lifeworld that may require additional visits to the dispenser. Contingency thus comprises the occurrences on which action has to be taken in order for the new users to successfully integrate the hearing aids into their daily life.

Constant factors, collective factors and individual factors

Contingency may be the stumbling block that prevents the individual from obtaining a point of orientation, however, human beings have agency, and they can thus employ different strategies to counteract contingency. Human agency is subject to and delimited by three types of factors that I explain in more detail in chapter 3, 3.2.4. Theory of meaning-creating elements. In short they are *the constant factors* that are those that cannot be changed by human intervention*, the collective factors* are made up of the interaction partners of the individual, and the *individual factors* are specific individual characteristics. These three types of factors as well as the individual characteristics interact and mutually support or counteract each other, and it is through this process that contingency may have a negative effect on the adaptation process.

Elements of the individual factors

Faculties

An essential element of the individual factors is faculties, which includes intelligence. It could be argued that intelligence is not negotiable, but it may be used differently in different lifeworld circles and have a varying impact on the outcome of different situations.

Worldview and self-understanding

Worldview and self-understanding contain essential elements of the sense-making process that make people act in a certain way (Hannerz 1992). Among these elements, *social awareness* is perhaps the most essential concept. Those respondents who have a high degree of social awareness feel a need to be included in social contexts in which a flow (Hannerz 1992) of information is accessible to them. Examples of a pronounced social awareness are when a respondent says he will put on a hearing aid for the sake of his partner or because he wants to hear everything that is going on. A high degree of social awareness is likely to help overcome contingency.

Our attitude towards others and how we see ourselves in relation to others will influence how we stage our appearance when interacting with others. However, for the hard of hearing person, there is an inherent contradiction in the wish to hear. The user wants the advantages of the technology but not the image implied by the technologically mediated body (Ihde 2002: 14). People do not want to display what they consider a physical or even cognitive deficit. Alison Stratton (1999) argues that hearing aids serve as artifacts of the various ways in which humans have organized physical and social difference through culture and technology. One element that emerged from the data was thus the *awareness of bodily appearance*. As listed under points of orientation, the respondents' desire to appear healthy, attractive and/or young, but when the invisible hearing loss becomes manifest through the hearing aid, making the physical deficit visible to others, some respondents fear that they appear as less desirable interaction partners. This point applies not only to physical attractiveness but also the fear that they may be deemed intellectually deficient with a hearing aid. Stated in terms of Robert F. Murphy (1990), there exists an assumed spreading of one impairment to other faculties. Consequently, a high degree of awareness of bodily appearance can be a barrier in the successful process of becoming a hearing aid user, especially if contingencies arise.

Technological skill (Haraway 1991a) concerns how the individual user situates himself in relation to technology. For some users, the above-mentioned problems of the technologically mediated body will be given less priority than an interest in the technology of hearing aids. Few of the users took a great interest in the technology behind hearing aids, and some displayed their interest through testing different soundscapes in order to see where the hearing aids are helpful. If the respondent's *technological skill* is pronounced and he focuses on technological solutions as such, a substantial effort may be made to overcome contingency.

Connected to worldview and self-understanding is also an awareness of *intellectual appearance*. All respondents ascribe meaning to how they appear intellectually – it is a major factor of the motivation to acquire hearing aids. For some, it is an issue in most social and professional contexts. For others, it is only of importance when they find that their self-understanding in a certain role is questioned if they do not respond within the norms of a tradition. Thus, a high awareness of intellectual appearance is a major element in the decision to become a hearing aid user.

Health

Health is also a key point of orientation. Of interest here is how the individual relates to health. It is not that health as such is a personal responsibility, but the individual may in some cases be able to take preventive action when it comes to lifestyle diseases such as type 2 diabetes or noise damages leading to hearing impairment. Another aspect of health strategies are those mentioned by Gisela Welz in *Gesunde Ansichten* (Healthy Attitudes) concerning the increased focus of health insurance companies, public health care and the patients themselves taking influence on the individual negotiation of the meaning of health, impairment and disease.

How the users relate to their hearing impairment plays a role for the strategies they apply in order solve the problems related to contingency. The respondents of this study are at various points between *acceptance and acknowledgement* of their hearing loss. By *acceptance*, I mean that the respondent has accepted the hearing loss and possibly a need to do something about it but hearing may not given a high priority. In combination with that, is likely that the potential user remains focused on the negative ascription to the device with regard to loss of attraction and reduced intellectual performance. When *acknowledgement* has taken place, the hearing loss has a factual meaning and the hearing aid is seen as a restoration of the capability to communicate freely.

The respondents often fluctuated between acceptance and acknowledgement. Perhaps they had accepted they had a hearing loss, but they would still claim that the reason for not hearing was other people's mumbling, thus placing the responsibility outside themselves. At the same time, they might be ashamed of being hearing aid users. Lack of acknowledgement of the hearing loss and a high degree of contingency are likely to counteract the habituation process.

Another aspect of health is *the actual health condition of the user*. If medical treatment is required, she might have less energy to make sure that contingency is dealt with adequately. Yet physical and even mental frailty should not be used as an excuse not to give persons in poor health a hearing aid. If for instance, someone suffers from Alzheimer's disease, hearing aids are all the more necessary to make the person stay in touch with their lifeworld.

Tolerance of bodily discomfort is linked to individual experiences of comfort. Some new hearing aid users complain of the noise stemming from chewing, talking and breathing; others seem to get used to these noises. Others may complain about the foreign body they have in their ear, which may be connected to a poor fit of the hearing aid. Thus, different individuals in different situations may focus more or less on discomfort.

For some respondents, dealing with contingency requires a high degree of strategic factors like *perseverance and determination* to make the hearing aids a success. A low degree of perseverance and determination coupled with a high degree of contingency could counteract the habituation process.

The effect of contingency

Based on the findings of this thesis, it is evident that contingency plays a decisive role when the above-mentioned elements negatively support each other. They may, however, also counterbalance each other in cases when the individual has a high bodily awareness, perhaps even a low social awareness, but at the same time holds a professional position that requires high intellectual performance, which in this case may be decisive for the adaptation and thus counteract contingency.

For the respondents of this study, their value on appearing intellectually engaged has outweighed the priority given to bodily appearance. Another example of interacting elements could be the low tolerance of bodily discomfort, linked to low social awareness and little focus on intellectual appearance, in which case, the three elements together would counteract the habituation.

Being prerequisites of the human existence, individual and collective factors interact resulting in various actions. The effect of contingency, however, could be greatly reduced through human intervention - for example if hearing aid dispensers paid more attention to the quality of the hearing devices and spent more time adjusting them and instructing the respondents in their use. Below in this chapter, I shall refer to the above theoretical instrument in order to identify the meaning-creating elements that serve as motivation to exercise agency that can counteract contingency in connection with the acquisition of hearing aids in a welfare state.

4.1. The hard of hearing and their interaction with their lifeworld

4.1.1. Choosing to become a hearing aid user

Having chosen to become hearing aid users, the respondents apply a strategy of collectivism and communication rather than individualism and isolation. They have accepted that they have a hearing loss in as much as they have realized the necessity to do something about it. In some cases, they themselves have not quite reached this point, but have been pressurized by their interaction partners into acquiring hearing aids. These processes take place in a cultural flow (Hannerz 1992) which they are a part of and at the same time rely on and negotiate, in order to recognize and be recognized in their validity claims.

I once discussed the matter of knowing when it was necessary to become a hearing aid user with a woman I met when I was travelling on public transport. She was going to see her daughter and son-in-law, who were posted in Brussels. She said that for quite some time her family had told her she needed hearing aids. Her reason for not accepting this was that she had found that the problem was not constant. It was true that when she was with her family and an unfamiliar topic came up or when the grandchildren said something to her without looking at her, she could not hear. But when they were few people in a room with reasonable acoustics, she heard well enough. As soon as she was back home, she spent most of her time alone or with one or two persons and did not really have any hearing problems. Thus, she could pretend for a long time she did not have a hearing problem even though she realized it was a matter of annoyance to the family in Brussels. The hearing loss dealt with in this study also develops over years and gives ample opportunity to construct the perceived sound pattern as normal.

In the case of the above women, her perceived need to hear was at least partially absent. The question is how the next statement is to be interpreted. Eiwin's (42/M/76/2/H) "Hearing loss is God's gift to elderly male spouses!" cropped up in different variations in the research material, and it can be seen as an expression of withdrawal from a social context. He knows what his spouse is going to say, and it does not arouse his curiosity. It is presented in a humorous way, and yet it can be interpreted as degrading social life as it exists within the family. To use the above categorization, his social awareness is not high. However, I would like to point out that throughout the research period, I did not perceive Eiwin as someone who was not interested in other people. The other extreme represents a different attitude to hearing and is found in an informant's quote "Hearing loss may make you stop participating. In that case, you run away from life!" This expresses fear of being excluded from communicative action and there is a wish to communicate under all circumstances. His hearing aids play a dominant role in his life – e.g. they helped him decide whether what other people said was important. He had experienced that if he asked people to repeat what they said, they would often say: "Oh, it wasn't important!" It might not be important, it could be just: "It's a nice day today!" He might already have noticed that, but it was important for him to decide for himself whether it was important or not. When he was travelling with friends, he often had problems when they sat together in a noisy environment. It depressed him that the hearing aids could not help him distinguish between sounds and that everything turned into an indifferent confusion of noise. If he removed the hearing aids, he also felt isolated because this situated him in a vacuum in which the sound was out there a couple of metres from him, but it did not make any sense.

4.1.2. Selecting circles of interaction

The latter person thus represents a case of someone who makes a huge effort to remain part of his lifeworld circles, but it does give him some negative experiences when it is impossible for him to follow the conversation. The next respondent, Jens (68/M/66/2/P), has also chosen communication rather than isolation, but I interpret his strategy as slightly different in as much as not being able to hear does not always interfere with his feeling of well-being and sense of being recognized when he cannot hear. He was extraordinary because he had much knowledge of sound and technology, partly because music played an important role in his life, and partly because he had used sound strategically in his professional life. When he had ordered but not yet collected his hearing aids, he had been at a gathering with close friends. One of them had commented to his wife that he seemed to be isolated in their midst, and that he did not participate. His wife could reassure the friend that he was going to collect his hearing aids the next day. He himself had in no way felt isolated or that he did not participate – the perception of the friend was a complete surprise to him. I was not surprised, however, at the observation of the friend. When I interviewed him, he would talk endlessly, and he did not seem to take much notice of me. He was a rhetoric capacity and it was hardly necessary to ask any questions. Of course he knew what the interview was about, and that was all that was necessary to set him off.

I interpret Jens' lack of noticing his isolation in the group of friends as well as his behaviour in the interview situation as an indication that he has constructed the meaning of hearing to include the elements which he deems important and worth the effort to hear. The construction is not based on an active decision but on the fact that some issues have ceased to exist as points of orientation. The construction does not interfere with the perception he has of himself as someone who is in charge, accountable and interested in the world around him. The situation with the friends involved enjoying a scrumptious meal with everybody talking at the same time, a hopeless situation for hard of hearing people. It did not make Jens feel excluded because to him, it was one of those occasions when he had a good time with his friends, and for him it was part of the setting he could not hear. In that respect he differed from the informant above who felt isolated and depressed when he was with friends.

For Jens, the situation is different when he is in a professional capacity or he talks to someone where his participation as a qualified interaction partner is a prerequisite for his standing. Hence, he distinguishes between situations that to a varying degree are important and meaningful to him. The slow progress of the hearing loss meant that at first at meetings, he found that some people mumbled, at a later stage he found that everybody mumbled, which made it impossible for him to ignore his hearing loss any longer. Although he had retired, he was still partly active in his former profession, and he would soon notice if he could not follow the line of communication. And so would his peers at the meeting.

Another issue that made it worthwhile for Jens to hear is the communication with his youngest son. They share their interest in music and the son shows remarkable communication abilities – if Jens is to continue to be a sparring partner for his son, he must be able to hear him. It was no use for him to have to say "Pardon" many times – then he would have had to redefine his relationship with his son. In Jens' case there is thus an interaction between social awareness, intellectual awareness, technological skill that further his interest in hearing – also as will be seen later, to him hearing aids have a factual meaning and is not a degrading attribute so his bodily awareness is low.

4.1.2.1. The narrow circle

The following is a case in point of a respondent, Eskild (56/M/74/2/P), who has constructed the meaning of hearing to fall within his predefined circle of interest and not within the interest circles of the other. One could argue that this would be the case for anyone in a complex society (Hannerz 1992) characterized by the lack of transparency for the individual. Yet it should be obvious that a hearing loss makes the problem of participation even more complex. In this case, it is important to note that within Eskild's circle of personal interest, he fully observes his individual construction of meaningful and traditional forms of participation.

Eskild is well known within his professional circle. He only uses his hearing aids when he gives a lecture and people ask him questions, when he talks to his students writing a thesis under his guidance, and when he is in a meeting where people are not disciplined enough to talk one at a time or they mumble (his definition). At the same time, it is important for him that his hearing aids are not seen, because he fears the other will have preconceived notions about his ability to communicate if they know that he is hard of hearing. The focus here is quite clearly on upholding a power relation in which he has to listen, pay attention and respond adequately to what other people say to him. He knows that he will be toppled from his high position in the professional hierarchy if his response in communication with his peers is not in accordance with the tradition within his profession. Otherwise, he does not use his hearing aids. Part of the reason is undoubtedly that the technology of hearing aids still leaves something to be desired when it comes to separating various sound sources, which makes it difficult for the hearing aid user to focus on specific sounds. This may be a contributory factor to why he defined the conversation at a party as rubbish. Still, he has chosen to define party conversation as irrelevant. Hearing what other people say at parties is for other respondents in this study the very reason why they obtain hearing aids.

Using humour as a strategy to bridge the gap that a hearing loss may open is common among the respondents, but in the case of this respondent, humour was rarely used, and when it was used, it was to maintain a distance. Eskild would say that his wife also had a hearing problem, and the advantage was that they did not have to talk together. When asked whether anyone had suggested that it would be a good idea for him to acquire hearing aids, he answered: "Nobody would have dared!" in a manner that was not meant to be humorous. About Eskild it can be said that he has a high intellectual awareness in selected circles which motivates his interest in hearing. At the same time his social awareness is low and his bodily awareness high which could counteract his interest in hearing which is why he only uses the hearing aids in limited circles.

Examples of another respondent who singled out lifeworld circles, is the retired teacher Holger (62/M/76/2/P), who uses his hearing aids to go to an interesting lecture or watch his beloved French movies. His wife and son had tried for years to convince him that he needed hearing aids, but it was not until he could not understand a French movie on TV that he made up his mind in favour of hearing aids. He would not use the hearing aids to talk to his wife. He said that agreeing to what she said without knowing what it was would keep him out of trouble, and she was much too kind a person to pressurize him into wearing them. Yet, I find that there is a discrepancy in the objectives. The significant others wanted Holger to acquire hearing aids in order to uphold the social relations in the common lifeworld circle, whereas he gives priority to the circle that would make him lose his self-understanding as an intellectual individual. He told me that he was ashamed that he did not make an effort to use his hearing aids more often, and that he dreaded my telephone calls because they reminded him of his insufficiency. He was aware that not hearing made him appear older and less bright, and that his body language was tense because of the effort of concentrating and leaning forward towards the other. From an ethical viewpoint (Kleinman 1998) it would be obvious to say that it is arrogant of him to disregard the needs of his significant others to stay in touch with him, and that he should make more of an effort to use his hearing aids during all his waking hours. However, seen from a moral position, I find it too late in people’s lives to try to revolutionize their behaviour. He had taught all his life and was used to telling other people what they should do and think. Why should he not use the hearing aids in relation to the circles where he draws the most benefit from them? I would at this point conclude that his intellectual awareness is high in selected circles, but his social awareness is low coupled with a high bodily awareness.

Poul’s (30/M/57/2/H) profile as to individual factors is similar to those of the two above ones. He had had a hearing problem for many years, but he found it difficult to say for how long. At some stage, he realised that he missed a lot in many of his conversations with other people, and he ended up withdrawing from the interaction. Getting older, he tended to take the role of the observer. He said he gained a lot from that because it was fascinating to watch people. He took the attitude that he did not need to hear everything, he could deduce a lot about what is going on. What he missed out on by not hearing was gained through observing. It was up to the others to approach him if they wanted something from him. He specifically said that he never thought of himself as isolated when he was with other people. As a researcher, I cannot know if it was true that he felt no need for acknowledgement through interaction in his lifeworld circles. But it was obvious that that was the image of himself, he wanted to present to me.

4.1.2.2. Shift in focal circles

The construction of focal circles is not necessarily a static issue in the respondents' lives – sometimes a modified participation in such frameworks (Hannerz 1992) as profession, family situation, moving from employment to retirement will alter the experienced necessity of hearing.

Jesper (16/M/59/1/H) was originally a blacksmith who later trained to become an engineer. If he had remained in his position as a blacksmith, there would have been nothing unusual about his hearing loss, which was noise induced. Everybody would be yelling at each other. But attending meetings and participating in the discussions required him to hear, if he was to continue his membership in this circle.

Inge (36/F/68/2/H) had retired from an employment where she participated in many meetings and where she sometimes had had trouble hearing what was said. Another of her colleagues had had a hearing problem as well and she had required the participants to speak more clearly. This made it unnecessary for Inge to refer to her own hearing problem. Now, she had retired and her son complained about the loud TV, and in combination with the extra time she now had, it made her decide to try hearing aids. She never took to them, however, and part of her explanation for not trying harder was that the pressure on her to hear was less because she did not participate in meetings. However, it cannot be concluded that retirement makes it unnecessary to hear. Many of the retired respondents lead highly active lives in which hearing aids are a prerequisite for participating in the various circles.

Some respondents were still partly active in their previous occupation. I cannot know whether their hearing had suddenly deteriorated which might have triggered the decision to become a user. I find it likely, however, that the extra time; as well the change in their life style gave them the opportunity to do something about the problem and possibly also made them more aware of the problem, because they no longer could take the contents of the interaction for granted. Such a case is Bertil (44/M/72/2/P), a manager who retired from a high professional position. When still employed, he demanded that people spoke clearly, and he himself explained with a degree of irony that the people who worked for him would not have questioned his ability to hear. When he retired, he married. At first his hearing loss was no issue, but as the enchantment evaporated, his new family talked him into acquiring hearing aids. They were a great success, and the few problems he had with them were seen as problems to be solved. He used them in all his waking hours. Bertil had well-functioning hearing aids that fitted him well. But he obviously also felt a need to be a reflecting, recognized and acknowledged participant in his lifeworld and to continue his participation in the negotiation and production of social and cultural values. The same applies to the informant quoted earlier who felt that choosing not to hear is running away from life. However, it is also possible to interpret the wish to hear everything as giving in to the social control referred to in the section "Lend me your ears", with the aim of making members of a lifeworld active participants in all its circles. Thus, I interpret the strategies of Poul (30/M/57/2/H), Eskild (56/M/74/2/P) and Holger (62/M/76/2/P) to be highly selective and without any wish to give in to social control that does not support their self-understanding. It is not the objective of this thesis to fell judgements on the different choices made by hearing impaired persons, but merely to establish the fact that the hard of hearing reflect the variations in world view and objectives found in society as such.

4.1.2.3. The wide circle

There are also respondents with a high social awareness who express their frustration and sorrow over their hearing loss in the following way:

> "I have felt isolated because I haven't heard all those details … at parties … it has happened that some girl confided in me – she told things that are really intimate or secret … and I couldn't hear it. Then I just smile and nod at the right times – then they think I'm a complete idiot because I cannot remember afterwards what they told me because I haven't heard it" (50/F/51/1/H Dora).

Henny had a similar experience of exclusion when she was unable to follow the communication:

> "You know what I've done – I feel somewhat ashamed. At parties, if someone gives a speech and everybody is laughing … what are they laughing at? Then I laugh as well. Otherwise they think that I'm stupid. It's embarrassing that I didn't catch anything. If the speaker looks at me, am I to say when everybody is laughing, "I didn't hear what you said?" Then I just smile … otherwise I have ruined the speech for him" (66/F/71/2/P Henny).

Some of the retired respondents wanted to hear what their families and friends talked to them about. At the same time, they were well aware that they did not have to hear everything. At times some teenage granddaughters would giggle about something and the respondents realized that they were better off not knowing what they talked about, either because they made fun of the respondents or because it was something that only interested young people (46/F/68/2/H Trine; 64/F/82/2/P Lotte).

4.1.3. Conflict potential of hearing loss

I describe above how some hard of hearing single out circles of their lifeworlds on which they concentrate. Sometimes, this is exactly how the significant others perceive the behaviour of the hard of hearing. They can often remark: ″Oh, he hears what he wants to hear!″ e.g. (51/M/62/2/H Bengt). Part of the problem is that they forget that the hard of hearing are left with a punctured sound pattern which they must try to fill in with guess work. I see the remarks of the significant others as an expression of social control, which aim at normalising the relationship with the hard of hearing person. The reaction may be caused by unhappiness over reduced social contact, but more often it seems to be varying levels of exasperation, annoyance or even anger over the need to speak louder, to repeat and to sort out misunderstandings (21/M/59/2/H Walter; 23/M/53/2/H Keld; 25/M/79/2/P Jørn; 27/M/66/2/H Anders; 28/F/57/2/H Lene; 31/F/57/2/P Birte; 38/M/66/2/H Frank; 41/F/59/1/H Marie; 42/M/76/2/H Eiwin; 43/M/73/2/H Herluf; 44/M/72/2/P Bertil; 46/F/68/2/H Trine; 50/F/51/1/H Dora; 51/M/62/2/H Bengt; 57/M/67/1/H Gerd; 62/M/76/2/P Holger; 63/M/74/2/PH Orla; 64/F/82/2/P Lotte; 65/F/74/2/P Stine; 66/F/71/2/P Henny). Walter's wife found it particularly exasperating that when they had invited people to their home, he never said anything and he kept out of the conversation. She had an especially angry and bitter expression when she talked about the years she had tried to make her husband accept that he did not hear well. She said to him that she expected him to take interest in what she said, but he just could not hear her. She had said to him: “If you hear as little when you're in meetings, it's disastrous!” Then colleagues had started saying to him that he did not hear well which finally started things moving.

Also Anders' wife was very clear in her frustrations:

> Anders' wife: All those misunderstandings – when I said something then he answered to something different. Sometimes he would say: ″Why do you say that?″ ″I never said that!″ … It can be rather annoying because I never said that, but he heard it that way, didn't he!″

Also this point contains conflict potential in relation to hearing impairment due to resistance to be constructed as hearing impaired. All the respondents complained that people, especially young people mumbled. Poul (30/M/57/2/H) was particularly clear in his judgement. He especially had trouble hearing women. He thinks that people should be excluded from speaking in public if they cannot speak in manner that can be understood. Another respondent, Jørn, blamed his wife and stepson for his having to acquire hearing aids.

> “I usually say that my wife does not want to speak clearly and turn her face towards me. She should avoid speaking when I'm here and she's in the bathroom. Therefore, I have to invest in hearing aids because I can't bear it … when Inge speaks to her son, I

> just can't hear what they say. But he's terrible. He's worse than his mother, he goes "blub blub blub blub"" (25/M/79/2/P Jørn).

When interviewing Frank, he said initially that he did not have a hearing problem, but his girl friend had a problem because he did not hear. She complained that she told him something and then she asked him repeat it. Then, it turned out that he had only heard half of it, and then she did not know whether he did not want to hear it, had he switched off? Or did she speak too quietly, or too loudly? She found it frustrating that he did not seem to realize the extent of the problem. He, on the other hand, would joke about it and say that he looked forward to being able to switch off the hearing aids. He thus did not seem to have a problem with not hearing his girl friend or his daughter, but he looked forward to being able to hear at the rowing club.

Marie (41/F/59/1/H) would also get frustrated over mumbling

> "I take minutes at board and management meetings and sometimes the table is long. The chairman sits at the other end and sometimes they turn their neck towards me and mumble – yes, sometimes I get furious and I think that it's rude."

Hearing loss can consequently accentuate differences of opinion in a relationship. It may either be the direct cause of a conflict or it can interrelate with other issues which can highlight the different behaviour of hearing impaired people.

Such an issue could be lip reading which is something that has to be taught; it is difficult, and the possibilities for misunderstandings are immense. Moreover, it is especially difficult to lip read in Danish because the Danes do not articulate clearly. All the same, many of the respondents said that they found it extremely difficult to understand what people said, if they could not see the mouth of a speaker. Some said that they used some degree of lip reading (21/M/59/2/H Walter; 23/M/53/2/H Keld; 27/M/66/2/H Anders; 39/F/42/2/H Sanne; 50/F/51/1/H Dora; 51/M/62/2/H Bengt; 60/F/74/2/H Lise; 65/F/74/2/P Stine; 68/M/66/2/P Jens) and it was essential that they could support what they heard by "face reading" and body language. Almost everybody made the comment that it was difficult to hear if people held their hands in front of their face or even worse if they turned their faces away. However, looking intensely at other people made the respondents feel that they acted differently from the norm. Sanne (39/F/42/2/H) found that one of her children would object to her lip reading and would say: "Mum, why do you look at me all the time!" She would answer that she had to see her daughter when she talked. Sanne felt that her children withdrew from her when she did that.

Henny (66/F/71/2/P) also worried that people would find her behaviour strange. She spent some time every year at a folk high school, and at meals she would sit somewhat

cramped at table with five-six ladies. If she sat with someone she did not know, she would say that she did not hear well and ask them if they minded that she looked at their mouths. Then, she would not have eye contact, but she had made the experience that everybody was friendly and made an effort and turned their faces towards her.
Keld's wife (23/M/53/2/H) had some trouble communicating with him. She said during an interview:

> ″I've told you to make more of an effort to look at our mouths … !″
> Keld: ″Well, I use lipreading a lot a school, I really do.″
> Keld's wife (rather annoyed): ″It may be that it bores you what we talk about.″
> Keld: "One is at an age when one would rather only hear oneself talk!″

I interpret Keld's strategy of making fun of the subject as a way of distancing himself from his wife's annoyance. It was clearly a matter of conflict between them.

4.1.4. Activities and hobbies

It is difficult to say anything definite about the activities and hobbies of the respondents compared to the normal hearing population. In the earlier section under "Knowledge based on written materials″ (Barth 2002) I touch on the communication of knowledge of the hard of hearing and I would like to add that there is nothing unusual about the choice of respondents' activities; on the other hand, they often talked about situations, such as social activities and telephone communication, in which they had difficulties hearing. These activities are often relaxing for normal hearing persons, but they are tiring and sometimes even exhausting for the hearing impaired, due to the great concentration demanded of them. These factors support the probability that the hard of hearing especially pursue relaxing activities in which oral communication with others is limited. Moreover, hearing deficit is sometimes connected to noise sensitivity. Often the hard of hearing say: "You have to speak louder!″ And when you raise your voice, they say: "Don't yell!″ There is in other words a narrow limit between "not hearing″ and "painful noise″. Thus, quite a few of the respondents talked with great emphasis about how much they hated noise and loved peace and quiet, this was especially the case for (25/M/79/2/P Jørn; 31/F/57/2/P Birte; 42/M/76/2/H Eiwin; 52/F/65/2/H Astrid; 60/F/74/2/H Lise; 62/M/76/2/P Holger; 66/F/71/2/P Henny; 71/F/56/1/P Janne; 72/F/61/2/P Lette). Janne even said with pleasure that she knew a place in Sweden where the silence was so intense that it almost hurt her ears. Some occupied themselves with activities that involved concentration and no or only limited oral communication with other people. Some even stressed their own ability to concentrate to such a degree that they were totally absorbed in an activity and not accessible to other people. Birte said that her husband envied her ability to exclude the world around her and to be totally lost in what she was doing. Keld was a teacher and a writer and his family knew that he would agree to anything they asked him when he was concentrating. He would say "Sure!" just to be left in peace. Similar situations were mentioned by e.g. (23/M/53/2/H Keld; 38/M/66/2/H Frank; 42/M/76/2/H Eiwin; 52/F/65/2/H Astrid). Admittedly, the same may apply to any random group of forty-one chosen individuals, but I find it plausible that concentration on activities involving less oral communication is likely to be more pronounced for the hard of hearing. Such activities involve writing (23/M/53/2/H Keld; 56/M/74/2/P Eskild) reading (23/M/53/2/H Keld; 42/M/76/2/H Eiwin; 43/M/73/2/H Herluf; 52/F/65/2/H Astrid; 53/M/77/1/H Jakob; 57/M/67/1/H Gerd; 62/M/76/2/P Holger; 64/F/82/2/P Lotte; 66/F/71/2/P Henny) sports activities (16/M/59/1/H Jesper; 27/M/66/2/H Anders; 58/M/62/2/H Ole; 59/M/66/1/P Carsten; 65/F/74/2/P Stine; 72/F/61/2/P Lette) (16/M/59/1/H Jesper) gardening (31/F/57/2/P Birte; 53/M/77/1/H Jakob; 66/F/71/2/P Henny) and painting (31/F/57/2/P Birte; 38/M/66/2/H Frank). Trine is very much into computers (46/F/68/2/H) and e-mails some of her friends. She says that when talking to them directly, she misses out on too much. Quite a few enjoyed listening to music and/or playing an instrument themselves (16/M/59/1/H Jesper; 23/M/53/2/H Keld; 26/F/67/2/H Jane; 28/F/57/2/H Lene; 36/F/68/2/H Inge; 38/M/66/2/H Frank; 42/M/76/2/H Eiwin; 44/M/72/2/P Bertil; 45/F/93/2/P Margit; 51/M/62/2/H Bengt; 52/F/65/2/H Astrid; 57/M/67/1/H Gerd; 68/M/66/2/P Jens; 69/F/81/1/P Ketty). Music is of course a problem for some hard of hearing, and some of those who played themselves preferred to play without hearing aids because they made the music sound strange. I have heard hard of hearing people say that they enjoyed listening to music they were familiar with when their hearing was still normal, which shows how important expectations are for the orientation of the hard of hearing. They use their experiences to fill in the missing elements of what is going on around them. This also means that it may be difficult to enjoy new music because of the "disappearance" of some frequencies, which diminishes perception of a natural course of the music.

4.1.5. Hearing loss – a dividing factor

It is a central anthropological question whether certain concepts, ideas, material or immaterial values divide or unite people. From the statements made by the respondents with regard to the hearing sense, it can be deduced that hearing loss, being a communication barrier, is a dividing factor. The question is, however, whether those suffering from hearing loss identify themselves with other hard of hearing people. The identification could show itself through the definition of common goals, i.e. an interest in other hard of hearing people or membership of a non-governmental organization that works for the rights of the hearing impaired. Also in this respect, hearing loss cannot be seen as a uniting factor for the respondents in this study. I have myself a personal knowledge of hard of hearing people who on a voluntary basis over several years meet and organise a self-help groups. However, the actual numbers of hard of hearing people related to those who indentify themselves with other hard of hearing people is reflected in the below statements of the respondents of the study. The exceptions are those who (39/F/42/2/H Sanne; 52/F/65/2/H Astrid; 53/M/77/1/H Jakob) actually were or became members of the Danish Association of the Hard of Hearing – Astrid and Sanne became members, and Jakob's wife had been a member and a hearing aid user for many years. Some were not completely unsympathetic towards the idea of joining, but most of them were rather unfamiliar with the idea. Dora (50/F/51/1/H) said she might become a member. Ketty (69/F/81/1/P) had no idea that such an organization existed, but she might join.

> Bertil (44/M/72/2/P) would probably feel ill if he received such a magazine – on the other hand, he said that he was a member of the DaneAge Association (an organization for elderly people), so perhaps it was all right, but he found that he was not quite ready for it.
>
> Eskild (56/M/74/2/P) could not see how he could benefit from a membership. He paid via his taxes, he paid for the public health authorities to take care of problems in the hearing sector. It was no use to be a member of a patient organization – there were too many of them.
>
> Gerd (57/M/67/1/H) could not see how he would benefit from a membership. When he still worked he was a member of various organizations, e.g. the Cancer Foundation, but he and his wife had cut back on things like that.
>
> Jørn (25/M/79/2/P) is a member of "all the others, heart, cancer and rheumatism, so I'm not ready for anymore. I feel that they have a suction pipe in my bank account." He did not find that he had anything in common with other people with a hearing loss, but "I feel attached to the Rheumatism Association because my mother had rheumatism … and my parents were members of the Cancer Foundation".
>
> Keld (23/M/53/2/H) said that he had not contemplated joining the Association because he did not see himself as a special case.
>
> Birte (31/F/57/2/P) would be reminded that she was hard of hearing if she received the magazine.
>
> Lotte (64/F/82/2/P): "Why on earth should I join? They probably also have activities that I can participate in. Then I would sit there with other old people who can't hear either!"
>
> Marie (41/F/59/1/H) is not an association person, neither does she feel that she belongs to any category or core group because she is hard of hearing. She doesn't feel affected or a special case because she has hearing aids.
>
> Poul (30/M/57/2/H) said that it had not occurred to him to become a member. If he suffered from a condition which made him think that he needed the experience of others, he might join.
>
> Jesper (16/M/59/1/H) thought the Association of the Hard of Hearing would be for people who had acquired their hearing aids from a private dispenser.

> Birger (88/M/75/H): Now that he had acquired his hearing aids there was no reason to join the Association.

From the above quotes, it is obvious that the respondents did not identify themselves with other hard of hearing persons, and they did not think the Association could do anything for them.

As touched upon in the theoretical section under "Framework of movements" the Hearing Association can be seen as a movement that is directed toward society at large and toward missionizing (Hannerz 1992:50). To become a success it must be able to mobilize society at large to exert political pressure. The aim is usually to achieve changes or prevent them in as much as the founding idea is to transform meanings of the general public or negotiate their policies with the authorities in order to turn them into the legal structures of society thus providing them with legalized agency as opposed to the agency of a pressure group (movement). They could be said to be a destabilizing element of culture, as their aim is to redirect the cultural flow.

As noted above, hard of hearing people rarely form a lifeworld circle. They do share the common denominator of being hard of hearing. Moreover, there are patient organizations for the hard of hearing people, which could be described as one of Simmel's non-concentric circles, but they do not nearly reflect the numbers of hard of hearing people in the Danish society. Paul Rabinow introduces the concept of biosociality (ibid. 1996:102), which he understands as the social dimension of the biomedical sciences. Biosociality is thus the networking activities undertaken by patients to exchange knowledge and experiences about a given physiological condition and its consequences (Müller 2005; Rabinow 1996). Gisela Welz (2005) writes in "Gesunde Ansichten" (Healthy Attitudes) about the increased focus of health insurance companies, public health care and the patients themselves on "responsible patients", who are expected to reduce health risks through preventive action, seek information about the medical development and act responsibly on the basis of information. I have put the expression "responsible patient" in quotation marks due to the disciplining connotation attached to the term. It conceptualizes the ideal citizen, which seems to be a prerequisite if one is to find one's way in the health care systems of the 21st century. At the same time, and for other medical practitioners and specialists in the field, the concept of the "responsible patient" is a horror vision owing to the pseudo-knowledge the patient may acquire and expect the experts to relate to.

The research for "Gesunde Ansichten" was made in Germany, but in Denmark the same issues apply. Personal communication with Annemette Mygh, Medical Officer of Health of the Copenhagen County, indicates that life insurance companies tend to have an increased focus on the personal biographies and life styles of their customers, which may be decisive for the insurance company's acceptance to draw up a life insurance policy. A predominant feature in Denmark is for patients to inform themselves through the Internet and then make much more extensive demands on their medical practitioner. Moreover, patient associations are considered to be gaining greater influence on the pursued Danish policies pursued in various fields (Steenberger 2006).

Why does the concept of the "responsible patient" only rarely seem to apply to potential hearing aid users? Some of the respondents in the study are members of other patient organizations like the Danish Cancer Society (Kræftens Bekæmpelse), The Danish Heart Foundation (Hjerteforeningen), DaneAge Association (Ældresagen) or The Danish Rheumatism Association (Gigtforeningen). Thus, with regard to membership of patient organizations, the respondents did not object on a general basis, but the identification they saw as natural in connection with these associations did not apply to the Danish Association of the Hard of Hearing. This corresponds very well with the membership figures of the various associations. The fact is that the Cancer Society has 362,459 members, the Heart Foundation has 95,000 members, the Danish Association of the Blind has 11,000 (restricted membership, potential members: 25,000), DaneAge Foundation has 500,000 and the Rheumatism Organization 74,800. The Hearing Association only has about 10,500, whereas – as stated elsewhere – there are at least 500,000 (some say 800,000) who have a hearing loss and in addition to that many people suffer from noise problems, which also is a topic of interest to the association. Out of the 10,500, more than 3,000 suffer from tinnitus or Morbus Ménière (a disease involving hearing loss, vertigo and tinnitus). Consequently, one could argue that the degree of suffering of the "normal" hard of hearing is not sufficient to make them become members. However, in my interpretation the cause for the low membership figures is to be found in what I write earlier about the "hidden ailment". It is not a condition that evokes pity, rather it evokes annoyance, and it is better kept hidden. This could indicate that also with respect to movements, hard of hearing people are at a disadvantage when it comes to directing the cultural flow.

4.1.6. Vanity and shame

The overall reason for the acquisition of hearing aids is of course to hear better and thus allow interaction with the circles of importance to the hard of hearing person. There are, however, a number of factors that turn out to be counterproductive when it comes to making the decision to acquire hearing aids. A rare case in point of someone who did not express dislike of hearing aids were Jens (68/M/66/2/P) and Sanne (39/F/42/2/H), who for practical reasons preferred an in-the-ear solution to a behind- the-ear solution. But they did not mind if people could see it, for Janne it applied: "It's OK for people to see it, then they will be able to understand why if I misunderstand things!"

The respondents lived their lives at different points between the extremes of ascribing no meaning to hearing aids other than their function, and at the other extreme of seeing hearing aids as deeply embarrassing devices which would make the user less attractive in the eyes of the other and unable to participate in the production of aesthetic values. The question is whether the interest in outer appearance can be seen as "fetichism in the post-industrial world" and bodily estrangement (Scheper-Hughes and Lock 1987). Some respondents referred themselves to vanity as a factor that would prevent them from acting on their hearing loss, when we touched on the problem (21/M/59/2/H Walter; 25/M/79/2/P Jørn; 28/F/57/2/H Lene; 65/F/74/2/P Stine; 71/F/56/1/P Janne; 72/F/61/2/P Lette). I interpret their behaviour as follows: an appearance that differs from what they perceive as socially acceptable – whether it is a physical defect, clothing or other attributes – is seen as socially inappropriate to such a degree that it evokes shame.

In the lifestyles the respondents presented to me, it was characteristic that they neither seemed indifferent about their appearance – that is, they did not show up looking sloppy or in dirty clothes – nor did they seem overly focused on the picture they showed me of themselves or their homes. The latter point, however, is more difficult to estimate than the first. It is possible that they had carefully contemplated their attire or spring-cleaned their houses before the appointment with me. But in my eyes neither they themselves nor their homes gave the impression that it was something they paid more attention to than just wanting to appear in a manner which they deemed fitting according to a socially and culturally defined normality.

4.1.7. Between acceptance and acknowledgement

At the beginning of chapter four, I write about awareness of bodily appearance as part of the individual factors that play and important role for the acquisition and adaptation for hearing aids. As will be seen from the below data,it is obvious that a high degree of bodily awareness will be counterproductive when it comes integrating a technology like hearing aids in the life of the individual.

Thus, looking at the aesthetic contemplations some of the users had with regard to hearing aids, it seems that they combine the appearance of the hearing aid with a construction as a degrading attribute that is separated from its functionality and that says something about the user in terms of attractiveness and health. Some of the respondents were very much aware of the priorities they set between hearing and appearance, and until the decision to become a hearing aid user, appearance mostly had the upper hand, making vanity a highly restricting factor when it comes to taking action. The users themselves often found their vanity slightly ridiculous, which fits the common view of vanity as a negative characteristic used to elevate one's status in comparison with others. Moreover, it is common knowledge that when vanity becomes too obvious, it serves to reduce the vain person's status. However, there is something more to vanity than these aspects. It is relevant in this connection to speak of an aesthetic sense, not according to my own personal construction of beauty, but rather as a factor that is of importance to people in determining how they style their lifeworld and themselves. It is part of the human quest for acceptance and dignity that they present themselves and their lifeworlds according to individual as well as collective aesthetic criteria linked to physical health and youth. The difficulty with this strategy is that the struggle to become a member of a circle, which is made difficult by a hearing deficit, may be less successful if it means the rejection of a hearing aid. This is none the less what very often happens.

> Anders: "I'm very much aware of details, I don't know why, but I do notice things like that … I would prefer a tiny hearing aid in the ear … I don't know why but there is a difference between sight and hearing – many people wear glasses and nobody takes offence – it's quite natural. But it is somehow less natural to have a hearing aid. Don't ask me why!" (27/M/66/2/H)
>
> Interviewer: "Does it matter to you that the hearing aid is visible?"
> Jørn: "Yes it does … I can't tell you why, but I think that it looks terrible and you get ten years older … I can't stand it, quite simply … I've seen several, I know several who have one. You know they poke out and you can see all the screws and bolts … and when they manipulate them and they whistle!" (25/M/79/2/P)
>
> Keld: "There was actually a woman in front of me with one of those I call "borgmesterstænger" [an oblong piece of Danish pastry]. She was manipulating it all the time. No, it's no good. I don't want one like that." (23/M/53/2/H Keld)
>
> Holger: "There's so much you can't do when you get older. Am I also to wear a sign saying "I can't hear either!?"" Holger added that he himself had trouble accepting that his quality of life was deteriorating – and that was the barrier between him and the hearing aids (62/M/76/2/P).

Walter (21/M/59/2/H) would prefer not to try to explain to his colleagues what it meant to have a hearing loss. He would feel that he drew too much attention to himself. His colleagues might tell the clients, and he would prefer them not to know – he hoped they would not find out about it and speak normally to him.

It is obvious that the above respondents used their aesthetic sense to define themselves according to what they felt they were not, i.e. unattractive, old, deficient or handicapped, thus making hearing aids an expression of difference. Using an ethical measure (Kleinman 1998a), the evaluation of the strategy is negative, in as much as health, beauty and youth are turned into factors of power and dominance. However, other factors play a role as well. At this point, I would like to use Kleinman's moral issue, since highly subjective factors are attached to the judgement of appearance. Inherent in an aesthetic sense is the pleasure to enjoy something beautiful, whether it is a human creation or not. At the same time, the existence of human and natural creations that universally are seen as beautiful is also an indication that aesthetic values, as well as the possibility for the individual to strive for these values, is an important part of the space in which the individual has the freedom to express world view and to set standards. The visual objection to hearing aids can be seen as part of freedom of expression. The conflict for the hard of hearing person thus lies in the personal wish to hear and the social reality, which demands on the one hand that the individual must hear, and on the other that she must engage in becoming a hearing aid user, which is seen as offensive to beauty. When the aesthetic sense gets the upper hand, it limits the possibilities of the individual, and it can thus be categorized by the fetishism referred to previously.

As already mentioned, the vanity subject was often touched upon in the conversation with most of the respondents; however, Birte (31/F/57/2/P) was extremely open about the problems of appearance that her hearing aids caused her. She was caught between her fear of not being accepted because of her physical deficit and its remedy, the hearing aid, on the one hand, and the consequences of not hearing on the other. I do not interpret her case as typical for all the respondents, but her anxiety and regrets are a reflection of the apprehension many of the respondents expressed, albeit to a lesser degree (e.g. 21/M/59/2/H Walter; 23/M/53/2/H Keld; 25/M/79/2/P Jørn; 27/M/66/2/H Anders; 28/F/57/2/H Lene; 29/F/63/2/H Inga; 30/M/57/2/H Poul; 41/F/59/1/H Marie; 44/M/72/2/P Bertil; 50/F/51/1/H Dora; 56/M/74/2/P Eskild; 57/M/67/1/H Gerd; 59/M/66/1/P Carsten; 62/M/76/2/P Holger; 65/F/74/2/P Stine; 66/F/71/2/P Henny; 71/F/56/1/P Janne; 88/M/75/H Birger).

Birte's husband and her now adult children had told her for many years that she could not hear. All through the period of contact I had with her, she deeply regretted her hearing aids and compared them to "lumps of flesh" and prostheses. She was an attractive woman, discreetly yet smartly dressed, a seamstress who taught sewing to adults. As a hearing aid user, she was afraid she would be mobbed and excluded and had decided to postpone the acquisition until she was 60, because she connected hearing aids with old age. A young relative of hers had suffered a hearing loss due to chemotherapy. She kept her hair very short and it was an enigma to Birte why she did not do anything to hide her hearing aids. When she herself was out on a windy day, she took care that the wind did not blow her hair aside, thus revealing her hearing aids. At night, when she got ready to go to bed and she was in front of her mirror, she would flick her hair behind her ear – her favourite hair style from before she got hearing aids. It was her moment of pretending that she did not have a hearing loss.

The thought of making fun of her hearing situation was to her unheard of – nobody she knew would ever do that. She got furious if anyone referred to her hearing aids. Someone attending her sewing classes who had a severe hearing loss had asked her about them in front of the class – some pretended not to have heard it; others expressed their surprise that she had hearing aids. Birte did not want to advertise her hearing loss and had afterwards said to her: "Din dumme skid!" (which is the Danish equivalent to "fuck you", definitely not part of the vocabulary you would expect from someone like her.

Birte walked her dog in the mornings with a younger friend, whom she was reluctant tell about her hearing loss. If they set off before she had put on her hearing aids in the morning, Birte had trouble hearing what she said, when one walked in front of the other in the woods. When they came back, also in winter, they would drink coffee in the garden. Birte would find some pretext to go into her house and put on the hearing aids. One day, Birte was going to the hearing aid manufacturer and said she had an errand in that area but not saying what she was going to do there. Her friend had asked why she was going there, and since Birte did not really know what to say, she had told her about the hearing aids, which did not seem to make any difference in their relationship.

Once, Birte had described a quite attractive man to an acquaintance of hers. Birte had added: "Well, he's a bit bald, and he's got hearing aids!" The reply: "Oh no – it gets worse and worse!" hurt Birte badly. The acquaintance had not known that she was a hearing aid user, and for her it was a confirmation of the negative connotations of hearing aids.

4.1.8 Hearing aids as symbols of less intelligence and lack of attractiveness

The relationship between bodily awareness and intellectual awareness is obvious in the below material on the reflections of the respondents on what the hearing aids signal. It is somewhat difficult to distinguish clearly between the fear of signalling less intelligence and a less attractive outer appearance, since the two overlap. Both factors take their origin in the wish to present the best possible appearance to the other and thus be worth approaching.

Eskild is a case in point of someone who on the one hand does not find hearing aids attractive, and on the other has the expectation that his starting point in communicating with others will be less favourable if they know that he is a hearing aid user. Outer appearance is apparently of importance to Eskild, who is a good-looking man, well-dressed and with a beautiful home.

> ”I don’t think that it looks nice with the large hearing aids. These days, people are used to glasses so they don’t make people wonder. But hearing aids still make people wonder; they seem to take it for granted that it’s more difficult to communicate with those using them. I want to make sure that I can refer directly to what I’m asked … that when people take the initiative to start a conversation, they don’t know that I’m hearing impaired. … I have spoken a lot with hearing-impaired persons, and they find they’re being discriminated against: “We would rather be blind than hearing impaired; the blind, people care about, but us they yell at and cannot understand that we can’t hear, can’t reply. It’s like outcasts!” It hasn’t bothered me; I don’t really care!” (56/M/74/2/P)

Jens (68/M/66/2/P) had a different experience regarding hearing aids. He said that he himself had no problems with the way hearing aids looked, but he had been at a gathering for old colleagues. One of them had approached him and said that he found Jens brave in that he had become a hearing aid user. He himself also had a hearing deficit but feared that people would think of him as less intelligent if he used hearing aids. He compared the impairment with a sight deficit, saying that glasses were outside the head, whereas hearing aids signalled a deficit inside the head.

4.1.9. Conclusion of the first pillar of the empirical findings

In the analysis of the research data, the common issue emerges that different persons focus on different lifeworld circles to construct the priorities that they choose as points of orientation in their existence. The acquisition of hearing aids thus become a strategy in the attempt to achieve those points of orientation which will take place through a selection of lifeworld circles in which the perceived need to hear will be established.

For some, hearing loss represent a loss of function that can be alleviated by a hearing aid. For others, hearing loss may become an expression of human difference that is based on combining the hearing aid with the construction as a degrading attribute which for some users is reflected in conflict, and a perception of reduced attractiveness and intelligence.

4.2. The interaction between the hard of hearing and the institutions

In this section, the interaction is described between the respondents and the different institutions I interpret as relevant to this study. This means that as a lay observer I attempt to take the perspective of the user when they interact with the institutions, but I also present some background information in order to explain the respondents' experiences in the adaptation process. First, I present a somewhat summarized version of the theories presented in chapter three on the theoretical framework. Then, I present a case of a user of the public system. Subsequently, in the attempt to categorize the user experiences, I have divided them into five groups. They have thus been constructed as belonging to a certain category, based on my interpretation of the interaction between the users, the system and the technology. The groups are "uncomplicated acquisition of hearing aids"; "solution of problems"; "users who create meaning without the use of hearing aids"; "users who apply a passive strategy in relation to their hearing aids" and "construction of problem users".

As described in the section on "The Hard of Hearing Act of 1951", hard of hearing persons in Denmark have the option to acquire their hearing aids from a private dispenser with a rather large subsidy. Some respondents expressed their suspicion that the aim of private enterprise is to make profit and not to provide the best possible hearing aid. Other respondents cherish deep suspicion of the public hearing dispensers, stating that they themselves have no influence on the hearing aids with which they are provided, and that the service is poor. In this respect, I find Kleinman's "moral experience" relevant. A debate on the moral response to hearing loss is highly relevant to address the pitfalls and strengths of the welfare state, as well as of private enterprise. In this process, agency is administered by user as well the agents of the welfare state.

In Kleinman's definition, experience has to be seen as a moral process. "Moral" thus becomes

> "the medium of engagement in everyday life in which things are at stake and in which ordinary people are deeply engaged stake-holders who have important things to lose, to gain, and to preserve." (Kleinman 1998: 362).

It is thus the question of the moral processes involved in the administration of agency that is important in relation to the dispensation of hearing aids.

4.2.1. The institutions

The respondents – as potential hearing aid users – could as a general rule choose between the public hospitals, but if they had no specific preferences, the area in which they lived would be decisive for the hospital they were referred to. Typically, the waiting time was about three months at Bispebjerg Hospital and twice as long at Gentofte Hospital. For the private dispensers, there were no significant waiting lists, if any. The respondents did not necessarily choose the hospital with the shortest waiting list, since they rarely objected to the recommendations of the ENT; rather there was an inherent automatism in the procedure which made the respondents accept the ENTs' authority and follow their recommendations. I asked the respondents why they had chosen either private or public dispensers. I interpret their choices as based on coincidence, since the procedure followed its own course depending on the persons they happened to speak to at the time (21/M/59/2/H Walter; 25/M/79/2/P Jørn; 27/M/66/2/H Anders; 31/F/57/2/P Birte; 38/M/66/2/H Frank; 50/F/51/1/H Dora; 56/M/74/2/P Eskild; 59/M/66/1/P Carsten; 62/M/76/2/P Holger; 65/F/74/2/P Stine; 68/M/66/2/P Jens; 71/F/56/1/P Janne; 72/F/61/2/P Lette). Inference as a means of acquiring knowledge (Barth 2002) is thus an important motivation to act. We learn what others have done in a similar situation, and those we trust provide us with the knowledge on which we act. This makes knowledge a negotiable factor that depends on the social settings in which it is acquired, which again explains why different people come to different conclusions as to the best way of achieving a goal.

4.2.2. Spatial access to the dispensers

There were differences in the spatial access to the dispensers – not only were they of course in different locations, but the differences in organization and location were considerable. Gentofte Hospital is situated in one of the wealthiest areas of Copenhagen, but at the time of the study, the hospital was in urgent need of refurbishment. The regional division of Denmark that existed at that time stipulated that Gentofte Hospital was responsible for dispensing hearing aids throughout an area that covered a belt around Copenhagen that included municipalities with less prosperous tax payers. This meant that the financing of the hospital was not linked to its location in the wealthy suburb of Gentofte. The urgent need for restoring the premises is illustrated by a statement by one of the audiologists, Bjørg Petersen, who had been employed at the ward some twenty years ago. She had now returned, but her office had not been redecorated since that time. When patients arrived for the first examinations, they waited in the same area where the secretaries worked, so that the patients could hear communications concerning other patients. One of the respondents, Lene (28/F/57/2/H), who is nurse herself, said it would be unthinkable for her to work under such conditions, because it was impossible to observe rules of confidentiality. When collecting their hearing aids, the patients had to wait in a small area in an adjacent building, but they accepted the conditions. Poul

(30/M/57/2/H) said with some irony that he found it acceptable, even though it was not as nice as travelling on an intercity train where the seats were better.

In contrast to the genteel atmosphere of suburban Gentofte, the approach to the other public dispenser, Bispebjerg Hospital, is through a densely populated area of Copenhagen with heavy traffic. Its name means Bishop Mountain, which reflects its location on one of the relatively higher hills in Copenhagen. On arrival, you find a hospital that was inaugurated in 1913. The architect was the famous Martin Nyrop, who also built the Copenhagen City Hall. In contrast to its surrounding areas, it is situated in a green park-like oasis with flowering bushes and shrubs. The audiology ward is housed in a red brick pavilion with spacious, light and recently refurbished waiting areas.

The private hearing aid dispensers all had slightly different procedures and offered different degrees of service. The private dispenser and manufacturer Widex is an example of the Danish interdependency between the manufacture of hearing aids and public dispensing. As a private dispenser, probably the least effort is made to provide luxurious premises. The service shop is situated in connection with the factory, and in addition to selling hearing aids, this is where those who have acquired Widex hearing aids, either from public or private dispensers, can come to have their devices serviced within the four year guarantee period if the users do not decide to go to the dispenser that provided the hearing aid. The atmosphere in this setting signals that the service shop is not the main source of income for Widex. The communication form is cordial, firm and straightforward, indicating that the customers are not everything. The respondents mostly liked the atmosphere there, and had not chosen the dispenser because they thought they would be pampered. You do get a free cup of coffee, but that is also the case at Bispebjerg. Eskild (56/M/74/2/P) and Holger (62/M/76/2/P) both expressed their surprise that so many workmen could afford acquiring hearing aids from a private dispenser, but they did not realize that they shared the waiting area with people who had obtained Widex from a public provider. Moreover, Widex supplies hearing aids in different price ranges, and with the public subsidy, it is possible that the users did not pay much for their hearing aids. The other private dispensers in the study, Dansk Hørecenter (Helsingør, Charlottenlund and Central Copenhagen), Center for Bedre Hørelse (Hillerød), Den Private Høreklinik (Lyngby), Blic (Hillerød) and Optic Ama'r (København, Sundby), all create or created their revenue from selling hearing aids to private users, mostly in a local area. They are situated in close connection to the best shopping areas of the various town or city centres, which in my interpretation achieves a proximity to their customers' lifeworlds and makes hearing aids a commodity comparable to the consumer goods they normally shop for in those areas. Moreover, it was usually easy to park there, which is not the case at Bispebjerg or Gentofte.

4.2.3. Figures and brands of hearing aids

When the study was conducted at Bispebjerg, the ward dispensed about 12,000 hearing aids a year to about 8,000 persons making it the largest dispenser of hearing aids in Denmark. The equivalent figures for Gentofte were about half that number. At Bispebjerg, the respondents were all given Siemens or Sonic hearing aids, except for one, Gerd (57/M/67/1/H), who was first was given Sonic, then Siemens and finally Widex.

At Gentofte Hospital, the users in the study were given either Widex or Oticon hearing aids, which both are Danish brands and have a relatively long tradition of supplying and servicing hearing aids for the public sector. According to Grete Boisen, at Bispebjerg Hospital, both firms have developed software programmes that make it easy for technicians to adjust the hearing aids. There are sensible reasons for not using too many different brands since different software programmes are applied to adjust each brand. The more practice the staff has with a programme; the easier it is to adjust the hearing aids to meet the needs of the users. The Gentofte premises where the hearing aids are adjusted and handed out to the patients vary in size, some are spacious and light, others are light but only about 8m². However, the users have good conditions where they can sit comfortably at a table to practise putting the hearing aids on, taking them off and changing batteries because they can sit comfortably at a table doing so. Also, as a standard routine, they were asked how they perceived different sounds. The users were informed that they could return to Gentofte within three months if their hearing aids needed readjusting. After that time, they could approach the hearing institute.

4.2.4. The policy of post-acquisition contact at the public institutions

The organization differs at the hearing institutes (see section on The Hard of Hearing Act of 1951) servicing the two areas included in the study. In most of the central Copenhagen area, (primarily respondents from Bispebjerg Hospital) the users have to contact the hearing institute themselves if they have queries about adjustment or manipulation of their hearing aids (except for one area, Frederiksberg), whereas the users from Gentofte Hospital are contacted by their hearing institute as standard procedure in connection with becoming a hearing aid user. The consequence for the user is that approaching the new institution, the hearing institute, requires more effort at Bispebjerg than at Gentofte and is possibly easier forgotten. Another difference is that any readjustments remain the responsibility of Bispebjerg, whereas readjustments are undertaken at Gentofte during the first three months, and are subsequently mostly undertaken by the hearing institutes.

Thus, at both hospitals, the new users could return to have their hearing aids adjusted, but it was not an inherent part of the system that the users actually did so. During an interview with Konrád Konrádsen, head of the Audiological Department at Bispebjerg, he said that if his department did not fulfil the yearly budgeted flow of patients, the staff would be reduced by the hospital management which would result in longer waiting lists. The staff was therefore aware that the users would benefit from more time, but as a ward in a public system, they were overruled by the politically allocated funds which reflected the quantity of patients rather than the quality of the patients' treatment. Therefore some users expressed their disappointment in the public system with regard to accessibility when they had acquired their hearing aids (23/M/53/2/H Keld; 27/M/66/2/H Anders; 35/F/79/2/H Agnete; 38/M/66/2/H Frank; 42/M/76/2/H Eiwin; 52/F/65/2/H Astrid; 57/M/67/1/H Gerd; 60/F/74/2/H Lise; 88/M/75/H Birger).

With regard to returning to have the hearing aids adjusted, I interviewed Bispebjerg's psychologist who conducted studies of its users. He told me that about 30% of the patients returned to have their hearing aids readjusted – of these, some would return again and again because they did not have the intellectual resources to benefit from hearing aids. According to him, the patients from the wealthier areas were clearly more demanding and would return to have their hearing aids readjusted, whereas those from the low-income areas would tend to accept their hearing aids as they were delivered. My interpretation is that people in higher income groups are more likely to make greater demands on the quality of what they hear, whereas people from low-income groups would add this experience to lifelong occurrences of making do with what they can get – and stop using what is of no use to them. I do accept, of course, that people at all levels of society can be cantankerous and that they also show up at the dispenser. One of the private hearing aid dispensers, Center for Bedre Hørelse, with outlets in wealthy Copenhagen areas as well as in the country, found that the people at the Copenhagen outlets sometimes were difficult to please whereas people in the country, who often were wealthy farmers, tended to adjust more easily to their hearing aids and did not turn up so often for readjustments. On the basis of this study, I am not able to define some people as rich and choosy and others as having a more down-to-earth worldview and possibly more accepting. It would be necessary to have a larger statistical material in order to be able to establish a correlation between urban sophistication, financial means, and high demands on the quality of what is heard.

4.2.5. A case in point of the procedure at Bispebjerg Hospital

To describe the procedures to acquire hearing aids at Bispebjerg, I use the case of Inga (29/F/63/2/H) as a starting point. We met in the waiting area at Bispebjerg a few days after the initial interview in her home. She approached the staff and showed her public health care card that is issued in accordance with the provisions of The Danish Health Security Act. The staff registered Inga's arrival and informed her where to go. While we were waiting, Inga told me that she the day before had talked to her sister-in-law, and Inga could not quite figure out why she had not told her that she was going to have an examination to see if she needed hearing aids. I interpreted this as an expression of her reluctance to occupy herself with the theme of hearing aids. Possibly also that they would become part of an ongoing negotiation in her relationship with her sister-in-law from which Inga would gain no benefit.

As to choice of dispenser, she could not imagine going to a private dispenser, because she suspected that she would be cheated since their only aim was to make money on her. She felt very safe at Bispebjerg, she had been there for other examinations, and it did not make her feel ill in any way to acquire hearing aids from a hospital. Inga had been informed by a standard letter about the day of the first examination, and also that the examinations and the waiting time would take a couple of hours so the long waiting times were no surprise. First, Inga saw the medical audiologist, who examined her ear and asked her what she did, and in which situations she had trouble hearing. Inga told him about her shop where she sometimes had trouble hearing what her customers said, about her husband who spoke very quietly, and about her grandchildren who found it quite funny when she misunderstood what they said. The audiologist also asked about her health, and she informed him about her medication, that she had had surgery for an inflammation of the middle ear as a baby, and that she 5-7 years ago had had an abscess in the ear. On that occasion, the ENT had thought that her hearing was too good for her to need hearing aids. She felt, however, that her hearing had deteriorated markedly during the last three years.

The audiologist sent her on to the audiometry, which was performed by a technician, in this case an audiologist assistant trainee. Such training concentrates on performing the audiometry and adjusting hearing aids. The general procedures of the audiometry are described in the section on "Categories of human construction". Inga's hearing was approximately the same on both ears, but slightly worse on the right ear. After Inga's audiometry we returned to the waiting area in order to talk to the audiologist again. When he had examined her audiogram, he told her that she would probably benefit from a hearing aid. First she would be given a hearing aid for the right ear, but if she wanted a second one, she could return within the next three months to obtain a second one. He showed her which hearing aids she would be given, a Sonic in-the-canal model – she was noticeably pleased that they were so small and not a behind-the-ear model. Afterwards, Inga went upstairs to wait in another waiting area to have a casting made of her ear for the shell of her hearing aid. The job is carried out by what is called an ørepropteknikker (an ear mould technician) a term which is not commonly known and will make most people snicker. As shown by this example, new users come into contact with many different professions during the process of acquiring a hearing aid. Moreover, they find it difficult to know which of the many people they speak to are the experts on hearing aids. Inga's ear was filled with a substance that hardened and could be removed after a couple of minutes. The procedure is not painful, but it felt a bit strange. When a casting is made of both ears, the patient of course cannot hear. Afterwards, Inga was given an appointment 2½ months later to obtain the hearing aid, which was the average waiting time at Bispebjerg at that time.

When the day arrived, Inga was excited to get her hearing aids. I interpreted her excitement as a result of a two-fold attitude in as much as on the one hand she felt reluctant about becoming a hearing aid user, while on the other hand she was excited to see what difference they would make in her life. Before the appointment, the hospital had received the hearing aids from the manufacturer who had adjusted them according to the audiometry carried out at Inga's last appointment. The technician who handed out the hearing aids inserted them in her ears, connected the hearing aids to the computer and made what is called an insertion gain measurement, which is made to see if the adjustment of the hearing aid fits the physical conditions of the ear canal. The computer emits sounds that measure the response in the patient's ear canal, therefore no noise may be made while the procedure is going on. After the procedure is concluded, some technicians ask the users how they perceived different sounds such as rattling of paper, cutlery clanging against a plate, the sounds of a bunch of keys falling on a table, but that was omitted in this case. Inga sat on a chair in the middle of the room, which was no problem when the technician carried out the insertion gain tests. But she was not given the opportunity to put her hearing aids on and take them off. In other cases, I have witnessed, the users had the opportunity to do that. It is easier to do this, if the users are sitting at a table so the hearing aids cannot fall on the floor if the new users dropped them. A table could also support their arms when practising to change the batteries.

Inga was informed that if her hearing aids broke, she could come between 9 am and 1 pm. If the hearing aids needed adjusting, she would have to make an appointment in advance. If she had problems handling the hearing aids or she needed additional technology to hear better, she could go to the hearing institute. She was told how to clean her hearing aids with toilet paper and how to order new, free batteries, that she should read the instructions and that flushing the toilet would sound like Niagara Falls.

Inga asked the technician if she could return to get a second hearing aid. He answered that in his opinion she ought to have two hearing aids, because it would make it easier for her to decide the direction of the sound. This is difficult with only one ear. She could return within the next three months to obtain another one. Otherwise, the procedure would have to start all over again. Inga would have liked to keep her hearing aid on when she left, but the technician advised her against it, saying that the traffic noise would be much too loud, when she was not used to her hearing aids.

Soon after Inga had acquired her hearing aid, she decided to acquire another one, and contacted the ward accordingly. Three months later, she went to pick it up. This time, it was a different technician, who was very thorough. When the users are provided with only one hearing aid, the volume is increased somewhat in comparison with the procedure when people get two. Thus, she reduced the volume somewhat, and she also tested whether Inga's hearing aids would easily whistle. She reassured Inga that it was a good idea to have two hearing aids and asked her if she did not feel whole and more in balance with two hearing aids. She also confirmed that it was easier to tell the direction of the sound with two hearing aids. At first Inga was taken aback by the sound of her own voice with two hearing aids. The world seemed a bit loud, but she also expressed her confidence that she could get used to the new one as well. One of the arguments for providing people with only one hearing aid is that they hear more natural sound in that way and the ear canal is not blocked up in the same way, which reduces the perception of being in a barrel, a sensation that is less pronounced when behind-the-ear-models are used.

After about a month, I contacted Inga to ask her how it was working out with her hearing aids. She was extremely pleased about the service at Bispebjerg and about her hearing aids. Sometimes in the evening, she would remove one of the hearing aids because it was a bit loud.

In the final telephone interview I had with Inga about 15 months later, she was extremely happy about her hearing aids and she wore them all day. She would definitely return to Bispebjerg for her next hearing aids. Their fit was perfect and she did not notice them. If she does not wear them she cannot hear her husband at all. But she probably benefited the most from them at her shop: "It's difficult to sell something when you cannot hear what the customers ask for!" The only thing she wondered about was that her shop assistant, who had a much more severe hearing problem than herself, seemed to hear better with her hearing aids than Inga.

4.2.6. The private dispensers

The private dispensers see themselves as representatives of the individual hard of hearing person and their wish to acquire the best possible hearing aid. The interest of the private dispensers is commercial, and at the time the study was conducted, some private dispensers and especially Dansk Hørecenter advertised intensively in the Danish media in an attempt to make hearing aids an everyday consumer product instead of a medical aid to be ashamed of.

In addition to the necessity of making a profit, the private hearing aid dispensers rely on their good name to win new customers, which implies different power relationships than those in the public sector. Thus, the users are customers with the attributed privileges and disadvantages. Obviously, the moral factor plays a considerable role in the outcome for the user. At this point it has to be said that some public dispensers and some private hearing aid dispensers are extremely dedicated and examples of the opposite can be found in both sectors.

It is an inherent part of the programme for the private dispensers that the users have the possibility to return to have a free adjustment of their hearing aids for a period of time, while later they are likely to have to pay a fee for an adjustment. This means that the next appointment is often made when the users have received their new hearing aids. To make it easier for the user to become habituated to the hearing aids, they are usually not fitted with the amplification the audiogram indicated, but then the volume is increased gradually. The disadvantage of this procedure can be that the users initially do not find that they get sufficient benefit from their hearing aids, which may be enough to convince reluctant users that hearing aids cannot help them. I have spoken to a wife of a person outside of my study who collected his hearing aids from a private dispenser and never returned to have them adjusted – and never used them. On the other hand, the procedure reduces the shock some users experience when they hear how noisy the world is. The advantage is also that the users do not experience that they have been forgotten by the dispensers, which is the experience of some of the users in the public sector.

4.2.7. Choice of dispenser

4.2.7.1. Users in favour of the public system

When I asked Herluf (43/M/73/2/H) if he had seen any advertisements from private dispensers, he laughed and said of course, you cannot miss them. However, he had never considered going to one of them because he believed in the welfare state and as a consequence, he would use the free public health care system. His ENT had pointed out to him that he could go to Bispebjerg, where the waiting list was much shorter than at Gentofte. However, for him there was no hurry to become a hearing aid user and he decided to go entirely through the public system and use the dispenser in his area. Herluf is thus a typical example of those who choose Gentofte.

Anders (27/M/66/2/H) also believes in the public system and finds that he has a responsibility towards it even if it does not fulfil his expectations. Although he as a watchmaker used to be a private shop owner, he had much more confidence in a public system than a private dispenser who possibly would trick him. There may be different reasons for feeling this way, but his belief in the welfare state and public institutions created meaning to him.

The choice of a public dispenser was not always a question of financial means. There were also users in the study who would have been able to afford to pay in part for their hearing aids, but who felt more confident in the public system. Also, they found it foolish to pay for something they had already paid for through their taxes. Inge, (36/F/68/2/H) had not found it difficult to decide on a public dispenser – she found it silly to pay for something that was free. However, if she had an urgent need to hear, she would probably have approached a private dispenser.

4.2.7.2. Users in favour of private system

Important motives for choosing private dispensers are easy accessibility, physical proximity, lack of patience when it comes to waiting time, mistrust of the public system and in some cases also wealth. Holger (62/M/76/2/P) made the remark that in the public system, he would probably be serviced by a foreigner he would be unable to understand, which could be interpreted as a racist remark. However, the problem for the hard of hearing is a real one since they have difficulty understanding foreign accents. It is obvious that when money is not an issue, the users are more likely to choose private dispensers. Ketty (69/F/81/1/P) had no objection to the fact that somebody was making money on her. She had no children and felt that her future was limited, so she might as well spend the money she had on herself.

Some respondents (44/M/72/2/P Bertil; 56/M/74/2/P Eskild; 59/M/66/1/P Carsten; 62/M/76/2/P Holger; 66/F/71/2/P Henny; 68/M/66/2/P Jens; 71/F/56/1/P Janne; 73/F/79/1/P Karoline) expressed their direct mistrust in the public system. Others (31/F/57/2/P Birte; 72/F/61/2/P Lette) trusted the recommendations other people gave them. Connected with the mistrust of the public system is also the negative attitude toward waiting time (25/M/79/2/P Jørn; 31/F/57/2/P Birte; 63/M/74/2/PH Orla). Whereas some in the public system did not mind the long waiting time, because it postponed the day when they would become users, some of those who chose the private system said that once they had made up their mind to become users, they did not wish to wait. Jørn (25/M/79/2/P) expressed his extreme dislike of waiting times. Birte thought that if she had problems with the hearing aids it would be easiest to drive over to the dispenser and have the problem fixed, if she acquired them privately. The visible size of the hearing aid was another subject that mattered to those who went to the private dispensers (31/F/57/2/P Birte; 44/M/72/2/P Bertil; 56/M/74/2/P Eskild; 59/M/66/1/P Carsten; 62/M/76/2/P Holger; 65/F/74/2/P Stine; 66/F/71/2/P Henny; 71/F/56/1/P Janne; 72/F/61/2/P Lette). When I conducted the study, the policy of the two public dispensers was to give the users the completely in the canal solutions only in exceptional cases. In that respect, it was thus true that the likelihood that a public institution would provide the users with a completely in the canal solution was small.

The choice of dispenser was a matter of trust, sometimes in private enterprise combined with mistrust in the service of the public health care system. Thus, Jens had decided on a private dispenser because of the negative experience of a relative who had chosen a public dispenser. The same applied to Karoline (73/F/79/1/P), who through a relative had experienced what she interpreted as horrendous waiting times – also for readjustments. Jens chose the dispenser because they had a branch in an area of Copenhagen where he often had business. Karoline's (73/F/79/1/P) daughter lived close by the dispenser, and she knew the area well. For Lotte (64/F/82/2/P), it was important that she could walk to the dispenser and not travel long distances with public transport.

Bertil (44/M/72/2/P) had also noticed the advertisements in the newspapers and had thought he ought to do something about his hearing problem. He chose a dispenser in an area he went to regularly. The hearing test was free which meant that he could not lose anything by making an appointment. The dispenser had pointed out to him that he could get free hearing aids through the public system, but Bertil was impressed by the treatment and the time the dispenser took to test his hearing and to explain what hearing aids could achieve for him. Bertil's attitude to public service versus private enterprise favoured the latter, and he found that the less the state interfered with his matters the better. Bertil's case was thus also an example of a general political attitude that the individual was responsible for his own existence.

4.2.7.3. Negotiable attitudes towards the private and public systems

Some of the respondents had a negotiable attitude towards public versus private dispensers. Agnete, (35/F/79/2/H), was not very determined to go either to a private or public dispenser. She had contemplated going to a private one but had then concluded that she had already paid for her hearing aid through the taxes. Lene (28/F/57/2/H) generally had more confidence in the public system than in the private, but she had contemplated going to a private dispenser. However, she had been informed that she would have to pay a substantial amount if she wanted to acquire hearing aids. For other respondents, the attitude was more negotiable since some would choose the public system in some instances, like Lette (72/F/61/2/P). She was a nurse and employed by the public health care system, which she felt perfectly safe to use. She was a personal acquaintance of someone who worked at Widex which made it natural for her to acquire her hearing aids from that firm. Through the interviews with her, she gave me the impression of being a person whose worldview reflected her professional life as a head nurse who knew who to contact in the health care system to fulfil her needs.

Dora (50/F/51/1/H) had considered going to a private dispenser. She had seen the advertisements in the newspapers and had also noted that some were close to where she lived. It had been a surprise to her that the hearing aid from a public dispenser did not cost anything. During the time of the first interview with Dora, there were newspaper reports that some hard of hearing people had been tricked by private dealers, and she commented that she might have ended up at one of the dishonest dispensers. The reason she went to a public dispenser was that her ENT automatically referred her to that sector. The same applies to Frank (38/M/66/2/H) who knew somebody who worked at Widex. There he was told to see an ENT, who had automatically referred him to a public dispenser. She had recommended the thorough check-up he would receive there.

4.2.8. Categories of user experiences with the dispensers

4.2.8.1. Uncomplicated acquisition of hearing aids

The respondents in this category received their hearing aids and did not return to have them readjusted or repaired. Their hearing aids undoubtedly meant an extension of their possibilities in the quest for values. But there were also soundscapes where hearing was stressful since they did have problems with the amplification of undesirable sounds like shrill children’s voices and traffic noise. It is not possible to know if a fine tuning of the hearing aids could have achieved an even better result for these users. Sanne (39/F/42/2/H) was pleased about the treatment she received and she never went back to Gentofte or the communication centre with any questions or problems. Eiwin’s (42/M/76/2/H) hearing aids made a great change in his daily life, and he tested his hearing aids in the different soundscapes he visited. He wrote a diary about his experiences which he sent to Gentofte. He had hoped to receive at least a standard acknowledgement of receipt, but he never received a reply. He was invited to go to the hearing institute. Because he felt that Gentofte did not take an interest in the fate of their hearing aid users, he accepted the offer. Nothing new came of the meeting, but he was pleased that what in his definition was "the system" had not forgotten him.

4.2.8.2. Solution of problems

This section involves those respondents whose hearing aids undoubtedly were a success, but who at some stage needed to return to the dispenser, hearing institute or manufacturer for readjustment or repair. The problems that are likely to occur in the interaction between individuals, institutions and technology can mostly be solved, but there are indications that the users need easy access to the dispenser since lack of knowledge of the system and the technology otherwise complicates the integration of the hearing aids into their lifeworlds. A reason for "the missing link" between staff and users can be found in Bateson's theory of learning which indicates the different situations of users at learning level I and experts at learning level II (please see the theoretical section, Gregory Bateson's Theory of Learning).

Eiwin (42/M/76/2/H), who is described above, was probably the one who went through the process of acquiring hearing aids with the least trouble. During the first interview with him before he acquired his hearing aids, he seemed friendly but somewhat withdrawn and I wondered if he could be one of those who did not find it worth the trouble to get accustomed to hearing through technology. He was not. A frail appearance cannot automatically be linked to the perceived necessity of hearing. A similar case was Margit (45/F/93/2/P), who was the oldest in the study. She looked her age but she coped with the manipulation and management of her hearing aids. For adjustment, she returned to the dispenser, but not more than foreseen when she collected her hearing aids.

When Lotte (64/F/82/2/P) first acquired her hearing aids, she stopped using them due to illness. When she contacted me a half year after the acquisition, she started a new. She went several times to the dispensers for adjustments. She thought the hearing aids sounded terrible, but she wore them all day, because she had promised the technician to do so in order to get used to them – and she was a person who held her promises, as she said to me.

For Herluf (43/M/73/2/H) the audiometry at the dispenser had at first seemed a bit unreliable. He said to me that the equipment had been new, and he was uncertain whether the technician had obtained a correct audiogram. She had to repeat some of the procedure because her findings did not fit together well. In my interpretation, such incidents are likely to happen whenever new technology is applied. At the same time, the individuals exposed to it wonder why it has to happen to them. When Herluf had talked to one of his relatives about the examination, the relative had asked about the hearing loss. That made Herluf question why he had not been given a print of his audiogram and had it explained to him. He himself had trained public servants, and he had always told his trainees to forget about behaving like public servants, i.e. they should always provide the best possible information to the users. In the cases of the respondents who had been at a public dispenser, this was not automatically done. They were given a copy of their audiogram when I asked for a copy, and they said that they wanted one as well.

Otherwise, Herluf was happy about the treatment he received. When he collected the hearing aids the technician was well prepared – she had collected the hearing aids before the appointment and had connected them to the computer, which was a general procedure at Gentofte. Various sounds were tested, e.g. speech – both one's own voice and that of the technician and cutlery. He had some difficulty inserting the hearing aid, but the technician said he could use some Vaseline to make it easier. He seemingly forgot about that, but his daughter who was a nurse had given him a cream which made it a lot easier for him. He had some difficulty talking on the telephone since his hearing aids whistled. He tried in vain to contact the hearing institute and was dismayed that the relevant homepage did not provide any information about the reconstruction of the premises, which he found out about through other sources. When they reopened, he got an appointment with them and was pleased about the service. He had been shown how to handle the hearing aid, which made it easier for him to put it on. Also with the new procedure, he no longer sensed he had a foreign object in the ear. When he removed them in the evening, he would not say it was a relief, only that he no longer sensed he had got anything in his ear. To solve his telephone problems, he had chosen to remove the hearing aid when talking on the phone. Herluf had to visit and see his ENT every three months to have his ear wax removed, but that too became part of the normal procedures of everyday life. His hearing aid story is thus a success story – the problems that arose in the process - the initial sore ear, his manipulation problems, the difficulties in contacting the hearing institute were solved through a combination of his perceived benefit of using the hearing aids and his determination and perseverance to contact the hearing institute. He had an extremely outgoing personality which made him score high on social and intellectual awareness which made it a necessity for him to hear.

It has been described previously how Jens (68/M/66/2/P) approached becoming a hearing aid user. Here, I describe Jens's approach to the private dispenser where the hearing test was made that confirmed that he would benefit from hearing aids. Before he could get the public subsidy, he would have to go to an ENT to confirm the findings of the dispenser. Part of Jens's hearing problem probably stems from an explosion that took place when he was a professional soldier, and which would possibly release compensation from the state. Neither the dispenser nor the ENT thought they were in charge of applying to the state. After some debate, the ENT acknowledged her responsibility to do the paperwork for the application. If Jens had acquired his hearing aids from a public dispenser, the institution would have identified the problem and would have approached the relevant authorities. It is a case in point that the private system is not always designed to meet the user's special needs.

Then, Jens did not know much about the different brands of hearing aids, but he was one of the few who made some research to learn more about them. The ENT and the dispenser disagreed as to whether Jens should be given one or two hearing aids. The ENT recommended Jens to use a hearing aid for the best ear because he would feel fenced in by two hearing aids which would make him stop using them. Jens himself felt that two hearing aids would be more suitable and give a better balance in his hearing. The dispenser agreed to this which could be ascribed to the commercial interest they had in selling two hearing aids.

The public dispensers tend to recommend one hearing aid in more cases than the private ones. This could seem to be a conflict between the commercial interest of private enterprise versus the best possible service at the lowest cost of the welfare state. Thus, the leading representatives of each sector tend to present the arguments which fit in with their interests. However, neural plasticity research (Logan 2002) indicates that the lack of input of sound frequencies to the brain degrade the activity patterns in the auditory pathway which underlines the importance of intervening early in cases of sensorineural hearing loss. In Jens' case, one hearing aid to his best ear could mean that the auditory pathway of his worst ear would deteriorate and thus be less able to process sound. The ENT left it open for Jens to acquire one or two hearing aids.

The question of one or two hearing aids can be compared to Inga's (29/F/63/2/H) and Astrid's (52/F/65/2/H) cases. They had at first acquired one hearing aid and later approached the public dispenser for another. In these cases the technicians recommended two hearing aids as a better solution. Other hearing aid users like Lette (72/F/61/2/P), Eskild (56/M/74/2/P) and Ole (58/M/62/2/H) acquired two but used only one. It can thus be concluded that the individual preferences of the respondents point in different directions. The main thing seems to be that the individual can take influence in the matter.

To revert to Jens's case, he was surprised that he was not given much choice by the dispenser. When he came to decide which hearing aid he was going to have he got the choice between three very different prices, i.e. about €200, €530 and €1600. Jens found the counselling very diffuse because he could not get a clear definition of the difference between the hearing aids. He compared the process to buying a CD which he could listen to before he bought it, whereas he would have to trust the sales person and make his own research about the technology, and then pay about €3000 for two hearing aids without having listened to the sound of it. However, he had sufficient trust in the system to accept that the price difference reflected a quality difference which seems to fit in well with Barth's (2002) concept of inference as a valid means of acquiring knowledge. The sales person informed him that he could get free hearing aids from the public system but that he hardly would get a quality corresponding to the most expensive hearing aid. The advertisement from the dispenser that had caught his attention promised that he could get a hearing aid free of charge; it had not revealed that the most advanced hearing aids could cost him about €3000. He decided to discuss the matter with his wife since he felt the expense would affect the family budget. Based on the poor experience of a family member, she recommended that he buy a hearing aid within the top category, which he did. After the acquisition, he very precisely verbalized what he heard through the hearing aids and in detail described to the dispenser that he could hear the noise generated by the technology. Jens had to go back to the dispenser several times to have the problem alleviated.

Bengt (51/M/62/2/H) had to return to the dispenser after about six months to get a new hearing aid, which he received free of any charge. He had worn his hearing aids when he jumped into a swimming pool. He was contented with them although his wife did not find that they helped sufficiently. Bengt still had to look at her to understand what she said. However, he did not contemplate returning to the dispenser to have his hearing aids readjusted. During the last interview with Bengt, he said that he had lost one of his hearing aids again and he would have to approach the dispenser once again to get a new hearing aid. In this respect it must be said that the Danish hearing health care system gives extended service to its users, a service which also covers those who acquire their hearing aids from a private dispenser. According to Cecilia Semar, who is the head of the ward at Gentofte Hospital that dispenses hearing aids, the motivation for the free replacement is that the private acquisition of hearing aids does not burden the public system and the users should thus not be punished for the favour they do to the public system if they lose their hearing aids. Thus Jørn (25/M/79/2/P) lost a hearing aid which he found tremendously stressful. He had to approach Gentofte to have the free replacement accepted and thus had to present the relevant papers and fill in a request. He expressed his gratitude that this was possible but at the same time he was overcome by what he thought was a complicated process. All through the process of becoming a hearing aid user, he complained about the new technology he attempted to include in his lifeworld. When he first had to try on his hearing aids, he complained about how small they were to which the technician remarked that he had wanted them to be so small. He found it extremely difficult to get used to the amplification of sound and went back to the manufacturer several times to have his hearing aids adjusted. The personal contact to the other was an important factor for Jørn's well-being, and even though Widex cannot be said to pamper its customers, he obviously enjoyed talking to the technician, Sanne Bloch, and to me. We both tended to tease him a bit, and it pleased him when I said that he obviously paid much attention to aesthetic values both auditive and visual. Playing with language to express his preferences and dislikes was part of his self-understanding, which is reflected in some of the quotes in this thesis. I interpret his need to interact with the other and develop a relationship to be an important part of making a process a success. His social awareness was thus pronounced, he wore his hearing aids partly to hear his wife and partly because he enjoyed engaging in a dialogue to his liking. In the opposite case he could be withdrawn, and according to his own statements, he could tend to avoid contact with other people. I interpret his many visits to the dispenser to have his hearing aids adjusted as a high degree of perseverance and determination – not least because he was very close to giving up using hearing aids. It is likely that he would have left his hearing aids in a drawer if he had chosen a public dispenser because of his dislike of waiting times and public bureaucracies. Also his manner and attitudes required time and interaction, a need which a busy public system would find it difficult to meet.

Another respondent who made use of the replacement was Birte (31/F/57/2/P) when she broke the shell of her left hearing aid. The repair cost about €80 which was refunded through the public system. She found the procedure bureaucratically complicated, and it made her think that she was pleased she had chosen a private dispenser, because she doubted she would have had it repaired so quickly in the public system. My interpretation is that her point of view is hardly correct. The public system is an important customer for Widex and the hearing aid is likely to have been repaired just as quickly. She would still have had the option to go to Widex for the same service she received as a private user. It is a case in point that the users who acquire their hearing aids through the private system sometimes imagine the public system to be worse than it actually is.

Bertil (44/M/72/2/P) integrated the hearing aids in his life without problems. The only problem he experienced with his hearing aids was that the dispenser closed down in his area. For repairs, he sent them directly to the manufacturer.

Jakob (53/M/77/1/H) had found that the sounds boomed in his head when he wore his hearing aids. He returned to the dispenser and was given a behind-the-ear model instead of the canal solution. It helped somewhat and he found he got used to the rest of the booming noise.

Jesper's (16/M/59/1/H) first hearing aid, a small in-the-canal model, did not fit him at all. The shell was much too small. The dispenser made a new shell for him. He was very relaxed about it – he said that mistakes can happen everywhere. He found it fairly easy to get used to his hearing aid.

The same applies to Birte (31/F/57/2/P), Carsten (59/M/66/1/P), Eskild (56/M/74/2/P); Inga (29/F/63/2/H); Jane (26/F/67/2/H); Lette (72/F/61/2/P); Ole (58/M/62/2/H) Trine (46/F/68/2/H); Walter (21/M/59/2/H) for whom some corrections were made either with regard to adjustment of the amplification, polishing or change of the shell or the acquisition of a second hearing aid. In Walter's experience he felt he had not received enough support from the hospital. According to my notes from the delivery of the hearing aids, the technician gave instructions like those given to Inga (29/F/63/2/H) described previously in this section. Walter himself did not find the instructions to be sufficiently detailed, which meant that he had not used the necessary procedure to clean them. Consequently, they did not work and due to the summer holidays at the hospital, he had to take his hearing aids directly to the manufacturer, Siemens, which has a service centre in Copenhagen. I interpret Walter's experience of insufficient instructions as correct. New users are often insecure about the small piece of valuable technology that is handed out to them. It is something they never wished to acquire, and this may be a contributory factor for the lack of questions in the acquisition situation. It can be argued that a person with Walter's training can read the instructions and find out for himself how to maintain the hearing aids. Thus it must be said that when things go wrong, both the dispenser and the users are at fault. However, I find Walter's case an example of the perseverance necessary to become a contented hearing aid user. If the user is not sufficiently motivated, the lack of instruction is in itself enough to make him put the hearing aids into a drawer and forget about them. Walter's wife was adamant that he should become a user and that contributed to his approaching to the ward to have them repaired. Because it was closed for the summer holidays, he took them to the manufacturer in another part of Copenhagen. It is not difficult to imagine that if it is necessary to get around by public transport, or if the user does not live in an area with easy access to repairs and is possibly a reluctant user, repairs can easily be postponed until later and then conveniently forgotten.

Birger's (88/M/75/H) hearing aids whistled which did not make him stop using them. He thus had the determination and perseverance to use the hearing aids even though he decided not to display the same qualities to make the hearing aids stop whistling which would have required another trip to the dispensers.

Janne's (71/F/56/1/P) interaction with the dispenser can be divided into two parts – on the one hand the interaction was successful in as much as she felt she could always return to discuss her hearing problems with them – on the other hand she suspected the dispenser made easy money on her. As explained below, she was aware of the fact that her visit to the ENT across the street from the dispenser was in opposition to the procedure that was laid down by the hearing health care system.

Janne had asked her general practitioner how to go about getting her hearing tested and he had advised her to go to an ENT. Instead she saw an advertisement in the newspaper which for her seemed to be the easy way out and she thus decided to go to the private dispenser. They did a hearing test, advised her to get hearing aids, and she decided to do so. She did not really know why she did not choose a public dispenser. She expected long waiting lists at the public dispenser while here it was only a matter of making an appointment. She said that once you have finally pulled yourself together, it has got to be done. Her own contribution was €333. On recommendation from the dispenser she went to the ENT opposite their shop.

> "I expect it's pro forma – he earns easy money – for me it's laziness – I could have gone to my own ENT … they [the dispenser] would send the result over to the ENT and I could go and collect it there."

Normally, the ENT, or his assistant, conducts a hearing test to establish whether there is a hearing loss. In the affirmative case, he issues a referral to the dispenser. In this case, the ENT examined her ears and looked at the audiogram he had received from the dispenser. He explained to the respondent that she could also go to a public dispenser to get a free hearing aid. She said she had not been informed about that. He said that in her case, things had happened in the reverse order, as she was really meant to go to him first. In his opinion, the authorities should discontinue the policy of giving subsidies for the acquisition of hearing aids from private dispensers because the costs of hearing aids had exploded. Based on the audiogram made at the dispenser, the ENT noted that the respondent would benefit from a hearing aid. It was a good idea to start out with one – she could then get another one later.

Immediately after the consultation, Janne was given a Siemens completely-in-the-canal hearing aid with a noise reduction programme. The technician conducted an insertion gain test, tested a variety of sounds like rattling paper and clanking of metal. They also went out into the street to allow Janne to listen to traffic noise. She found it a bit strange that she could not hear where the noise came from and that her own voice sounded strange. She was offered a second appointment at the dispenser and went back after 12 days. Then, she was reasonably satisfied with the hearing aid, but her hearing had not improved as much as she had hoped. The technician explained that the amplification would be increased and then she would probably hear better. After four months Janne went back to the dispenser again. She wanted to get more amplification and a reduction of background noise. She was using it more regularly now, but she tended to forget to put it on. She was satisfied with the dispenser because she felt she was welcome when she showed up. As a new hearing aid user, she did not know if the problems stemmed from the general shortcomings of hearing aids or whether it was something that could be fixed through adjustment.

Astrid (52/F/65/2/H) had high confidence in the public health care system. She remained convinced that she had chosen the right procedure, because she had the possibility to solve problems that may arise. She could go to the communication centre, the dispenser and medical audiologists. During her first appointment, the audiometry showed that her hearing was almost identical on both ears, and she was offered one Sonic in-the-canal hearing aid. That seemed reasonable to Astrid in as much she imagined it would be overwhelming with all the artificial sound if she was given two hearing aids at once. She asked the audiologist about the differences between different types of hearing aids and he said that some hearing aids were more advanced than others but that she would be given a really good hearing aid.

When Astrid had acquired the hearing aid, she was amazed how much she had not heard, but at the same time so many questions cropped up all the time. She made an appointment at the dispenser, because she felt that her hearing aid did not fit properly – she felt she had to hold on to it when she was chewing. The ear-plug technician said that the problem was probably her ear canal which seemed to push the hearing aid out, but the shell could be given a better fit. He tried to polish them and at first she thought it helped but when we were talking when she was about to leave, she found that it had not improved much. However, she would not do anything about it that day. She found it a difficulty that questions seemed to crop up after she had acquired the hearing aids and she also had doubts whether it was a good choice that she only had been given one. I interpret her attitude as having less confidence in the system than when she started out at the dispenser.

Astrid visited the dispenser again twice because her hearing aid whistled and generally had a poor fit. At the first visit the shell was polished again and it was said that if it did not help, a new shell would have to be made. When she got home, she continuously had to push the hearing aid in place because it otherwise generated its own sound or whistled, therefore, she decided to go to the dispenser again two days later. Here, a sign informed her that the ward was closed, but she talked to a secretary who told her it was due to illness and it would be better for her to call before she came again. She explained why she had come and was referred to two staff members who looked at her ear and thought the problem stemmed from ear wax. A third person said that it had nothing to do with that, but the problem was rather the narrow ear canal. A new imprint was made and this time it had felt very different from the first time when she had felt that the material had not filled her ear canal. In about a fortnight she would receive the hearing aid from the factory. When she received it, it turned out to be the original shell, but a rubber piece had been added and the problem seemed to have been solved after she had grown accustomed to it.

She received an invitation from the communication centre in her area and was tremendously pleased about the service they gave her and offer for equipment for hearing impaired persons, such as alarm clock, telecoil and telephone.

Four months after Astrid had acquired her first hearing aid, she had an appointment with the dispenser to have an imprint made for a second hearing aid. The technician confirmed it would be an advantage for her with two. The second hearing aid turned out to be a success and there was no need for her to return for any further adjustments.

For her next hearing aids Astrid would choose the same procedure at the same institution. She says about herself that she is not someone who puts up with poor quality or service and she feels lucky to have been able to go to the hospital or communication centre whenever there is a problem.

4.2.8.3. Users who created meaning without the use of hearing aids

Four users could create no meaning in the interaction between their lifeworlds, the dispenser and their hearing aids. One of them was Karoline (73/F/79/1/P) who had a moderate hearing loss and thus a more severe deficit than most of the other respondents. She acquired her hearing aid because she had trouble hearing when she was out for a walk and a bicycle approached her from behind. However, her hearing aid had not made much difference. She went back to the dispenser three times – the first time it turned out that the battery was flat because she did not know she had to leave the battery compartment open when she did not use the hearing aid. The following two times she had adjustments made, but she still found that the hearing aid did not make much difference. She only found it useful at church. She may be a case in point that some people with a moderate hearing loss seem to be less affected by it than others with a mild hearing loss. She approached the dispenser a few more times, but she still did not find that the hearing aid was of any help and thus wondered whether to discontinue its use.

Like Karoline, Stine (65/F/74/2/P) had a moderate hearing loss, but she never integrated her hearing aids in her life. In her case, some unfortunate factors came together. She had acquired the smallest hearing aids available, because she was extremely focused on appearance and could not accept that her hearing aids were visible. In effect, it would probably have been much better if she had acknowledged her hearing loss and a behind the ear model from the start. She claimed that she could really hear well enough and that she had got her hearing aids too early. I had the chance to participate in one of the courses she ran, and the other participants were unhappy about the very loud music she played. Also, she said that especially young people did not speak up. I therefore conclude that in her case it may have been poor guidance on behalf of the dispenser, but contributory causes were an unfortunate combination of the wrong hearing aids due to her focus on appearance, and her lack of acknowledgement of her hearing loss which led to her unsuccessful experience with hearing aids.

When Inge (36/F/68/2/H) acquired her hearing aids she was quite sceptical about the situation. She worked conscientiously and analytically to learn more about her hearing aids, but in the end she found that she had too little benefit from them. She decided to make an appointment at the hearing institute, where she had her audiogram explained and was told that at some frequencies her hearing was above average for her age. Four months later, she made another attempt to contact the hearing institute, which contacted the dispenser for her, where she was given an appointment. Here, she was advised to use the hearing aids in the situations where they actually helped and leave them in other situations. She had a lot of confidence in the technician who took care of her this time. She was told she could call her directly if she needed extra advice or guidance. She thus found she had been given all the help she required at Gentofte and the hearing institute. When I again talked to Inge a month later, she said that she hardly ever used her hearing aids. She felt a bit ashamed that she was given hearing aids by the public health service and that she did not use them.

Orla (63/M/74/2/PH) started out with a private dispenser, but he never managed to get used to his hearing aids. Especially the woman he lived with was unhappy about his hearing loss which made him approach the public sector where he was given a hearing aid. However, he still found his own voice too difficult to get used to, so at the end of the contact period with Orla, he did not use his hearing aids.

4.2.8.4. Users who applied a passive strategy in relation to their hearing aids

The nine users discussed in this section either took no action to improve their experience with their hearing aids or they took some action but to little avail, which meant that the interaction with their lifeworld primarily took place without hearing aids.

In the first interview with Poul (30/M/57/2/H) he found it peculiar that the future user does not get the opportunity to find out how the different hearing aids sound and work. The aim is to help the hard of hearing, but they are not allowed to have any influence on the process. When you buy a pair of shoes, you can try them on, but with hearing aids you cut out that stage and deliver something to people and tell them to wear these in order to hear. He was disappointed that "the best health care system in the world" (used ironically) treated its patients like that. After Poul had collected his hearing aids, he never went back to the dispenser. He never really integrated his hearing aids into his lifeworld and he only used them rarely. During follow-up communication, he sometimes said that he could not answer a specific question because he did not have enough experience with his hearing aids to do that. Likewise, he never felt a need to approach the dispenser again to learn whether the hearing aids could be adjusted in a manner that would mean a greater benefit for him.

Marie (41/F/59/1/H) found the premises at Gentofte dilapidated but she was impressed with the service they provided. At some stage, the battery drawer of her hearing aid broke and she had expected a bill for the repair and found it marvellous that she could have it repaired for free. At the end of the contact period with Marie, she only used her hearing aid at work because her intellectual appearance would otherwise suffer. But she did not contemplate going back to the dispenser or the hearing institute to check whether anything could be done to help her use her hearing aids extensively.

Before Lene (28/F/57/2/H) went to the dispenser, she had more knowledge about the place as well as hearing aids than most people have, because she used to go there when her patients needed hearing aids. I met her when she had just collected her in the canal Widex, Senso hearing aids; she was smoking a cigarette and sat with the bag containing the hearing aids in front of her. She was not enthusiastic. She looked at the bag as if it held something distasteful, something she would rather leave in the next dustbin and forget about. She found them too big, but she had been informed she could get smaller ones if she returned them within three months. Apparently, they were so big because they also had a special programme for music. When I talked to Lene later, she said they were like foreign bodies in her ear, and they bothered her when she wore them all day. She also found them tiring and they were of no use at family gatherings. When her adult son came to visit, he told her to put them on. At a Christmas family gathering she could not hear and Lene’s daughter had been really surprised that she wore her hearing aids. Lene had said: “They do not help me!” Sometimes, however, they were helpful, especially during meetings because she did not have to ask to have things repeated all the time and watching TV, because the TV did not have to be so loud. She was also pleased that she could hear the tick-tock of the clock in her house, and that the water tap was dripping. But she did not mention any situations in which she had been really pleased to have her hearing aids. Their use was entirely reserved for the situations in which her intellectual appearance would be seriously questioned if she could not hear. In my interpretation, Lene’s lack of acceptance of her hearing loss and her awareness of bodily appearance may have barred the way to become a more contented hearing aid user. I asked her whether she had contemplated returning to the dispenser to try to have the hearing aids adjusted, but she evaded the question. If it had been inherent in the procedure for users to be given another appointment to discuss the adaptation process, Lene might have presented the problems to a dispenser, who might have helped her solve her indifference towards doing something to improve her hearing situation. I partly ascribe the problems to the pressure on the dispenser to get more users through the system, partly to the different learning levels of the users and the professional staff, which leads them to create different meanings of hearing loss and its remedy, the hearing aid.

I spoke to Holger (62/M/76/2/P) when he had just acquired his hearing aids. He had talked to hearing aid users who were unhappy about their hearing aids and he had always thought that it probably was their own fault because they gave up too quickly. It was necessary to have a positive attitude and ask oneself if one did the right things. Also, he was annoyed that he as a taxpayer financed something that remained in a drawer. He ascribed the reason for the failure to the fact that hearing aids acquired through the public sector were free of charge. He thought that his case would be different, because he had paid quite a lot for his hearing aids. In the follow-up conversations, he seemed to have lost his initial enthusiasm, and he did not take the trouble to approach Widex to see whether anything could be done to the adjustment the sound or shell. He complained somewhat because he felt the technician had not instructed him properly in the management and manipulation of the hearing aids. However, since I was present during the instructions, I have to conclude that Holger must have forgotten, because he was told how to handle his hearing aids.

Some users were given adequate instructions and could apply them, some forgot, and some received inadequate instructions. It could be argued that it is the responsibility of the individual to be informed about the acquired technology. However, when I was present at the acquisition of the hearing aids, they all expressed to differing degrees that they were excited about what the hearing aids would be able to do for them. It was obviously an important factor, which they now had to integrate into their lifeworlds, and which affected them physically and psychologically. Thus, they had to deal with hearing differently, a foreign body in the ear and learn how to maintain and manipulate their hearing aids. In my interpretation it explains why some of the users forgot what they were told and it underlines the necessity of giving the users easy access to return to ask questions and have the procedures shown once again.

Henny (66/F/71/2/P), Jette (61/F/76/1/P) and Ketty (69/F/81/1/P) are thus examples of those users who had trouble understanding what the dispensers explained to them about manipulating and adapting to their hearing aids. Henny visited the dispenser several times, and he told her in a friendly – not scolding – manner, that she might as well throw her hearing aids into the harbour if she did not use them every day. Otherwise, she would never get used to them. He patiently explained to her that she should put them on when she had breakfast and when she could not stand it anymore, she could remove them. It would also be a good idea for her to wear them when she went shopping. The silence without her hearing aids should seem strange to her – not the sounds experienced through the hearing aids. She found it difficult to insert them into her ear, and he showed her how to insert them. During later follow-up contact, she returned to the same questions and when I said to her, that the everyday use would be a good idea, she said that that was new to her. She had obviously forgotten what the dispenser had told her. She also felt that she caused much inconvenience when she returned with her questions. The same applied to Ketty (69/F/81/1/P) and Jette (61/F/76/1/P), who both tended to forget and also felt they bothered the friendly technician when they returned to ask him questions. Thus Ketty could not understand why it would not help her to have a hearing aid for her worst ear, where her hearing deficit was of a nature that could not be alleviated by a hearing aid. Jette suffered from a number of other diseases and had to go to check-ups. In comparison with her general condition, she found her hearing loss was a minor problem and she thus tended to see her hearing aids as a waste of time and money. Lise (60/F/74/2/H) also suffered from a number of diseases and really acquired her hearing aids to hear her television better even though her hearing loss led to conflicts with her daughter because she did not hear that well. She showed a high degree of perseverance and determination during the beginning of her habituation period, but as her general condition was deteriorated, she found that the difficulties she experienced with her hearing aids were too overwhelming for her to cope with.

When Agnete, (35/F/79/2/H) had had the examination at the dispenser's, she had been recommended only one hearing aid, because – as she explained to me, the hospital had said it could be confusing for her to hear the sound from two sides. She was satisfied with the instructions she received when she had acquired the hearing aid. Later, it became a problem when she experienced a buzzing noise - like a wasp - in it. Still later, she wanted to approach the dispenser again because she found her hearing aid did not work, but she was referred to the communication centre since it was an operation problem, but she found it much too complicated to go there by public transport. Then, she found out that her hearing aid did not work because she had never changed the battery. When Agnete the next time was in touch with the dispenser, it was to acquire a new hearing aid. There had been a fire in the block where he lived and she did not get the hearing aid out. She was given a new one, but she only used it to hear the television, at church and the theatre and when she was with other people. The rest of the time, she thought it was better for the ear to rest also because she found that her ear got somewhat sore from the hearing aid. Also in Agnete's case, there was a great need for renewed contact about procedures, manipulation and maintenance of hearing aids. She herself did not have sufficient resources to take the necessary action to achieve the best possible result.

4.2.8.5. Construction of problem users

It applies to the subdivision of the respondents into five groups that they have been constructed as belonging to a certain category. I base the categories on my interpretation of the interaction between the users, the system and the technology. I have identified the five users in this group as those that I have identified as those who went through a specifically complicated adaptation period. Some of the users showed a high degree of perseverance and determination to become hearing aid users, and risked being defined as difficult. Often their complaints were met by lack of understanding by the dispensers. Sometimes, the users themselves did not meet the necessary requirements of the system to solve the problems, but the lack of understanding on both parts could stem from different learning levels (Bateson 1999) sometimes in combination with a lack of moral response to hearing loss (Kleinman 1998).

The dispensers relied on a concept of normality on which I base the description below of users who fall outside the range of normality: "Construction of a cantankerous patient", the extent of the time frame within which the users could approach the dispenser: "Observation of a time frame", the lack of quality involved in the adaptation of hearing aids: "Inadequate behaviour towards the needs of the users" and the construction of severity of the hearing loss: "Patronization".

Construction of a cantankerous patient

Gerd's (57/M/67/1/H) process of becoming a hearing aid user was from the start difficult. During the first examination, nervous tension was apparent at the ward, and was expressed through the prolonged waiting times and the technician's remarks about the heavy workload. When he carried out the bone conduction test, which is a test to establish more about the character of the hearing loss, he did not place the device in the correct place, which made the sound go to the wrong ear. When Gerd saw the audiologist the second time, he did not explain the audiogram which Gerd was disappointed about. He was offered a Sonic hearing aid for the right ear. Because of the difference of the audiograms of the ears, Gerd was moreover offered a scan for a acousticus neurinom.

When the day of the acquisition arrived, he looked forward to receiving the hearing aid. The technician was thorough and made a conscientious effort to adjust it. Gerd complained that the sound was very metallic, and there was a sound in the hearing aid that troubled him. The technician asked a colleague for advice, and they agreed that the hearing aid was not suitable to alleviate the hearing loss. Instead, Gerd was offered an in-the-canal Siemens. After a month, the new hearing aid was ready, and when Gerd tried it on he complained that he felt shut off and there seemed to be an echo in the hearing aid. The technician was an attractive woman and he made the attempt to charm her and be a good patient, which she did not respond to. She said it could take 2-3 months before he got used to the hearing aid and added that some people never got used to it. She made no attempt to adjust the sound. It was fitted with a programme for noisy surroundings which would enable him to focus on speech that was close to him. As it seemed that the hearing aid was moving out of Gerd's ear, she said that he could get a new shell if he needed it. There should have been a note in his records about the scan for the acousticus neurinom, but it was missing. However, Gerd said he had been informed after the examination that there was no neurinom.

During follow-up conversation with Gerd, he said that he was not satisfied; his hearing aid whistled when he chewed and when there was noise around him. In his own words, it was tremendously entertaining for the lady sitting next to him. He went to the dispenser, and the technician who looked at the hearing aid said that there was hole in the ventilation canal that had to be fixed. Moreover, the technician thought the adjustment of the hearing aid was too loud. He needed an appointment to have it readjusted which he made. During the adjustment at the dispenser's, Gerd was less enthusiastic about his hearing aid, because it did not interact with the hearing of his other ear. Also, the waiting times were too long, and if anyone asked about dispensers, he would recommend people to go to the private sector. He asked to have the hearing aid fitted with a music programme in stead of the noise reduction programme – however, it turned out that it was already fitted with a music programme. The technician adjusted the hearing aid so that voices sounded less shrill.

After about a month, Gerd still complained that the sounds his hearing aid produced did not interact with his hearing in his other ear – it was as if the sound was out of focus. He could not hear what other people said and what he heard did not sound right. When Gerd received a questionnaire from the dispenser he filled it in and enclosed a letter in which he complained about the problems he had with hearing what people said to him. The hearing aid had only meant a marginal improvement. After four months, Gerd was approached by the hospital. The technician found that the adjustment of the hearing aid was not distinct in the speech range, and it included too much irrelevant noise. Gerd has a hearing loss in both ears. The one with the hearing aid is not much worse than the other ear, but the amplification is only adjusted to the hearing capacity of the better ear.

After about a month, Gerd made a new appointment because his hearing aid whistled when he moved his head. While we waited for the appointment, he seemed frustrated and said that if he had paid for the hearing aid, he would have taken the dispenser to court. I had noticed that he did not seem to have any trouble understanding me, but while we were waiting, somebody said something to me and Gerd said afterwards that he had not been able to hear what to me had been perfectly clear. During the appointment, the technician adjusted the hearing aid but Gerd said it did not seem to make much difference. She was obviously at a loss about what to do and suggested a new hearing aid, a Widex, Senso Diva and a new appointment was made for the following month. I arrived early, and the technician called me to her office, she said that Gerd was likely to be one of those persons they could not help. He had been there so many times, he was a difficult patient who did not make a sufficient effort to hear. I told her about the situation where Gerd had been unable to hear my conversation with another person, and asked whether it would be possible to give him two hearing aids. She said that he would have too many problems with two in-the-canal hearing aids to which I replied that in my understanding, Gerd only wanted to hear and he did not really care if they were in-the-canal hearing aids. By the time Gerd came in, the technician had decided to offer him two behind-the-ear hearing aids.

Consequently, it was a considerable surprise that Gerd was much happier and more satisfied with his new hearing aid. He said that his sound perception was more harmonious and cohesive than before. He had a clearer perception of what was happening around him. The technician asked him to explain in detail, and he said that previously he seemed to have heard some of the sound outside his ear and something else in his head. Now he sensed that the sound originated from the same place.

Gerd had found it difficult to hear when he lately went to a large Christmas party – also they had whistled a bit. The technician inserted a smaller tube in the ventilation canal to minimize the problem. Gerd was pleased that the hearing aid was provided with volume control and the technician was pleased that it had worked out. She said that Gerd could come any time to have the hearing aid adjusted. After about a month I called Gerd to hear whether he was still happy about his hearing aid. He said there was no comparison with the one he had previously. He thought the old one had been faulty. I later talked to the technician. She said that Gerd probably was so pleased about the hearing aid because he had understood that the dispenser was unable to do any more for him.

In my interpretation, Gerd is an example of how someone can be constructed "cantankerous" – it was his right to return to have his hearing aids adjusted, and the problems he had with them were not connected to any misunderstandings or mistakes on his part. Rather, the adaptation process took a long and chaotic course, because Gerd was not given the right hearing aid from the start.

Observation of a time frame

In Keld's (23/M/53/2/H) case, more factors play a role for the process. Possibly he could have been more determined and persevering to become a contented user. He had found it difficult to acknowledge his hearing loss, which could have made him reluctant to solve his problems, and perhaps he should have had easier access to the dispenser. When Keld acquired the hearing aids, he was informed that because his hearing was almost normal in the low frequencies, he was a "border case" for hearing aids. He was given in-the-canal hearing aids in which all frequencies are heard through the hearing aid. If he had been given behind-the-ear-devices, he would have been able to hear some frequencies normally and others amplified. However, Keld was not willing to acquire the more visible behind-the-ear hearing aids. He said that he had a friend who had hearing aids that were much larger than his. If they had given him that type at the public dispenser, he would have acquired them privately to get smaller ones. He kept a diary over the first three months to learn about their use, advantages and disadvantages. Later, he sent it to the dispenser, who did not acknowledge receipt. He went to the hospital to have the shell adjusted, because the hearing aids itched which made him remove them several times a day. He complained that, when he had worn his hearing aids for a couple of hours, he had to rock them – otherwise he could not hear. The attitude of the technician was not forthcoming and Keld attempted to make some jokes about the situation, but he was met with a reticent attitude. The ear mold technician found Keld’s statements about his hearing aids atypical and, after trying various measures, decided to send them to the manufacturer to have the shells remade. If this did not help she would then suggest a behind-the-ear or a completely-in-the-canal model. Keld’s shells were replaced which made especially the right one fit much better. Moreover, he went to the hearing institute to have the amplification adjusted, which helped somewhat. Teaching, however, was still terribly exhausting due to the poor acoustics in the classroom. The hearing institute contacted the dispenser to find out whether he could try out another set of hearing aids that might be able to meet his needs for noise reduction. The dispenser replied that the change had to take place within the first three months after the acquisition. Now, it was too late, unless there was a radical change in his audiogram. It was decided that the hearing aids should be readjusted, and that Keld should approach a hearing consultant at the municipality in charge of difficulties in the work place because of hearing loss. After a number of meetings with the local authorities, Keld was granted what is called a flex job, which means that he retains his full salary and pension but he works fewer hours. His employer is reimbursed for the difference between the actual hours worked and the full-time hours. Thus, Keld’s problem was seemingly solved. The number of exhausting classroom hours was reduced and Keld could adjust his work load to his capacity. What remained were family problems because there was too much he did not hear and his work place had to adjust to the loss of a full time teacher. Keld as well as society invested many resources in making him a hearing aid user. Possibly, the process could have been even better, if the dispenser had attempted to fit him with a more advanced hearing aid.

Inadequate behaviour towards the users’ needs

Anders (27/M/66/2/H)

Anders is an example of a user who was met by inadequate behaviour by staff. If he had not shown perseverance and determination by returning to the dispenser several times to have the problems solved, he would probably have left the hearing aids in a drawer. At the same time, he never integrated the hearing aids into his life as a natural part of his existence. This too may be a question of perseverance and determination together with the procedures undertaken at the hospital.

For years, Anders had known he had a hearing problem. At the first examination, he was enthusiastic about the outcome, he also found the whole procedure interesting. While he was in the box having his audiogram made, the technician commented to me that his hearing loss was of such a nature that it seemed incredible that he was able to lead a normal conversation. Anders opted for an in-the-canal solution which he preferred to a behind-the-ear solution. The difference in his audiograms was inconsiderable, but sufficient to make the audiologist recommend a scan, but she did not inform Anders that it was for an acousticus neurinom. The scan turned out to be negative.

Anders could collect his hearing aids 1½ months later. He was very interested in the procedure, and the technician said he could guarantee a good result since the hearing aids were Signia from Siemens, but due to his almost normal hearing in the low frequencies, whistling could become a problem. This did become a considerable problem later and the question remains whether Anders should have been given a technologically more advanced hearing aid that could meet the problems of whistling. His hearing loss was steep and considerable in the area of speech.

The whistling did become a problem for the right hearing aid and he returned to the dispenser about 10 days later. The technician said that the hearing aid was all right but if the problem continued, it would have to be sent to the manufacturer to be repaired. Anders went home, but the hearing aid was still whistling. He went back to the dispenser, where another technician looked at it. He said that there was dirt in the hearing aid; he sucked it out, and said that it was now in order. Anders went home, drank a cup of coffee, while according to Anders, it was whistling happily. After about an hour, he went back to the dispenser, where a third person looked at it. He decided that the ventilation canal was too big and inserted a plastic tube into the canal. It helped somewhat but the whistling was still a problem. Anders was informed that the problem could no longer be treated as a technical problem, but that he had to make an appointment, which he did.

The left hearing aid started making a boiling noise. At the appointment he had made for the right hearing aid, he was informed that the left hearing aid would have to be repaired, and that the right one did not fit well into the ear. He would thus have to have a new imprint made. The technician objected to the plastic tube, which would have to be removed. About a week later he received the left hearing aid from Rexton (Siemens) and the other one the following week the other one. Both were fitted with a plastic tube in the ventilation canal.

Anders comments that he finds the dispenser staff very friendly but they could have saved their own time as well as his, if they had taken the time to find out what the problem was. He found them much more thorough in the process leading up to giving him the hearing aids. But when he really needed help from the staff, they were much more difficult to get hold of.

When Anders had received and returned the filled in questionnaire, he wrote that he was neither happy nor unhappy with his hearing aids and that he would like to be contacted about the sound in the hearing aid. When I asked Anders if he would return to the dispenser the next time he was going to get hearing aids, he said he would not know where else to go, and he did not have much confidence in the private sector. He has a sense of responsibility towards using his hearing aids since the public hearing health service pays a lot of money for the service. Anders's wife said that he is very meticulous about things, and that it affected him deeply when they did not work the way they were meant to. She asked why hearing aid users could not pay an additional amount to get a more advanced type of hearing aids. For Anders, the best thing about his hearing aids is when he removes them in the evening and that he is doing his fellow human beings a favour by wearing them. But he personally could do without them.

Frank (38/M/66/2/H)

During Frank's first appointment at the hospital, it was decided to give him two hearing aids, and he could collect them two months later. When the technician explained about the hearing aids, he put his one ankle on the knee of the other leg and placed the hearing aids on his calf in the folds of his jeans. I interpret the procedure as lack of consideration of the needs of the users. A better procedure would have been to have a table on which the hearing aids could be placed and where the new user could practise their manipulation. However, Frank found listening with hearing aids an improvement because voices became much clearer. The technician explained about reduced frequency resolution (reduced capacity to analyse sound) which he made sound like brain damage, but Frank did not seem to pay much attention.

When Frank started using the hearing aids in his daily life, he said he was not satisfied with them. When he watched TV, they were fine, he could tell that the voices were clearer. But when two people were talking and, even worse, when they were more, he did not hear any better. It was as if there was a big chunk in his head. One of his friends had a behind-the-ear device; he wondered whether it would be a good idea to try one like that. He therefore made an appointment at the dispenser. The technician saw immediately that the hearing aids did not fit Frank well. The problem could stem from the fact that the loudspeaker hit the wall of his canal and that the sound was sent from one side to the other. The adjustment of the hearing aids gave an equal amplification from 1000 to 4000 Hz, but his hearing loss is sloping towards steep in that range. She pulled the hearing aids a bit out of his ears and he now found that the sound was somewhat improved. She ordered new hearing aids, which he was to collect a month later.

When Frank turned up to collect the new ones, they had gone missing for which the technician apologized, ordered new ones and made a new appointment. When Frank tried on the new hearing aids he remarked that they seemed shorter than the previous ones. This time the technician had ordered Siemens with a wider ventilation canal, but the latter had not been done. The technician was very thorough and tested different sounds (cups, cutlery, keys and paper). Frank still found his own voice unpleasantly booming. The technician pulled the hearing aids a bit out of Frank's ears. The sound of his voice improved and the technician suggested that the hearing aids be polished by the earplug technicians. They would then be sent to him. She adjusted the hearing aids. Since his hearing is almost normal in the lower frequencies, it would be sensible to have a wider ventilation canal because it would give him more natural sound. Frank wanted to drill a larger hole himself since he was used to repairing very small items. The technician said it could be good idea if he did it himself. I interpret the technicians accept as an inadequate approach to the users needs. If Frank had broken the hearing aid, it is unlikely that the manufacturer's guarantee would still be valid.

A month later, Frank went to the dispenser to have his hearing aids polished because they did not fit him well. Later, the same month he had made an appointment to have them adjusted. The technician took them away to have the hearing aids tested and cleaned, and she was told there was not much amplification in them. She adjusted them and Frank was more satisfied with the new sound quality and also with his own voice.

The reason for coming was that the bass had disappeared – but when he pulled the hearing aids out a bit, it was better. The polishing had helped a bit, but not enough. For this reason he had put a thick "bandaid" on the hearing aids to keep them from being inserted too far into the ear. The technician found it most odd that "we can't make shells that fit," she told Frank that he should take care not to develop an infection in the canal.

He said that he changed the bandaid regularly and that he would put some fibreglass on the hearing aids instead.

For half a year, he had the thick bandaid on the hearing aids, because otherwise, it was inserted too far into the ear. He later removed it because the hearing aids started whistling as soon as he chewed or talked. He said regarding the dispenser that they had given him the cheapest hearing aids; however, he had not regretted choosing a public dispenser – he had not known anything about hearing aids at the time. In his opinion, the public institution did what they could for him with the means they had available. When he finally got the questionnaire from the dispenser, he informed them that the hearing aids did not help him.

Patronization

Dora (50/F/51/1/H) is probably a case of someone whose hearing is on the borderline for hearing aids. Her adult children had said that she always said pardon, or please repeat what you said. She often felt excluded privately and professionally because she missed a lot. When she saw the ENT, she was told that her hearing was normal for a person at the age of 75-80, and the ENT had thus recommended hearing aids.

During the first appointment at the dispenser Dora was offered one hearing aid. The audiologist was friendly but somewhat patronizing in the way she belittled Dora’s hearing loss. A hearing aid could be justified because of "Reduced Frequency Resolution" (reduced capacity to analyse sound). She was told that the hearing aid was not likely to help her in noisy surroundings. It made Dora feel like a hypochondriac and she therefore told me that she was useless for my study, which I said was totally unjustified. She was offered a Siemens Prisma 2 for her left ear.

While she was waiting for the imprint to be made, the audiologist came and said that she had ordered the hearing aid with a noise reduction function which would make it easier for her to cope in noisy situations. When Dora collected her hearing aid about a month later, she said that the sound was fine. The hearing aid was without noise reduction and the technician confirmed that it had been ordered with noise reduction and that she could check what had happened, but nothing further happened. The technician said that she had made a study that showed that people did not switch between the different programmes. She showed Dora how to clean the hearing aid. It turned out that the ventilation canal was blocked. Nothing further was done to check up on the problem.

The first time with hearing aids was a success for Dora. At the kindergarten where she worked, they had noticed she could hear everything. Dora decided to return to the dispenser to get the noise reduction programme installed. It was sent to the manufacturer and returned to her by mail. After that, they did not seem to be of much benefit. She informed the hospital, and they had told her to come without an appointment. She did not go, however, as she feared she would have to spend a whole day there. Finally, she did make an appointment, but forgot about it. When I talked to her she said she was still not happy about the hearing aid. She would call the dispenser for a new appointment. At the new appointment the technician asked whether the programmes in the hearing aid worked. Dora said: "Which programmes?" She had told me that she did not think that the hearing aid worked, and she hardly used it. An acquaintance had shown her how to check whether the battery worked (she closed her hand around hearing aid when it was on to hear if it whistled). This would have been a very useful piece of information if she had known it earlier, because she had changed batteries often. The technician gave her a new instruction booklet, as she claimed she had not been given one previously. I do not think this was correct because I had been given one and in other cases, the respondent and I were given brochures at the same time.

Dora found that the sound fluctuated. The technician suggested it might be caused by humidity. She advised Dora to buy a box that was especially designed to dry the hearing aid. Then, she checked the hearing aid and established that there was no amplification at all. When the hearing aid was sent to the manufacturer to have the noise reduction programme installed, the adjustment of the hearing aid had been cancelled. The technician now adjusted the hearing aid and tested Dora's hearing with it. She programmed the hearing aid with two programmes - one for "normal" surroundings, one for noisy surroundings. The beep that was supposed to sound when Dora switched between the programmes did not work and the hearing aid was sent to the manufacturer to have it fixed.

The technician was extremely thorough in her treatment, but she patronized Dora and said a couple of times that her hearing loss was quite insignificant. Dora obviously felt that she had no right to be affected by it. She said that, if I had not been making the study, she would have given up on hearing aids. When Dora received the questionnaire, she filled it in and generally showed her satisfaction with all the items. However, there were still items she was not happy about: soreness, the noise reduction programme did not work and she would have liked to have a volume control.

At the end of the contact period I had with her, she said that she had noticed that when she drives in a car and there is a bump, she can suddenly hear and then there is another bump, she again cannot hear. She knew that she should try to get an appointment at the hospital, but it discourages her that they belittled her hearing loss even if she herself finds it has a considerable impact on her life.

In my interpretation, the system cannot sufficiently accommodate Dora’s needs. On the one hand, too many incidents were left unsolved, and on the other hand, the attitude towards Dora’s hearing loss was condescending. Since the audiologist had dispensed a hearing aid to Dora, it must be assumed that it could help. In any case it is not part of the staff’s job to patronize the user.

4.2.9. Conclusion of the second pillar of the empirical findings

The second pillar of the empirical findings concerns the interaction between the dispensers and the users. Several factors play important roles in the execution process: the design of the chosen system, the allocation of financial means, the training of employees, the motivation and strategies of the users, and the quality of the hearing aids.

Whenever human beings, institutions and technology in the form of hearing aids interact, it is a process in which human beings can fail but also in which problems can be solved. The possibility of returning for advice, adjustment and repairs is thus almost always imperative for a successful outcome.

4.3. The interaction between the user and the hearing aid

This section presents the empirical data seen in relation to the third pillar in the theoretical chapter regarding technology. I concentrate on the following points:

Technology stabilizes social life and is a factor of social and cultural contingency management (Beck 1996: 296-297). For the hard of hearing, hearing aids are mostly an enabling condition of everyday life. Consequently, I examine here the users' expectations of the technology they acquire and what their experiences are.

The use of hearing aids leads to a temporal decentring of the human subject, since technology to some degree has the capability to mediate what and how its user hears. At a semiotic level, it is possible to speak of material agency that emerges temporarily in practice (Pickering 1993), which varies from one device to the next, depending on the quality of the device and its adjustment, and on the individual perception of sound. The material agency decides the quality of the reproduction of the soundscape. The hearing aids beep when the batteries need changing, thus encouraging the user to take action. Some hearing aids amplify the sounds that come from the direction facing the user and suppress the sounds coming from the sides.

The unpredictable relationship between self and other may be paralleled to the user's ambivalent attitude to technology. In the case of hearing aids, the users may see them as an indispensable extension of themselves and as a device to fulfil their needs. But in other situations or to other users, they may be seen as alienating, subjugating devices that question orientation and identity. Hearing aids are thus able to evoke emotions of frustration or satisfaction, just like any human relationship. When the relationship "works", the hearing aid is experienced as an extension of the self. In other cases, the relationship remains an antagonistic one. In this case, the users develop counter-strategies.

4.3.1. Expectations and experiences

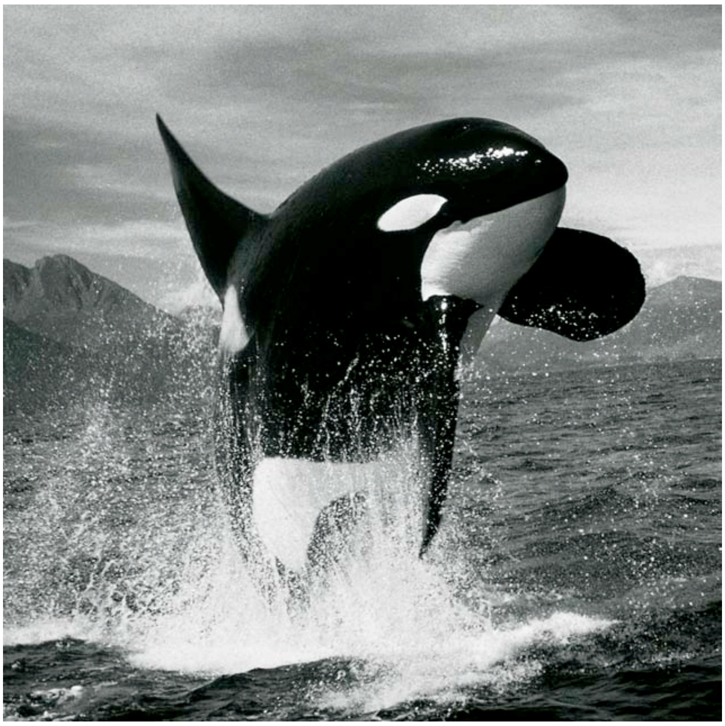
4.3.1.1. Creating expectations

Under the theoretical chapter's first pillar, "The hard of hearing and their interaction with their lifeworld", I define in more detail what I mean by experiences and expectations. When I asked the potential users about the latter, their expectations were usually vague – of course, they wanted to hear better, but their ideas as to the functionality of the hearing aids and what they could achieve for them had to be seen in the light of what I write in the first pillar of this chapter under "4.1.7. Caught between acceptance and acknowledgement". Moreover, advertising could be said to be a creator of expectations but to make advertising work, the advertised product must be attractive and must reflect the social perception of people's lives. The themes of an advertisement thus reflect people's worries about marginalization due to the hearing impairment and also the hearing aid itself. It can be said that hearing aids are projected in a discursively, regulated social and cultural context (Pfaffenberger 1992) that is based on equality and a low tolerance towards people who are different. Not only is there a difference between the ability of the individual to distinguish between facts and the virtual world of advertising, there is also a difference between the experiences we have in connection with different commodities. Where e.g. cars are concerned, the modern consumers are able to relate to at least some of the statements made in the advertisement because of their knowledge of the performance and appearance of cars. Another case in point is washing detergents. We all know that a dirty shirt is a dirty shirt, and we know that it can become clean in the washing machine; but it does not leave the washing machine in an ironed and folded condition. With regard to hearing aids, the new user usually has personal experiences of their own feelings, fluctuating between acceptance, acknowledgement and aversion, but they neither have experiences with listening though a technological device nor with the physical experience of having an object in the ear. The narratives chosen to bring the advantages of hearing aids closer to the new users thus often involve subjects of inclusion and acceptance as well as naturalness and creative powers. The following are some examples of narratives on hearing aids.

A woman in her sixties, presumably a grandmother, is driving her car with her grandchildren in the back. They are talking to her, and she obviously enjoys the conversation. For hard of hearing persons, driving in a car is a particularly difficult soundscape, and the meaning is immediately conveyed: "The technology advertised here will extend the space in which I and my grandchildren are part of the same social setting." The Oticon advertisement constructs a narrative about the happy exchange between the generations as opposed to the exclusion she would experience, if she could not hear her grandchildren's chatter behind her back.

Another Oticon advertisement shows four people playing bridge in an attractive private home. In bridge, the players will have to bid for the contract best suited for their cards. The one who wins the bid is the declarer, and he takes over the responsibility for playing the cards and trying to win the tricks. The declarer's partner (the dummy) lays her cards on the table, and thus has no further responsibility. All card games are about establishing a hierarchy in as much as the rules decide which card has the highest rank. In bridge, however, the power implications are even more obvious, as the game requires a good memory, skill and the ability to learn. In addition, the interaction aspect is pronounced, as the game is about building a bridge between the declarer's and the dummy's cards – if the cards fit, communication can be established between them and they may win. The players in the advertisement are obviously keen on the game since they use a "bidding box" indicating that they are experts and only the best is good enough. They all seem to enjoy themselves. The declarer, who also is the dominating figure in the photo, is an attractive male hearing aid user, around sixty. He is obviously attracted to the dummy, who is a younger, blonde female. Below the photo the text says: "Experience the difference and an active life with better hearing. Syncro is an entirely new generation of hearing aids inspired by the brain. Contact your local hearing dispenser for further information." The advertisement is a construction of the narrative that a hearing aid makes it possible for a hard of hearing person to enjoy himself with friends. Moreover, hearing aids are used by people who make demands on life. And it is a deconstruction of the myth that hearing aid users are sexually unattractive.

The Hearing Aid manufacturer Widex used to advertise their hearing aid 'Senso Diva' with a Killer Whale surging out of the water. Apart from being a beautiful animal, the photo reflects notions of freedom (wild animal) with the meaning of not being bound by the fetishized body subjected to notions of beauty and youth. At the same time, the whale can be seen as a phallus symbol and thus an embodiment of generative power which is the opposite of the common association of hearing aids. The shape of the animal is rounded which makes it look young and intact unspoilt gives an association of something pleasant to touch. Moreover, the Killer Wale breaking out of the water transmits the technological break-through of new innovations.



Another killer, the Snowy Owl, is used to advertize 'Savia', a product from Phonak. The snowy owl was chosen because it is a worldwide symbol for wisdom. Also, the Snowy Owl has adapted to its natural environment in many ways using unique features such as its fantastic hearing sense and its ability to fly without making any sounds (Phonak 2005).

As shown above, the promotion of hearing aids implies the construction of narratives of the harmonious and active life. There are also advertisements concerning overcoming physical discomfort in connection with hearing aids, but because the users have never experienced this discomfort, these advertisements do not make much sense to them. I would argue that for the great majority of the new users, advertising played a very minor role, if any. In the light of many potential users who were unwilling to dare the attempt to use hearing aids, the managing director of Phonak, Denmark, Søren Hougaard, previously Widex, said: "Our communication to the users has failed; we have not succeeded in bringing the message home."

Another position is taken by the hearing therapist, Bernadette Murray, who said that the lack of experience with hearing aids, as well as the individuality of hearing loss, give advertisements a specific penetration when new users are involved.

As argued above, however, the respondents had only to a very limited degree studied brochures that could form their expectations. Exceptions are Frank (38/M/66/2/H), Carsten (59/M/66/1/P) and Jens (68/M/66/2/P), who were mainly interested in the factual content and thus not the narratives of the good life with hearing aids. My interpretation is that lack of experience with hearing aids, and especially the lacking desire to gain experience with hearing aids, make it difficult to create a relationship in which the viewer comes to care about the events recounted. It is only after the acquisition of hearing aids has taken place and direct interaction with technology exists that it becomes meaningful to relate to the content of advertisements.

A case in point is the discussion I had with Gerd (57/M/67/1/H) during the 30 minutes we waited for a consultation. In the waiting area, there were magazines from the hearing association with hearing aid advertisements. A Phonak advertisement thematized improved speech perception, which made him wonder what that meant in comparison to those he had. We also looked at an advertisement for the ReSoundAir hearing aid, a behind-the-ear solution for which the design is much lighter than other behind-the-ear models. The design appealed to him, because he found there was a kind of honesty about them, partly because they were not designed to be hidden, and partly because the technology was not wrapped in an invisibility cloak of skin-coloured plastic, but an attractive design that was made to show. The illustration showed a man with a bucket over his head, which is not meaningful until one has tried the occlusion effect experienced by a number of hearing aid users. As compared to Gerd's pre-hearing aid days, his experiences had now provided him with a vocabulary that enabled him to reflect on the advertisements. The knowledge gained had thus situated hearing aids and their functionality in a particular and unequivocal way (cf. Barth 2002:2). For Gerd, this meant that the interaction with the technology had made hearing aids pass from being a marker of difference and something that was better hidden from the world to be a marker of functionality. But it was important that their design expressed functionality and modernity. For the great majority of the other respondents in the study, the hearing aids remained an object that was better hidden from the world.

The finding that advertisements hardly played a role for inexperienced users made me refrain from discussing hearing aid brochures with them. If I introduced them to advertisements, which then evoked their expectations, my study in this connection would have interfered seriously with their choices and thus their experiences.

A dispenser who seemed to be able to reach the ears of potential users was the proliferating private dispenser, Dansk Hørecenter, which started advertising during the research period for this thesis. It published full-page advertisements in the leading Danish newpapers, like Politiken, Berlingske Tidende and Jyllands Posten, as well as local newspapers. The narratives chosen to support the advertising often portrayed hearing aids as everyday commodities; they could for example involve the season: "Hear before Christmas" – or there would be special offers at certain times of the year. Some respondents had taken note of these advertisements and had chosen the dispenser because they felt they would get better service there than from the public system. Five of the respondents chose this dispenser.

4.3.1.2. The effect on expectations formed through interaction with other hearing aid users

The experiences of other hearing aid users played an important role in the formation of some of the potential user's expectations. Thus, the source of expectations is characterized by coincidence and engagements that occur through practises and negotiation. It is essential, however, how the potential users interact with those persons, and their own construction of the necessity to hear. Trust in what other people tell us about their experiences becomes an important motivation to act. Frederik Barth (2002) notes that inference is accepted as a valid means of acquiring knowledge, which is what happens when trust in someone on a specific item replaces the value of personal experiences which could imply that hearing aids are a degrading or useless attribute. This applies to those respondents who had dragged their feet about becoming hearing aid users (25/M/79/2/P Jørn; 29/F/63/2/H Inga; 31/F/57/2/P Birte; 42/M/76/2/H Eiwin; 51/M/62/2/H Bengt). An example is an acquaintance Anders (27/M/66/2/H) made on a vacation, or Bengt's best friend, who had hearing aids. This convinced him that he could also get some. Previously, his initial focus had been on human difference and other people's attitudes towards a technological device meant to compensate for a physical deficit, rather than on his own ability to hear. When his friend acquired hearing aids, they were no longer devices representing deficiency, but something they had in common, and they were thus acceptable to him. His expectations regarding his hearing aids remained rather vague, in as much as he said: "I don't really know. I haven't given it much thought other than it must be different from what it's like now."

Inga's (29/F/63/2/H) perception of hearing aids had been affected by elderly relatives, who had had negative experiences with hearing aids. Hence, she had not really considered them to be something that could help her. She had a shop where she sold handicrafts. One day a window cleaner and her shop assistant started talking about hearing aids, as if they were the most natural thing in the world. For Inga, this was a totally new perspective. It was only then that she found out that her employee was a hearing aid user. Moreover, she could hear much better than Inga could. This had encouraged her to dare to try them.

Frank (38/M/66/2/H) was quite optimistic when he said that he often decided to go home when he spent time in his rowing club, because he could not hear what the others said. In the club, many of the older members had hearing aids, and he had noticed the difference they made. They cheered up and were part of the fun. Jakob's (53/M/77/1/H) wife had been a user for a number of years, which undoubtedly contributed towards his confidence in hearing aids.

Another incentive to do something about a hearing loss could be knowing someone who works professionally with hearing aids, which was the case three respondents (38/M/66/2/H Frank; 59/M/66/1/P Carsten; 72/F/61/2/P Lette).

Some of the respondents had knowledge of users whose experiences did not add considerably or positively to their expectations. Three respondents (28/F/57/2/H Lene; 71/F/56/1/P Janne; 72/F/61/2/P Lette) worked in the health sector and had some experience in handling their patients' hearing aids. Moreover, Janne's mother was already a hearing aid user when Janne was a child, but they did not seem to have solved her hearing problems, and she had given up using them. Lene, Janne and Lette thus had some knowledge of the physical appearance and functionality of hearing aids, but since their patients were mostly mentally impaired and thus not equal interaction partners for them, they – in my interpretation – could not use their patients' experiences to form their own expectations. The three of them were all highly conscious that they wished to have small types of hearing aids, which were different from especially the behind-the-ear-models that their patients had been provided with. Other respondents had experiences with other hearing aid users that did not necessarily make it possible for them to acquire knowledge about hearing aids: Astrid's (52/F/65/2/H) granddaughter was a hearing aid user. She had asked her grandchild what it was like, but she had replied that it was impossible for her to explain, because to her hearing aids were normality, and she was unable to say anything about adaptation or the process of creating expectations and turning these into experiences. None the less, Astrid had the idea that her hearing aids could possibly be built into her glasses – a concept which was given up many years ago in Denmark.

Jørn (25/M/79/2/P) was aware that becoming a hearing aid user could involve some degree of adaptation. A colleague had told him that he would not get his hearing sense back, and that it would not become what it was when he was young. Moreover, he would have to be persistent. It was not something he could just plug into his ears and that was that. It was necessary to make an effort – and that was also what he intended to do.

It was quite common that the respondents did not know what to expect, even if they had given it some thought. Anders (27/M/66/2/H) said that his expectations were about 50/50. He had once taken a course where one of the other participants was hard of hearing and had worked for Oticon. His type of hearing loss could not be helped by a hearing aid. Anders thought that the same could happen to him. Inge (36/F/68/2/H) had friends who were not particularly happy about their hearing aids, which seemed to add to the experience of hearing aids not being of much use.

Ulf Hannerz (1992) says that human beings cannot live in the world without producing sense through experiences, interpretation, contemplation and imagination. The motivation of being competent and/or equal interaction partners in professional situations and social activities differs from one respondent to the next. However, behind any expectation to hear better is the incentive to produce increased sense of the lifeworld, even if some of the respondents say that they do not know what they do not hear. The following statements and quotes reflect rather different degrees of optimism and apprehension about hearing aids:

> Inge (36/F/68/2/H) put it very precisely and spoke for quite a few of the respondents: "When your hearing sense has been gradually diminished then you can't really remember what it's like to hear normally, and consequently I don't know what to expect."
>
> Keld (23/M/53/2/H) said: "Well, I have a hunch that the blanket I feel that lies between my eardrum and the hearing centre will be levelled by the devices so I'm not sceptical about wearing them – I don't feel it's handcuffs I have to wear, but I haven't tried them yet!"
>
> Janne (71/F/56/1/P) was somewhat worried about becoming a user because she thought she would not be able to concentrate on specific sounds. Without hearing aids, she could decide to listen to the person she talked to or the clock in the room – but with hearing aids she would not be able to exclude any sounds. After she had made up her mind to become a hearing aid user, she sensed that there were things she could not hear: "It's like a grey zone – like when there's a fog and there are things you cannot see clearly. I think I'll be able to hear some of those things!"
>
> Jesper (16/M/59/1/H) wanted to be able to hear better at work: "I do hope that it will help me hear my colleagues in my everyday life!"
>
> Gerd (57/M/67/1/H): "I have no idea whether it'll be good or bad … I hear opposite views … but I hope I will again be able to hear what people say without having to exert myself to the utmost and to guess what they say and think: 'Well, they probably said that!', and then pretend to have understood – then, try to return to the subject to make them repeat once again. Quite simply, I'd like to hear everything!" And about birds: "I do hear some – but I don't know what I don't hear – I don't know what I miss out on."
>
> Dora (50/F/51/1/H): "I look forward to hearing what my grandchildren say. Last week, I had Anna here. She's three years old and talks all the time: Grandma, do you want some pizza? You know what? And then she turns her head while talking. I look forward to not having to say, 'Speak up', or ask, 'What did you say … ?'. then I look forward to going to a party where I can hear everything and not miss out on things and just nod – people think I'm a complete idiot. I have great expectations! Recently, I went to a funfair where I couldn't speak to my friend – I saw one of my colleagues who seemed to chat uninhibitedly."

Obviously, the acquisition of hearing aids is influenced or triggered in one way or another by the interaction with the lifeworld. However, for some, the poor outcome of a friend's or relative's hearing aid acquisition may enhance their decision to use hearing aids and to achieve a better result (41/F/59/1/H Marie; 43/M/73/2/H Herluf; 52/F/65/2/H Astrid; 59/M/66/1/P Carsten; 71/F/56/1/P Janne; 73/F/79/1/P Karoline).

Carsten thinks it a sad situation that his old mother never got used to the expensive hearing aids she had acquired from a private dispenser. She is totally isolated at the old people's home where she lives and is in addition rather suspicious. Astrid had several hard of hearing relatives in her parents' generation, who always complained about their hearing aids. She herself is convinced that she is getting hearing aids at an age when she can learn to use them. Marie had a father who would not accept his hearing loss or any other physical shortcomings that isolated him from other people. She thought this extremely sad.

4.3.2. The experience of material agency

> "It says something!
> It's as if I've got much more space around me!"
> (26/F/67/2/H Jane)

The kind of hearing impairment dealt with in this study is progressive hearing loss, which habituates the individual to a quieter world. Several of the respondents expressed how much they enjoy peace and quiet – even to the extent that it is a point of orientation for them. This point should be seen in relation to the time, just after they acquired their hearing aids when new users experience a temporal decentring of their identity, and technology mediates what and how they hear. They are bewildered or even shocked by the noise of the world with hearing aids – and even if many of the respondents were pleased that they could hear what other people said, they sometimes preferred the quieter soundscape of the pre-hearing aid days:

> "I fled from my son's birthday party; it was unbearable!" (62/M/76/2/P Holger).
>
> Ketty (69/F/81/1/P) apologized at a meeting that she was unable to hear because she had become a hearing aid user.
>
> "What a noise when I do the dishes. It's so extremely tiring to wear hearing aids" was Astrid's (52/F/65/2/H) comment.
>
> Carsten (59/M/66/1/P) complained that over the years his female colleagues had become used to talking loud to him. Now that he could assess their loudness, it was too much for him, and he had his hearing aids adjusted to amplify less in the area of "female voices!"

> Jørn (25/M/79/2/P) said: “I really feel quite comfortable by myself!” A positive note was his: “Doesn’t the blackbird know that he doesn’t sing in July?” However, as an artisan, Jørn also had a problem when he worked with his metal tools – they made a sharp unusual noise when he placed them in their various boxes. In his view, the hearing aids added to his quality of life – when he removed them.

Almost all the respondents said that they were subjected to a noise bombardment from traffic, including the noise of their own cars:

> “When I left the dispensers with my new hearing aid in the ear, I thought I had left the window open, because the passing cars were tremendously loud – not to speak of the clicking sound of the direction indicator – it sounded as if I had a table tennis match in the car!” (41/F/59/1/H Marie).
>
> Marie also found lawnmowers, chewing crisp bread, household noises like kitchen utensils, rattling newspapers and flushing toilets tremendously disturbing.

Even the noise of touching one’s clothes could be peculiar:

> Jens found the noise his clothes made annoying. He jokingly said that he often went to bed very late when his wife was asleep. He now removed his hearing aids before he undressed, so the noise of his clothes would not wake her.

Another of the new users, Trine, (46/F/68/2/H), immediately took to her hearing aids.

> She was prepared for a “replacement of natural sound” and was thus positively surprised that she recognized her husband’s and my voice at once. “It’s great. It’s a new quality of life!” When the technician removed the hearing aids to teach Trine to manipulate them, she said: “Oh, I get so deaf!” One of her expectations had been that it might be difficult to handle the hearing aid, but she had no trouble cleaning the device.

The hearing aid as such is a mass produced item that is individualized through its adaptation to the particular needs of the user, while the user is given the ability to hear better through the technology of the hearing aid. Those who have a successful relationship with their hearing aids entered into a mutual adaptation process, in which user as well as technology are transformed. When the hearing aids work according to their function, the user’s benefit is effortless and unproblematic. The relationship between the user and the device is symmetrical, in as much as they exchange qualities and actions. Latour (2000) defines this as the folding of space and time. The result is a blackbox in which the different actants (in this case, user and technology) present themselves as a unity. The hearing aid is individualized according to the ear and hearing of its user: It is fitted with a battery and turned on, inserted into the ear; it will beep according to the chosen programme, and when the battery is flat. When it is no longer time to hear, it is removed and cleaned. If, for some reason, the hearing aid does not work, the time and space have to be unfolded to establish when and where something went wrong. Is the hearing aid not adjusted properly for the user? Did he not maintain the hearing aid as prescribed? Did he have it on in the shower? In this process, the user and the hearing aid do not form a smoothly operating unit, rather the user may harbour a fair amount of resentment and even antagonism toward his hearing aids. At this stage, the user may counteract the technology – and decide not to use them anymore.

An example of the interaction between user and technology, as well as the material and human agency that come into play in the process, are well described by Jens (68/M/66/2/P). One of the first experiences he had with his hearing aids was a visit to a Copenhagen theatre where he and his family went to see a show. In the lobby, 150 people were chatting and the acoustics were terrible, but with hearing aids it was disastrous. Jens describes the sound picture as a gigantic wave that hit him; he felt he could almost see it, and his ears died. He could not hear what his wife said who stood right in front of him. It was like having cotton wool plugs in his ears. He is used to hearing protection devices when shooting and it was exactly the same sensation. From reading the brochure for his hearing aids and from what he had been told by the dispenser, he had learned that the hearing aids would suppress noise from the sides as long as he looked at the person he wanted to hear. But he found he was worse off with hearing aids than without because they reduced the volume to a degree that left him deaf. The automatic control took away his own sense of control. The only thing he could do was to switch to telecoil, which excluded everything, but the world around him was already excluded. All he heard was white noise. He told his wife that he could not hear a thing, but he did not know if he was yelling or speaking normally. The experience was very different during the show, when the telecoil was very helpful. Their seats were in the rear, but it was like sitting in the first row. He could hear the actors breathe. Sometimes, it was very loud, and in those instances, he would have preferred to have a volume control.

After the theatre, the family – his wife, their son and his mother-in-law – went home to have supper. Jens says that the family is rather undisciplined – everybody speaks at once and wants to hear themselves speak, and nobody listens to the other. The result is that the sound level has been turned up accordingly over the years without anyone noticing. Things trickle through anyway, and it did not really bother him when he did not hear well. But with hearing aids, it was suddenly a problem for him, because it made his ears hurt. He got angry and asked them to speak one at a time. His wife was quite aggressive, and he said to her:

> "You've recommended that I get hearing aids. Now I have them, that has consequences - It is artificial sound; it has side effects and I am pointing them out to you. If you get aggressive, you are telling me that if it is like that, you may not be ready to accept the limitations they have for you. You must – if you want to communicate with me – speak in a manner that complies with the hearing aids – otherwise there is no reason to pay a huge amount for them. I might as well give them back. I will feel much better without them. Normally, I can hear what you say because you are so loud. I will do

> what Alfred [the brother-in-law] does. I'll remove them – you can speak as much as you want to, but it will be without me."

That immediately led to conflict in the family. It was extremely difficult for the wife to accept that she had to change her mode of communication. Jens decided to return to the dispenser to have his problem solved. He explained that when his wife speaks, he can hear the electronics operating. The technician managed to reduce the noise. But he also returned to have other problems solved. To avoid the problems Jens had when he was in large crowds, she reduced the amplification of the sounds that came from the side and from his back. He concentrates on the person standing in front of him and if someone comes from the side and talks to him, they have to draw his attention to them. That also allows him to withdraw and relax when he wants to – it is like a volume control. The ability to hear what is being said by those in front of him includes people at some distance. That gave him some unexpected experiences as he could often hear what was said at other tables in a restaurant. Jens did not see this as a disadvantage, but both Bertil and Eskild (44/M/72/2/P; 56/M/74/2/P) complained that at dinner parties, they could hear what was said at the other side of the table, but they could not hear what the person next to them said. That would require them to turn their heads towards that person which could be tiring during dinner and, moreover, socially unacceptable to look constantly and directly at the person close and immediately next to them. The above description of the adaptation process illustrates that, for some, there are still priorities to be set, even after acquiring the hearing aids, and battles to be avoided or fought with the hearing aids and interaction partners. Jens' interaction with the technology, the technician and his family lies somewhere between a game and a battle that he is not prepared to lose. In Jens' narrative I find a perseverance and determination not to be objectified by the technology, as well as an intense pleasure in technological skill (Haraway 1991a).

> The same fascination with technological performance is found Birte's (31/F/57/2/P) first experience with her hearing aids. She was thrilled when her sewing machine zigzagged – the noise was at first very loud, but then her hearing aids would turn down the noise. When the machine reached a corner, and she reduced the speed, her hearing aids turned up the volume again, and once she had turned the corner and increased the speed again, the hearing aids turned down the volume. Also the birds were amazing, and she now needed the TV to be set at a lower volume than her husband – she had told him not to yell. She also found that her brother yelled, previously she had not been able to hear him.
>
> It was not a given thing, though, that well-adapted hearing aids made the family grateful for fewer misunderstandings. Bertil (44/M/72/2/P) said that his family had complained about his hearing loss before he got the hearing aids, but they did not express their gratitude that he now heard much better. They seemed to take his improved hearing for granted.
>
> Lette (72/F/61/2/P) felt completely fenced in by the material agency of her hearing aids: she felt that she was in a room by herself, which made her feel excluded. Voices

> and smells matter very much to her and when the technology distorted the voices she knew and loved, she did not feel physically and psychologically present. Her own voice also sounded strange. A solution for her was to use only the right hearing aid.
>
> Ketty (69/F/81/1/P) participated in an amateur orchestra. She had much pleasure from her wonderful grand piano, but she was terribly disappointed that it lost its timbre when she played with her hearing aids. Her hearing aid was provided with a special programme for music, but still her grand piano sounded like the keyboard she sometimes played when the orchestra performed. She played the piano when I was there to interview her, and it obviously made her sad that the sound was so different. It disturbed her that, suddenly, she could hear her rings against the keys.
>
> Inge (36/F/68/2/H) was also disappointed when she played. I talked to her when she still was trying to adjust to her hearing aids, and she said that she had not been to a concert, because she feared they would distort the sounds, and she would prefer not to have to fumble with their adjustment in public. Inge and Ketty had the same brand of hearing aids, Widex.
>
> The unpredictable attitudes to hearing aids and what they can do for the users are reflected in Astrid’s (52/F/65/2/H) experience. She was given another brand, Sonic. Moreover, her type of hearing loss could obviously be alleviated by hearing aids. In general, she was highly enthusiastic about her hearing aids and always wore them at concerts. Astrid obviously became a hearing aid user at a stage of her hearing and personal life situation that made it possible for her to derive a meaning from her hearing aids. Her social awareness and her awareness of intellectual appearance were high, which made her accommodate the material agency and thus the restrictions the hearing aids imposed on her.
>
> Another type of material agency is when the hearing aid beeps in order to inform the user that the battery is running out or that it switches to a different programme, such as the adjustment for speech, music or telecoil. Ketty finds these switches complicated when she is somewhere with a lot of background noise. Her device gives different beeps for the different programmes, but none of them seemed to work for her, which made her feel bewildered.

The question is whether it can be concluded that hearing aids have the agency to make the user into the manipulated other, e.g. when the technology turns the volume up or down or when it suppresses some sounds and amplifies others. Some hearing aids can even be programmed to remember the soundscape in which a user normally moves, e.g. from loud music to more quiet settings to meetings and lectures. It will then automatically shift between the different soundscapes. Some users felt the programmes suited their needs; others felt objectified by it. It is possible to get more advanced types of hearing aids that have a remote control, and some of the experienced users I talked to had one and would not do without it. I already mentioned the farmer who said that when she was out ploughing the fields in her tractor, the hearing aids would turn down the amplification to a degree that made her deaf – just like Jens’ experience at the theatre. With her remote control she could select the programme that fitted the soundscape. Another informant, Annemarie, had a severe hearing loss, and she had acquired various kinds of technology that alleviated her hearing loss. Her hearing aids use 5 different programmes, including those for an FM-receiver and telephone communication. They are programmed to shift automatically according to the soundscape, but she finds that the automatically chosen adjustment does not always suit her needs, which makes it draining and stressful to listen. It could be argued that Annemarie's case is too different from the other respondents in this study. Nonetheless, I include her, because I find that her situation is illustrative in a discussion of different theoretical concepts of the interaction of technology and user. It is a must for Annemarie to be in control of the different programmes, and she wants to be able to see what she is doing. Consequently, a remote control enables her to regain control over the technology, and allows her to choose the preferred setting. It would not be realistic to be able to select the different programmes via the hearing aid itself – there would be too many function keys to choose from and the hearing aid would have to be much bigger. She would also have to remove it to find the right key. Annemarie does not want to fumble with it openly and lose valuable time. By using the remote control, she can control both hearing aids with one click – and her action is separated from the hearing aids, which means that she does not have to offend the cultural norm of not picking our ears, nose or teeth in public. The only thing Annemarie regretted about her hearing aids was that she could not turn them off with the remote control. She had to do that directly at the hearing aid. Later, I revert to the advantages of turning off hearing aids. In the discussion of Latour's (2000) concepts of composite whole and the folding of space and time in relation to the experienced user, Annemarie, I can see factors which his concepts fit. Annemarie in some aspects forms a composite whole with her technology and would have great difficulties communicating with a hearing lifeworld without them. On the other hand, her own strategies and counterstrategies in relation to the performance of her hearing aids leaves so much agency on her part that I find her interaction with the technology much more along the lines of Andrew Pickering, when he speaks of a temporal decentring of the human subject; but only a temporal one, in as much as she regains control over her device by demanding to be able to use the remote control instead of the preset programmes of the technology. This gives her a high degree of intentionality, accountability and responsibility, which in my view is not reflected in Latour's concept of the composite whole.

Some users blamed themselves for not hearing everything with their hearing aids (52/F/65/2/H Astrid; 62/M/76/2/P Holger; 66/F/71/2/P Henny).

> Henny (66/F/71/2/P) said that she did not use her hearing aids much. Her hearing aids remained a foreign body in her ears. She blamed herself for being too old or not trying hard enough. At the same time, she said that it was less exhausting to listen with hearing aids – hence, she knew she missed out on a lot without them.

Other users put the blame on the hearing aids. Anders' (27/M/66/2/H) wife said that he would sometimes use a four-letter-word about his hearing aids, which he admitted. The difference between blaming oneself and blaming the hearing aids can be said to be the difference between being objectified by the technology and applying a counterstrategy that can be an attempt to regain a sense of control of the situation. The latter may lead to cursing the device and possibly putting it into a drawer, which of course will not mend the relationship – but it will make one's sense of control return and make one regain the status of subject (cf. Jackson 2002). In Anders' case, more actors are involved. If Anders had been left to decide, he would have regained control by discontinuing the use of his hearing aids, but his wife's intervention made him succumb to the social control requesting him to hear. She was annoyed that he neither ignored the problems his hearing aids caused him nor found a solution to them. On the one hand, he resisted the delimitation he experienced because he was unhappy about the sound in the hearing aids; on the other hand, they met especially his wife's needs for social contact. Human and material agency are thus entwined in a practice of resistance and accommodation (Pickering 1993). Resistance because they exasperated him, and even if some of the problems they caused him possibly could be solved, he did not feel enthusiastic enough about his hearing aids to have them adjusted. His wife was not aware that hearing loss could be linked to noise sensitivity; neither did she know much about the performance of hearing aids. When he complained that traffic noise or unexpected noises from the radio made him feel uncomfortable, she would say that it was no different for normal hearing people.

> Anders: Sometimes I miss being able to adjust them myself – some people can do that, I can't. They should do it by themselves.
> Anders' wife: You can exclude the noise psychologically. I've worked in a crèche for 20 years, and I can shut out noises. … You must give it a chance.
> Anders: It can't be right that the public spend so much money – I must be able to use them.
> Anders' wife: But you still say they're no good.
> Anders: I guess so. Also, something practical – when I play badminton, then I take a shower afterwards. I can't put on my hearing aids immediately afterwards because I have wet ears. Then I can't talk to people, some people don't speak clearly. It's just such a detail, but I find that I can't always use them.
> Interviewer: Doesn't it help you to put cotton wool into your ears [when you shower]?
> Anders' wife: You have to take the shampoo out of your bag, then you can take the cotton wool out as well. It's a solution, isn't it?
> Anders: I haven't thought about that.
> Anders' wife: And you can even get water resistant cotton wool.
> Anders: Well yes, as a matter of fact, I don't seem to have any problems, do I?

However, Anders' hearing aids also represented an accommodation of his needs, because they reduced some of the misunderstandings that earlier gave rise to conflict. His wife knew instantly whether he wore his hearing aids or not. Moreover, other people would also comment that she was not as loud as she used to be, which made Anders say in the interview that even if he was not very happy about his hearing aids, he did other people a great favour by using them, because his wife was not so loud anymore.

Another counterstrategy for those who blamed themselves and those who blamed the hearing aids could be to return to the dispensers – for the above users, this option has been described under the interaction between the users and the institutions.

4.3.2.1. The reconstruction of the user's own sounds

For most users it requires habituation to get used to listening to one self. In some cases, the problem may be an adjustment problem, e.g. when the complaint is that the sound of one's own voice booms, which was the case for Jakob (53/M/77/1/H) and Lotte (64/F/82/2/P). Some said it was like speaking in a barrel; for others it was as if they were fenced in. Carsten (59/M/66/1/P) said: "It's like flying, like having a plug in the ear – I just need to get rid of it, but I don't think that I can avoid it!" It should be noted that the problem mainly exists for those using the in-the-canal type hearing aid. None the less, most of the users clearly preferred the in-the-canal solution, because it is less visible. Chewing, swallowing, breathing and talking suddenly become uncomfortable experiences that have to be dealt with somehow or other. For some respondents, the adjustment is easy. Some respondents looked quite shocked when they first got their hearing aids, but quite a few seemed to accept the new way they sounded quickly, (46/F/68/2/H Trine; 52/F/65/2/H Astrid). Most respondents commented, however, that they had trouble chewing crisp bread, carrots and hard sweets, and that they removed their hearing aids in those instances. Janne (71/F/56/1/P) worked in the evenings, and when she came home, her husband had made a crisp salad that she ate in front of the TV, but she had to turn up the volume because of the noise she made when chewing the salad. Marie (41/F/59/1/H) complained that the noise when chewing was the reason why she removed her hearing aids at home. She did not wear them at dinner parties, because she could not hear what people said to her when she chewed. When she did not wear them, her grandchild complained that she did not use her hearing aids, since this made it difficult to communicate with her. The problem lies in the fact that having a meal with someone while communicating freely is an important factor in the negotiation of a position within a social circle.

Another user who counteracted the agency of technology was Stine (65/F/74/2/P). To regain control over her life, she stopped using her hearing aids. It was rather a shock for her to listen to herself talking, breathing and swallowing, "and all the other sounds in her head were awful". The noise from her clothes was also terrible. She said that she did not think she would use the hearing aids much. When I talked to her a fortnight after acquisition, she said that she heard worse with them than without them, and that it was wonderful to remove them. She found it difficult to understand that the most expensive hearing aids on the market could give such a poor result. It was only bearable to use them when she and the cat were alone together in the house. She got terrible headaches and even tinnitus from them.

When it comes to how loud people speak, the communication partners of the hard of hearing complain that the users speak loudly because they have trouble hearing themselves. But when they get hearing aids, the users complain that they find it difficult to estimate how loudly they speak when wearing hearing aids. When I participated in hearing aid adjustments, I noticed that when the users removed their hearing aids they immediately spoke louder. Astrid (52/F/65/2/H) said that her children had told her that she did not speak as loud with hearing aids. Bertil (44/M/72/2/P) said that the only problem he had with his own voice was that his communication partners would say that he yelled when he did not wear his hearing aids. Henny (66/F/71/2/P) and Inge (36/F/68/2/H) sang in choirs, and preferred to sing without hearing aids because they could not estimate how loud they sang. The technology thus has material agency to make the users reconstruct the perception of loudness.

At first, Carsten (59/M/66/1/P) found it difficult to estimate his own loudness. During lunch hour, his colleagues told him to speak up because they could not hear him. But when I spoke to him after about a year, he said that he had adjusted his loudness and that he did not perceive it as a problem any more. When asked if he found it difficult to get used to hearing aids, he said that the only difficult thing was to remember to put them on in the morning. Sanne (39/F/42/2/H) used to ask people how she sounded, because she could not estimate her own loudness. This was the reason Eskild (56/M/74/2/P) chose to use one hearing aid even though he had two. All the same, the biggest problem he had with his hearing aids was to estimate how loud he was. Sometimes he could tell by the distant look in the eyes of the other that they had not heard what he said. Then, he would repeat what he said somewhat louder. Walter's (21/M/59/2/H) boss had made the comment that he spoke less loudly now that he had hearing aids. Keld (23/M/53/2/H) was a teacher and gave his pupils exams two days in a row – the first day he had not used his hearing aids, the second he had. Without reference to his hearing, Keld had asked the external examiner how he found the exams. His comment was that Keld did not speak so loudly the second day. Keld mentioned another example that distanced him from his hearing aids. He sometimes spoke in assemblies where he had never had problems with attracting the attention of the audience. With hearing aids, however, he felt uncertain how loudly he spoke. It thus became an example of his negative judgement of the hearing aids and of his strategy to regain control of the situation by leaving the hearing aids at home.

Jørn (25/M/79/2/P) had been to his grandchild's school to talk about his work as an artisan. He had found it distressing to find out how loud he had to speak to catch the attention of the children. His wife had been there as well, and she said his voice had been very quiet. It is of course impossible for me to judge why he could not catch the attention of the children in the way he wanted to, but Jørn blamed the hearing aids, and they thus became negatively judged.

There are users like (44/M/72/2/P Bertil; 52/F/65/2/H Astrid; 88/M/75/H Birger) who have not found it difficult to estimate how loudly they speak.

4.3.2.2. Manipulation and fit of hearing aids – a foreign body in the ear

The users of hearing aids do not only have to reconstruct their perception of a normal soundscape; they also have to get used to handling the device. It is obvious that elderly people with rheumatism in their hands have difficulty with their hearing aids, but younger people may also fumble, especially when they are nervous as well as new users. Anders (27/M/66/2/H), however, was happy that he was a trained watchmaker. He put on his magnifying class to see what he was doing when he changed batteries and cleaned them and thus had no problems.

Mostly, the respondents had very little knowledge of hearing aids and what it takes to maintain them. There were exceptions, as already described (28/F/57/2/H Lene; 71/F/56/1/P Janne; 72/F/61/2/P Lette), who because of their profession were used to handling patient's hearing aids to some extent. All the same, Lette had trouble learning how to insert her hearing aid and sometimes inserted it in such a way it blocked the passage of sound into her ear.

Like Lette, Birte (31/F/57/2/P) had spent several years getting used to the thought of hearing aids, but once she had them, she did not find it particularly complicated to get used to them. She was determined to make them a success. It took her a month, and she wore them all day even if they sometimes hurt her ears. The dispenser polished them a few times to give them a better fit. Trine's (46/F/68/2/H) one ear canal got a regular pressure sore, because she was so eager to get used to them. She returned to the dispensers where the ear mould was adapted to give her the right fit; she also experimented with the best way of inserting it and found out that a bit of Vaseline made it easier. Determination to make the hearing aids work well seems to be a driving factor behind success. Astrid (52/F/65/2/H) had to push her hearing aids into her ear ever so often because they whistled. None the less, she found her hearing aids indispensable.

It is possible that the three following respondents would have benefited from behind-the-ear models instead of the small models they had, because they all had trouble manipulating the hearing aids. Jette (61/F/76/1/P) worried about the handling of the device and the possibility of breaking it. She had a complicated ear canal, which also made it difficult for her to insert it properly. Sometimes it whistled, and she tried to manipulate it to make it stop. I went with her to the dispenser, where, she was unhappy and felt incompetent because she had to return with her questions. The technician was extremely forthcoming and showed her again how to insert the hearing aid. Holger (62/M/76/2/P) had difficulties finding out how to clean the hearing aids and worried that he might break them when using the cleaning utensils. He also found that the batteries ran out unexpectedly. Jørn (25/M/79/2/P) complained about his "foster children" – they needed lots of cleaning and washing. He was already annoyed that he often had to polish his glasses, and now he was even more annoyed to have to change batteries and use tools to clean the hearing aids. For most of the respondents, the free batteries were of great value. In the beginning they were often surprised that they had to be changed so often – every fortnight for the behind-the-ear types, every week for the in-the-canal types.

In the beginning especially, most of the respondents complained about the foreign body in their ears – either because they changed the hearing, felt fenced in, or because the hearing aids caused sore ears. The experienced users mostly overcome these problems to the extent that they could forget to remove them when they took a shower – this happened a few times (51/M/62/2/H Bengt; 59/M/66/1/P Carsten). Luckily, the hearing aids could be dried. One very accustomed user said that hearing aids should not be perceived as a foreign body in the ear. Once people were used to them, he believed, they should not be felt at all. None the less, quite a few users saw it as a relief to remove the hearing aids when they came home from their various activities, partly because of the noise, partly because they felt it was a foreign body they could remove (16/M/59/1/H Jesper; 23/M/53/2/H Keld; 25/M/79/2/P Jørn; 27/M/66/2/H Anders; 28/F/57/2/H Lene; 29/F/63/2/H Inga; 30/M/57/2/H Poul; 38/M/66/2/H Frank; 39/F/42/2/H Sanne; 41/F/59/1/H Marie; 50/F/51/1/H Dora; 60/F/74/2/H Lise; 61/F/76/1/P Jette; 62/M/76/2/P Holger; 63/M/74/2/PH Orla; 66/F/71/2/P Henny; 69/F/81/1/P Ketty; 71/F/56/1/P Janne; 72/F/61/2/P Lette).

Inge (36/F/68/2/H) found that the expression "at hvile ørene" which directly translated means "to rest one's ears" (an idiomatic expression for relaxing and doing nothing) had gained new importance for her. Moreover, she wondered whether the kind of noise damage iPods were said to cause in young people could also affect hearing aid users, because she found the noise unbearable.

Marie expected that it was not good for the ear canal to be blocked all day; she thought she might get a skin rash, which luckily she did not. Before Inge got her hearing aids, she feared it would be like having a foreign body in the ear. A friend of hers had said that the hearing aids sometimes itch and you cannot do anything about that in public.

4.3.3. The ascription of value

The following section is an attempt to categorize the respondents' usage of hearing aids. The categories are: "Non-usage", "Selected usage", "Part-time usage" and "Full-time usage".

4.3.3.1. Non-usage

Only few of the respondents (36/F/68/2/H Inge; 63/M/74/2/PH Orla; 65/F/74/2/P Stine; 73/F/79/1/P Karoline) discontinued the use of their hearing aids during the study period. It is slightly difficult to say exactly why these five users almost or completely gave up using hearing aids. Stine's experiences are described under "The reconstruction of the user's own sounds" and "Users who created meaning without the use of hearing aids", where Karoline's case is also mentioned.

Inge was a chemist and had recently retired. Inge found that her need for a high intellectual appearance was reduced in comparison to earlier, when she was working. Her present need for communication did not outweigh the restrictions imposed on her by the hearing aids. She had decided to try the hearing aids because her son, who lived in her house, had complained about the noise level when they watched TV. When she got them, she consciously weighed the pros and cons of her hearing aids, and gave a number of reasons for not using them. Her hearing aids distorted the music when she played the piano, and there was no solution to this problem. It was explained to Inge that some musicians who required hearing aids had to stop playing in an orchestra.

She could not understand what people said to her when there was background noise. This problem could be solved when the background noise was mechanical but not when it was speech. Her hearing aids sometimes "fell out" in the sense that they did not work. The solution was to have the earwax removed more frequently, but that meant cleaning the hearing aids every three or four hours.

On one occasion, her neighbour had talked to her when she had just turned on the car engine, and she could not hear him – she found this a deterioration of her hearing situation in relation to her pre-hearing-aid-days. Something else that made her decide against hearing aids was the wind noise when she was riding her bike. When she was in her house on her own, the hearing aids would amplify all the sounds she did not want to hear, i.e. the fridge, the clock and the neighbours' lawnmowers. Moreover, it is possible that her hearing loss was too insignificant for her to have any benefit from hearing aids.

Orla never took to his hearing aids. When I interviewed him about them, it was obvious that he would much rather speak about something else. It was difficult to make him focus. He said that he found it extremely distressing to listen to himself when he wore hearing aids. Thus, he found it difficult to talk to other people, because he could not get used to hearing his own voice. He found it important to hear because it is inconsiderate to other people to give peculiar answers when they spoke to him. He gave up the hearing aids he had obtained from a private dispenser, and got some from a public dispenser instead. Still, he found it much too strange to listen to his own voice, which was the reason he gave for not using them. The woman he lived with said that she was embarrassed by the way he behaved, because he would interrupt and say things that were out of context when he could not follow the conversation.

The following categories are slightly more difficult to delimit clearly, as they tend to fluctuate somewhat in that the respondents may say that they sometimes take a few days off from wearing their hearing aids. However, the division represents what I have concluded from their statements. The cases for which I have presented the relevant aspects earlier are either omitted or only touched upon below; however, they are mentioned as belonging in the different categories.

Apart from the understandable reply that the users would rather do without their hearing aids, I had expected that more of them would focus on the benefits of hearing aids. However, it turned out that most of the respondents said that the hearing aids had not restored their normal hearing sense. Moreover, most found that even if the hearing aids might be indispensable in some listening situations, there are still too many situations where they are of no help.

4.3.3.2. Selected usage

The category, 'selected usage', includes those who use their hearing aids when e.g. they go to a lecture or to see friends. The category includes: (28/F/57/2/H Lene), (30/M/57/2/H Poul), (35/F/79/2/H Agnete), (50/F/51/1/H Dora), (56/M/74/2/P Eskild), (61/F/76/1/P Jette), (62/M/76/2/P Holger), (66/F/71/2/P Henny), (69/F/81/1/P Ketty) and (60/F/74/2/H Lise)

Holger (62/M/76/2/P) said that when he watched TV, he wore them to avoid turning up the volume like other old people did. Another case in point is Henny, who was going to hospital and decided to bring her hearing aids to make sure she could understand what the staff said. Lene would put hers on when she attended a meeting at her job.

Eskild (56/M/74/2/P) could not imagine doing without his hearing aids. They were a great relief at meetings, and it was less tiring to listen when he had them on. They were a natural part of his life. He adjusted to the technology and used it according to his needs. Also, he was very clear in his priorities when it came to hearing, and it was clearly an important issue to him that he had known a minister of finance with a severe hearing loss. He was convinced that the minister was so intelligent and focused, because he could turn his hearing aids off when he did not want to listen to the nonsense other people said.

Poul's (30/M/57/2/H) relationship to hearing aids remained within the field of resistance. He withdrew from interaction, when many people were present; then, he chose to take the role of the observer. It created meaning for him, as he found it fascinating to watch people. What he missed out on by not hearing was gained through observing. If other people wanted something from him, they could approach him.

Lise (60/F/74/2/H) suffered from rheumatism and high blood pressure, both of which made her hearing problem seem like a lesser problem. Maybe some of the problems she experienced with her hearing aid could have been solved – but it was too much for her. She also had a problem with loudness when she wore her hearing aids. There was heavy traffic in the street where she lived, and she could not bear the noise, and the same applied to her bike rides - it was much too noisy for her.

4.3.3.3. Part-time usage

Seen in relation to the group "Selected usage", the part-time users wore their hearing aids more often and had a fixed rhythm of usage, i.e. they put their hearing aids on most days, e.g. at work and when they went somewhere: (27/M/66/2/H Anders), (64/F/82/2/P Lotte), (88/M/75/H Birger), (38/M/66/2/H Frank), (71/F/56/1/P Janne), (16/M/59/1/H Jesper), (23/M/53/2/H Keld), (72/F/61/2/P Lette), (41/F/59/1/H Marie).

Frank (38/M/66/2/H) acquired his hearing aids in order to participate in the communication at his rowing club, especially at parties. But his hearing aids turned out to be a disappointment in especially those situations – sometimes he even had to remove them to hear what people said to him. At a later stage, in connection with a birthday celebration of his, he had learned to cope with that. Instead of inviting all his friends at the same time, he invited small groups of 4-6 people, because he was able to hear under those circumstances. Here again, it is possible to speak of material agency in connection with the integration of technology into people's lives, because the hearing aids force their users to redefine their relationship with other people.

One example of situations when omitting the use of hearing aids was Anders (27/M/66/2/H), who said that he did not use his hearing aids when he was with his grandchildren – at one moment, they would almost whisper and turn their heads away from him (hearing aid users seldom hear whispering because the hearing aids do not amplify sounds at such low dBs); at other times, his grandchildren would be extremely loud and it would hurt his ears. However, his hearing aids had been of great value when he went to see an old friend from his school days. Before he went, he remembered that his friend mumbled.

With hearing aids, Lette (72/F/61/2/P), Marie (41/F/59/1/H) and Jesper (16/M/59/1/H) managed to hear their colleagues better. This also applies to Keld (23/M/53/2/H), but sometimes he would turn off his hearing aids and use them as ear-plugs. He did that in the school staff room, because some people were very loud – others had found it quite funny. Janne (71/F/56/1/P) took some time to get started with her hearing aids. She found them helpful at work and at church, but she sometimes forgot to put them on. They are no good at parties – she cannot cope with all the noise. When she acquired the hearing aids, she was aware that it required an effort to integrate them into her lifeworld, but her experiences with them seemed to be a disappointment when compared to her in expectations. There seem to be some unresolved matters in her attitude towards hearing aids. Her mother had been a hearing aid user when she was a child, but she had stopped using them, presumably because they did not work. Now, she was a user again. Her father was going to acquire hearing aids now. But she had neither told her parents nor her siblings that she had acquired hearing aids. She said it was because she had done so privately. The underlying reason was one of family conflict that involved other matters than just the hearing loss. But this example shows how hearing loss is integrated into peoples' lifeworlds. The hearing loss of course becomes a factor that directly affects communication, but it may also become a factor that produces difference because of the way it is handled by the hard of hearing as well as the family members.

4.3.3.4. Full-time usage

The full-time users are those who use their hearing aids almost all their waking hours: (52/F/65/2/H Astrid), (51/M/62/2/H Bengt), (44/M/72/2/P Bertil), (31/F/57/2/P Birte), (59/M/66/1/P Carsten), (42/M/76/2/H Eiwin), (57/M/67/1/H Gerd), (43/M/73/2/H Herluf), (29/F/63/2/H Inga), (53/M/77/1/H Jakob), (26/F/67/2/H Jane), (68/M/66/2/P Jens), (25/M/79/2/P Jørn), (45/F/93/2/P Margit), (58/M/62/2/H Ole), (39/F/42/2/H Sanne), (46/F/68/2/H Trine), (21/M/59/2/H Walter).

In the section on the individually constructed meaning of hearing, I have already noted the various meanings the users ascribed to their hearing sense. When the integration process into their individual life styles had taken place, they also attached different meanings to the hearing aids. They do not seem to become a source of what could be expressed as joy, but rather a tool that is part of the normal procedures of everyday life. Typically, most would say something similar to Birte (31/F/57/2/P), who said that her hearing aids were not fun – not like a new PC or mobile that you could show to other people and discuss. Most of the respondents would say it is like putting on a wristwatch, glasses or brushing one’s teeth.

Sanne (39/F/42/2/H) was the youngest of the new users, and she had prepared herself well before she acquired her hearing aids. She was quite enthusiastic when she left the dispenser – she had a bicycle ride of several kilometres ahead of her. On the way home, unfortunately, she had to remove her hearing aids due to the wind noise. In the afternoon, she celebrated one of her five children’s birthday, but that was also too much for her. In addition, she found it difficult to get used to her own voice and her ears were sore. When I talked to her later, during the habituation period, she used them a lot. She is a day-care mother looking after five children below the age of three in her home. She put the hearing aids on at 6-6,30 am and removed them again at about 8 pm – but if the children were really noisy, she removed them. In the evening, she enjoyed resting her head – she felt a need for some introversion. Her family was pleased that the TV was not so loud anymore. But otherwise they had not commented on her improved hearing. When she helped the children with their homework, she did not have to ask them to repeat so often. She could also hear what they said when they were doing homework upstairs – they were less pleased about that, but she was. She found that she benefited the most from them at lectures and when watching television.

As a bus driver, Bengt (51/M/62/2/H) finds the hearing aids indispensable when working. He uses them all his waking hours, but sometimes he finds it exhausting to wear them – he hears too much, and there is too much noise in his soundscape as compared with earlier. Sometimes his ear canal gets a bit sore. He admits that it was vanity that made him postpone seeking help – he should have acquired his hearing aids 10 to 15 years earlier. His wife had been getting at him for many years to do something. She still does not think they have helped much, because she can still only talk to him if he can lip read, and he cannot hear if he has turned his back to her. Obviously, it is a point of conflict, but now at least they agreed about the volume of the TV. Bengt recently found out there was telecoil in his hearing aid, which made it a much more positive experience to go to the theatre. Hearing better thus ensured more participation for Bengt, although the hearing aids did not solve all his problems, and they also produced new conflicts when he lost them, which seemed of displease his wife.

An indication that the users have included the hearing aids into their lives is when they comment on how quiet it is when they remove them. Jørn (25/M/79/2/P) said:

> "It's wonderful when I remove them in the evening – then I cease work for the day; but it's also good to put them on in the morning – that makes me feel active and on the move."

This again is an aspect of material agency, because the hearing aids divide Jørn's day into activity and relaxation.

Margit (45/F/93/2/P) expressed her view particularly well: "My hearing aids confirm my existence!" By that she meant that her improved hearing gave her the courage to express her opinion on topics where, previously, she would have refrained from making a comment. The inclusion of hearing and exclusion of not hearing made the difference for her in the negotiation for control in relationships with other people.

Birte (31/F/57/2/P), who had had such trouble accepting her hearing deficit and who kept on being repulsed by her hearing aids even after she had acquired them, also said that they had changed her life in those situation where few people are present: "It's like day and night with and without hearing aids!" If she has forgotten to put them on, she almost panics: "I have to concentrate so hard on what people say. I have to say "what" all the time. I'll have to lip read, to guess and to pretend that I've heard." Before she got her hearing aids, she had not perceived it as particularly exhausting not to hear. However, the hearing aids did not help in all situations. Birte had hoped she would be able to hear what everybody said in her sewing classes, but she could not. The classes can be like a party, where everybody is talking at the same time. When somebody says something immediately next to her, she can understand it, but if somebody starts talking simultaneously, she does not understand a word. If it is relatively quiet, she can understand, better than previously what somebody says at the back of the room. Birte also plays badminton with a group of twelve girls, and they meet for coffee before they play. Here, she is lost – she cannot hear what the others say.

The first thing Jane (26/F/67/2/H) said when she tried her hearing aids was "They say something! It's as if I've got far more space around me!" On a later occasion, she said how much she enjoyed being able to listen to all the sounds around her when she was outside. Moreover, she had previously been quite frightened when somebody suddenly stood next to her; now she could hear them coming. Also, it was wonderful to listen to music. She found she heard many more details.

Lette (72/F/61/2/P) found that her hearing aid became a fine companion for her. Her reason for getting hearing aids was her job – but she felt generally better about hearing aids than she had expected. Once, when I contacted her while she was still a new user, she said that she had been to see a friend, but she had forgotten to put on her hearing aid, and she had had to lean forward and say: "Oh, I didn't catch what you said", which had been quite stressful. She had told me she looked forward to hearing the nightingale, and when I asked about it the following spring, she replied: "The nightingale is a great source of joy when I come home from work at night!"

Walter's (21/M/59/2/H) hearing aids were a great success. At the office, he could now hear when people came into his office. He told everybody that he had hearing aids, and they had been surprised that they were so difficult to see. Also, they were a great relief for his wife. They had to be repaired twice, and they were reminded then of the great difference the hearing aids meant in their daily lives.

Trine (46/F/68/2/H) thought about her hearing aids the same way she thought about her precious gold jewellery. She puts them carefully into a box when she removes them. For her, there is a parallel between her hearing aids and her jewellery – they are both part of her identity. In the beginning, when she put them on in the morning, she saw them as a blessing; later, when they became an integrated part of her life, she did not think about anything special when she put them on. However, she felt much more confident when talking to others – also when she was shopping, because she did not have to ask several times for the price.

Eiwin (42/M/76/2/H) enthusiastically described the forgotten soundscape that re-emerged around him, and that it was far easier for him to participate in social contexts. But he could also use his hearing aids as ear-plugs. If his wife watched something on TV he was not interested in, he turned them off, but he kept them on because they helped him keep out the last rest of sound. He could then concentrate on his beloved books.

Another example of users switching off hearing aids is at a conference or meeting. It is tiring to listen and concentrate through hearing aids. Consequently, it makes sense to economize one's resources. I have noticed that some users switch off their hearing aids when they consider topics or speakers less interesting. The users I have approached in these situations smiled half apologetically but by no means ruefully - rather roguishly. I see it as strategy to protect themselves – and possibly it can even be seen as an advantage the hard of hearing have when it comes to concentrating on the essentials of life.

Jakob (53/M/77/1/H) complained that he had hoped that he would be able to hear in the meetings in his club, but it turned out to be a disappointment. However, in his daily communication, he would not do without them. Once, he lost one of his hearing aids when he was gardening – that had made him realize how little he heard without them.

4.3.4. Conclusion of the third pillar of the empirical findings

The third pillar describes the interaction between the new users and the hearing aids. It thus covers their expectations which often combine the appearance of the hearing aid with a degrading attribute whereas its technological features assume less importance. Moreover, the respondents' general level of knowledge of hearing aids is not profound which made their expectations uncertain.

Their experiences, on the other hand, reflect the interaction between the individual human being and the hearing aid. For some, the hearing aids became an enabling condition of everyday life, but in all cases they represented a degree of material agency, because they had the capability to mediate what and how the user heard and thus controlled the reproduction of the soundscape.

5. CONCLUSION OF THESIS

The title of the thesis, "Coping with emergent hearing loss, expectations and experiences of new, adult hearing aid users, an anthropological study in Denmark" is to be understood in the following way. We apprehend experiences through the senses, and they cover the outstanding, isolated event as well as the routine, average and established. Seen in relation to the acquisition of hearing aids, experience is thus the actual event or totality of events that turns the hard of hearing person into a "hearing aid user" and that leads to the accumulation of knowledge and skills. We form our expectations on the basis of our experiences, which are thus characterized by their practicality with regard to handling imponderable and concrete elements of everyday life.

Like any human condition, self-understanding and worldview play a considerable role for the handling of hearing loss. Some people exclusively view hearing loss as loss of function, which in many cases can be alleviated by a hearing aid. But for most people, hearing loss and its remedy, the hearing aid, express categories of human difference symbolizing old age and loss of attractiveness and intelligence. Thus, hearing aids are usually not neutral objects, but bearers of ascribed meaning. They may be accepted, rejected, generate stress, become an object of family strife, be seen as helpful or as a nuisance, as degrading and shameful or even as something that symbolizes new, higher technology and thus an object used to negotiate social status. While they are a means of inclusion, they are at the same time an expression social control because the attempt of society is to normalize the hard of hearing through a hearing aid.

Studies of new hearing aid users normally focus on one of three pillars of the users' situation: the interaction with their lifeworld, the interaction with the dispensers or the interaction with the technology. This study has attempted to focus on all three aspects of new hearing aid users in order to understand the process from the perspective of the users and how they experience the adaptation. Not only is there interaction between the users and three pillars, there also occurs interaction between the lifeworld, the technology and the dispensers in as much as a successful hearing aid acquisition and adaptation also may depend on the empathy, understanding and skill of friends and family, a work place and the dispensers. After acquisition of the device, users and communication partners need to know something about the functionality of the hearing aid, and what it can actually do for the users. There may be acoustic environments where a hearing aid is more of a nuisance than a help, and the maintenance of the device may for some require assistance.

5.1. Findings of the thesis and discussion of analytical framework

As I write in the introduction, I myself entered the field as a stranger, and I only had vague ideas of what hearing loss could imply. It is my hope that through my research, I have been able to cast light on the consequences of suffering from hearing loss and the implications of becoming a hearing aid user. "Suffering", as the term is used here, implies very different degrees of discomfort, in that some people suffer psychologically from general exclusion and feelings of loneliness, whereas for others, hearing loss is merely a loss of function that prevents them from maintaining their status within a hierarchy. This again can lead to exclusion, but the suffering is of different nature because it is not attached to a basic requirement of being informed about all the details of the lifeworld. In both cases, however, the inter-subjective nature of the suffering involves people whom the hard of hearing relate to in their everyday communication. The research has thus made me aware of the need to be informed about communication strategies when hearing loss is involved. A hearing loss is a barrier that affects the sender of information as well as the receiver, which in turn affects the relationships between people in various ways. Varying degrees of conflict and a sense of loss may very well be the consequences for several members in the individual's lifeworld.

The research is based on a qualitative design, which includes interviews and participation in contacts with the various institutions as well as research into the media and the vast material available from everyday contacts concerning communication about hearing loss. It also explains the distribution of the sample and how the respondents were located. The contact to the 41 respondents between the ages of 42-92 was maintained throughout 2003-2004. It was initiated with a detailed interview and continued when the respondents went to examinations and adjustments at the dispensers. Moreover the contact was held through telephone or e-mail communication. In 10 cases, a personal interview was held at the end of the contact period.

On the basis of the research, I conclude that emergent hearing loss is a bodily impairment that has no physical signs that can be perceived by others. It does not cause physical pain, and it can rarely be cured. Its consequences are cultural, social and existential, as it hinders the exchange of ideas and knowledge, communication and the identification of sound, e.g. danger signals. Being hard of hearing, however, is not necessarily a static, objective condition. It is dependent on the soundscape, the personal knowledge of the communicated themes, the knowledge of the spoken language or dialect, the individually ascribed meaning of hearing, the condition of the hearer, i.e. is she fit and rested or so exhausted that she finds it difficult to concentrate on the matter at hand.

The participation in the negotiation, production and exchange of ideas, meaning, understanding and information all require instruments of perception (cf. Hannerz 1992). Hearing and hearing aids thus seem to touch on all aspects of the human existence. Ulf Hannerz is well-known for his work on urban societies, local media cultures, transnational cultural processes and globalization, but he has not worked specifically on impairment and the senses. All the same, I have found Hannerz highly relevant to explain why hard of hearing people are at a disadvantage when it comes to making sense of their lifeworld and redirecting a cultural flow. Following Hannerz cultural processes take place in the interaction between four types of organizational framework, 1) everyday life, 2) market economy, 3) the state and 4) movements that are made up of associations and pressure groups. In all these frameworks, the sense of hearing plays an easily traced role for the individual as well as society at large. An important finding of the thesis is that hearing loss is a socially dividing factor that not only complicates the communication with others. Also, the identification with fellow sufferers is not pronounced which is reflected in the fact that other diseases or impairments will often lead to membership of self-help groups and patient associations, whereas the membership of the Danish Association of the hard of hearing only counts less than 2% of those affected by the problem.

When examining human interaction, I take it as an axiom that people strive for recognition, but not all people strive for recognition by all people. In the analysis of the research data, it is a common issue that different persons focus on different circles when they construct the starting points for their orientation. These starting points fall between two extremes: collectivism, where any sound is of interest, and individualism where it is of little importance to know about the information in the soundscape. The starting points thus represent various degrees of individualism and collectivism, and are the points of reference at which a hearing culture can keep its flow in motion and make society possible. Consequently, I discuss the ascription of meaning to the hearing sense under the following aspects: 1) hearing aid acquisition is a means of maintaining or improving one's position within a lifeworld. 2) Different people may single out different life-world circles on which they focus when constructing the meaning of hearing. 3) Moving to a new stage of life, e.g. a new job, retirement or marriage, may imply a shift or change of focus on other life-world circles.

In the second pillar of the empirical findings, the interaction between the institution and the user, I discuss the procedures used by the Danish hearing health care system as experienced by the users and recorded by me as a researcher. Since the 1950s, it has generally been possible for the hard of hearing to acquire a hearing aid free of charge when an audiological examination established a need. The system has been developed as part of the Danish welfare state and is thus based on equal rights for the citizens. It is set up with the intention of achieving a degree of normality based on the construction of the normal hearing citizen. In its implementation, several factors play important roles: the design of the system, the allocation of funds, the training of employees, the motivation and strategies of the users and the quality of the hearing aids.

Since 2000, it has also been possible to acquire a hearing aid privately with a subsidy covering the costs that is sufficient to acquire a basic hearing aid free of charge. The Danish government sought to give users a freedom of choice between the public and private sectors, which has led to a considerable loss of staff from the public institutions. The users were thus given the possibility of avoiding the often substantial waiting lists of the public sector and if they had the financial means, they could acquire more advanced and expensive technology which in effect lead to a loss of solidarity in the Danish hearing health care system.

I have found it important to elucidate the effects of the interaction procedures between users and institutions. Sometimes these processes are uncomplicated, but the importance of easy access to hearing aid dispensers is well documented in the study. Hearing loss and its remedy, the hearing aid, cannot be treated only as physiological or technological problems. Dispensers of hearing aids, with their extensive expertise, are being approached by clients who not only have a physiological hearing loss problem requiring a technological "fix". They are approached by individuals who ascribe variegated and vacillating meanings to their hearing loss, which often has very little to do with the anatomy of the ear or the technological wonders of modern hearing aids. To these people, the hearing loss adversely affects how they negotiate their position within their lifeworld, in as much as they wholly or partly miss out on certain forums or messages of communication. Most importantly, however, they seldom know what awaits them. There are often substantial reasons for complaints of a technological nature. The dispensers should be given the opportunity to see the hard of hearing individual as a whole person who is integrated in a certain lifeworld and not as someone suffering from a physiological and/or technological problem only. The expert staff may be entangled in bureaucratic procedures and strictly regulated time slots for each user, but in this process it must never be forgotten what is at stake for the involvement of the hearing impaired individual. Training of staff and the awareness of the essential role the experts play for the outcome should be given a high priority in the planning of adaptation procedures. It is a general problem in modern day health care systems that the focus is on a specific problem and that the whole individual is left out. As pointed out throughout the thesis, hearing loss and its rehabilitation are low status areas and it is consequently necessary for politicians to have knowledge about the consequences of the impairment, the experts to take pride in their profession and the users and their communication partners to handle the barriers attached to a hearing loss.

An important theorist in modern health care is Arthur Kleinman with his concept of health care administration as a moral experience. He is one of the world's leading medical anthropologists and a major figure in cultural psychiatry, global health and social medicine. On first reading about his concept of experience as a moral process, I was unsure whether the moral issue was relevant to the thesis. However, "Experience and its Moral Modes: Culture, Human Conditions, and Disorder" (ibid. 1998) made me aware that experience can be seen as a moral process in which important issues are at stake, such that ordinary people are deeply affected by the way the process is handled by the professional experts on the issue. The relationship between the impaired individual and society is well described by another anthropologist, Robert F. Murphy in "The Body Silent" (1990).

The new hearing aid users start a process of adaption to a technology the outcome of which has serious implications for their future interaction with their lifeworld. The ever-increasing hunt for efficiency in the health care sector has also hit the rehabilitation of the hard of hearing who approach the learning process of becoming a hearing aid user with no previous experiences. Also, in this respect, Gregory Bateson's (1999) theory of learning is relevant to explain the differences in approach between the new users and the dispensers.

The way in which people acquire hearing aids and integrate them into their lives is the result of a complex web of personal characteristics and factors in the lifeworld. In 3.2.4. Synthesis and original approach, I explain the interaction between the individual and the dispensing systems which may operate smoothly, in other cases the users may have to apply agency to address contingency. Whereas contingency can be generally defined as that which is neither impossible nor necessary, I define contingency as all the negative occurrences in the adaptation process that may impede a successful integration of the hearing aid into the individual lifeworld. Moreover, contingency are factors that can be overcome by human intervention. Apart from the physiological differences between the kinds of hearing impairment that may be decisive for the use of hearing aids, a number of user characteristics including *faculties*, *worldview, self-understanding and health* will play a role for the outcome. That means that certain often interacting user characteristics are essential for addressing contingency.

I have divided the forty-one respondents in the study into five groups that cover their experiences. In all the groups, there are cases in which contingency is allowed to play a dominant role that could have been avoided through improved work routines and increased attention on behalf of the staff. The first group, containing two users, signifies "Uncomplicated acquisition of hearing aids." These users never returned to the dispenser in the contact period to have their hearing aids adjusted; they themselves adjusted to the hearing aids. The next group, "Solution of problems", involves twenty-one respondents and is by far the largest group. It includes those who returned to the dispensers to have some course of action taken. Some of these actions were foreseen, in as much as they involved an appointment made at the time of acquisition. Other appointments at the dispensers involved the users' incorrect manipulation of the hearing aids, faulty devices, adjustment or incorrect fitting. These respondents are in the same group because I interpret hearing aid acquisition as a process of experiences. Whenever human beings, institutions and technology - here in the form of hearing aids - interact, human beings can attempt to solve the problems that arise. The possibility of returning for advice, adjustment and repairs is thus almost always imperative for a successful outcome. The "Solution of problems" is therefore inevitable, but this also means that the extent of new appointments, mistakes on the part of the users or the staff should be kept at a minimum. The problems involve the different learning levels of staff and users. In some cases, the staff have such engrained work routines that they may forget that most users are at a different learning level (Bateson 1999) and require basic knowledge about the manipulation of hearing aids and the technology of listening. Apart from the difference in learning levels, the question of moral experience or even inadequate procedures may also come into play at this point.

The third group are "Users who created meaning without the use of hearing aids" (four users). These respondents chose to create meaning in their lives by constructing hearing aids and their providers as unable to accommodate their needs. Thus, they discontinued using their hearing aids.

The fourth group, "Users who applied a passive strategy in relation to their hearing aids", involves the nine users who either took no action to improve their experience with their hearing aids or only limited action without effect, which meant that their interaction with their lifeworld took place primarily without hearing aids.

The fifth group, with five users, deals with "Construction of problem users". In this group, many of the same factors as in the "Solution of problems" group come into play. However, the process is influenced by contingency such as difference in learning levels between employees and user, as well as inadequate response to the needs of the users. This group has been divided into: "Construction of a cantankerous patient" where it is shown that it sometimes takes a high degree of perseverance and determination to become a contented user and that the dispenser in that process may deem the user cantankerous; "Observation of a time frame" is a case in point that the rigorous observation of time frames may result in the possible loss of the working capacity of an employee; "Indifferent behaviour towards the needs of the users" includes the cases of contingency that reflect a random and unfortunate process. The last one, "Patronization", reflects the unconsciously condescending behaviour towards a user.

The third pillar of the empirical findings describes the interaction between the new users and their hearing aids. Mostly, their expectations of the new technology were not very accurate because they only had limited knowledge of hearing aids. Their focus was to differing degrees on hearing aids as a demeaning attribute in stead of on the functionality – thus the devices was something that could impede their status rather than facilitate their communication with others. It can be said that for the majority of the respondents, there existed a gap between appearance and functionality which partly had been bridged through trust in what other people had told them about hearing aids, partly through pressure from the lifeworld. Advertising, on the other hand, only played a minor role in the acquisition process. In my interpretation, this was due to the fact that they had little interest in hearing aids and seemed inaccessible to the recounted events in the advertisements.

In connection with hearing loss and the use of hearing aid as remedy, a practice arises from the interaction between user and technology that is reflected in the experiences. While hearing aids to most users were an enabling condition of everyday life, they remained an object they would rather do without. They entail a degree of material agency, since they have the capacity to mediate what and how the user hears and thus control the reproduction of the soundscape. Some hearing aids will be adjusted to hear what the users specifically want to hear, or suppress the frequencies they do not want to hear. Or they may amplify the sounds that come directly in front of the user and suppress those sounds coming from the sides. Moreover, the devices encourage the user to take action in various ways, when they need to be repaired or cleaned in order to operate correctly, or when they beep to indicate that the batteries need changing. To explain the interaction between the users and the technology, the thesis draws on a number of theorists who have differing and at times conflicting approaches. Thus Michael D. Jackson is strongly influenced by existential-phenomenological thought and his starting point is the human being and her existence in the world. Meanings are defined with reference to an intersubjective dynamic according to which people strive to accomplish a balance between the factors that can be altered through human agency and accepting those which lie outside the realm of human interference (Jackson 2002: 333). Even if he sees the human and material worlds as distinctly different entities, he sees similarities in the ways we interact with other human beings and with technology. The individual not only includes the other in notions of subjectivity; the conception of otherness also reaches into the extra-human sphere, making artefacts, words and concepts factors that require a certain form of interaction. The outcome of this interaction is not always foreseeable, and the extra-human sphere thus seems to have its own will and consciousness. However, while Jackson argues that the boundary between the human and the material worlds is blurred, he retains his focus on human agency.

Don Ihde (2002) also questions the division of the material and human worlds, insisting that technologies are the material aspects of our embodied ways of relating to a world. He speaks of embodied being in a concrete and material world, in which human beings make technologies and technologies make human beings. Applied to this study, it can be said that hearing aids make the world available to the individual and thus make the unheard heard. In this view, Ihde agrees with Andrew Pickering, who states that "material and human agencies are mutually and emergently productive of one another" (1993: 567). Donna Haraway (1991a) speaks along the same lines when showing that our daily lives are held together by an inseparable entity of nature and culture (technology).

Bruno Latour (2002) develops a decentred and "posthumanist" sensibility that removes the focus from human individuals and their interactions with and in social groups. In so doing, it is not his aim to dehumanise society. Latour instead focuses on the failure of human beings to develop in harmony with the environment in an aim to make anthropology reflect contemporary concerns of destruction of the environment. To Latour, a technology like hearing aids would be seen as a fully symmetrical human and non-human semiotics in which all actants (in this case the hearing aids, the user and the system that has provided the hearing aid) are not only both natural and cultural but also constructed and real. Thinking semiotically about the issue of non-human agency allows the various actants to shift back and forth between being real entities and social constructs. Technology is thus not confined to rigid categories but can be seen as devices that do things, take influence and make a difference. The question is whether material agency can be equalled to human agency? Following Andrew Pickering (1993), we could ask: "How do we conceptualize the displacement of the human subject?" "What is the relationship between the different actants?" These questions remain unclear. It is unsettling to remove intentionality, accountability and responsibility from the sphere of human beings and place it within a corporate body made up of humans and non-humans. The difference between human beings and technology lies in the fact that our actions have intentions behind them. It is impossible to understand the workings of hearing aids without understanding the intentions of those who have developed them. It is thus human beings that have imbued the technology with the agency they can be said to have. While it is self-evident that successful hearing aid adaptation implies a mutual adaptation of user and device, such that they form a unity, I cannot follow Latour when he says that purposeful action and intentionality are not properties of humans (cf. 2000: 192). One could say that modern hearing aid science has given the hearing aid agency because it beeps when the battery needs changing, but it remains up to the user to respond to the beep and take the action of replacing the battery. As for responsibility, it is still the user who can be taken to court if she does not observe the financial obligations that may be connected to the acquisition of hearing aids. The dispenser is taken to court if he has violated the sales contract – not the hearing aids. It is humans who ascribe various meanings to hearing aids, making them emblems of e.g. high-tech, impairment or old age. Accepting the premise the non-human world has lost its material and objective character (cf. Latour 2000: 202) speaks against the finding of the thesis that users as well as the experts fitting the hearing aids in most cases need to take ownership over the adaptation process in order to achieve a positive outcome. It is thus the staff adjusting the hearing aids who in cooperation with the users have to make a conscientious effort to make the outcome a success – the best technology in this world will not alleviate a hearing loss if human beings do not take on the responsibility of making it work.

The above different theorists whose work can be applied to understand the dynamics of hearing aid adaptation come from a wide range of mainly anthropological but also sociological and philosophical starting points. When writing the thesis, I sometimes wondered how it would work out if they were all invited to a panel discussion on the topic, and I concluded that they would probably not come to any agreement. However, working with their ideas has given me a deeper understanding of the role of technology in the existence of the individual. Depending on the degree of hearing loss and the characteristics of the individual, hearing aids may be partially or fully accepted, or rejected, or used in differing contexts, or take on different roles. Taking into account the degree and type of the hearing loss as well as the functionality and state of the technology, human beings in the role of users, experts and communication partners thus play the decisive role in the outcome of the process.

5.2. Possible problems connected to the research design

It could be said that a better starting point for the study of new, adult hearing aid users' expectations and experiences would be identical hearing loss and identical hearing aids. However, such a test situation would be difficult to achieve. Moreover, the difference in the perception of the consequences of hearing loss, as well as the still unknown elements of physiological knowledge of the hearing sense, makes it difficult to say what "identical hearing loss" means. Moreover, users vary in the kinds of hearing aids they prefer. Some seem to prefer one brand to the other; others prefer the technology of the hearing aid to mediate what is heard, whereas other respondents prefer to be provided with a volume control and the possibility to change between different programmes.

I consequently find that the 41 respondents of the study represent a wide range of the problems encountered by Danish people with mild to moderate emergent hearing loss.

5.3. The remarkable Danish hearing health care system

The extensive literature on the problems of hard of hearing people reveals that it is not only a Danish issue that many people find it difficult to acknowledge their hearing loss. Rather than merely being seen as loss of function, however, we need to explore the meanings of weakness and connotations of intellectual deficiency that are attached to hearing loss and hearing aids. Compared to other countries, the Danish hearing health service is notable in its provision of free hearing aids every four years. Thus, the thesis is an attempt to reflect on the societal attitudes and policies connected to the reestablishment of a perceived degree of normality when it comes to the sense of hearing. The Danish hearing health service, together with the factors linked to it, makes up an entirety, but - as in any microcosm - the entirety encompasses conflicting financial and political interests, attitudes and types of knowledge. Part of the reason for the conflicting interests can be found in the fact that hearing aids, as a free medico-technological facilitator, are funded to a large extent by the Danish welfare state, which is governed by an obligation to supply the best possible quality at the lowest cost. In various ways, this fact situates hearing aids at the crossroads where the interests of the welfare state are expressed by presenting a range of choices of public and private dispensers. However, the interests of the users do not necessarily converge with those of the dispensers; the interests of the private dispensers are not the same as those of the public dispensers; the interests of the industry are not necessarily the same as those of the users or those of the dispensers; and the interests of the welfare state are not necessarily the same as those of the individual citizen.

Drawing on Bryan Pfaffenberger (1992b:305) quoting Illich (1973), I see all these conflicting interests in connection with scientific and technological innovations that produce great social benefits. As they become widely used, they consume vast amounts of social wealth and thus occupy a considerable share of the state budget for facilitators. In this respect, hearing aids in Denmark must be said to have been constructed as a right to a free benefit. Items like glasses and artificial teeth must be paid for by the users themselves, and the question can be rightly asked: Is this distinction in the right to subsidies justified? Seen from this perspective, hearing aids as a social benefit can be characterized as bureaucratic, administered by professional elites, and differentially distributed as compared to other facilitators paid for by the users (Pfaffenberger 1992b:305). However, there is another aspect to hearing aids that applies to a higher degree to the situation in Denmark. Seen separately from other facilitators, hearing aids are undoubtedly defined by many users as "decentralized, egalitarian, universally distributed, controlled by users, and open to the purposes of the individual" (ibid.). The cost of good hearing aids would be prohibitive for most users. The loss of free hearing aids would undoubtedly mean considerable suffering for the hard of hearing of all ages. At the same time, it would mean a loss of active, participating citizens in the various frameworks of the modern state. The question remains whether it could be socially justifiable to make users with a certain level of income or financial wealth pay toward their hearing aids and for a replacement. Unemployed or retired users with severe hearing loss are often rejected when they apply for extra, expensive facilitators which they will use to communicate with their lifeworld, whereas a user in this study with a mild hearing loss could acquire a telephone, telecoil and a special alarm clock for her home free of charge. Is the distribution of facilitators administered in a way that provides the most efficient relief to the users?

The diagnosis of hearing impairment is characterized by a wide range of auditory competence and deficit experiences which call for a diversity of technological solutions. However, it is difficult to say that hearing assistive devices are more important to one hard of hearing individual compared to another. But it can be concluded that hard of hearing people who move in complex and diverse types of soundscapes require more sophisticated technology than those who live their lives in a more quiet and withdrawn type of environment. Concerning the latter group, many people are of course capable of maintaining their hearing aids themselves, but others, who for mental or physical health reason are at a disadvantage when it comes to demanding the best service, do not receive the required attention to make certain that the hearing aid works. In those instances, it is perhaps more important than ever that society provides the possibility to retain an ability to hear and thus to preserve a lifeline to the world. At all levels of society, the hearing issue should thus be given a higher priority. Not least politicians and staff administering public funds require information about the consequences of hearing loss.

5.4. Suggestions for future research

Behind the following suggestions for future research lies the wish to reflect on everyday issues of contemporary hearing aid users in their interaction with the different frameworks of society (Hannerz 1992).

- In the health care sector, there is a high prevalence of quantitative studies as compared to qualitative studies. The quantitative studies are excellent for measuring the effect of various medical treatments in a large population. At the same time, the natural sciences sometimes view qualitative studies with suspicion claiming that the findings will be influenced by a few remarkable cases and that you cannot use these statistically. However, qualitative studies are unassailable when the research looks into a process in the attempt to find out how a user in detail experiences that process. Moreover, the qualitative instrument allows unforeseen elements to be included in the study whereas the quantitative study is based on preconceived ideas and concepts. The findings of this qualitative study show that for the random group of 41 persons there were many questions that needed to be addressed to make the outcome of the adaptation process a success. An obvious starting point for further research is thus to use the qualitative data to ask questions about work procedures wherever hearing aids are adapted. The research would have to look into user as well as staff characteristics. Thus, the individual characteristics of the users play a role for the outcome, and at the same time human beings do not always react logically or in the best way to solve a problem which highlights the human factor of hearing aid fitting. Training and the resulting enhanced awareness of new hearing aid users are required to make them take ownership of the process in the sense that they are made aware that they themselves may have a hand in the outcome. But this is not enough. It is an often heard regret of users of health care that their way through the system is characterised by anonymity, and that they have to start over again every time they meet a new staff member. A higher success rate of hearing aid fitting could be found in the interaction between the individual user and the expert. A consequence would be that the staff fitting the hearing aids also should be allowed to take ownership over their part of the process in the sense that the same person should follow the user. Of course, expertise in adjustment of the technology is essential for success, but staff should be aware of the importance of their own contribution towards a successful outcome. An argument against the change in procedure could be the involvement of more time and thus increased costs. However, unused hearing aids are a wasted societal resource and a higher quality of fitting procedures does not necessarily cost more. Consequently, it could be a highly interesting research topic to make the users as well as the expert staff see the hearing adaptation as a joint undertaking requiring commitment on both sides.

- A question that could give rise to further research is the gender issue. Do women and men get hearing aids for different reasons? Throughout the research period, I sometimes recognized patterns that made me think that the main focus of men was to uphold a status and thus the main concern was their intellectual appearance. At the same time I talked to men who said that they wondered why and how their wives spent such a long time on the phone when talking to friends and family. They could not imagine what the communication was about. My initial conclusion was that men tended not to take an interest in family matters and that women gave high priority to being informed about the activities of their non-professional networks and thus had a higher social awareness. However, when analyzing the data, I identified four men who almost exclusively used their hearing aids in contexts other than those that were family related. The rest of the men specifically also used their hearing aids to know what was going on in the networks of friends and family. Looking at the women, I found the same pattern. Four women almost exclusively used their hearing aids in contexts that did not have anything to do with friends and family. It generally applied to both sexes that they found it important to hold their own in the various lifeworld circles they lived their lives and used their hearing aids to support their intellectual as well as their social awareness. Moreover, it applied to some of the men as well as some of the women that their significant others over a long period of time had urged them to get hearing aids. Bodily appearance played a role to both sexes. While I do anticipate that a closer study of the gender issue would reveal differences in the way the potential users approach the matter, it would be important to avoid falling into the trap of looking for the gender patterns, we think we are going to find – like I myself did at first. Furthermore, there may be cultural differences from one country to the next which also could be interesting to investigate.

- An interesting issue is the dichotomy with regard to the product image as viewed by the industry/investors and the end users. While hearing aids are an example of a continually developed high-tech product and a profitable business undertaking that is highly visible in the media and attractive for employees and for investors, the adjustment and use of hearing aids have a low prestigious value to users and to medical experts. This makes it difficult to attract staff and funds to the distribution and application of hearing aids. Does the dichotomy mean that there is an imbalance of investments between technology development and investments in the application and user value? Can we identify a distinction between hearing aids viewed as a sophisticated technological device and a profitable business undertaking as opposed to the view of hearing aids as a degrading attribute that whistles and gets covered in ear wax? The distinction probably applies to no other technology to the same degree.

- An issue of possible future research is the users' evident lack of identification with other hard of hearing people, and the question is whether the same pattern can be found in other countries with a welfare health care system. It seems that different hearing health care systems construct different cultures of hearing aid adaptation. The diverse organization of the state framework thus has far-reaching consequences for the cultural practices that arise from legislation. In Denmark, the provision of free hearing aids is mostly considered a basic right, along with free medical care, but the practice reflects issues of self-understanding and identification with other hard of hearing persons. The following are some examples of the different structures that lead to different practices:

- In Denmark, the replacement of a broken or lost hearing aid is free, which means that the users do not have to purchase insurance to prevent possible financial expenses. In Norway, there is no such free replacement, and the users must obtain insurance, the price of which can be included in the membership fee of the Norwegian hearing association. Consequently, the association numbers far more members than the equivalent Danish association. Does this mean that the association has more political influence, and that in general there is more focus on the hearing issue? When people have to take action towards a goal, will they identify more with others within the same group because they receive information provided through written materials such as letters, brochures and the internet? Will they tend to discuss various factors with other hearing aid users which could make hearing loss more of a common issue and thus a uniting factor than is the case in Denmark?

- Another factor which makes it easier to be a hearing aid user in Denmark is the provision of free batteries whereas in Germany (and many other countries), the users have to pay for them. Consequently, this could mean that Germans would be more reluctant to use their hearing aids when they find it less urgent to hear what is going on around them, which again could hamper the habituation process. The question is thus whether the difference in allocation of funds gives rise to a difference in usage?

- In the United Kingdom, the public hearing health care system organized the structures behind a state-manufactured hearing aid with guaranteed and predictable sales; however, the devices never reached a position in the world market comparable to that of the Danish hearing aid industry which likewise developed alongside the modern welfare state, but without the ensured sales of the British industry. To survive the difficult initial period, the Danish manufacturers also had to export their hearing aids, which required a high technological standard. For Danish users, this has meant hearing aids of a higher quality, and for Denmark as such, the hearing aid industry has been a profitable business undertaking. Does this mean that firms such as Oticon, Widex and GNResound are to the Danes what Nokia is to the Finns and Mercedes, BMW and VW are to the Germans? A hearing aid is not an object of status, such as mobile phones and automobiles. Moreover, it could be argued that for mobile phones and cars, the status is attached to their visibility, whereas for hearing aids the status is attached to their invisibility, but not even that applies in as much as even invisible hearing aids remain an undesirable object. Nevertheless, it could be a research topic to see whether the locally made product of highly sophisticated technology is reflected in the collective consciousness in Denmark and in the way Danes acquire hearing aids.

6. REFERENCES

Arbejdstilsynet (2006) Anmeldte arbejdsskader 2000-2005. Årsopgørelse 2005. In: http://www.at.dk/graphics/at/07-Arbejdsmiljoe-i-tal/02-Arbejdsskader/Aarsopgoerelser/ anmeldte-arbejdsskader-2005.pdf.

Arvidsson, Torborg (2000) From denial to integration. A qualitative study of women's attitudes before attending audiological rehabilitation. Unpublished thesis. Medicinska fakulteten, Institutionen för särskilda specialiteter, avdelingen för audiologi, Göteborgs Universitet.

Barth, Fredrik (2002) An Anthropology of Knowledge. In: Current Anthropology 43 No.1, 1-27.

Bateson, Gregory (1999) The Logical Categories of Learning and Communication. In: Steps to an ecology of mind. University of Chicago Press, Chicago, 279-308.

Beck, Stefan (1996) Umgang mit Technik. Kulturelle Praxen und kulturwissenschaftliche Forschungskonzepte. Akademie Verlag, Berlin.

Bentzen, O/Ewertsen, H.W./Salomon G. (1976) Preface. In: Dansk Audiologi 1951-1976. Nyt Nordisk Forlag, Arnold Busck, København, 1-2.

Bisgaard, Susanne (2001) Internationale 'Communities'. Hochqualifizierte britische, dänische und deutsche Migranten in Frankfurt, Kopenhagen und London auf der Suche nach Gemeinschaft. Unpublished thesis. Institut für Kulturanthropologie und Europäische Ethnologie, Johann Wolfgang Goethe-Universität, Frankfurt am Main.

Bleses, Dorthe/Basbøll, Hans (2003) The Danish sound structure - implications for language acquisition in normal and hearing impaired populations. In: Schmidt, Erik/Mikkelsen, Ulla/Post, Inge/Borcher Simonsen, Jørn/Fruensgaard, Inge (eds.) Brain, Hearing and Learning. 20th Danavox Symposium, September 9-12, 2003. Danavox Jubilee Foundation, 165-190.

Boisen, Grete (1989) Psykosociale forhold i forbindelse med at være hørehæmmet [Psychosocial circumstances in connection with hearing impairment]. Unpublished paper presented at the 10th Congress of the Nordic Audiologic Society 1989. Stockholm.

Brandt, Mildrid (2001) Hva'? Hørehæmmet og isoleret. Unpublished Master's degree of Psychology, University of Copenhagen.

Bundgaard, Helle (2004) Positioner og kategoriseringsprocesser. In: Hastrup, Kirsten (ed.) Viden om verden. En grundbog i antropologisk analyse. Hans Reitzel, København, 95-116.

Christensen, Vibeke Tornhøj (2006) UHØRT? Om betydningen af nedsat hørelse i forhold til arbejdsmarkedstilknytning og arbejdsliv. Socialforskningsinstituttet, København.

Classen, Constance (1993) Worlds of sense. Exploring the senses in history and across cultures. Routledge, London.

Clausen, Thomas (2003) Når hørelsen svigter. Om konsekvenserne af hørenedsættelse i arbejdslivet, uddannelsessystemet og for den personlige velfærd. Socialforskningsinstituttet, Rapport 03:01, København.

Delta-Acoustics (2006) Høreapparater udleveret fra offentlige høreklinikker og solgt fra private høreklinikker i Danmark med tilskud 2000-2004. [Hearing aids handed out by public dispensers and sold by private dispensers in Denmark with subsidies 2000-2004].

Dewey, John (1980) The Quest for Certainty. Putnam's, New York.

Downey, Gary Lee (1998) On the replacement of humans with machines. In: The machine in me. An anthropologist sits among computer engineers. Routledge, New York, 237-251.

Engelund, Gitte (2006) "Time for hearing" – recognising process for the individual. A grounded theory. PhD thesis, Department of Nordic Studies and Linguistics Audiologopedics, University of Copenhagen & Oticon Research Centre, Eriksholm.

Elberling, Claus/Worsøe, Kirsten (2005) Når lyden bliver svagere - om hørelse og høreapparater. Videnscenter for døvblevne, døve og hørehæmmede. Oticon Fonden.

Erikson, Erik H. (1980) Identity and the life cycle. Norton, New York.

Ewertsen, H.W. (1976) Dansk medicinsk audiologisk historie 1951-1976. In: Bentzen, O./Ewertsen H.W./Salomon G. (eds.) Dansk Audiologi 1951-1976. Nyt Nordisk Forlag, Arnold Busck, København, 1-17.

Foucault, Michel (1977) Discipline and punish. The birth of the prison. London.

Garro, Linda C/Mattingly, Cheryl (2000) Narrative as Construct and Construction. In: Narrative and the cultural construction of illness and healing. University of California Press, Berkeley, 1-49.

Geertz, Clifford (1973) Thick Description: Toward an Interpretive Theory of Culture. In: The interpretation of cultures. Selected essays. Basic Books, New York, 1-30.

Greverus, Ina-Maria (1994) Menschen und Räume. Vom interpretativen Umgang mit einem kulturökologischen Raumorientierungsmodell. In: Greverus, Ina-Maria/Moser, Johannes/Ploch Beatrice/Römhild, Regnia/Schilling, Heinz/Schult, Marietta (eds) Kulturtexte. 20 Jahre Institut für Kulturanthropologie und Europäische Ethnologie.

Greverus, Ina-Maria (1995) Die Anderen und Ich. Vom Sich Erkennen, Erkannt- und Anerkanntwerden. Kulturanthropologische Texte. Darmstadt.

Hallberg, Lillemor R-M (1996) Occupational Hearing Loss: Coping and Family Life. Scandinavian Audiology, 1996:25, Suppl. 43, 25-33.

Hannerz, Ulf: (1992) Cultural complexity. Studies in the social organization of meaning. Columbia University Press, New York.

Haraway, Donna J. (1991a) A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century. In: Simians, cyborgs and women. The reinvention of nature. Free Association, London, 149-181.

Haraway, Donna J. (1991b) Situated knowledges: the science question in feminism and the privilege of partial perspective. In: Simians, cyborgs and women. The reinvention of nature. London, 183-201.

Hastrup, Kirsten (2004) Introduktion. Antropologiens vendinger. In: Viden om verden. En grundbog i antropologisk analyse. Hans Reitzel, København, 9-29.

Hear-it (2006b) More and more hearing impaired people. In: http://www.hearit.org/page.dsp?page=430.

Hear-it (2006d) Sweden. In: http://www.hear-it.org/page.dsp?page=1266.

Herzfeld, Michael (2001) Anthropology. Theoretical practice in culture and society. Blackwell Publishing, Malden, Mass.

Hétu, Raymond (1996) The Stigma Attached to Hearing Impairment. Scandinavian Audiology: 1996:25, Suppl. 43, 12-24.

Hörselsskadades Riksförbund (2005) Annual Report, In: http://www.hrf.se/upload/pdf/statistik/arsrapport2005.pdf.

Ihde, Don (2002) Bodies in Technology. (Electronic mediations, 5), University of Minnesota Press, Minnesota.

Ihde, Don: (2003) ScienceTechnologySociety, working paper No. 2. Postphenomenology – Again? http://sts.imv.au.dk/arbejdspapirer/WP3.pdf

Illich, Ivan (1973) Tools for conviviality. Harper & Row, New York.

Jackson, Michael D. (1996) Introduction: Phenomenology, Radical Empiricism, and Anthropological Critique. In: Things as they are. New directions in phenomenological anthropology. Indiana University Press, Bloomington, 1-50.

Jackson, Michael D. (2002) Familiar and foreign bodies: a phenomenological exploration of the human-technology interface. The Journal of the Royal Anthropological Institute 8: 333-346.

Jakobsen, Søren Linding (2005) Klinikker presser producenter af høreapparater. Børsen, 5 April 2005.

Kleinman, Arthur/Kleinman, Joan (1998a) Suffering and its professional transformation. Toward an ethnography of interpersonal experience. In: Geest, Sjaak van der/Rienks, Adri (eds.) The Art of Medical Anthropology. Readings. Het Spinhuis Publishers, Amsterdam.

Kleinman, Arthur (1998b) Experience and its Moral Modes: Culture, Human Conditions, and Disorder. The Tanner Lectures on Human Values. Stanford University, April 13-16, 357-419.

Knudsen, Anne (1995) Mercedes-Modellen. Feltarbejde blandt de u-eksotiske. Tidsskriftet antropologi, 19-26.

Kragballe, Søren (2005) GN udvikler superchip til Metrix. Jyllands-Posten, 31. marts.

Kunzro, Hari (1997) You are cyborg. Wired Digital, Inc. 994-2003, 1-7.

Kvale, Steinar (2002) Interview. En introduktion til det kvalitative forskningsinterview. Hans Reitzels Forlag, København.

Latour, Bruno (2002). A Collective of Humans and Nonhumans. In: Pandora's Hope. Essays on the reality of science studies. Harvard University Press, Cambridge, Mass., 174-215.

Logan, John (2003) Language acquisition in children and the neural processing of speech. In: Schmidt, Erik/Mikkelsen, Ulla/Post, Inge/Borcher Simonsen, Jørn/Fruensgaard, Inge (eds.) Brain, Hearing and Learning. 20th Danavox Symposium, September 9-12, 2003, Danavox Jubilee Foundation, 147-148.

Luhmann, Niklas (1998) Contingency as Modern Society's Defining Attribute. In: Luhmann, Niklas: Observations on Modernity. Stanford University Press, (Writing Science), 44-62

Mehr, Allan S. (2006) Understanding Your Audiogram, In: www.pacificaudiology.com/audiogram/uya.html.

Mogensen, Finn (2000) Hørenedsættelse set indefra. Unpublished manuscript.

Morgan-Jones, Ruth A. (2001) Hearing differently. The impact of hearing impairment on family life. London and Philadelphia, Whurr Publishers.
Murphy, Robert F. (1990) The Body Silent. W.W. Nortonn, New York.
Müller, Franziska (2005) No body is perfect. Cystische Fibrose – Lebenserwartung zwischen Risiko und Prävention. In: Welz, Gisela/Heinbach, Gesa/Losse, Nadja/Lottermann, Annina/Mutz, Sabrina (eds.) Gesunde Ansichten. Wissensaneignung medizinischer Laien. Kulturanthropologie Notizen, Institut für Kulturanthropologie und Europäische Ethnologie der Universität Frankfurt am Main, 173-192.
Oticon (2004) Founded on care - Oticon through 100 years. Oticon Foundation.
Pfaffenberger, Bryan (1992) Technological dramas. Science, Technology & Human Values, Vol. 17, No.3, 282-312.
Pickering, Andrew (1993) The mangle of practice. American journal of sociology, Issue 3, 559-589.
Pollitt, K. (1982) The Politically Correct Body. Mother Jones, 66-67.
Porter, Michael E. (1998) Clusters and the new economies of competition. Harvard Business Review Vol. 76, No. 6, 77-90.
Rabinow, Paul (1996) Artificiality and Enlightenment: From Sociobiology to Biosociality. In: Paul Rabinow (ed.) Essays on the anthropology of reason. Princeton University Press, Princeton, N.J. 91-112.
Ringkjøbing Amt (2006) Ubenyttede høreapparater blandt førstegangsbrugere i Ringkøbing Amt. Kvalitetsafdelingen for Sundhedsvæsenet. In: http://www.ringamt.dk/Internet/RingAmtP1.nsf/DokumentBilagFilNavn/Ubenyttede%20høreapparater%20blandt%20førstegangsbrugere%20i%20Ringkøbing%20Amt.pdf/$File/Ubenyttede%20høreapparater%20blandt%20førstegangsbrugere%20i%20Ringkøbing%20Amt.pdf.
Sacks, Oliver (1991) Seeing voices. A journey into the world of the deaf. Picador, Oxford.
Scheper-Hughes, Nancy (1994) Embodied Knowledge: Thinking with the Body in Critical Medical Anthropology, In: Borofsky, Robert (ed.) Assessing Cultural Anthropology. Mc-Graw-Hill Inc., New York, 229-240.
Scheper-Hughes, Nancy/Lock, Margaret M. (1987) The Mindful Body: A Prolegomenon to Future Work in Medical Anthropology. Medical Anthropology Quarterly, Vol 1, Issue 1, 6-41.
Schilling, Heinz (1996) Der Öffentlichkeit verborgen? Das Geheimnis, Öffentlichkeit und Privatheit. Unpublished paper. Institut für Kulturanthropologie und Europäische Ethnologie der Johann Wolfgang Goethe-Universität, Frankfurt am Main.
Simmel, Georg (1908) Exkurs über die Soziologie der Sinne. Soziologie. Untersuchungen über die Formen der Vergesellschaftung. Duncker & Humblot Verlag, Berlin, 483-493.
Simmel, Georg (1992 [1890]) Die Kreuzung sozialer Kreise, Soziologie. Untersuchungen über die Formen der Vergesellschaftung. Suhrkamp, Frankfurt am Main, 305-318.

Statistikbanken (2006) Eksport: Høreapparater, undtaget dele og tilbehør. Dele og tilbehør til høreapparater. Danmarks Statistik. In: www.statistikbanken.dk/KN8Y.

Steenberger, Anne (2006) Mere indflydelse til patientforeninger. In: Mandat, Issue 2, Amternes politiske magasin.

Stratton, Alison (1999) Hidden Stories of Hearing Aids. Technologies and Cultures In-the-Ear. In: Lundin, Susanne/Åkesson, Lynn (eds.) Amalgamations. Fusing Technology and Culture. Nordic Academic Press, Lund, 63-83.

Stratton, Alison (2003) The Cultural Work of Hard of Hearing in Sweden. Submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy under the Executive Committee of the Graduate School of Arts and Sciences, Columbia University. UMI Microform Number: 3088426, ProQuest Information and Learning Company.

VCDDH (2006) Hørelse og høretab, In: http://www.vcddh.dk/hoerelse_og_hoeretab/hyppighed/.

Welz, Gisela (2005) Gesunde Ansichten. Zur Einführung. In: Welz, Gisela/ Heinbach, Gesa/Losse, Nadja/Lottermann, Annina/Mutz, Sabrina (ed.) Gesunde Ansichten. Wissensaneignung medizinischer Laien. Kulturanthropologie Notizen, Institut für Kulturanthropologie und Europäische Ethnologie der Universität Frankfurt am Main, 11-21.

WHO (2001) International Classification of Functioning. World Health Organisation.

WHO (2004) The Fifteenth most serious health problem. The WHO Perspective.

Helsinki, July, 2004: IFHOH, 4.

Widex (1995) Sound & Hearing. Widex.

Widex (2006) Widex Encyclopedia.

Deutsche Zusammenfassung

Die vorliegende in englischer Sprache verfasste Dissertation, „Coping with emergent hearing loss," entstand vor dem Hintergrund der Vielfalt der Probleme in Verbindung mit Schwerhörigkeit und der Anpassung von Hörgeräten. Die Recherchen der Arbeit sind in Dänemark durchgeführt worden. Es handlet sich um Erwachsenden mit einem beginnenden bzw. fortschreitenden Gehörverlust, die sich für ein Hörgerät entschieden haben. Die Gruppe der „neuen Hörgeräte-nutzer" wird kulturanthropologisch auf drei Ebenen untersucht: Wie ändert sich der Status der Betroffenen und ihrer Angehörigen, und wie integrieren sie das Hörgerät in ihre Lebenswelt? Welche Bedeutung hat die Kostenübernahme des dänischen Gesundheitssystem für Geräte, Batterien und Anpassung und trägt diese Regelung zum Entstehen einer neuen Gruppe bei? Wie werden die Hörgeräte von ihren Nutzern angenommen und welche Lernprozesse sind dabei erforderlich?

Die angewandte Methode ist qualitative Feldforschung. Über zwei öffentliche Krankenhäuser wurden 24 neue Nutzer gefunden, die im Rahmen der gesetzlichen Krankenversicherung ein kostenloses Hörgerät angepasst bekamen. Darüber hinaus gelang es 17 weitere Respondenten zu kontaktieren, die als Privatversicherte ihre Hörgeräte außerhalb des öffentlichen Gesundheitssektors erhielten. Die 41 Respondenten im Alter von 42 bis 92 Jahren repräsentierten eine weite Bandbreite von Berufen und wurden in den Jahren 2003 und 2004 begleitet. Nach einem ausführlichen qualitativen Interview wurde die Verbindung zu den Respondenten durch wiederholte Kontakte aufrechterhalten, um den Prozess der Einfügung des Hörgeräts in deren eigenes Leben mitvollziehen zu können. Soweit dieses möglich war, wurden die Untersuchungspersonen auch zu ihren Terminen im Krankenhaus bzw. im Hörgerätegeschäft begleitet. Zusätzlich wurden Interviews mit Experten aus dem öffentlichen Gesundheitssystem, mit Unternehmen und Geschäften, mit Politikern und Patientenorganisationen geführt sowie der gesellschaftliche Diskurs über Hörschädigungen und Schwerhörigkeit verfolgt.

Das zweite Kapitel gibt einen Überblick über die Situation der Audiologie in Dänemark, epidemiologische Informationen zur Verbreitung von Schwerhörigkeit in der dänischen Bevölkerung und Statistiken zur Hörgeräteverbreitung und –nutzung. Außerdem werden grundlegende Informationen zur Funktion des menschlichen Ohrs, zur auditiven Wahrnehmung und zur Diagnose und Klassifikation von Gehörschädigungen dargestellt. Schließlich wird noch ein kurzer Überblick über die Hörgeräteakustik gegeben.

Die Struktur der weiteren Arbeit besteht aus drei Säulen, die ermöglichen die Ebenen des Interaktionsprozesses zu thematisieren:

(1) die Interaktion mit der Lebenswelt und der umgebenden Gesellschaft, wobei die Bedeutung des Hörens für die lebensweltliche Partizipation dargestellt wird. Das Spektrum reicht von Individuen, in deren Leben die soziale Teilhabe unbedingt ein gutes Gehör erfordert, um ausreichend kommunizieren zu können, bis hin zu Befragten, für die Informationen, die sie über das Gehör aufnehmen, eine verhältnismäßig geringe Wichtigkeit haben. Viele Befragte agieren selektiv und setzen das Hörgerät für bestimmte soziale Situationen ein, während es bei anderen nicht zum Einsatz kommt. Welche diese im Einzelnen sind, unterscheidet sich wiederum von Person zu Person. Statuspassagen, die besondere Herausforderungen beinhalten – eine neue Arbeitsstelle, eine neue Ehe – motivieren eher dazu, das Hörgerät dauerhaft im Alltag einzusetzen. Ins gesamt macht die Arbeit deutlich, dass Schwerhörigkeit ein sozial trennender Faktor ist, der die Interaktionen mit anderen erschwert. Im Unterschied zu anderen körperlichen Einschränkungen oder Krankheiten wird der Verlust des Gehörs von ihren Interviewpartnern selten als Anlass dafür genommen, sich mit Leidesgenossen zusammenzuschließen und Patientenorganisationen oder Selbsthilfegruppen zu bilden.

(2) die Interaktion mit den Institutionen
Der Ansatz des Medizinanthropologen Arthur Kleinman konzeptualisiert den Verlauf im Gesundheitssystem als moralischen Prozess, in dem Entscheidendes für die Nutzer auf dem Spiel steht. Hier interagieren verschiedene Faktoren zu denen – neben der Ausbildung der Experten, der Zuteilung der Finanzmittel, der Qualität der Hörgerätetechnologie und der Organisation der Vergabe von Hörgeräten - insbesondere die Motivationen und Umgangsweisen der neuen Hörgerätenutzer zählen. Auch ist die Integration eines Hörgeräts mit einem Lernprozess zu vergleichen, und um diesen analysierbar zu machen, wird die Lerntheorie des Anthropologen Gregory Bateson herangezogen. Als eigene Theorie wird ein Instrumentarium entwickelt, das die sinnstiftenden Elemente darstellt, die als Motivation dienen, Kontingenz (Ereignisse, die die Anpassung negativ beeinfließen) entgegenzuwirken. Es geht um eine Wechselwirkung zwischen Gesellschaft und Individuum, wobei das Individuum auf Grund seiner Persönlichkeitszüge Strategien einsetzen kann, um Hindernisse zu beseitigen.

Die Umgangsweisen der Respondenten mit den institutionellen Strukturen werden in fünf Kategorien unterteilt. Nur zwei Respondenten aus den Teilnehmern der Informantengruppe sind unkompliziert und haben nach Ausgabe des Gerätes keinen weiteren Bedarf nach institutioneller Betreuung. Die größte Gruppe von Respondenten (21 Personen) kehrt mindestens einmal zu Ausgabestelle zurück, weil Änderungen gemacht werden muss. Eine weitere Kategorie von den neuen Nutzern (4 Personen) verweigert relativ bald nach dem Erhalt die Nutzung. Eine Gruppe (9 Personen) verwendet eine passive Strategie ihrer Hörgeräte gegenüber und versucht nicht wirklich die Technologie in ihr Leben zu integrieren. Die letzte der eingekreisten Gruppen (5 Personen) umfasst die wirklichen Problemfälle, bei denen es zu Beschwerden, Missverständnisse und Konflikten kamen.

(3) die Interaktion zwischen Körperbildern und Technologien
Hierzu werden eine Reihe von Autoren der Anthropologie und Science und Technology Studies miteinander ins Gespräch gebracht, um die Fragen von menschlicher Handlungsautonomie gegenüber der technologischen Determination zu diskutieren und theoretische Modelle auf ihre Nutzbarkeit für die vorliegende Arbeit hin zu befragen. Hörgeräte haben eine unterstützende Funktion im Alltagsleben der Nutzer, besitzen aber auch die Fähigkeit zu entscheiden wie der Nutzer welche Geräusche wahrnimmt und welche diese sind. Die befremdende Erfahrung der durch Lautsprecher verstärkten eigenen Stimme, die Erfahrung des Geräts als Fremdkörper im Ohr und die unterschiedlichen Umgangsweisen, die aus der mehr oder weniger geglückten Umgang mit der Technologie resultierten, sind anhand von Fallgeschichten und Äußerungen der Interviewten dargestellt.

English summary

The dissertation, ”Coping with emergent hearing loss”, is written in English and is based on the diversity of problems connected to hearing loss and the adaptation of hearing aids. The research was carried out in Denmark and involves adults with an emergent hearing loss, who have decided to become hearing aid users. The data is analyzed through methods of cultural anthropology with focus on the following topics: How do the new users cope with the status passage towards being hearing aid users, how do they integrate the hearing aids into their lives, and what are the involved learning processes? What are the consequences of the provision by the state of free hearing aids, their free adaptation as well as free batteries, and does the state take part in the construction of the social group of new hearing aid users?

The method is based on qualitative field work. Two public hospitals were helpful in identifying 24 new users, who acquired a free hearing aid through the hearing health care system. Through ENTs and private dispensers 17 further respondents joined the study – these acquired their hearing aids with a considerable state subsidy but mostly they themselves contributed financially as well. The 41 respondents between 42 and 92 years of age came from a wide range of professions and were followed throughout 2003 und 2004. After an in-depth qualitative interview, the contact to the respondents was maintained in order to follow the process of integration into their lives. When possible, the respondents were accompanied to their appointments in the private or public clinics. Moreover, interviews with experts from the public hearing health care system, politicians and user organisations were carried out, and the general public debate on the hard of hearing and hearing loss was followed and recorded.

The second chapter gives an overview of the position of audiology in Denmark, of epidemiological information on hearing loss in the Danish society and statistics to the use of hearing aids. Moreover, basic information is given about the functioning of the human ear, the auditive perception and diagnosis and classification of hearing loss as well as a short introduction to the hearing aid technology.

The structure of the further thesis divides the material into three pillars that make the discussion of the interaction processes possible.

(1) The user’s interaction with the lifeworld concerns the meaning of hearing in relation to social participation. For some of the users, a good sense of hearing was essential to communicate freely and uphold their position in relation to others, whereas other respondents paid less attention to the information they acquired through their sense of hearing. A number of the respondents were selective and only used their hearing aids in specific situations, whereas another group discontinued the use of their hearing aids for various reasons. Status passages that hold specific challenges like a new work place or a new marriage motivate the continued everyday use. On the whole, the thesis illustrates that hearing loss is a socially dividing factor that complicates the interaction with others. In comparison to other bodily impairments or diseases, the hearing loss is rarely used as occasion to unite with fellow sufferers, join patient organisations or form self help groups.

(2) The users' interaction with the institutions

The medical anthropologist Arthur Kleinman conceptualises health care as a moral process in which essential issues are at stake for the users. Different factors interact in the process: the training of the experts, allocation of funds, the quality of the technology, the dispensing procedures and the motivation and individual characteristics of the new users. The integration of the hearing aid into the lifeworld can be compared to a learning process, for which reason the learning theory of the anthropologist Gregory Bateson is outlined. Susanne Bisgaard's own theory lists the meaning creating elements that serve as motivation for the users to counteract contingency (occurrences that influence the adaptation negatively). In the interaction between individual and society, the individual can apply strategies in order to eliminate stumbling blocks.

(3) The users' interaction with the technology

A number of theorists from Anthropology as well as Science and Technology Studies are discussed in order to question their validity with regard to human action autonomy vs. technological determination and test the theoretical models with regard to their usability for the thesis. Hearing aids have a supporting function in everyday life and have the capability of moderating the user's perception of sound. The alienating experience of hearing one's own voice amplified, of wearing a foreign body in the ear and the different strategies that emerge from the more or less successful handling of the technology is reported by way of case stories and quotes from the interviews.

OVERVIEW OF RESPONDENTS

Each respondent has been assigned a name as well as a references number, e.g. 35/F/79/1/H. 35 is the interview number. F (or M) refers to the sex of the respondent. 79 is the age, 1 (or 2) indicates whether the fitting of the hearing aid is monoaural or binaural, i.e. whether the respondent has been given one or two hearing aids. H (for hospital) refers to a public dispenser whereas P refers to a private dispenser.

Below the reference, I have listed the hearing impairment classification based on the pure tone average calculated from the frequencies 500, 1000, 2000 and 4000 Hz. For further explanation of technical terms Hz and dB, please see the section on "Statistics and facts connected to the sense of hearing".

To describe the configuration of the hearing loss, I quote the most common configurations using the terms "flat", "rising", "sloping" and "precipitous". Another relatively rare configuration is the "cookie bite loss". The cookie bite is a configuration which – seen from above - looks like a bite that has been taken out of the middle of the audiogram, with the result that the hearing is better in the low and high frequencies. The inverted cookie bite results in better hearing in the middle frequencies.

The term "low-frequency" indicates that the hearing loss makes itself felt at the low frequencies. The more common configuration, the high-frequency hearing loss (with normal to mild loss at the low frequencies) has a relatively high impact on the understanding of speech, in as much as it makes it more difficult to understand those consonants that are situated within the high frequencies. A hearing loss of a certain dB thus has to be compared to the configuration of the audiogram to gain insight in the affect on understanding certain frequencies.

Anders, 27/M/66/2/H, degree of loss: Right ear: 39 dB HL; Left ear: 34 dB HL; Average: 36 dB HL
Classification: Mild high frequency sensorineural hearing loss. Flat configuration above 1000 Hz, precipitous between 1000 and 1500 Hz, sloping to flat above 1500

Agnete, 35/F/79/1/H, degree of loss: Left ear: 34 dB HL
Classification: Mild high frequency hearing loss with sloping configuration, precipitous above 4000 Hz

Astrid, 52/F/65/2/H, degree of loss: Right ear: 35 dB HL; Left ear: 33 dB HL; Average: 34 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Bengt, 51/M/62/2/H, degree of loss: Right ear: 41 dB HL; Left ear: 43 dB HL; Average: 42 dB HL
Classification: Moderate high frequency sensorineural hearing loss, flat until 1000 Hz, sloping configuration above 1000 Hz

Bertil, 44/M/72/2/P, degree of loss: Right ear: 33 dB HL; Left ear: 34 dB HL; Average: 33 dB HL
Classification: Mild high frequency hearing loss with sloping configuration

Birger, 88/M/75/2/H, degree of loss: Right ear: 34 dB HL; Left ear: 41 dB HL; Average: 38 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Birte, 31/F/57/2/P, degree of loss: Right ear: 40 dB HL; Left ear: 34 dB HL; Average: 37 dB HL
Classification: Mild mixed conductive/sensorineural hearing loss with inverted cookie bite configuration

Carsten, 59/M/66/1/P, degree of loss: Right ear: 21 dB HL; Left ear: 44 dB HL; Average: 33 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Dora, 50/F/51/1/H, degree of loss: Right ear: 19 dB HL; Left ear: 25 dB HL; Average: 22 dB HL
Classification: Very mild high frequency sensorineural hearing loss with sloping configuration

Eiwin, 42/M/76/2/H, degree of loss: Right ear: 40 dB HL; Left ear: 50dB HL; Average: 45 dB HL
Classification: Moderate high frequency mixed conductive/sensorineural hearing loss, inverted cookie bite configuration

Eskild, 56/M/74/2/P, degree of loss: Right ear: 36 dB HL; Left ear: 44 dB HL; Average: 40 dB HL
Classification: Mild hearing loss with sloping configuration

Frank, 38/M/66/2/H, degree of loss: Right ear: 34 dB HL; Left ear: 34 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Gerd, 57/M/67/1/H, degree of loss: Right ear: 44 dB HL; Left ear: 26 dB HL; Average: 35 dB HL
Classification: Mild high frequency mixed conductive/sensorineural hearing loss. Right ear: precipitous configuration between 1000 and 2000 Hz. Left ear: sloping configuration

Henny, 32/F/71/2/P, degree of loss: Right ear: 61dB HL; Left ear: 48 dB HL; Average: 54 dB HL
Classification: Moderate hearing loss with inverted cookie bite configuration

Herluf, 43/M/73/2/H, degree of loss: Right ear: 41 dB HL; Left ear: 44 dB HL; Average: 43 dB HL
Classification: Moderate mixed conductive/sensorineural hearing loss, flat to rising configuration below 1000 Hz, precipitous above 1000 Hz.

Holger, 62/M/76/2/P, degree of loss: Right ear: 44 dB HL; Left ear: 45 dB HL; Average: 44 dB HL
Classification: Moderate high frequency mixed conductive/sensorineural hearing loss, with sloping configuration.

Inga, 29/F/63/2/H, degree of loss: Right ear: 31dB HL; Left ear: 31dB HL; Average: 31 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Jakob, 53/M/77/1/H, degree of loss: Right ear: 44 dB HL; Left ear: 46 dB HL; Average: 45 dB HL
Classification: Moderate sensorineural hearing loss with inverted cookie bite configuration

Jane 26/F/67/2/H, degree of loss: Right ear: 39 dB HL; Left ear: 38 dB HL; Average: 39 dB HL
Classification: Mild high frequency mixed conductive/sensorineural hearing loss with precipitious configuration above 1000 Hz

Janne, 71/F/56/1/P, degree of loss: Right ear: 26 dB HL; Left ear: 24 dB HL; Average: 25 dB HL
Classification: Mild high frequency hearing loss with sloping configuration, cookie bite around 2000 Hz

Jens, 68/M/66/2/P, degree of loss: Right ear: 34 dB HL; Left ear: 39 dB HL; Average: 37 dB HL
Classification: Mild high frequency sensorineural hearing loss (acoustic trauma), with sloping configuration

Jette, 61/F/76/1/P, degree of loss: Right ear: 45 dB HL; Left ear: 46 dB HL; Average: 46 dB HL
Classification: Moderate high frequency hearing loss with sloping configuration

Jesper, 16/M/59/1/H, degree of loss: Right ear: 29 dB HL; Left ear: 34 dB HL; Average: 31 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Jørn, 25/M/79/2/P, degree of loss: Right ear: 35 dB HL; Left ear: 38 dB HL; Average: 36 dB HL
Classification: Mild high frequency sensorineural hearing loss, precipitous configuration above 1000 Hz

Karoline, 73/F/79/1/P, degree of loss: Right ear: 45 dB HL; Left ear: 48 dB HL; Average: 46 dB HL
Classification: Moderate high frequency hearing loss with sloping configuration

Keld, 23/M/53/2/H, degree of loss: Right ear: 35 dB HL; Left ear: 23 dB HL; Average: 29 dB HL
Classification: Mild high frequency sensorineural hearing loss with precipitous configuration

Ketty, 69/F/81/1/P, degree of loss: Right ear: 39 dB HL; Left ear: 86 dB HL; Average: dB HL
Classification: Right ear: Mild hearing loss with inverted cookie bite configuration. Left ear: profound hearing loss

Lene, 28/F/57/2/H, No audiogram available

Lette, 72/F/61/2/P, degree of loss: right ear: 33 dB; left ear: 28 dB; average: 31 dB
Classification: Mild mixed conductive/sensorineural hearing loss with inverted cookie bite configuration

Lise, 60/F/74/2/H, degree of loss: Right ear: 35dB HL; Left ear: 36 dB HL; Average: 37 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Lotte, 64/F/84/2/P, degree of loss: Right ear: 35 dB HL; Left ear: 63 dB HL; Average: 49 dB HL
Classification: Moderate sensorineural hearing loss. Right ear: sloping configuration, left ear: sloping configuration with cookie bite around 1000 Hz

Margit, 45/F/93/2/P, No audiogram available

Marie, 41/F/59/1/H, degree of loss: Right ear: 16 dB HL; Left ear: 35 dB HL; Average: 26 dB HL
Classification: Mild high frequency sensorineural hearing loss with sloping configuration

Ole, 58/M/63/2-1/H, degree of loss: Right ear: 53 dB HL; Left ear: 40 dB HL; Average: 46 dB HL
Classification: Moderate high frequency sensorineural hearing loss, precipitous configuration

Orla, 63/M/74/2/P. No audiogram available

Poul, 30/M/57/2/H, degree of loss: Right ear: 23 dB HL; Left ear: 25 dB HL; Average: 24 dB HL
Classification: Mild sensorineural hearing loss, precipitous configuration above 1000 Hz

Stine, 65/F/74/2/P, degree of loss: Right ear: 44dB HL; Left ear: 45 dB HL; Average: 44 dB HL
Classification: Moderate mixed conductive/sensorineural hearing loss with sloping configuration

Walter, 21/M/59/2/H, degree of loss: Right ear: 40 dB HL; Left ear: 35 dB HL; Average: 38 dB HL
Classification: Mild high frequency sensorineural hearing loss, precipitous configuration above 1000 Hz

Trine, 46/F/68/2/H, degree of loss: Right ear: 45 dB HL; Left ear: 58 dB HL; Average: 51 dB HL
Classification: Moderate mixed conductive/sensorineural hearing loss with sloping configuration above 1000 Hz

ACKNOWLEDGEMENTS

Without steady support and encouragement this thesis would never have reached its finishing stages. First of all, I would like to thank my supervisor, Professor Gisela Welz, who always was there with constructive and immediate guidance when I needed it.

I am grateful to the Oticon Foundation and especially Claus Elberling for supporting me and letting me use their library and premises. The interviewees, dispensers, manufacturers, contributed extensively when they let me hang around and probably did not know what they were in for when they let me look over their shoulder.

Writing the thesis became a process in which I involved friends and family – it became a discussion in which everybody had to consider how they used their hearing sense and what it meant to be a hearing aid user. I do not think that they always were grateful to me, but for me it contributed with insight in the inclusiveness and multifaceted aspects of the hearing sense and the degree to which we take it for granted what we hear. If I tried to make a list of those I'm grateful to, it would be longer than anyone cared to read, however, without the steady support of friends and acquaintances, I would never have made it.

A very special "thank you" will have to go to Palle who never questioned the justification of my undertaking.

FUNDING

During the research and writing periods of the study, I decided to apply for funding to meet my costs of living and expenses related to courses and technical equipment. I made several applications to foundations but was turned down. Eventually, the Oticon Foundation agreed to support my study with DKK 500,000, which is the equivalent of €66,600, of which I had to pay about 50% tax. In addition, the foundation funded my travels and conferences, a computer programme, NVIVO, to support the analysis of qualitative data, and a course to learn how to use it.

Another foundation, Leverandørforening for Høreapparater, provided DKK 30,000 for the transcription of recordings of the interviews. I am extremely grateful for the funding. I was also allowed to use the library at the Oticon research centre and was able to discuss the Danish hearing health care system as well as technical matters. Especially Claus Elberling at the Eriksholm Research Centre was helpful; also other staff members were a great support for me. During the autumn of 2004, I had my place of work at the research centre, where I worked with the coding of my own project for about two months. I presented a paper on my research and also learned about the research projects there.

Some of those with whom I discussed my project warned me against being funded by the Oticon Foundation. They claimed that my results would be questioned, because Oticon is one of the key global players in the hearing aid industry. To this point, I can make three statements. First, Oticon has in no way tried to influence my work. Second, the result of my study that hearing aids are useful devices will not be news to most people. Third, in this thesis, I discuss individual and societal attitudes and solutions to hearing aids problems. I do not think that this can directly influence the hearing aid market. It could have some impact on fitting procedures, but if this were to happen, it could in time not only be of benefit the entire hearing aid industry but certainly to the users. In that case, I would have achieved something with my study – and that is my hope.

CURRICULUM VITAE

	Ellen Susanne Bisgaard, Born: 6 March 1951, Nationality: Danish Address: I.H.Mundtsvej 10, DK-2830 Virum, Denmark Tel: +45 45 85 96 86 - e-mail: Bisgaard@tdc-broadband.dk
2009	June: Paper at Hearing Aid Developers' Forum, Hörtech, Oldenburg, Germany
2008	June: Paper at NAS 2008 in Reykjavik, Iceland May: Papers at University of Southern Denmark, SPIRE, Alsion, Sønderborg
2007 -	Free-lance journalist
2006	Paper at Phonak Seminar, 20-21 November on the meaning of hearing loss.
2005	Course for hearing impaired people, Castberggård, 4 – 6 September 2005, paper on human-technology interaction with a focus on hearing impairment.
2004	7th IFHOH WORLD CONGRESS, July 4-9, Helsinki. Congress of the International Federation of the Hard of Hearing. Presentation of http://www.kuulonhuoltoliitto.fi/tiedoston_katsominen.php?dok_id=74
2004	Hearing Care Day**.** Paper on my research presented at a Hearing Care Center in Slagelse for a group of social workers on 4 March 2004.
2003	Medical Anthropology at home 3, Medical anthropology, welfare state and political engagement. Perugia (Italy) 24-27 September 2003. Paper presented.
2003-07	Editor of the magazine of the Danish Ménière and Tinnitus Association
2002	30 September – 1 October: Plans to Practice: Research Mehodology Workshop, Insitute for Anthropology, University of Copenhagen
2002	26 – 27 September: Method and analysis of ethnographic medical research 2002, Institute of Anthropology, University of Copenhagen
2002-2003	Participation in seminar on medical anthropology at University of Copenhagen. Paper on Robert M. Murphy: ”The Body Silent” seen in relation to field work on new users of hearing aids.
2002-08	Doktorandin at Institut für Kulturanthropologie und Europäische Ethnologie, Frankfurt am Main. Regular participation in Doktorandenkolloqien
2001	Magistra Artium, Institut für Kulturanthropologie und Europäische Ethnologie, Frankfurt am Main
1995-2001	Posting (husband) in Frankfurt am Main

1986-95	Employed as personal assistent and translator at the Copenhagen Zoo
1982-1986	Various temporary, part-time employments
1980-82	ED in English, Copenhagen Business School
1978-81	English teacher/adult education programme
1975-78	Posting (husband) in New Zealand
1972	Graduated as English/German/French correspondent
1970	A-levels in Copenhagen

PUBLICATIONS

Bisgaard, Susanne: At høre, at høre efter, at høre til. Strategier i forbindelse med høretab og høreapparater. Tidsskriftet antropologi, nr. 54, 2006/2007.

Bisgaard, Susanne: Ungehört. Hören – Hörverlust – Hörgerät. In: parapluie, No. 20, Frühjahr 2005. http://parapluie.de/archiv/ohr/hoergeraet/

Bisgaard, Susanne: Expectations and Experiences of New Hearing Aid Users http://www.kuulonhuoltoliitto.fi/tiedoston_katsominen.php?dok_id=74. Paper of the 7th IFHOH World Congress, July 4-9, 2004 Helsinki.

Bisgaard, Susanne: Am Ende einer Reise: Probleme lokaler Identitätsfindung in Bad Karlshafen. In: Schilling, Heinz: Peripherie. Frankfurt 2000.

Bisgaard, Susanne: Nachbar Zoo. Wilde Kreaturen in der Stadt. In: Greverus, Ina-Maria et al.: Frankfurt am Main: Ein kulturanthropologischer Stadtführer. Frankfurt 1998.

Bisgaard, Susanne und Wehrs, Elke: Ein Haus taucht aus der Geschichte auf. Der Poelzig-Bau zwischen Macht-Monument und zukünftigem demokratischem Lern-Ort. In: Greverus, Ina-Maria et al.: Frankfurt am Main: Ein kulturanthropolog-ischer Stadtführer. Frankfurt 1998.

Bisgaard, Susanne und Wehrs, Elke: A building emerges from History. The Poelzig Ensemble between Monument of Power and Future Democratic Place of Learning. In: Greverus, Ina-Maria et al.: Frankfurt am Main: An anthropological City Guide. Frankfurt 1998.

Bisgaard, Susanne: Neighbourhood Zoo: Wild Creatures in the City. In: Greverus, Ina-Maria et al.: Frankfurt am Main: An anthropological City Guide. Frankfurt 1998.

Bisgaard, Susanne: Menschen Tiere Räume. Zoo als Nachbarschaft verstanden. In: Schilling, Heinz: Nebenan und Gegenüber. Nachbarn und Nachbarschaften heute. Frankfurt 1997.