Interpreting Ideals and Relaying Rights

A Comparative Study of Video Interpreting Services

in Norway, Sweden and the United States

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Hilde Haualand

Preface

Why are they so different?

"Why are they so different?" has repeatedly been the puzzled response when the differences between both request and outreach of the video interpreting services in the US, Norway and Sweden have been discussed. Almost 20 years after the first trials to using videophones to provide sign language interpreter services, video interpreting approaches a billion dollar market in the US (without long queues), is subject to heavy demand (including long queues) in Sweden, while the service is still in its infancy with limited outreach and request in Norway, at least compared to the two other countries. In the US, the service is considered a civil right. Increased accessibility motivates the service in Sweden. It is organised as an extension of the sign language interpreter services in Norway. The video interpreting services are condensations of politics, technology and human resources, which are entangled with each other. The service cannot be separated into neat units of politics and technical solutions that operate independently from each other, nor can the services be conceived as a coherent whole, in which all the actors involved tell, or enact the same idea. Once the focus is on the various definitions and goals of the services and how they are organised, the apparent similarities in the moment of use evaporate and differences abound. These differences pave the way for the discussion in this dissertation.

There has been an increasing focus the past decades on studying and treating disability as a social and material construction. National as well as international agreements and regulations emphasise accessibility and inclusion as the foundation of disability politics. Non-governmental organisations of disabled people who lobby various government bodies working to improve the lives of people with disabilities, use these documents (both legally binding and not), as well as successful measures in other countries to argue why and how

national improvements should and can be made. The very implementation of the politics always happens within the existing political, social, financial and social structures of each country. This dissertation is a comparative study of a service that appears the same across various countries. The video interpreting services have been implemented in different political and regulatory contexts, and are a case for a qualitative comparative study of disability politics. International comparative studies of disability have mostly focused on regulations and financial provisions, and have been less concerned with their consequences (Hvinden, 2009; Hvinden & Halvorsen, 2003). This study focuses on the consequences of regulations and financial mechanisms, and how a particular technology (the videophone) and a related service (the video interpreting service) has contributed to a slight reformation, but also consolidation of the same mechanisms.

Directory for readers

This dissertation is by several measures unfaithful to classic traditions in social anthropology. Putting several pins on a map and saying; "I was there and there to collect data" would miss the field totally. Next, I have been an insider as well as an outsider in the field(s), and not always at the expected sites. Third, it is a result of an open affair with Science and Technology Studies (STS) and the actor-network theory (ANT) approach that partially arose due to a slight annoyance with anthropology's incessant dualisms. These somewhat coarse grained assertions are left for now, and will be elaborated on one by one in the next three chapters. The last infringement of this dissertation is the style of the dissertation itself. It has a form that violates the monographic ideal of anthropology, since the analysis is presented in the form of three autonomous articles. These articles are "Interpreted Ideals and Relayed Rights: Video Interpreting Services as Objects of Politics" (Haualand, 2011), "Video Interpreting Services: Calls for Inclusion or Redialling Exclusion" (Haualand, forthcoming), and "Scripts of Video Interpreting". They were written in that order, and are sometimes

referred to in the introductory chapters as the "first", "second," and "last" (or "third") article. The context, method and a discussion of the articles are presented respectively in three introductory chapters titled "Connections", "The journey" and "Conversations". In the preface, the dissertation is presented and its form outlined as a reader's guide to the chapters that follow. A concluding discussion and summary of each of the three articles are presented in the last section called "Messages". There is also an appendix containing figures illustrating the national structure of the video interpreting systems in the US, Sweden and Norway. The three figures are included to give an overview of how the different institutions involved in video interpreting in each country are related to each other. The figures are not mentioned in the text again.

Connections in the field

Chapter I "Connections" is dedicated to giving background information and a description of how the invention and dispersion of electronic communication technologies is intertwined with the history of deaf peoples' lives, social position and cultural organisation within societies where they have been viewed both as individuals with a hearing impairment, as well as a linguistic and cultural minority. The fields where the ethnographic data for this dissertation is gathered are not foremost demarcated by any kind of physical, regional or state borders, or geographical landmarks. Rather, the field is a complex of questions related to inclusion, communication, deafness (and disability) and technology, where the "nature" of the involved entities has changed over time, and continues to do so. The study of videophones and the emerging video interpreting services in this dissertation, is a study "that cares about, and pays attention to, the interlocking of multiple social-political sites and locations" (Gupta & Ferguson, 1997a, 37). This "interlocking" is something that is not done once and for all. Both the technologies in use and how they are politically organised are in continuous change. There are hence more difficulties than only trying to place a pin on the field geographically or

spatially. This study is indeed about the implementation of videophones and the emergence of a new public service in three specific countries (the US, Norway and Sweden), but it is not the particularities of these three countries that are in focus. Neither is the temporality of the field given, or possible to demarcate by dates, since the study is about a project that is "observed at a particular point in time, one that was under way before the research started and one that will continue when the research grants run out" (Moore, 2005, 8). It is this ever on-going process of intertwining, interlocking and entanglement of technology and politics that makes up what in a very broad sense can be called the context or the "field" in which the videophones, the video interpreting services and their users are located. The first chapter is an attempt to give an outline of this field.

The fieldwork journey

Chapter II "The Journey" is a description of the research questions that led up to the fieldwork and an account of the fieldwork; where I have been, how I have been doing research and whom I have talked with. I have had multiple roles, not only "out there" in the field, but also in the political and research communities where the questions and assumptions leading up to the thesis have also been discussed. When the various disability policies, programs and measures were discussed among disability researchers, I found myself observing how my colleagues discussed them and how they related to them as theoretical concepts and units of analysis. As a Deaf person I was living and struggling with the same ideas and measures, often in the most tangible ways, resulting in being included or left out, and often with a feeling of not really knowing if I was either. By continuously experiencing the mechanisms of exclusion and being a token of inclusion, I was a condensation of the tangible consequences of exclusion and an imagination of what inclusion makes possible. I defended the ethical imperative of inclusion while I also questioned it, since it failed me over and over again. I could not take the position of the insider since I was an outsider, and I could not take the

position as an outsider since I am partially a product of the politics of inclusion. In the quest to keep the various perspectives apart, to understand them as more than one perspective, but less than a coherent whole, the idea of the cyborg (Haraway, 1991) was inspiring, since the cyborg demands more than one gaze; that we simultaneously aim to see unity and difference, and what is one and many at the same time. "The journey" includes a narration on how the initial research focus caused intellectual as well as emotional discomfort, which later led to a change of focus and questions in the research process. This chapter and the next are also about how I have been unfaithful with traditional theories of social anthropology, and have juggled with anthropology, sociology and actor-network theory. It was not a goal of mine to use one consistent theory to explain a whole, rather there was a search for theories and ideas to express the multiplicity in the field, to show that there are numerous stories to be told, several realities and ideals, which cannot be separated and must be understood in light of each other. I have used a wealth of different methods, and been more pragmatic than predetermined in my choice of methods at the different sites of the fields I have visited and followed. This is not to say that the choice of theories and methods have been accidental and without intent. The choices partially arouse from what I observed and learned as the fieldwork progressed, when I found ideas from other disciplines than anthropology fit my observations, and when ideas also influenced by my personal position(s) within the field.

Conversations with theory

Chapter III "Conversations" gives an overview of the theoretical perspectives that have guided my analysis in the three articles. Marilyn Strathern's (1999) description of the double location of the anthropologist's practice explains the purpose of this chapter spot on. One location is out there, in what traditionally is called the field, while the other location is at a desk. The fieldwork from "out there" is the focus of Chapter II "The journey", while the third chapter focuses on the desk as a field. At this anthropologist's desk, the field notes mingle

with books that either have been read from cover to cover, or where only a chapter has been inspiring. There are articles from scientific journals and fanzines, project and research reports, commercial and informational material, a long list of "favourites" in the web browser, and online or paper copies from public archives and databases, to name some of the material that formed a creative mess. "Conversations" is about the journey through this second field, and elaborates some of the considerations and reflections that were made before and during the work with the articles. Due to the strict and limited format of scientific journal articles, not all ideas and associations could be included in them. The analyses emerged in a dialectic process between the two modes of fields, where the experiences and observations during the fieldwork "out there" were in a continuous conversation with the ideas that covered the desk in the material form of paper, ink and bytes. Also, the last chapter includes a summary of how the intense conversations with Science and Technology Studies and actor-network theory not only have been valuable, but also determined the analytical process.

Messages from the dissertation

In a concluding section called "Messages", some of the discussions initiated or only touched upon in the three previous chapters and the articles are taken up, and the most important messages of this dissertation are highlighted. This is also the place where the comparative dimension and aspiration are finally discussed. A main reason for not discussing comparability earlier (an elephant in the room throughout the introductory chapters and the articles), is that this discussion is partially done in a mode of hindsight on the comparative project that was part of the research from the beginning.

Some comments on terminology

This last part of the introduction explains some terminology choices. The three introductory chapters shift between a rather descriptive approach to the history leading up to the research

questions, to passages of considerations inspired by theory and sometimes interrupted by personal memories. The disposition does not tell one, neat story. The three introductory chapters follow a more or less chronological order to show how the research process has evolved. The field is outlined through a description of connections that have emerged over more than a century, and is followed by a chapter that concentrates on the fieldwork period, which was characterised by repeated visits to the US, Sweden and numerous encounters in Norway (the location of my office) from late fall 2005 to late 2010. The last chapter is concerned with theoretical considerations that emerged during, and after the data collection ceased.

D/deaf

The text alternates between using *deaf* and *Deaf* (with a capitalised D), which is a widespread practice in the social sciences and the humanities. Very broadly, ***d***eaf refers to the medical condition, while ***D***eaf refers to the social and cultural formation of (deaf) people who use sign language to communicate (Bauman, 2008; Higgins, 1980; Padden & Humphries, 1988; Woodward, 1972). The d/Deaf distinction is increasingly controversial, as it creates a dichotomy between deaf and Deaf experiences and identifications that may not be easy to separate, if possible at all. It has also been argued that d/Deaf people foremost should be viewed as an ethnic group, a cultural and/or linguistic minority (*D*eaf) rather than as a group of disabled people (*d*eaf) (Ladd, 2003; Lane, 1993; Lane, Pillard, & Hedberg, 2011). This discussion will not be pursued here. In this dissertation, the alternation between *d*eaf and *D*eaf follow a pattern where lowercase deaf is used when the concept refers to persons or a group of people who are protected by a legal measure or entitled to receive or use a service by virtue of hearing loss, regardless of their linguistic or cultural identity or background. Uppercase Deaf refers to persons or groups of people who explicitly have expressed membership in or identification with a community of people who use sign language.

Hearing people

The concepts "hearing" or "hearing people" are sometimes used in this dissertation, and are terms widely, and probably mostly, used by Deaf people. It refers both to people who possess the physiological ability to hear, and to the indefinite mass of people who are ignorant about Deaf people, Deaf lives or Deaf culture. It is a ubiquitous concept used in the Deaf community to identify *the other*, or those who are not part of the group. The concept is quite fluent, there are no clear cut lines, and not all hearing people are conceived as equally hearing. Hearing people who know sign language (in particular hearing children of deaf adults, or sign language interpreters) may be less hearing than hearing people who know no sign language or Deaf people. In this dissertation, I use "hearing" in a similar manner as my informants (who are both Deaf and hearing).

Personal anecdotes

The text is occasionally interrupted by personal anecdotes. Some are more than 20 years old, while others are more recent accounts, and are typically slightly edited excerpts from field notes. Most are presented as memories to illuminate a point in the text. All the anecdotes are retrospective. The incidents they tell about did not necessarily have the same meaning when they happened as the connotations they are intended to give when used in this text (Denzin, 1997). Other stories are accounts of emotional and intellectual turmoil, discomfort or revelations during work on this dissertation. All will appear in the text as memories that were revitalised in a certain stage of the research project, or as synchronic disclosures.

The reasons for including these anecdotes are two-fold. First, I am part of a general trend in social anthropology where more are doing fieldwork in arenas closer to "home" than ever, both in the geographical, metaphorical and/or ideological senses. We may study societies of conceptual "others" in the very cities we live in, and hence, commute between our field and our familiar dinner table every day. Or, we may travel around the Earth to study a group of

people whose interests or common ground is also a topic of concern and interest to the anthropologist (often related to some kind of activism (environment, religious, politics, identity)), and we may feel at "home" with them in some sense. Even in the most remote places, globalism has dispersed quite a few concepts, references and experiences which makes us even less alien to the people we study. These references need not only be for mundane concepts, but one may as well meet informants who know, and even work with the same theoretical concepts as us. Although being "away", the anthropologist may simultaneously meet informants that are scholarly engaged in the same questions as we aim to explore during fieldwork (Bruner, 1993; Narayan, 1993; Weston, 1997). As researchers in fields we perhaps increasingly are, or become a part of, it is mandatory to be quite conscious about the interaction between ourselves (as human beings and as researchers), the people we study and the theoretical ballast we always carry (Gupta & Ferguson, 1997a, 1997b; Narayan, 1993). The anecdotes are an attempt to reveal some experiences that may reveal my relationship to the questions studied, and to make these transparent.

From this follows the second reason for positioning myself so explicitly in the text. Being a Deaf researcher involved in national as well as international activities to improve the lives of Deaf people, there is no means to do what Foucault desires when initiating his inaugural speech, the Order of Discourse; "I would really like to have slipped imperceptibly into this lecture" (Foucault, 1971, 7). As a researcher who repeatedly and overtly has been marked and questioned on the basis of what sometimes is perceived as a disability, sometimes as an identity, sometimes as a physical impairment which supposedly limits my access to certain data (bluntly ignoring that the same impairment has given me access to data I probably would have overlooked, could I hear), I may have developed a hypersensitivity to these issues, since I have been, and am, in a situation where I have been challenged to defend and explain my position. I do not only meet a demand to make my methods and research process transparent,

but as a marked body, I also sense a continuous demand to make myself, as a person-researcher, transparent. I believe this tacit demand to be transparent is a result of rarely being imperceptible, of continuously being noticed because of the difference that marks my body as deaf. The anecdotes are an attempt to reinstall the embodied nature of vision, and to distort the idea of a gaze, which traditionally has been a privilege of the unmarked body, which "inscribes all the marked bodies, that makes the unmarked category claim the power to see and not to be seen, to represent while escaping representation" (Haraway, 1991, 188). By this, I give my consent to Haraway when she writes that the researcher must confess to and recognize the significance of being situated and positioned as a researcher. Only by being situated and recognizing the vision, is it possible to be responsible for one's own research, since research that is not locatable cannot be held accountable. So rather than making a futile attempt to avoid intervention, I hereby stage myself as a cyborg, since "Cyborg writing is about the power to survive, not on the basis of original innocence, but on the basis of seizing the tools to mark the world that marked them as other" (Haraway, 1991, 175).

Videophones

"Videophone" is the common name for a series of technologies, which all have in common that they enable distant communication in sign language. Basically, there are three different groups of video telephones: a) dedicated video phones, with or without a detached display, b) computer software and c) mobile cell phones with integrated cameras, operating on the UMTS-network or wireless networks. All three can be either mainstream equipment or equipment specifically designed for deaf users or video interpreting service clients. Only recently, and quite exceptionally, some interoperability between the different models has been enabled. Video telephony was until very recently (if not still) an emerging market, which has lacked a common standard. It is generally believed that the dedicated solutions developed explicitly for video interpreting services will be replaced by generic solutions. Video

interpreting service providers in the US and Sweden are already moving towards such a scenario, but this kind of interoperability was not evident during the field work period. Hence, when the term "videophone" is used in this text, it refers to the models mostly used vis-à-vis the public video interpreting services, or to call other videophones of the same type.

Video Interpreting Service

Basically, there are always three people involved in a process of video interpreting: a deaf sign language user, a sign language interpreter and a hearing person using a spoken language. These communicate by way of a videophone, a studio where the interpreter works, equipped with a videophone and a headset, and a telephone. The interpreter is ideally only an intermediary, who relays a conversation between the signer and speaker. Video interpreting services are a combination of human and technological resources, and without any one of these involved, the services would not exist. Video interpreting services have been made possible by the invention of the microchip and the subsequent digital revolution, and the emphasis on accessibility and inclusion that has permeated disability politics at national as well as international levels in the past decades.

In the article "Interpreted Ideals and Relayed Rights", the different terms that are used for the video interpreting services in the three countries serve as a foundation for the discussion, and they quite precisely also reveal the major differences, and where the emphasis is in each system. In Norway, the service is called "bildetolktjeneste" (video interpreting service), the Swedish name is "tolktjänst för bildtelefoni" (interpreting service for videophony) while there are two names in the US: "Video Relay Service" and "Video Remote Interpreting". These two terms used in the US refer to interpreting of telephone calls, and interpreting in situations where the communicating parties are located at the same site, and the interpreter provides the service via a videophone. This distinction is not made in Norway or Sweden, but is fundamental to the service in the US. The bulk of the American discussion, financing and

regulations are related to Video Relay Services (VRS), and Video Remote Interpreting has continued to be diminutive compared to VRS. International discourse related to these services often use Video Relay Service with the abbreviation VRS as a common name for the services provided in a growing number of countries worldwide. In this dissertation, I have however chose to use video interpreting, or video interpreting services as a common name, unless it has been important to emphasise that a particular national system is discussed. The reason for this is the prevailing position VRS has in the US, and its specific reference to a telecommunication service. This dissertation shows that the telecommunication aspect is one of several possible definitions or ways to organise the service, therefore the more "neutral" concept "video interpreting" is used as a general term.

1. Connections

Coming full circle

When I drove up Telegraph Hill at Gallaudet University's campus Kendall Green in Northeastern Washington, D.C. a late autumn day in 2005, I had come full circle. I was back where it all started. It was the place where the early origins of my field made its entrance into history in 1856, when the business partners Samuel Morse and Amos Kendall opened the world's first telegraph line at the latter's large green field. Morse's invention was the first step towards what is now sometimes referred to as the global village, where information can be sent over large distances in fractions of a second using electricity. Postmaster Kendall lobbied his contacts in the American Congress to make them establish a telegraph line between the Capitol and Baltimore that crossed his property in the outskirts of the Capitol. A few years later, the politicians asked him to give land to establish a school for the Deaf and the Blind at his property. In 1864, President Abraham Lincoln signed the document that founded a college for Deaf students at Kendall Green. Today, Gallaudet University is the world's only liberal arts university for the Deaf, where the lectures, instructions and tutoring by and large are in American Sign Language. The campus is a green oasis in a metropolitan area, and it is an oasis of visual communication in a world that otherwise is infused by auditive information and spoken languages. It is also the place where I spent a year as an exchange student at the Model Secondary School for the Deaf, the high school located on the university campus. When I returned to work and do fieldwork at Gallaudet in 2005, the house where I lived was right behind the resident halls where I had slept and lived during school in the late 1980s, right at Telegraph Hill. It was the place and the year I found myself – in the sense that I realized where I belonged, among the people of the eye, Deaf people. In 2005, I once again came home.[1]

Producing a field

In this chapter, the sites of the fieldwork are contextualised in a techno-historical outline. The focus is on some of the numerous connections that have founded the ways people communicate using technology, and how these connections have contributed to classification,

[1]The content of this narration would not have been possible without basic familiarity with American Deaf history, including the history of Gallaudet University, and some knowledge of the history of the telegraph. Further, on numerous occasions (of which some will be described in the next chapters) I have been challenged to do an introspection of my identity/ies and make my cultural lens(es) explicit. Some of the implicit references in the narration include, but are not exclusive to (Gannon, Butler, & Gilbert, 1981; Greenwald & van Cleve, 2008; Haualand, 2001a, 2001b; Lang, 1994, 2000; Lepore, 2002; McLuhan, 1964; Strauss, 2006; Veditz, 1910).

exclusion and inclusion of deaf people. The technology is not viewed as something that surrounds society, but as something that is both embedded in as well as embeds society, and makes society durable (Latour, 1993a, 1993b, 2002). The field is here very broadly conceived as the connections and processes where communication technologies and deaf people meet. With an explicit focus and emphasis on the role of technologies in the regulation and structure of social life, the foremost characteristic of the field in this dissertation is not a definite group of people or a certain geographic area. Demarcating (or constructing) a field of study is not only an act to make a research question manageable – it is also a methodological act that helps to *produce* the reality the methods describe (Law, 2004, 6). Qualitative studies of definite groups of people in geographically demarcated areas have been a hallmark of anthropology. Such studies have been an invaluable source of knowledge about the variety of ways of organising human social life. However, as argued by Marcus (1995), this traditional (albeit declining) approach, has also contributed to a (re)construction of the same groups and geographical borders, through suggesting a focus on certain associations and connections. The definition of the field in this dissertation is no less, nor more, than other approaches proposing a search for and thereby also a look towards particular associations and connections. However the field is defined, whether as a single site or a multisited phenomenon, it has implications for the choice of methods – which again produce the realities the ethnographer describes. Law argues that "Method always works not simply by detecting but also by amplifying a reality" (Law, 2004, 116). This is certainly done at the cost of a more nuanced description of the effects of information technology in the society in general, the deaf community as well as the processes behind the numerous inventions and discoveries mentioned. The aim of this chapter is to unveil some of the technologies that are often taken for granted, and show their role in establishing and consolidating a field in which the videophones and in particular the video interpreting services may be studied.

Intertwined history

The telegraph and the telephone

Two early crossings between communication technology and deafness were the invention of the telegraph (as indicated in the anecdote at the start of this chapter) and the telephone a few decades later. The invention of the telegraph as well as the telephone happened, as most inventions and discoveries, within a structure of scientists who cooperate, and by assembling and experimenting with existing technologies in new constellations. Scientists build upon the works of others, technologies and methods others have developed, and inventions are often the result of simultaneous cooperation as well as competition between scientists and researchers who share an interest, and form part of a common paradigm (Kuhn, 1962; Merton, 1973). Sometimes, a "big man" is identified in a process of invention or discovery, like Pasteur for the anthrax vaccination (Latour, 1988), Edison in the case of electricity (Hughes, 1983), Morse in the case of the telegraph or Alexander Graham Bell (1847-1922) and the telephone. The "discoveries" these individuals made were highly contingent on a vast intertwinement of previous knowledge, existing technologies, financial resources and objects (both human and non-human), which these inventors eventually succeeded in recomposing or tying together. Samuel Morse and Alexander Graham Bell were part of a milieu of influential merchants and politicians in the mid-19th century United States where the question of how to educate deaf children was discussed along with general contemporary themes (Krentz, 2000; Lepore, 2002; Van Cleve, 2002). Bell was also the son and husband of deaf women, and was directly involved in the discussion of how to educate deaf people, and emphasised that deaf people should learn to use their voice and perceive sounds. It is generally believed that Bell found interest in acoustic experiments with electricity partly due to his private and close affinity to Deaf people (Lang, 2000; Strauss, 2006), and one of the early investors in Bell's acoustic experiments was a prosperous merchant with a deaf son (Murray, 2007). Bell is

today known as the inventor of the telephone, but this is not to say that he alone came up with the very idea of communicating by way of electricity, or the first functional solution to transmit voice. His lawyers were however the first to file a patent that made the invention his property on February 14, 1876. The patent alone was not sufficient to secure the dispersion of the telephone, but it gave Bell a tool to push forth the development of a system of masts, lines and mass production of telephones that soon fundamentally altered the way communication was carried out worldwide.

The telegraph also allowed communication that by far exceeded the speed of a courier, but people still relied on other people (who mastered telegraphy and Morse code) to transmit a message. The buzz of the electric signals were also tactile, so several Deaf or hard of hearing people worked as Morse operators, who coded and decoded messages for people who paid them for this job. One of them was Thomas Alva Edison, who was completely deaf in one ear and hard of hearing in the other, and later filed patents to improve both the telegraph and the telephone (Beals, 1997; Lang, 1994). The telephone did not require skilled operators like the telegraph did. The importance of the telephone emerged gradually over the next decades, and it was improved and redesigned by new generations of engineers and electricians. The telephone dispersed throughout the world by a parallel engineering of a social, economic, legal, scientific, and political infrastructure. The expansion of an infrastructure was a prerequisite to put the telephone into convenient and economic use (Anderson & Johannesson, 2005; Hughes, 1983; Pfaffenberger, 1992), and within few years, telephone networks had been established all over the world. The telephone did not build the infrastructure, but the infrastructure – or a whole sociotechnical system - enabled the dispersion of telephone. This system was first reserved for the wealthy that could afford telephones or had occupations that involved use of telephones, but gradually included the wider masses of people. This system did however not expand without a rupture – a rupture in

which deaf people were left outside. The telephone became a tangible manifestation of the exclusion of deaf people; exclusion embedded in a material artefact. Prior to the invention of the telephone, deaf and hearing people had been quite equal with regards to communication at a distance. Deafness became a spatial disability upon the invention of the telephone, when hearing people effectively could use auditive speech to connect at a distance. The new way of communication displaced the visual space that had gained increasing dominance by the printing press, with auditory space (Cavell, 1999; McLuhan, 1964). The practical and spatial exclusion of deaf people was maintained, if not reinforced; not so much because of the telephone itself, but because it was so inextricably part of a sociotechnical system, in which distant communication was detached from the constraints of time.

Structuring society

Communication technologies have enhanced human capacity so much they have become part of who and what we are. They are a fundamental part of the material culture that constitutes us, but they are still often conceived as external things people simply use to communicate and to send or receive information. Some of the most widespread communication technologies like telephones and computers are not most powerful by their tangible design or existence, but by the way they are taken for granted. When communication technologies simply are taken as external artefacts, and their role as agents that make people act in certain ways, they have been objectified (Miller, 2005, 2010). Rather than conceiving of objects as agents that make us act in certain ways, we tend however to literally *see* them, perceiving them as physical objects that are external to the body. The process of objectification is part of the very same process by which we make and use the technologies; objects make people just as much as people make objects. Not only do they habituate us as individuals, they often also come in standardized forms that prompt people to act in ways that are eventually also conceived as appropriate. They also create groups of people and create distinctions between those who use

them, and people who for one reason or another do not. By enhancing the human ability to communicate, the telephone was gradually objectified, and structured the way societies are organised.

A salient example of how communication technologies contributed to the social formation of a group is their role in the construction of the status of deaf people as outsiders. Deaf people have however not been mere bystanders to or isolated from the development of the telephone and the telegraph, and the challenges of how to teach deaf children was part of the consciousness of those who invented those technologies. However speculative it may seem, the quest to find (new or alternative) ways to communicate that may come as a consequence of both lack of hearing and enhanced eyesight, may have been part of the motivation of some of the people involved in the development of various communication technologies. In the history of communication technologies, deafness has not necessarily only been a "lack", but it has also represented as a "gain", or "a form of human diversity capable of making vital contributions to the greater good of society" (Bauman & Murray, 2010, 210). Thus, the intersection between deaf people and communication technologies is not a one-way story, in which deaf people have been excluded or included by means of technologies and sociotechnical systems. Deaf people have also by their very existence, contributed to the formation of these sociotechnical systems. This has happened both by way of hearing impaired individuals and from processes initiated by members of the Deaf communities that also emerged during the 19th century.

An emerging Deaf transnational sphere

During the 19th century, a transnational public Deaf sphere evolved all over USA and in Northern Europe; a sphere in which co-equality with hearing people, not the inferiority of Deaf people was emphasised (Krentz, 2000; Ladd, 2003; Murray, 2007; Widell, 1993). In the last decades of the 19th century, educated Deaf people founded local clubs in many of the

cities where a school for the Deaf had been established a few decades earlier. These boarding schools are sometimes referred to as the cradle of the Deaf community. For almost two centuries, the deaf schools have been a major arena for passing on sign language to new generations of Deaf children, since only 5-10 % of all deaf children are born in homes where sign language is used to communicate. The schools have maintained close ties between pupils who not only received their education there, but also lived there through large parts of their childhood. The Deaf clubs were not only important sources and distributors of information. They were also sites where the close ties from the Deaf schools could be maintained after graduation. The printed press and numerous national and transnational meetings played a major role in spreading information about Deaf people and common experiences from encounters with hearing people (Murray, 2007).[2] The first Deaf club in the Nordic countries was established in Copenhagen, Denmark in 1866 (the first school for the Deaf was established in 1807), Stockholm, Sweden in 1868 (first school in 1809) and Oslo, Norway in 1878 (first school in 1848). Also in the US, an array of different associations of the Deaf was established in the last decades of the 19th century (Van Cleve, 2002). The American National Association of the Deaf (NAD) was the world's first nationwide association of the Deaf (established in 1880), and national associations of the Deaf were established in the Nordic countries a few decades later. In 1925 almost all large Nordic cities had their own Deaf club and numerous countries (especially in Northern Europe and North America) had national associations of the Deaf. In the following decades, several of the international organizations of the deaf that exist today were established. The International Committee of Sports for the Deaf was established in 1924) and the World Federation of the Deaf in 1951.[3]

[2] The telephone may have played a role in the dissemination of information in the Deaf community by way of hearing allies or helpers, but this is only speculation on my part.
[3] Other groups of disabled people were formally organised several decades later.

Segregation and consolidation

The organised cooperation among Deaf people may have been encouraged by several synchronic factors. One influential factor in the consolidation and formalisation of the social networks of the Deaf community was probably the emergence in general of guilds and unions at the end of the 19th century and the gradual exclusion of sign languages from Deaf schools at the same time; changes which may have inspired, reinforced or intensified the solidarity and mutual support among Deaf people (Widell, 1993). Some of the Deaf clubs resembled guilds, and the members established small sickness, emergency and funeral insurance funds (Lundström, 1995; Sander, 1980; Schröder, 1978; Widell, 1993).

Another major change in the position of deaf people in society may have come as a consequence of the telephone and its infrastructure being widely spread, and the fundamental changes of the sociotechnical system that emerged with electricity and the telephone. Without a telephone, it was not possible to make arrangements or share information without physical meetings or time consuming letter correspondence, so these clubs also functioned as the "switchboards" for the Deaf community. The turn of the century was simultaneously a time of consolidation of the Deaf community (cf. the formalisation of organisations mentioned above) and a time of increased exclusion from the general community. The period until around 1970 has repeatedly been referred to as the golden age of Deaf clubs (Lundström, 1995; Padden & Humphries, 2005; Widell, 1993). Weekly meetings in Deaf clubs were well attended, and there was a galore of cultural and athletic events hosted by Deaf clubs, numerous subgroups or by national and international associations of the Deaf. The members were mainly craftsmen and unskilled workers. Most were the only deaf person at their workplace, often leaving them out of the social interaction there. Sign language interpreters were a scant sight, so access to higher education, public events and community meetings were severely limited. The Deaf clubs thus represented a major arena for relatively unstrained communication with other

people, as well as important sources of information both about other Deaf people and society in general.

The Deaf communities, which often were concentrated in and around cities that had boarding schools for Deaf pupils, also represented arenas for equal and unrestrained communication. Deaf people often experience a departure from home or the closest geographical surroundings in order to meet communication partners (Breivik, 2005; Padden & Humphries, 1988). Mostly being surrounded by hearing people, who either do not know sign language, and/or are ignorant about the communication prerequisites of deaf people, the

> "… everyday life in a hard-to-sign (hearing) environment where many deaf subjects are "settled," raised and positioned (most of the time) – do hence not contain the key constituting elements of belonging. Identification and belonging are thus more connected to projecting, longing for, planning and performing deaf communal life beyond this – on temporary occasions. (…) Conscious efforts in making such occasions appear, through active involvement and planning, is thus becoming central. The sense of belonging is thus connected to the places and occasions where visual communication is practiced" (Breivik, Haualand, & Solvang, 2002, 11).

The (lack of) telephone might have reinforced translocal senses of belonging for Deaf and hard of hearing people, and some of the places "where visual communication is practiced" (ibid) were the Deaf clubs. Advances in technology like radios, talking movies and television "… were for hearing people. As society changed its long-distance communication patterns, deaf people became increasingly isolated" (Lang, 2000, 29). Expenses for travelling were an additional cost of living and for many a serious financial burden. This issue was also raised by National Associations of the Deaf in Norway. The 1974 General Assembly of the Norwegian Association of the Deaf made a decree requesting reimbursement for expenses related to public transportation, that read;

> "Most deaf and severely hard of hearing people live more or less isolated, there are large distances and because of the communication problems that are a common consequence of deafness or hearing losses, it is a necessity of life to regularly - and as often as possible - get in touch with fellow soul mates, both for personal visits and by participation at various events" (Sander, 1993, 193. Translated by author.).

Until only a few years ago, it was still possible to request a tax deduction by attaching documentation to the income tax form of increased travel expenses due to deafness. The need to travel was thus officially recognized in Norway.

Diverging geographies in time and space

Telephones remained within the sphere of hearing people for almost a century. In order to place calls, deaf people needed hearing people's assistance and required including an uninvolved third party, often a neighbour, son, daughter or colleague. The telephone "… subjected many deaf persons to certain indignities in relying upon hearing persons for calls" (Lang, 2000, 25). Rather than relying on the assistance of a third party, many deaf people chose to travel long distances, even if this took considerably more time than making a phone call. Many probably reasoned that the personal costs of spending time for transportation was less than the cost of involving outsiders in businesses that could be quite private. Sometimes the alternative to travelling was dependency and humiliation and sometimes there were no hearing people to ask for help. Deaf people spent more time and resources to communicate than hearing people did, simply because they did not have the tool that split the road and the message, which the telephone was (ibid).

The space-time geometry of the environment for hearing and deaf people (or for those who could not use vs. those who could use the telephone) diverged with the invention of the telephone. This is an example of what "determines, to a great extent, the course of events in this or any other possible world is the space-time geometry of the environment" (Gell, 1992, 218). Deaf people had to arrange and organize their time different than hearing people who had access to telephones, and "… although we are obliged to act in the real world, and real-world events are the ultimate arbiters of the efficacy and timeliness of our actions, the source of projects of action, and hence action itself, are the beliefs we hold about the world, not the world itself" (ibid). This statement resonates with Miller's (2010) observation of the power of

objects. It is not their physical appearance that makes them important, but their action upon us. The ultimate effect of the telephone is not due to construction of a handset with number keys, a microphone and a loudspeaker, but as a source of projects of action, both for deaf and hearing people. The pervasiveness of the technology, and the way the telephone gradually became an integral part of human activity, resulted in individual and collective activities being shaped by (but not necessarily determined) by the technology (Castells, 1999). Hearing people could connect to each other over vast distances in seconds, while deaf people had to spend much more time and effort in order to communicate over the same distance; a distance that partially had been constructed since the telephone. Cars and other distance-reducing technologies also allowed larger geographical lengths between communities that interacted with each other. Before the invention of the telephone, there were few differences between deaf and hearing people in how they had to arrange and prepare for distant communication. Hence, telephones do much more than merely convey electronic representations of voices along a copper wire or via a satellite. They also establish "*networking logics"* (Castells, 1999, 61), which regulate the pace and infrastructure of social life and relations, both to those who have access to it, and those who do not.

The telephone – a gatekeeper of difference

More than a century after the invention of the telephone, it is taken for granted and its power to include – and exclude - is so opaque and obscure, that when some people cannot use or access it, one blames the victims of the inaccessibility, rarely the telephone or the sociotechnical system it is embedded in. The design of the telephone extended the communicative abilities of some – namely those who could hear – while those who could not use it were left behind. It en-abled some people and dis-abled other people, in a process which also shows that agency is always mediated, or enabled, through networks that involve both humans and non-humans, and that this applies to all people, not only disabled people. People

do not simply act. As Moser puts it, "people *are* not actors, they are enabled to act in and by the relations in which they are located, and become actors by having agency distributed and attributed" (Moser, 2003, 158). When the inability to use a particular artefact is used as an excuse to exclude, the role of the artefact or technology itself is not questioned, it simply is. With Miller's (2010) words, the telephone has been objectified. When Deaf people are excluded from holding various positions, a common argument against hiring a deaf person has been that they "cannot use the telephone", and the problem is located in the Deaf person, partially in the inability to use the telephone, but rarely in the telephone itself. Here we touch upon Latour's critique of Western thought, that we regularly don't conceive of artefacts or technologies as having any social agency (Latour, 1993b). The telephone is clearly equipped with agency, and the power to distribute it. Not only does it enable distant communication, it is also given the role as a gatekeeper in a network "that make paths for the flow of agency" (Moser, 2003, 158) of both humans and non-humans. Without even touching the handset, employers evaluate who is a capable worker, and who is not by way of the telephone. Both employers and deaf employees often argue that the inability to use a telephone is the problem, not the telephone's ability to discriminate. As a consequence, the deaf person, and eventually the inability to use a telephone are highlighted and attract our attention. The material network is so often taken for granted and so embedded with cultural classification and social stratification, that those "who are brought up surrounded by artefacts which embody such ordering principles will tend to understand the world in accordance with this order, with the result that dominated groups will tend to have some difficulty in understanding the nature of their own interests, since these are not given concrete form in the world they inhabit" (Miller, 1994, 404). Rather than overtly questioning how the telephone orders people in groups of abled and disabled, hearing as well as deaf people take the existence of the telephone and telecommunication infrastructure for granted, and try find other ways to connect, both literally

to the telecommunication network – and metaphorically to enable agency. The time and financial costs of travelling were high and the problems related to lack of access to telephony were similar for deaf people in North America and Europe. On both sides of the Atlantic, there was a desire to make a telephone that could convey messages by way of the visual modality text represented.

The struggle to make access possible

The text telephone

There were experiments and trials in the Nordic countries (particular in Sweden) and in the US with solutions that enable real time conversation with text rather than speech. One of the earliest experiments was done by three deaf engineers in the US in the 1960s. Almost a century after the experiments with electricity and acoustics that led to the invention and later improvements of the telephone, a typewriter formerly used by the military, was coupled to a modem by the deaf engineers Robert H. Weitbrecht, James C. Marsters, and Andrew Saks (Lang, 2000). They succeeded in sending text over a distance in a closed network in 1964, but the American telecommunication authority AT&T did not permit use of such devices on their network, since they were afraid that signals from the modems would interfere with other signals (Strauss, 2006). As with the invention of the telephone and the telegraph, the invention alone was not enough to make it work or make it useful, it had to be connected to a system, or a network. AT&T had a monopoly on telephone line connections and was initially unwilling to contribute financially or practically to the development of an affordable text telephone that could be used over the telephone lines. Not until the Federal Communications Commission declared that the teletypewriter did not impair the quality of the telephone network in 1967, could people who owned text telephones connect to the telephone network without being thrown out of service. The small company producing teletypewriters had to set up waiting lists, even though at this time teletypewriters were too expensive and bulky for an

ordinary Deaf family.[4] The telecommunication corporations and the Federal Communications Commission were lobbied intensely to take responsibility for developing a smaller, more accessible and affordable teletypewriter, and to reduce the cost of using these telecommunication devices that were not regular telephones. The Rehabilitation Act of 1973 stated that access to text telephones was an act of rehabilitation service, and required public offices and employers of deaf people to make teletypewriters accessible to their clients and employees. With the microminiaturization of electric circuits in the early 1970s, smaller text telephones could be constructed. These were also increasingly affordable for deaf individuals, who in general earned 70% of the income of the average hearing worker (Lang, 2000).

During 1970, text telephones began to be used in several countries, but were rarely compatible between countries. This was particularly due to use of different Baudot codes, the number of "bits" of information required for transmitting each letter or figure. In 1975, an American text telephone model was tested for use in Sweden, but it did not meet the required specifications for signal transmission codes that were being developed under the Nordic telecommunication cooperation. The Swedish telecommunication monopoly Televerket developed a new text telephone model which met the new specifications in 1979 (Regeringen, 1981). The same year, the Council for Technical Assistive Remedies in Norway made an application to the Ministry of Social Affairs for a project to test 20 Swedish text telephones for one year. The number of text telephones was small, but according to Sander (1993) it was a fantastic experience for those deaf people who could now reach each other for distant and synchronic communication. Like in the US, a system for distributing them was initially not in place, and the text telephone owners remained a very exclusive group for four to five more

[4] "There is no better term than "behemoths" to describe the first teletypewriters (TTYs) deaf people used to make phone calls. The enormous, old, and heavy machines were the size of big drop mailboxes. They weighed several hundred pounds and stood more than four feet high. Appropriately, many were painted battleship gray. Vibrations from the TTY's gears and motors shook the floor and penetrated walls. The rumbling could be heard by neighbors living in adjacent apartments. Inside the huge machines were vibrating levers, rotating parts, shafts, clutches, pawls, plates, springs and screws. Electric wires connected magnets, transformers, and capacitors. With meshing gears and slipping clutches, the behemoths spewed forth heat and sometimes sparks." (Lang, 2000, 3)

years, mainly because the financial and organisational structures were not yet in place. Even if the project was successful, no-one wanted to pay for the telephones, which also in Norway and Sweden were too expensive for most individual users. The cost for one text telephone was much higher than the cost of a telephone, and an additional fee was added to the regular subscription fee. Both the Swedish and the Norwegian associations of the Deaf lobbied the government to classify the text telephones as an assistive technology to be reimbursed by the national insurance agencies. Unlike in the US, the focus was not on reducing the cost of the devices to make them affordable for a deaf individual, but to make the devices a public responsibility. This was in accordance with the ideology that underpins the Nordic welfare states; that the state takes responsibility for expenses related to disability. The Norwegian parliament defined text telephones as an assistive technology in 1984, and made the National Insurance Agency responsible to purchase and distribute them. The 500 text telephones that had been collecting dust at a storage room were released shortly thereafter. Deaf people could now send applications to their local National Insurance office to receive a text telephone. In the application, deaf people had to provide documentation (certification from a hospital or doctor) that they were "telephone-deaf", they had to prove that they needed a text telephone and they had to pass a test showing their literacy and typing skills without assistance from others. A similar attitude towards deaf people and telephony could be seen in England: "The biggest impediment to English people was not technology but attitude. To begin with, deaf people in England needed to verify their deafness in order to be allowed to use a telephone device" (Lang, 2000, 138). The cost of using the text telephone was considerably higher per minute than for a regular telephone, even though it takes much more time to write a conversation than carrying out the same conversation by speech. Despite these obstacles, 110 text telephones had been sent out in Norway by the end of 1984 (Sander, 1993).

Text relay services

In 1984, deaf people in Norway were in almost the same position as their deaf fellows in the United States; fair sized and accessible text telephones were available. There was a system to distribute them, whether through dealers specialising in marketing the teletypewriters, or through national rehabilitation or insurance authorities. Deaf people could easily get in touch with each other, but communication with hearing people, public institutions and services was still cumbersome, since few of those had a text telephone installed. Relay services would make contact with a hearing public far more feasible, but there were no reliable text telephone relay services in the beginning of the 1980s.

State services

From 1966 to 1986 a few sporadic relay services existed in USA, but all were voluntary and local, and did not really provide full access to telephony. In 1987, California was the first state to provide a state-wide relay service, and it operated on a 24/7 basis. More than 100 staff members were hired in 1987, but this number quickly grew to 250, and they handled more than 230,000 calls per month. The time-space geography of the owners of teletypewriters (TTY) in California had become similar to that of hearing people, since they could reach anyone with a telephone, just like hearing people had been able to do for more than a hundred years. Deaf people could now reach each other without travelling to each other. Still, no other states had an equivalent service. Relay services were gradually established in other states as well, but these were often severely understaffed, partly because they first had been scaled for local use only, second because the need for access had been underestimated, and they also had limited operating hours. The pressure on the few relay services that existed was extreme, which also extended the waiting time even more. Since people had no other places to get assistance to place calls, they were forced to repeat calls to the relay services until they finally

were connected with an operator (Lang, 2000; Strauss, 2006). There were no other alternative services, so the autonomy was still reduced. The few relay services that existed had full control of the TTY users' time expenditure for the calls they wanted to place.

A telecommunication service

The emergence of relay services in Norway followed a similar pattern as in the United States. A small telephone relay service was established in 1982 by a voluntary organisation that received NOK 13,500 (approx. €1,750) from the Ministry of Social Affairs to run this service. Even if the number of text telephones was limited in 1981, the cost for running the relay service exceeded this amount and the relay service was like the services in USA walking the tight rope between survival and bankruptcy, even though the demand was high. Following the decision by parliament to release the 500 text telephones in 1984, the telecommunication monopoly Televerket launched a relay service in Oslo serving the whole country as part of their universal service obligation. In August 1984, when 30 text telephones were in use in Norway, the relay service placed 10-15 relay calls per day, and operated from 8-21. In 1987 a second relay service central opened. The centrals were established at places where the last switchboards were closed as a consequence of the automation of telephone directing, and the (mostly) women who had worked as telephone switchboard operators were trained to work as text telephone relay operators. These relay centres operated from 8-21 on weekdays, 9-21 on weekends, and handled calls to and from the 1,300 text telephones that were in use in Norway in 1987. The operating hours were limited and it was more expensive to call in the evenings (the opposite of regular telephone calls). The relay capacity was lower than the demand, so the waiting time was high.

Waiting for pizza

When I arrived in Washington, D.C. as an exchange student in 1987, I found out the text relay service was somewhat better developed and organized in Norway than in the US capitol area. In Norway, the national text relay service handled calls from early morning to late evening throughout the week, was accessible to everyone regardless of location, and there was only one number nationwide. In the US, the text relay services were still local, not all states had established text relay services, waiting times could be extremely long and there were often limits on the length and number of calls that could be relayed. There were a list of text relay numbers attached to the wall by all the text telephones at the school, and the relay services located in Virginia and Maryland were more reliable than the services in Washington, D.C. So we called the relay service in Virginia to order a pizza from Domino's a few blocks down the street. The waiting times were sometimes so long we probably could have walked out, bought and eaten the pizza before the relay service even had answered our call. The university neighbourhood (and subsequent strict curfew rules) did not encourage us to go off campus in the evenings, so we spent numerous evenings around the text telephones that were placed in the dormitory's basement, talking and playing around while we waited for the relay service to answer and relay our calls.

A reduced gap

At the beginning of 1988, deaf people in the United States and Norway experienced a similar lack of independent time management related to placing phone calls since their use of this communication device was restricted, compared to hearing people. Such restrictions on time use of the clients were probably in part a consequence of the monopoly situation of the relay services. Deaf people were very aware of the waiting time they experienced with this and other services, and moaned that if hearing people had been subject to the same waiting for services, action would have been taken much faster. The demand for better relay services grew, as more and more people saw the difference it could make to people. Political lobbying by the National Associations of the Deaf in both countries soon paid off. In Norway, a third relay centre opened in northern Norway in 1988, operating on a 24/7 schedule with no restrictions on length of calls, but understaffed at peak hours so waiting time could sometimes be long. In 1993, all states in the US had established similar relay systems (Strauss, 2006).

In Norway (and Sweden), the relay services were considered a responsibility of the telecommunication sector as one of their universal service obligations. This was also the case of the text relay services in some states in the US, while in other states, the service was a responsibility under the public utilities commission or provided by private institutions under contract with a public authority. In an attempt to juxtapose the systems for provision of text telephones and the text relay services in USA, Sweden and Norway in the early 1990s, there are a few features that stand out. In USA, the text telephones (the teletypewriters) had been defined as "nonvoice" telecommunication devices, which could be purchased by any individual or institution, for whatever reason. In Norway and Sweden, the text telephone had been classified as "assistive technology", and was distributed by national or regional medical-rehabilitation authorities to deaf people who were entitled to receive it at no cost, but on the basis of a hearing impairment that had to be verified by a physician. The text relay services in Norway and Sweden were however solely organised as a universal service by the national telecommunication incumbents. In the US, the text relay services were characterised by a diversity of solutions for calls within different states, and later also a separate system for interstate text relay calls, organised by the Federal Communications Commission.

The development of text telephones and subsequent establishment of relay systems did reduce some of the spatial exclusion of deaf people, and increased their access to more community arenas. The text telephone and the text relay services did however have a couple of major drawbacks. First, it was not a technology that the community in general was familiar with, and was almost exclusively used by deaf people or hearing people who were in touch with them. It was a technology that was associated with a group of disabled people, people who were not able to use a regular phone. Second, text telephones represented communication in a written form, which deprived the calls of some of the intimacy and spontaneity of direct

communication in a spoken or signed language.[5] The text telephone technology was not particularly inclusive, but gave some access to the vast electronic communication infrastructure that quite effectively had enabled hearing people to communicate over long distances for the past century.

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20 minutes

August 1989. When I rang the doorbell at the home of a Deaf couple late in the evening, I had a post card from a close friend in USA and 200 Norwegian kroner (€26) in my pocket. This couple were the only people I knew in Oslo who had an American text telephone, and after weeks of post card correspondence, I had set up an appointment to call my friend with this text telephone. It was almost ten o'clock in the evening, and soon four in the afternoon in Washington, D.C., on the date we had agreed to make a phone conversation. Her phone number was written on the post card, and we had twenty minutes at our disposal. Those twenty minutes would cost 200 kroner, the amount I had agreed to pay the couple who owned the telephone, and who had to pay the bill for the conversation. I felt a thrill as I dialled her number. For the first time in over a year, we were going to talk directly to one another, not only write letters. We connected, and we talked by writing as fast as we could, to get as much as we could out of our allocated time. When I went home soon after, I happily ascertained that the talk had been worth the 200 kroner from my tight student budget.

The Deaf community changes

The entrance of text telephones and the relay services soon deprived the Deaf clubs of their role as the switchboards of the Deaf community. Deaf people (especially in Northern Europe and Northern America) also experienced increased access to several arenas in the communities they lived in at this time. Since the 1960s, there has been a gradual shift in the view of disability. Disability is now not univocally viewed as the unfortunate fate of an individual with an impaired body, but is seen as a consequence of social, cultural and material barriers that are possible to remove and adjust without correcting or "curing" individual bodies.

In a way, this process can be seen as a continuation of the co-equality that had been emphasised by the Deaf elites during the consolidation of the organised Deaf community in

[5] To many deaf people, a written text is a representation of a second language they do not have full access to. Writing conversations could therefore be more cumbersome for deaf people than hearing people.

the late 19th and early 20th century. The new efforts to integrate and/or include disabled people was however not fully embraced by the Deaf community, since it was difficult to see how a community of non-signers would be able to offer Deaf people full and unrestrained access to communication with other people. Further, the status of sign language rose after William Stokoe (1960) and other linguists documented that the signed languages used by Deaf people are fully fledged natural languages, and not a mere simplification or visual representation of a spoken language, as had generally been believed. In the wake of this "discovery", Deaf people started to explicitly identify as members of a linguistic and cultural minority. The notion linguistic and cultural minority did not create this minority, but the term was used to describe the distinct communities of people using sign languages that had evolved for more than a century, mainly through the boarding schools for the Deaf and the Deaf clubs. With the emphasis on access to "normal" lives and deinstitutionalising of services towards disabled people, the disability movement and the continued campaigns for inclusion of disabled people were partially viewed as threats of assimilation, that eventually also would weaken the vast networks of Deaf people. A second consequence of depriving the Deaf communities would also be decreased access to and use of sign language. The close to unilateral process towards integration and later inclusion of disabled people in society in general implicitly devalued the significance of the schools for the Deaf and the numerous arenas where Deaf people met and had a vivid social life. The associations of Deaf people did not oppose the concept of accessibility *per se*, but emphasised that full access for Deaf people could not happen without a continued effort to secure the rights of people who needed, and used sign language to communicate.

During the 1980s, sign language interpreter services were also gradually formalised, both in terms of education and financial schemes. Increased access to sign language interpreter services and a political emphasis on measures to reduce the exclusion of disabled people have

opened the doors to higher education for Deaf people, and the educational and professional heterogeneity of the Deaf community has increased. National sign languages are gaining official status and recognition in a growing number of countries worldwide, as well as at international levels (United Nations, 2006; Wheatley & Pabsch, 2010). The heightened legal status of sign languages has given lobbyists and representatives of the associations of the Deaf another tool to argue for an expansion of public services in sign language. Enhanced accessibility, raised awareness about the significance of (and pride in) sign language, and the changes in patterns of communication by way of digital technology that emerged over the decades surrounding the millennium, also paved the way for major alterations in how Deaf people could, and wanted to organise their everyday lives.

Communication digitalised

A wave of new technologies

The Deaf community that was partially founded on sociotechnical exclusion that had lasted for almost a century was not a passive bystander to the wave of new digital communication technologies that started to emerge from the mid-1960s. In 1978, an article on electronic mail written by a hard of hearing engineer, appeared in the American Annals of the Deaf.

"This is an exciting period for anyone who is interested in applying new technology to the communication needs of the hearing impaired. Digital technology, which for example provides us with small, low-cost calculators, behind-the-ear hearing aids, digital watches and intelligent computer terminals is at the root of a communication revolution which is making itself increasingly evident."(Cerf, 1978, 768)

Vinton Cerf, a hard of hearing Computer Science graduate from the University of California in Los Angeles, introduced his article with the quotation above about what later became known as "e-mail". The quotation quite precisely describes the period that is the focus of this section.

In 1973, Vinton Cerf and Bobby Kahn wrote the first protocol that standardised the procedure by which two computers "talk" to each other (the TCP/IP-protocol). They are sometimes referred to as the founding fathers of the Internet. In the article "The Electronic Mailbox: A New Communication Tool for the Hearing Impaired" (1978) in the American Annals of the Deaf, Cerf identifies a few advantages of electronic mail, and some of the challenges that must be solved before the electronic mail system would be useful to both to the hearing impaired as well as the general public. He describes the electronic mail system as a composite of established technologies, including text editors, word processors, dial-up computer terminals, the public switched telephone network and computer servers, and the "result of this conjunction of text manipulation and computer communication is the creation of an electronic mail service" (Cerf, 1978, 769). This is not too different from the works of Alexander Graham Bell (telephone) and Saks, Weitbrecht and Marsters (the American text telephone), who also created a new technology on the shoulders of existing technological solutions. Cerf is however clear that there is a need to solve cost related issues, do more testing and rewrite some telecommunication regulations before the electronic mail system would be a viable tool for communication. He does not spell it out, but what he describes is the need of a sociotechnical system that must be in place for the new invention to gain popularity. He wrote that "... it appears that nearly all the focus which would tend to make electronic message systems an integral part of our culture are aligned in a supportive way towards that end. The precise timing of the widespread penetration of this service is still somewhat uncertain but it does seem to be inevitable" (Cerf, 1978, 772).[6]

Almost at the same time as the Internet and e-mail became popular, the GSM network and the short message system (SMS) made it possible to communicate with mobile telephones by way of speech or text. When text messages could be sent via mobile telephones, deaf people

[6] His talents as an evangelist seem to have been evident in 1978. Today, Cerf works as the Chief Internet Evangelist at Google.

purchased their first regular mobile telephones just a few years after they had become common among hearing people. By 1999, young deaf people were the group using the short message system (SMS) most frequently in Norway (Skog, 2001). In the US, deaf people also most frequently use mobile text communication. The telecommunication operator T-mobile has two transmission masts at the Gallaudet University campus. In May 2006, one of these masts was their busiest mast in the US, which generated more data traffic (excluding voice) than their second busiest mast in downtown Manhattan in New York (T-mobile, 2006).

The telephone untied the knot between time and space, but still required the two parties to communicate synchronously, and by means of sound. With the electronic mail system, submitting electronic communication also lost the close ties to time. The electronic mail system and the Internet represent a spatial, as well as a chronological extension of vision, since sight also could be used for long distance communication in almost no time. It reintroduced the visual into the realm of distant communication that had been dominated by acoustic space since the invention of the telephone. With even greater bandwidth both for cordless mobile devices and computers, simultaneous communication in several modalities is becoming more and more widespread. The difference in access to communication technologies between deaf and hearing people is not as clear cut as it used to be in the pre-text telephone era, and it may be less possible to predict the consequences and changes from use of mobile communication technologies.

Time in the information age

The mobile telephone has contributed to a redistribution of time that is probably at least as fundamental as the changes that succeeded the invention and dispersion of the telephone. The fundamental change the mobile telephone brings about is in the notion of time, "… when it's possible to exist in a communication-sphere regardless of spatial boundaries. The coordinating aspects of clock-time are put under pressure from the ever present and dynamical

restructuring and renegotiation aspects of the cell-phone" (Johnsen, 2002, 63). The telephone was in the end of a physically located cord. The mobile telephone is at the end of the body, in the hand, so it becomes an extension of the body (Townsend, 2000); it becomes ever-present, leaving the potential for communication in the individual, not in the telephone. The potential connection to anyone, anywhere and immediately brings the individual into a state of an ever present now, an "immediate time that is disconnected from the brute force of linear time and spatial limitations" (Johnsen, 2002, 63). With the social network being immediately available, delayed communication and action planning is a foregone phenomenon, at least among those who carry their mobile telephone with them day and night. The constraint of not being able to couple social activities which involve more than one person is still present with the mobile telephone but its nature has changed (Gell, 1992, 192). Few plans need to be definite, since everything can be planned at the last minute. However, this quickly works the other way round. When few plans are definite because everything can be planned at the last minute, we are entrapped in a time situation where we *must* continuously plan, not only for the immediate future but also for the *now.* As communication has become an ever-present potential, it has also turned into an ever-present necessity putting even larger demands on the individual's capability to communicate continuously. Digital technologies have enhanced human capacity so much they have become part of who and what we are. They have become so much a part of what we are that the time we live in is named after them, as if the medium finally has become the grand message (cf. McLuhan's assertion that it is not the content, but the very medium that is the message (1964)). Some of the technologies (the telegraph and the telephone) that were invented and mass produced and dispersed in the last decades of the Industrial Age have made society evolve into what we now call the Information Age.

Altered abilities

Deaf people were and are taking part in the explosion of new communication technologies almost on par with hearing people. The Internet has made information common property, and people may to a much larger degree themselves decide the format they prefer to receive information in; that is both in a choice of medium (TV, web browsers, smart phones and more), as well as in modality (text, sound, picture). The digital network does not inherently exclude deaf people in the same way as the telephone infrastructure – as the possibilities it provides are so many, but only if someone finds ways, knows how, is able, can afford or is allowed to use the new technological solutions. As mentioned earlier, the potential users of the new technologies may not be as predictable as earlier, since the "information technologies are not simply tools to be applied, but processes to be developed" (Castells, 1999, 32). The extent to which (new) disabilities are created or reduced in the interplay with these technologies, lies not so much in the technologies, but in how they are developed and applied. This suggests a wider flexibility in the notion of disability, where the demarcation between disabled and nondisabled people becomes even more blurry than earlier. The flexibility need not however be a univocally good, or "a liberating force, but also a repressive tendency if the rewriters of rules are always the powers that be" (ibid, p 62). If the design of new technologies continues to exclude certain groups of users, maybe out of mere habit, the new communication and communication technologies may be as exclusive as the telephone was to deaf people. While deaf people in general seem to have benefitted from the development, and the new communication technologies are less dis-abling than the telephone towards this group, there are other groups that experience being excluded by the technology. The entry of the visual into long distance communication requires the ability to see, and the increased emphasis on text in communication disables illiterate groups. If agency, or the ability to act, is

dependent on connections and flows between both humans and nonhumans, it is evident that a changing communication and information infrastructure, also changes what disability is.

Diffuse differences

The digitalisation of a wide range of technologies may possibly also decompose the distinction between technologies made for disabled people (so-called assistive technologies) and general technologies. With the growth of software and "human" interfaces in computers, technologies like text-to-speech and speech-to-text, digital sign language dictionaries, translation applications,[7] digital screen magnifiers, remote controlling of various home functions (light and heat management, food preparation, etc.), the distinction between "assistive" and "mainstream" technologies is blurred. These new technologies do not sustain the demarcation between disabled and nondisabled in the same effective manner as the telephone could discriminate between deaf and hearing people, since it is not particularly clear who is able and unable to use them. As has been shown in this chapter, the distinction between deaf and hearing people has been maintained by the technological and political infrastructure, which has also been different in various countries. The history of some technologies that have been presented in this chapter is also a history about how the ideas we hold about disability is embedded in technology through the demarcations between different kinds of people the technology and the sociotechnical systems create. The distinction between disabled and nondisabled people that is folded in technology has also created a distinction between technologies used by disabled people as "assistive" and technologies in general. Not only did the technology itself make a distinction (like the telephone), but this distinction was sometimes also sustained through political decisions. Text telephones were defined as assistive technologies in Norway and Sweden, while they were labelled as a

[7] Including an iPhone application where a sentence in written English is signed (in English word order) in an avatar using signs from American Sign Language.

telecommunication device in the US. The definitions of the text telephones were related to the general political systems and disability legislation in these countries.

This shows that it is not possible to identify technologies as "assistive" by studying their appearance or function. Their function may even be viewed as a result of political processes where the users of some technologies may be identified as for example, "disabled", who have a "special need" of "assistive technologies" to carry out everyday tasks. What such a distinction conceals is that everyone is thoroughly dependent on technologies, as has been argued by Bruno Latour and Daniel Miller. Even though there has been a gradual move towards defining disability as a relational mismatch between the individual and the (material) surroundings, few common definitions of assistive technology recognize that services and products that enable independence for non-disabled people, are assistive, too; "Since all useful technology is assistive, it is peculiar that we stipulate that some devices are assistive, while others need no qualification" (Beals, 1997, 21). Communication technologies may, like other material artefacts, en-able or dis-able people by the way they are designed, constructed or structured in a society. Seen this way, disability is a social construction that is consolidated and manifested through the dispersion of certain technologies and how the material is organised. The relationship between disability and technology is one example of Bruno Latour's argument that a separation of the "technological" and the "social" development makes no sense (Latour, 1993b). In order to understand how disability, as well as society is constructed, the techniques and technologies that permeate societies must also be considered. The material gives social life a durability the "social" could not have alone, and by its enduring appearance, technologies also stabilise society. This stabilisation is however not an attribute of single technologies, but an effect of their entanglement in each other.

Videophones

One technology that not is possible to identify with a particular group of people or users (yet,

if it ever will be), is the videophone. This is the last technology I address in this chapter. When the possibilities of videophones appeared more than a hundred years after the invention of the telephone, the videophones was soon embraced by institutions that serve deaf people, since videophones utilize sight rather than sound, and permit communication in a natural, visual language. This embracement did however presuppose the tool of exclusion the telephone had represented for a century, was contingent on the ever increasing demand to access and speed of communication, and it was also contingent on the increased status of and insight in sign languages as natural languages.

For decades, videophones remained a technical curiosity with little practical use. Like all the other technologies mentioned in this chapter, the moment of invention is unclear, and it is not yet one technology, but a common name for a series of technologies. On a postcard from 1910, a video telephone is imagined as an assemblage of a telephone, projector, screen, microphone and a control unit (Villemard, 1910). Eighty years later, a similar assemblage of technologies was used to establish a "network" of videophones between two offices of the Swedish Association of the Deaf through the "Video Communication Project". Both offices were mainly staffed by Deaf sign language users, who were in frequent professional contact with each other, and the videophones were basically composites of the same technology as seen on the postcard, albeit more modern. Each user had a video terminal consisting of a video recorder (with the recording part disabled), a domestic television receiver and a control unit for dialling, reviewing of own view and with a built-in microphone and loudspeaker. The network had a capacity of 2 Mbit/s, a bit rate identical to the Swedish Telecom's video conferencing services already established at that time, and could also provide fairly good picture quality (Dopping, 1991). This solution was however too expensive to have any hopes of dispersion in a wider market, but the evaluation of the project concluded that this way of communicating had great potential for deaf users. The Swedish engineer Gunnar Hellström,

who was involved in follow-up projects with more affordable connections, recognized that the existing performance of compression of video via affordable digital networks did not meet the requirements sign language users had for making intelligible conversations. Hellström and his team used the rapid movements and fine details of sign language in fingertips, eyebrows and eye-gaze directions to define a minimum acceptable standard for performance of digital video compression for sign language (Hellström, 1996). He has continued to be involved in the standardization work of the International Telecommunication Union (ITU) the European Telecommunication Standardisation Institute (ETSI) and the Internet Engineering Task Force (IETF) with the goal of meeting the performance requirement of Sign Language and inclusion of video, text and audio combined in the same accessible communication standards. The increased emphasis on international standards may possibly have avoided the national incompatibility of the text telephones, but the various types of videophones are not yet fully compatible with each other.

One-to-one communication with live pictures is in 2012 not yet a feature used by "everyone", despite its availability in various free or low cost forms and on platforms most people using a computer connected to a broadband Internet connection may access. A telecommunication analyst stated in 2006 that videophones were a "flop" because "People have no need to see the person they talk to, because they most often know very well how the person they call looks" (Eltervåg, 2006).[8] The only exceptions were, according to the same analyst, prostitutes and hearing impaired people. There are a few studies of sign language and videophones (Dopping, 1991; Keating, 2000; Keating & Mirus, 2003; Power & Power, 2009; Tetzchner, 1991), but none of these studies indicate how many Deaf people actually use one or another kind of videophone technology. Intuitively, the videophone appears as an obvious choice for

[8] Translated to English from the following Norwegian: "Folk har ikke behov for å se den de snakker med, ettersom de oftest vet svært godt hvordan personen de ringer ser ut"

telecommunication between two people who use sign language.[9] There has been a tremendous development of user friendliness, accessibility and picture quality since the early experiments with videophones, and the speed at which this happens, testifies to an openness of scope and content that shows that neither the technology nor the related services (like for example the video interpreting services) have been blackboxed - yet. As shown in the three articles of this dissertation, the use and definitions of the videophones and services vary greatly.

Bundled connections

Despite the ubiquitous dependence on technologies, there is still a tendency to believe that subjects (human thought, culture and action) can be separated from the objects (nature, artefacts and technology) (Latour, 2005; Miller, 2005; Pfaffenberger, 1992). One consequence of the separation of society/humans on the one hand and nature/object on the other, is a conceptual distance between those of "us", whose thinking, actions and cultures are independent of the artefacts we live by and with, and the "other", whose fates are left to nature, who are dependent on their physical surroundings and thought is not separated from the material. Latour (1993b), Pfaffenberger (1992) and Miller (2005) (and others) are mostly concerned with the conceptual demarcation between Western, modern societies and so-called traditional communities, as if the dependence on nature and material surroundings is fundamentally different in these two categories of societies. The same conceptual demarcation makes it also possible to state that only some people (i.e. disabled people) are dependent on (assistive) technologies to perform everyday tasks. Making such an assertion would however be to bluntly overlook the entire society's ubiquitous dependence on an integrated technological infrastructure. To most people participating in the everyday life of

[9] This applies to sign language users in industrialised or developed countries, who already have access to high speed telecommunication networks and computers, and know how to use them. The situation is quite different in countries with lower Internet usage and permeation, and/or where deaf people do not have access to computers, whether due to limited financial resources or limited access to education.

contemporary society, the dependence on the Internet and the cell phone is so profound and extends the communicative capabilities so much that one actually become dis-abled if the cell phone is lost or if a server is temporarily out of order. The new range of technologies and its infrastructure have enhanced the communicative capabilities in any given society, but have also made everyone increasingly dependent on the same technologies in order to function and participate and go through everyday life. Nonetheless, disabled people are in general still viewed to be particularly dependent on others or on (special) technological solutions, and the general conceptual and symbolic difference between disabled and non-disabled people and their respective technologies remain strong. At the same time, digital technologies change "disability" itself, as everyone may use the same technologies to communicate, and eventually only make personal adjustment of the device(s) they have purchased at the cell phone retailer at the local shopping centre, like silent alarms, built-in vocalization of received messages, activation of integrated web cameras, vocal GPS applications for orientation, etc. It is thus more than the mere accessibility to, or personal adjustment of various technologies that needs to be understood and "… perhaps contested. That is the cultural dynamics through which the symbolic significance of a technological device evolves, thereby helping shape how its users interpret their experience of its use" (Blume, forthcoming). It is important to not only understand how its users experience the use of a technology, but also how the users of this technology are interpreted and conceived. These social representations of technology "… are a mixture of ideas concerning realms other than matter of energy. In short, the mental processes that underlie and direct our actions on the material world are embedded in a broader, symbolic system" (Lemonnier, 1993a, 3). Intuitively, it stands close to reason that when an array of technological solutions are abundant, the social representation of technologies, the uses and their users will evolve and eventually change. A study of these changes should however not be confined to an inquiry of how people adapt to or domesticate

various technologies, or use them to expand the communicative abilities or possibilities. They also need to be taken out of the black box in order to grasp their internal complexity. One needs to see how they construct social reality - are constructed in the same process, and study the power they possess by being social agents.

In this chapter I have tried to unfold this black box and make a few spy holes through which it is possible to get a glimpse of its internal complexity, and how the history of deafness, disability and ideas about communication are partially bundled up in the development of communication technologies. The current politics of videophones and video interpreting services did not emerge with the invention of the videophone. The questions of inclusion and access to communication emerge from a field in which previous technologies have created categories of people. These bundles, that are historically constructed, constitute the "field" in which the study of videophones and the video interpreting services are studied. The journey through the field and the lessons learned, are the topics for the next chapter – about the fieldwork.

2. The journey

Assembling material

Since the "field" in this dissertation is not a definite place or a specific group of people, but rather can be perceived as bundles of technologies, disability issues and politics, the fieldwork was a reflection of this definition of the field. As mentioned in the previous chapter, the definition of the field directs the ethnographer's glance in a certain direction. The challenge for the fieldwork for this dissertation was hence to search for connections and assemblages in and between these bundles. The fieldwork could itself be regarded as an assemblage, or a "process of bundling, of assembling, or better of self-assembling in which the elements put together are not fixed in shape, do not belong to a larger pre-given list but are constructed at least in part as they are entangled together" (Law, 2004, 42). The fieldwork has been characterised by a continuous interplay between empirical inquiries and theoretical searches. The interaction between these directed which theories appeared as relevant for the features that prevailed in the field, but the interplay also worked the other way around – the theories explored also directed where attention was given during fieldwork. It is not possible to separate the ethnographer from the fieldwork process, and the vision and assembling of the empirical and theoretical assets shape how reality is presented. There is further discussion on the theories applied in the next chapter. In this chapter the focus is on the process.

The fieldwork is outlined through a timeline that was initiated with a nine-month long visit to Washington D.C. in 2005-06, and ended late 2010 in Sweden with a presentation on video interpreting services for an audience at a Swedish workshop for prescribers of videophones. I was not continuously gathering data all these years, and in this chapter the course of the fieldwork is divided in four sequential parts. The first part includes the positioning of the

doctorate project and its research questions within the field of disability and welfare politics research in Norway. When writing about this phase, the discussion initiated in the previous chapter on disability, technology and inclusion is continued, but here in a context of welfare research on these issues. The next part was life and work at Gallaudet University in Washington, D.C. as a visiting scholar. Gallaudet is the world's only university in which all programs and services are specifically designed to accommodate deaf and hard of hearing students. The next phase of the fieldwork is in this chapter is termed "Interruption," which was also a period for an epistemological reconsideration of my position(s) vis-à-vis both the questions raised in this project, as well as the research community. The last phase of the fieldwork is characterized by a revised focus of research, more interviews and repeated, frequent and multiple visits to Sweden, visits to various offices in Norway, meetings and exhibitions in Norway, and a month long revisit to Washington, D.C.

Researching disability politics

A new era for disability politics

When the Official Norwegian Report *From User to Citizen – A strategy for the dismantling of disabling barriers*[10] (Sosial- og helsedepartementet, 2001) was released in 2001, it initiated a new era of public disability politics in Norway. The report stated that disability was not ultimately a question about impairments or accidental (and numerous) discrepancies between individual abilities and physical surroundings, but a consequence of systematic neglect, ignorance and discrimination of a large group of people. The official report followed an international trend of legally prohibiting discrimination or exclusion on the basis of disability. Examples of legal documents against discrimination and for accessibility are the Americans with Disabilities Act (1990), the before mentioned Norwegian Discrimination and Accessibility Act (2009), and the United Nations Convention on the Rights of People with

[10] Norwegian title: "Fra bruker til borger: En strategi for nedbygging av funksjonshemmende barrierer"

Disabilities (2008), which is being ratified by an increasing number of countries. Rather than viewing disability as a condition internal to the body and an (unfortunate) fate of the individual, the social model of disability and the view that disability is a consequence of social discrimination, has increasingly gained ground. This is not to say that most states have an active inclusion or accessibility politics in all arenas. In most countries, disabling and excluding social and material barriers remains the rule for disabled people. Even though the rights defined in the UN Convention on the Rights of People with Disabilities are numerous, implementation of the goals of inclusion remain contested and is a topic for several profound political discussions and ideological disputes. These discussions are often related to the financial implications of practical solutions, and if accessibility, and hence inclusion of disabled people can be prioritized with the tight budget frames most politicians, bureaucrats and various public and private institutions have to face every day.

Integration in the name of inclusion

Inclusion is defined in the Official Report NOU 2001:22 *From User to Citizen – A strategy for the dismantling of disabling barriers* as a program to change schools or other community institutions so they are adjusted to all human diversity. Inclusion is about a change in general, so everyone can find a place (Sosial- og helsedepartementet, 2001). The concept of inclusion replaced integration, which had been more about allowing disabled people in ordinary public schools and other arenas of society, rather than offering and planning specific, and often isolated services for disabled people. With the integration concept, the person with a disability was tolerated, but not necessarily accepted as such, since the focus was on making an individual "fit".

At an ideological level, the shift in focus from 'integration' to 'inclusion' and eventually universal design is an important move towards building a society for all, which does not conceptually or practically exclude anyone. Real life experience however shows that the

concept of inclusion in practice has often only replaced the concept of integration, and functions as a new principle of organization which defines what is conceived as right and wrong, and who or what the relevant kinds are. The concept of inclusion is also historically contingent on the traditional exclusion of disabled people in separate schools and institutions (Foucault, 1967, 1971; Hacking, 1999). The financial disputes over various means to create a more inclusive society reveal that inclusion by way of for example universal design is a concept that is first of all connected to disabled people. This retains the focus on a particular group of people, or individuals with an impairment, and inclusion is something disabled people 'need', or eventually should have the right to. Inclusion has not removed the focus on the individual; rather it has replaced integration as a concept, which sustains the conceptual exclusion of a group who eventually should be included. There has indeed been a change in terminology, but this does not necessarily entail a "better classification of individuals as pure beings-in-themselves, but reclassification of individuals in the light of how those individuals had altered, in the light of a previous classification, and because of the theories, practices, and institutions associated with that classification" (Hacking, 1999, 112). The way the concept inclusion guides politics does not only confirm that exclusion exists, it also defines disabled people *as* excluded, and hence – this group becomes the target of inclusive measures, not the society as such. Already when the Official Report NOU 2001:22 was followed by the White Paper with the title "Dismantling disabling barriers – Strategies, goals and measures in the politics for people with impairments" (Sosial- og helsedepartementet, 2003), the definition of "inclusion" that the Official Report had suggested, was demarcated to be a politics on disability, not on inclusion as a fundamental way of organising society.

Welfare studies on disability

The Official Report was followed by a White Paper to the Norwegian parliament, that initiated a research programme on disability, to "document and reveal discrepancies between

the goals and realities". The White Paper also clearly stated that for the inclusion concept to be taken seriously, there is a need to do more research on the politics, society and general processes, and go beyond mere documentation of the individual experiences of disabled people. The Norwegian Research Council programme on disability and disabling conditions (2004-2008) was established as a direct consequence of the Official Report and the White Paper. The connection between research activities on disability and a governmental or political concern is part of a long tradition in Norway, where the research on disability to a large extent has been about "applied welfare research intended to provide policy makers with the knowledge on which to act in order to bring about social reform" (Moser, 2003, 10). In line with the turn towards an increased focus on disabling structures in society and the recognition of the relational aspect of disability, the research subjects in several of the research projects that received financial support from the above mentioned disability research programme in the Norwegian Research Council, was extended beyond individuals with impairments. Employers, teachers, small businesses, family members, social workers, public administration workers and politicians have been the research subjects in several of the projects, in addition to people with various impairments (Norges forskningsråd, 2008).

Welfare research on disability is however only one strand of disability research. Concepts from epistemologically or constructionist oriented research on identity formation, social networks, stigma, deviance and other aspects of disability have informed and inspired welfare researchers. Disability studies in the United Kingdom has been dominated by the *social model* of disability, which by explicitly opposing itself to the medical model of disability also had an emancipatory purpose, and has sometimes been tightly connected to the disability movement (Oliver, 1990; Shakespeare, 2006; Söder, 2009; Tøssebro, 2004). The British school and the social model have inspired the Norwegian disability research tradition, with the identification of disability as a consequence of discrimination. While the social model clearly defines

disability as a consequence of a society that has not been adapted to fit all people, the Nordic *gap model* ("a mismatch between the person's capabilities and the functional demands of the environment" (Tøssebro, 2004, 4)) to a larger extent emphasises the interplay between the body and the environment (Grue, 2010; Tøssebro, 2004). Michel Foucault (1967) and Erving Goffman (1961, 1963) have set the theoretical foundation for a critical analysis of identity, social networks, stigma and deviance, and the *minority model* in disability research has possibly its strongest footing in the United States (Grue, 2010). In the Nordic countries, Per Solvang (2000, 2002), Jan-Kåre Breivik (2005), Mårten Söder (2000, 2009), Ingunn Moser (2003, 2005, 2006) and Jan Grue (2011) are a few of the researchers who have contested the ideal of the "normal" and "inclusion" and discussed the consequences of these ideals for disability politics and on the lives of disabled people. With a few exceptions (e.g. Anvik, 2011; Breivik, 2005), the anthropological contributions to disability studies in Norway have been from the sub-discipline medical anthropology, which has had its main focus on disability in locations outside Europe (Ingstad & Whyte, 1995, 2007). Whether there is a metafocus with a critical analysis of normalcy, mainstreaming and inclusion or an applied focus, concepts like inclusion and accessibility continue to guide disability research and politics in Norway. The utility value for political activism in the organisations of disabled people has not motivated disability studies to the same extent as in the United Kingdom, but this is not to say the research on disability in Norway has not been used for political purposes or by decision makers (Söder, 2009; Tøssebro, 2009). The partial shift in disability politics, with a larger emphasis on politics based on rights and anti-discrimination than on individual adaption and means tested measures, has not abandoned the overall focus on the assumed applied utility of disability research in Norway.

The "Information and Communication Technology (ICT), disability and employment" project

With funding from the Norwegian Research Council research programme on disability and disabling conditions, and academic and organizational affinity with the Fafo Institute of Labour and Social Research, this doctorate project is firmly placed within the welfare branch of Nordic disability research. The doctorate project is part of the research project "Information and Communication Technology (ICT), disability and employment". The aim of the research project was to "study the importance of new information technology as a means to increase employment rates among disabled people" (Hansen, 2009, 9). This represented an optimistic view of technology; that technology may generate increased possibilities to participate in the labour market by people with "severe impairments" (ibid). The approach of the project was to compare different innovation and diffusion systems in a few countries, to find out how "these systems work to provide disabled people access to necessary information and communication technology in working life" (ibid). Rather than focusing on how disabled people use certain technologies, there was an overall goal to study how new information and communication technologies are distributed to and made accessible to the work places where disabled people may potentially be or are employed. The project "ICT, disability and employment" consisted of several modules, where comparing the systems for diffusion and distribution of technologies that could be used by disabled people at their work places in Norway, Denmark, United Kingdom and the Netherlands were a core element. The project represented a non-traditional approach to disability. The focus was with the systems that were assumed as key elements in the quest to increase work life participation for disabled people, rather than with individuals with impairments.

The doctorate project: Cell phones, video telephony and Internet - new communication practices among sign language users

As part of the "ICT, employment and disability" project, an ethnographic study of work places with deaf employees was planned (this doctorate project). The focus was on work places where the new technologies (with an emphasis on visual communication technologies) were implemented, and how these become part of everyday life at work for a group of people who traditionally have been cut off from communication in a verbal language at long distances. Though the overall research question was related to the consequences of the abundance of new technologies on disabled people, and in particular deaf peoples' situation in the labour market, there was also a particular interest in studying the role of assistive technologies vis-à-vis generic technologies. One question was if the conceptual demarcation between various kinds of technologies used by disabled and non-disabled people in Norway was related to the system for public distribution of technical remedies for disabled people. With a universal welfare model, disabled peoples' right to free assistive technologies is stipulated in the National Insurance Act. In order to keep the budget under control, there was a need to establish a gatekeeper system which could distinguish those qualified for support. A medical diagnosis indicating some kind of disability was (and is) an effective tool to make this demarcation (Solvang, 2000). The United States served in light of this hypothesis as a contrast to the Nordic model. Provision of assistive technologies to individuals is not considered public responsibility in the US, but a liability of both private and public institutions. In the US, the Americans with Disabilities Act (ADA) has for more than 20 years required public institutions to make their products and services accessible to all citizens. According to Berven & Blanck (1999), the Americans with Disabilities Act fosters innovation and activity in the consumer market (especially related to assistive technology) and has expanded the market for goods that improve accessibility. It is anticipated that technological

solutions that can be used by as many as possible reduce the need and expenses related to provision and development of special technologies for a few.

Norway and the US have quite similar populations of deaf people with almost equal employment and educational rates, and both countries rank high on the scale of Internet penetration within the overall population. As part of the research design, extended fieldwork at Gallaudet University in Washington D.C. was planned so that I could see how politics, disability and technology hit a work place in two different countries. Another reason for choosing Gallaudet University as a field site is that the majority of its employees and students know sign language, which is rare. Fieldwork at Gallaudet would provide an opportunity to not only study how deaf people use a particular technology in everyday work life, but it would also provide a milieu that would serve as a contrast to a study of visual communication technologies at work places in Norway where deaf people were alone or a minority. These contrasts turned out however to be important in another way than anticipated, which I will return to later in this chapter.

Entering the field

Gallaudet University, Washington D.C.

When I was appointed with the Dr. Powrie V. Doctor Chair of Deaf Studies at Gallaudet University for the academic year 2005-06, I got an ideal position to follow the life at a work place where I assumed the emphasis on visual technologies was high, and where the technologies in use probably could not be separated into general and assistive use. Living in the middle of the American Capitol, the geographical and mental distances were very short to the political and legal institutions and organisations that not only have firsthand knowledge and expertise on the Americans with Disabilities Act and other relevant legislation, but also work actively to either change or implement them. Being an employee at Gallaudet

University, I was also provided with a comfortable position from where to study the inside life on a campus where sign language was ubiquitous. I could take part in the everyday routines of its faculty and staff, was given access to all their technological perks, and could use it the way they did.

Very soon after arrival, I could conclude that various communication technologies were used everywhere, both in and out of class rooms, in dormitories, offices and in the hallways. Everyone had pagers (mobile telephones with full keyboards), students were working with their laptops everywhere, and the computer hall in the main service building was almost always full. There were videophone booths in all buildings on the campus. With a few exceptions, people did not talk explicitly about all these technologies. They simply were there as indispensable tools for work and study, to keep in touch with friends and stay networked. One exception was the pagers, which were subject to both jokes and complaints, especially since people who used their pagers could be more concentrated on watching the display and typing conversations with persons not present, than with looking around and interacting with the people who actually were around. The numerous bent necks made someone label the students a new redneck generation.[11] There were also some new signs suggesting the changed ways of interaction in public, often referring to these bent necks. Only hearing people used them for phone calls, and this use of the pagers also marked them as hearing people, or as "the other" compared to the majority at the campus.

The other notable technology talk was about the buzzwords videophone and its counterpart the video relay service. Both were signed by finger spelling their respective abbreviations, VP and VRS with the hand alphabet. The sign for video relay service was sometimes replaced with the sign for Sorenson, the dominant provider of videophones and video relay services in

[11] Redneck is a derogatory slang term that historically refers to poor white farmers, whose necks were burnt red during work in the sun.

the US. In 2005-06, the private corporation Sorenson VRS was also the official provider of videophones and video relay services at the university campus. There were well used videophone booths from Sorenson VRS in veritably all buildings on the campus. Unlike the other technologies I used and observed in use among my colleagues, the videophone represented a relatively new opportunity for communication. With permission from the Internal Review Board at the university, I made several formal interviews with both colleagues at the university and deaf people in the capitol area about their use of technology to communicate at their work places. The videophones came up early in in these interviews, and one informant demonstrated how "VP" was no longer only a noun to describe a video telephone, but was also used as a verb, e.g. "We'll VP tonight?" or "VP later, okay?" There was a galore of commercial material and gatherings by video relay service providers, and the waiting times I had experienced as a high school student at the same campus when we wanted to call for a pizza via the text relay service 18 years earlier, was definitely history. People could still recall what it was like not to have this technology around and one could inevitably observe an intense diffusion period of a new communication technology.

The Video Relay Service

The major provider of videophone services on the Gallaudet campus, Sorenson VRS, did not provide the videophones and the video relay services without intent to earn a profit. Their business model was built on some of the possibilities federal regulations had provided the basis for. Although the Federal Communications Commission included video relay service in the Telecommunication Relay Service definition in 2000, there were only a few video relay service providers before 2003, and the traffic was growing slowly. There was no large-scale provision of or system for distribution of the required equipment (webcams, computers, videophones), which at that time was quite expensive and few, if any, were designed with Deaf people as a target group. In 2003, Sorenson made a few moves that gave the VRS

market in the US the distinct features it still has today. First, they loaned user friendly TV-mounted videophones to consumers (who only had to pay for a broadband connection) and configured the videophone so the consumers could only use SorensonVRS for relay calls. By making it complicated or impossible to use the terminals for communication with other videophone models and other providers' services, they optimized payback of the investment in end-user terminals. Based on the number of minutes the clients used their video relay service, Sorenson and other video relay service providers would have their expenses reimbursed from the Telecommunication Relay Service fund,[12] based on reimbursement rates per minute. Next, Sorenson VRS started a large-scale roll out of the new equipment and service that was free for the consumers (who only paid for their broadband connection), which within a short time gave Sorenson VRS a national market share of about 90%. Other VRS providers at that time required that the users of the service already had a computer, a high-speed Internet access line, a web camera and knowledge about how to download, install and use the software. A main difference between Sorenson Media and the other providers in 2003 was that Sorenson VRS launched an entire system, which was convenient and economic for consumers. The interest in videophones and video relay services sky rocketed from this time, and confirms the theory that "a major shift in communication cannot occur in isolation. (…) One must capitalize not only on a scientific discovery, but devise an entire *system* that puts it into convenient and economic use" (Anderson & Johannesson, 2005, 8-9). There were also a few other providers of videophones and video relay services around, but they were not as visible in the Gallaudet surroundings. The near monopoly of Sorenson VRS at the Gallaudet University campus also had an effect beyond the campus, since external videophone callers had to request a videophone from Sorenson in order to call one of the numerous staff or services at the campus.

[12] All providers of Interstate telecommunication services contribute to this fund, based on a carrier contribution factor that is calculated annually based on the size of the service provider and anticipated request for telecommunication relay services for a 12 month period.

Ease

Encouraged by colleagues and friends, I got one videophone at the house at Telegraph Hill and one in my office only a few weeks after arrival. The procedure was uncomplicated. All I needed to do was complete an application form online. A few days later, a technician came and installed a camera over a TV monitor and a modem. Before she left, she made sure all the cables were connected, and tested to make sure the system worked. There was no need to argue why I needed one, no signatures required by a physician or employer. In minutes, I was ready to call anywhere at any time. Once equipped with a videophone and a new pager, the speed of data gathering increased. The video relay service was within reach 24 hours a day throughout the week. Most of my deaf informants and professional contacts had a videophone, and I could easily connect to them by a technology I experienced as an ordinary telephone, providing the ability to talk to people at a distance.

The videophones from Sorenson were, though not compatible with other videophones than those delivered by Sorenson VRS, intuitive and easy to use, could be accessed day and night, and there was rarely any waiting time, which also was in compliance with the Telecommunication Relay Service rules. If a telephone number of a person not registered as one of Sorenson VRS' clients was dialed, the call was automatically directed to an interpreter, who could see the requested number on their screen, and immediately forwarded the call after presenting themself with a Sorenson operator number. The video relay service was defined as a tool to secure "functionally equivalent" telecommunication services, which gives users the right to be connected to an operator who can relay their call at close to the same speed as a voice telephone user can expect to hear the dial tone that signals a call can be initiated. To end-users like me and most of my colleagues at Gallaudet, who mostly had contacts who also used a videophone from Sorenson VRS, the visible or tangible presence of any federal agency or public regulations were infinitesimal; the videophone and the relay service simply worked when we needed it.

Federal involvement

This is not to say that the government did not have a role at all, and this was in particular evident when talking to people and representatives of various public and governmental bodies outside the campus. Visits to and interviews with workers in, among others, the Department

of Defense (responsible for providing assistive technology to federal workers),[13] the Department of Justice (responsible for overseeing and informing about the Americans with Disabilities Act), the Federal Communications Commission, and consumer organisations like TDI (Telecommunication for Deaf and Hard of Hearing Inc.) and the National Association of the Deaf gave a valuable overview of the various regulations and schemes for access to and provision of (assistive) technologies to disabled people. The videophones and the video relay services were also discussed extensively in the meetings with these organisations. These visits also confirmed what was anticipated, that provision of accessible technologies was foremost the responsibility of employers and the institutions that serve a general public (including disabled people), and not foremost a responsibility of the state or a federal agency, as was the case in Norway.

Life as an Ordinary Outsider

As written initially in the previous chapter, Gallaudet was not merely a place I went to do fieldwork, it was also a place where I had the relaxing feeling of being "at home" and being ordinary. Unlike the research institute where I am a permanently employed in Norway, I was not the only Deaf employee at the Department of Deaf Studies and American Sign Language, where my office was. I was not even the only Deaf researcher. There were plenty of us, and I could, without the sometimes uncomfortable presence of a sign language interpreter, engage in any discussion, academic or more profane, whenever it was natural. If I wanted to attend a meeting or a workshop I did not have to give the issue of interpreters and communication a second thought.[14] I was rarely the cause of our need for a sign language interpreter, and thus

[13] To the extent that the federal state provides assistive technology, it is in the role as an employer of numerous disabled people, which due to the large return of veterans from the conflicts in Iraq and Afghanistan, was a fast growing group of federal workers.

[14] Several times, fellow anthropologists, accustomed to using interpreters for fieldwork interviews, etc., have asked me how I manage my interpreters when I do fieldwork, or which role they have had. The answer has most often been that I did not "manage" them much during this fieldwork, with a few exceptions. They were often requested by other participants at the events I attended, whether deaf or hearing, and I frequently found myself

not the one who had to request or find qualified sign language interpreters for the meetings I attended. Living and working at the Gallaudet University campus gave me a sense of being ordinary, of feeling at ease and of being part of a network that I did not have to any work or make any special effort to connect to. I soon caught myself thinking the same as a woman I interviewed who had been working at Gallaudet for 20 years. We discussed the difference between her work situation at Gallaudet and the struggles of her Deaf husband, who worked off campus. He was frustrated with the process of convincing his boss to allow a videophone at his desk, and she commented, "One reason I am still working here is that I don't tolerate those frustrations." After only a few months at Gallaudet, my tolerance and patience with communication barriers decreased. I was beginning to take the ease of access to communication technologies and other people for granted, just like most hearing people do every day without ever giving this access a second thought. I had maybe gone profoundly native, but it was indeed very comfortable.

As a Deaf person, I could partially call myself an insider at Gallaudet. My preference for communication in sign language (and fluent mastery of American Sign Language) made me share the often tacit experience with and outlook towards the general society of hearing people who mostly do not know sign language. This is not the place to discuss the nature of this sense of being Deaf, but was nevertheless a feeling, or an identity I more or less shared with several of my Deaf informants at Gallaudet and the surrounding Capitol area. It would however simplify the experience(s) of being d/Deaf if I claimed I was totally "at home" when living in a foreign Deaf community. Deaf people are always d/Deaf in the context of a region, a nation state, the social or cultural group they reside within. Deaf people, and organisations and institutions serving them have increasingly made claims that Deaf people are bilingual

being one of many. In contrast, when I am among hearing anthropologists, I become the outsider – made visible and symbolised by the interpreters we need to discuss with each other at conferences and workshops.

(mastering at least one sign language, and the written representation of the language spoken in the area where they live). On the grounds of the bilingualism, Deaf people are also referred to as bicultural, who both identify with, and belong to both a Deaf culture and the culture(s) where they reside. The "Deaf" part of this biculturalism (American Deaf, Norwegian Deaf, written with our without a hyphen (-) or a slash (/)) is however not a static attribute, which can be sorted out like pepper from the salt in a mix of both (Weston, 1997). The experience of being Deaf in the US is different from the experience of being Deaf in Norway or any other part of the world. So when I claim I felt "at home" at Gallaudet, I am foremost referring to the shared mode of communication and partially to the similar (but not identical) visual horizon towards or experiences with (ignorant) hearing people. As a Norwegian residing in a rural suburb outside Oslo, I was indeed an outsider in downtown Washington, D.C., and I did not always understand the social codes of my Deaf fellows. For months, I struggled to adjust to the pace of life in the Capitol and the university, and understand formal procedures related to receiving a social security number or open a bank account. I spent hours in the local, huge grocery store only to leave with a bottle of juice, a few apples, yoghurt and muesli. Another trivial, yet vital task was to decode the East Coast social codes in order to melt in. With all the practical mysteries I had to solve and the quest to understand the dynamics of life in the political heart of the US, I was also a continuous outsider who never really melted in with life in the Capitol.

Demarcating the focus

Inspired by the intense focus on videophones and video relay services in the US, I was starting to prepare for a second phase of data collection when I returned to Norway. At this time, I also realised I had to make some demarcations in order to make my data manageable. Simply focusing on visual communication technologies would be too much. How should "visual" be demarcated, if it should not include anything visible, like a text on a display? For

two reasons I decided to focus on videophones and the related video interpreting services for the rest of the data collection. First, I had started to explore Latour and other scholars from Science and Technology Studies and actor-network theory, and found it intriguing to follow an object in the making and how it was implemented. The uses, as well as the technological features of videophones and the video interpreting services were still being molded, discussed, redefined and developed. Second, the National Insurance Agency (NAV) in Norway had already been involved in several video interpreting service trials (Berstad, 2001; Haualand, Natvig, & Ørsnes, 2006; Rikstrygdeverket, 2004; Valestrand & Berstad, 2004). A permanent video interpreting service was expected to start within a short time, partially inspired by the success of the service in the US and in Sweden. By the end of my visit to the US, I had decided to pursue my fieldwork with a goal to compare the development of the video relay service in the US with the development of the video interpreting service in Norway, with a focus on how the users implemented videophones at work places and eventually domesticated the technology and used the new service. This seemed like a viable and manageable method to study and compare the interplay between political processes, regulations, technological solutions and everyday use at work places in these two countries. Demarcating the focus of my continued fieldwork at "home" (in Norway), was a result of the empirical observations made in and around Gallaudet, but the very material reality I had lived in at the same place, also changed my vision and experience of being a communicating human being.

The looping process

More happened at Gallaudet than data collection. My vision had also changed through a process of looping (Hacking, 1999). The looping process between the anthropologist and the field is one of the hallmarks of what often has been regarded as the distinctive method of social anthropology, participant observation. By doing fieldwork, the anthropologist engages

in a process where s/he aims to understand a group, a culture or a social group at its own terms, through experiencing the everyday life of this group with and through one's own body. This is a research methodology in which the anthropologist's own body becomes the foremost research tool. The theoretical perspectives we find relevant are entangled with both what we observe in the field we participate in and in our personal and academic histories. We are private persons and we are researchers. The social anthropologist is a person and a researcher, a human being with more than one role, and it is impossible to separate the anthropologist from the person (Haraway, 1991; Narayan, 1993; Strathern, 2011; Weston, 1997). The predispositions the anthropologist has (including, but not exclusive to cultural/social background ('lenses'), academic/personal interests and theoretical positions), filters what the anthropologist sees in the field. At the same time, the field also changes the position of the researcher vis-à-vis the field and the people studied, which then may alter what continues to be observed. At Gallaudet, I had gradually learned to take communication and inclusion for granted, and rarely had to give the struggle for participation a second thought. My behaviour and understanding of others and myself changed in the interaction with the community in and around Gallaudet University. With a revised and more demarcated focus on the research project, as well as an altered and revised position within it (which was not revealed to me until much later), it was time to go back to the country my passport told me was home.

An Interruption

Video interpreting – a quasi-object

When I returned home to follow the implementation of the new video interpreting service in Norway, a first challenge was that the video interpreting service did not yet exist. It had been anticipated that the service would start to operate in late 2006 after an allocation in the state budget in 2005 (Sosial- og helsedepartementet, 2005). However, due to formal errors in the process to procure a platform from where the sign language interpreters would work to

provide their services, establishment of the entire video interpreting service was postponed twice. In 2006, the Norwegian video interpreting service was still an example of what Latour (1993a) calls a "quasi-object". The competency, skills, financial resources and potential users of the video interpreting service were there, but the technology that would link all these social entities was not in place. This also illustrates Latour's point that "every time we are faced with a more *durable* social link, we are in effect faced with techniques" (Latour, 1993a, 380). It was pointless to study the implementation, use and effects of a service that did not exist. While pondering if I should postpone data collection until the establishment of the service, or once again reconsider my focus, other obstacles piled up that were of a practical, intellectual and emotional nature, and seemed to form an impenetrable wall.

A Token

Gallaudet University had charged my communication batteries. I had great expectations when I returned home. I was looking forward to continuing an exciting and interesting project. I was prepared for more use of interpreters than when I was doing fieldwork at Gallaudet, but I soon realized that the work to include myself was becoming a part time job. The daily e-mails to and from the regional interpreter service and other people I needed to consult in order to get the right interpreters in place at the right time added up to about 500 e-mails every semester, not to mention the numerous text messages I also had to handle. This was cumbersome, but what really bothered me was that people I thought would be sensitive to the issues of inclusion and communication turned out to be completely oblivious of the issues. They did not see the mutual responsibility of handling interpreters and that inclusion was about much more than just having an interpreter present at a meeting. The disability research community discussed research on inclusion in schools, work places, and other locations where the idea of inclusion was "implemented", as if inclusion was something to be practised in the schools and work places we researched, but not something to consider right here and now among us. The feeling of being an excluded token of inclusion was growing.

As a researcher within disability studies in and about the welfare state, the concept of inclusion soon caused epistemological as well as ontological discomfort. On one level there is an inherent inference in the concept of inclusion that caused both theoretical and methodical challenges. There were also a number of personal practical struggles related to the ideal of inclusion and the theoretical implications of the concept. Due to the struggle I had to

participate and to organise the interpreters we needed in the research group, I kept asking myself if I was included – or excluded. I had to continuously do an uncomfortable mental exercise. As the only deaf researcher in the field of disability studies in Norway, I was starting to feel like a token of inclusion that was excluded by the research community's failure to include. Further, I began to doubt if could do a good job as a researcher with all the embodied and tangible challenges of communication and biased experiences with "inclusion".

The inherent inference of inclusion

The initial aim of the overall research project of which this dissertation is a part, was to "study the importance of new information technology as a means to increase employment rates among disabled people" (Hansen, 2009, 9). This is a discursive statement with two inherent messages that are closely related. First, it adheres to the political goal or ideal of inclusion, that insight is needed to increase inclusion of disabled people in the labour market. Second, and as a consequence of the first adherence, this aim also confirms that there is a group of people who are excluded from the labour market, i.e. disabled people, which also becomes a recognition of the political ideal. This is not an assertion that the political goal to include disabled people or increase participation in the labour market is wrong or morally suspicious. The point is rather that researchers risk repeating political goals without discussion on what kind of implicit categories they represent, and in this way they also shape and define the political context of their research. By defining research questions and operationalizing the research subjects, the researchers not only give a political issue a scientific touch. They also discursively shape and define expectations, goals and ideals since all discourses exclude, translate and order; they seek coherence and define actors. Posing a research question is a "…decisive factor in democratic institutional politics, as it determines which actors can get involved in political processes, and on what terms" (Marres 2007, 762). A discourse is reproduced critically in the sense that it prohibits certain statements and utterances and

defines what can be said, when and by whom; and it is reproduced genealogically by the way it repeats itself through verbal acts that are strengthened through reappearance (Foucault, 1971). There is an excluding inference in the discourse of inclusion, since it confirms and reproduces the idea that some people are excluded. A discourse of disability and inclusion defines those who should be included (and are excluded (disabled people)), the material and social mechanisms and the conditions by which inclusion may or may not happen.

Exotification of disability

With a project focus on the inclusion of deaf (or disabled) people, I also found myself in the role of a virtual anthropologist, defined by Kath Weston as a (anthropological) colleague produced as a Native Ethnographer who is "'fixed' as the one who sets out to study 'her own'" (Weston, 1997, 163). The virtual anthropologist finds herself in "an untenable position, unwilling or unable to produce 'my people' (the Other of anthropological inquiry), and incapable of extricating herself from the grip of the professionally dangerous perception that she should 'naturally' call some nativized group 'my people'. Understandably loath to exoticize that which she cannot leave behind, she is less likely than most of her colleagues to build professional credibility on the backs of 'informants' through an orientalizing move" (Weston, 1997, 175). When the discourse of inclusion and lack of practical implementation of the same idea, ideologically and practically labelled me and my fellows as excluded, I also experienced it as an act of exotification of both disabled, as well as deaf people. This exotification was in particular expressed when disabled people were discussed as "dependent" on certain technologies or services in order to be able to work, as if my nondisabled colleagues were not equally dependent on communication technologies to produce research, and vulnerable if these did not work. The same goes for disabled people being identified with "special needs" or as "vulnerable" when there is fast moving technological development. The difference was that for my nondisabled colleagues technology worked well within a

sociotechnical system, defined as "heterogeneous constructs that stem from the successful modification of social and non-social actors so that they work together" (Pfaffenberger, 1992, 498). The significance of the existing material infrastructure to everyone, not only disabled people, was concealed in the discussions and often taken for granted. When disabled people were identified as "dependent" on technology, this was an act of exotification which also (re)confirmed a difference between disabled and non-disabled people.

With all the non-technical barriers I faced, the discussions on systems to provide disabled workers with appropriate technologies soon appeared as totally out of touch with real life. No "diffusion system" would reveal what I at this time perceived as the real issues at stake: giving attention to and becoming sensitive to the full implications of "inclusion" as a way to organise society. In order to learn about how technology could potentially lead to increased inclusion of disabled people, one would also need to identify the mechanisms that made nondisabled people able to work or participate by use of technology. Added to this, I did not see how I could pursue my fieldwork when the existence of my object of study still didn't exist. I left, and thought I'd never return to doing research.

The cyborg awakens

After almost a year in academic exile while working as a video journalist, I started to read some of the books and articles I had left behind, maybe since the calling to do research never had been completely silenced. Reading Donna Haraway's texts "A Cyborg Manifesto" and "Situated Knowledges" (Haraway, 1991) revived a conversation from when I was an undergraduate student in social anthropology.

Labelling

A senior professor at the Department of Social Anthropology gently asked me what the topic for my Master's thesis would be. Knowing she was interested in gender, reproduction and kinship, I told her I wanted to study family cultures in families where one or both parents had grown up at a dormitory school, which most Deaf schools used to be. When she learned that all my informants would be Deaf, she suggested with a sulky comment that I should find someone else to study and do fieldwork somewhere else. Indeed, I knew the debate on "native" anthropologists, but I was nevertheless baffled by this comment. Should I study "hearing" people, the first group of "the other" that came to my mind?

For reasons not relevant here, I had to alter my Master's thesis totally, but the senior professor's comment has continued to haunt and inspire me. The comment effectively undercut my sense of legitimacy as a Deaf researcher by putting me in a sack of "natives". By virtue of my difference or deviance, I could be no different than all other people embodying the same difference, irrespective of my own schooling and family background, which was totally different from that of my potential informants in a Deaf families project. It was a comment originating from anthropology's colonial heritage which "has formed a field that disciplines its natives in a society that nativizes its queers" (Weston, 1997, 164).

The comment has also been an ongoing reminder to keep my eyes open and "study up". By keeping her comment in mind, I have been reminded to consciously continue the participant observation among hearing people I have done since early childhood. This sensation of being a continuous observer may not be unique; "Within hearing culture but not *of* it, deaf people are almost always adept anthropologists - seeing culture everywhere - and are continuous translators from one system to the other" (Fjord, 1996, 60). When as a child I realised there was a difference between those who used their mouths and ears to communicate, and those who used their hands and eyes for the same purposes, I also initiated lifelong fieldwork that sometimes posits me betwixt and between, and sometimes gives me a feeling of being blessed from the insights this doubleness reveals. Donna Haraway's description of the cyborg (1991) echoed my feeling of doubleness or of being a hybrid (a mix or blend of Native/Anthropologist, as if these categories were possible to extricate). A cyborg is one and

many at the same time; it can juggle identities and positions, and does not faithfully have to be a researcher or a native. The cyborg may not only inspire the so-called native anthropologist, it is also a good metaphor for any social anthropologist doing fieldwork. Anthropologists pursue inside knowledge of the communities they study, while they are wary of becoming *real* members (going native) of the same communities. In the quest to keep the various perspectives apart, while also trying to grasp a whole, the cyborg metaphor inspires since the cyborg also demands a double gaze; to simultaneously see what is unitary and what is different, what is specific and what is general at the same time. In the role as a deaf researcher, I am an imagination (in Haraway's sense of the term) of a politics of inclusion (through increased access to interpreters and various technologies), while I am continuously excluded by the shortcomings of the same mechanisms.

Rather than being paralyzed by the double position, the cyborg metaphor revealed the productive possibilities that could be provided by an active consciousness and an attention given to being "double". A native anthropologist may never leave "our" community totally behind, but this does not deprive us from the ability to observe, or to possess a vision. *Vision* is the other concept from Haraway I contemplated when I wondered if I should re-enter academia. Vision is not a research method, but it is a tool to reflect on our own position and where we are situated as researchers. There are no researchers that do not have a vision, and there are no two researchers who share the same vision. This does not ultimately disqualify any of them, but makes all equally responsible for what we see, and confesses that our vision is always partial. This insight is fundamental to take responsibility for our research - and the possibility to be objective, in the sense that we are aware of how we see and why we observe what we see. Knowledge is always partial – and it is the partial and situated perspective we can account for. This is, as Haraway presents it, an "argument for situated and embodied knowledges and against various forms of unlocatable, and so irresponsible, knowledge

claims" (Haraway, 1991, 191). As an embodied proficiency, vision enables us to go beyond fixed appearances. We can use vision to go behind the surface, behind phenomena as they first appear. It allows us to explore. As such – in the metaphor of vision – "we find means for appreciating simultaneously *both* the concrete, 'real' aspect and the aspect of semiosis and production in what we call scientific knowledge" (Haraway, 1991, 195). As our informants, the anthropologist is influenced by the people we not only observe, but also meet and interact with (cf Hacking's looping concept), and we are never completely naïve or innocent when we engage in participant observation. The key to taking responsibility for our knowledge is to be aware of this process and the continuous multiplicity of experiences we pull in when doing fieldwork and analysing the field notes. In this, I will argue, there is no difference between the native ethnographer and the classic anthropologist who goes a long way to study a group that is defined as "other" vis-à-vis the ethnographer. We are equally situated, we both possess a vision, and our knowledge can in any case only be partial. The outsider anthropologist may notice patterns the insider anthropologist can overlook or take for granted, but the insider (who never can be totally so, or know everything about the community where he or she is from (Narayan, 1993)), may also see structures the "outsider" takes for granted, and can challenge categories and perceptions of reality that often pass as unmarked.

Haraway's cyborg and vision metaphors (re)established a sense of equality and symmetry vis-à-vis the research community I had left. There was no need to be either included or excluded – I could be both. Just like my colleagues, I was situated, and I possess a vision it is possible to be accountable for. What was more, my double position within the field of communication technology, disability and employment made me perhaps able to direct the vision towards categories and perceptions I, as well as my colleagues perhaps more or less took for granted. With the senior professor's advice in mind to study a different group than Deaf people, I resumed my doctorate thesis and once again redefined its focus.

Going Multisited

While I worked as a video journalist, the platform needed for establishing the video interpreting service in Norway had arrived, and the video interpreting service was evolving into a real object to study. Haraway also provided me with a new position from where the double position would be an asset. The continued focus would not be towards those who were defined as the "users" of the video interpreting service and how it eventually enhanced their inclusion at their workplaces (with an implicit message that they were excluded in some indefinite sense), but towards the videophones and video interpreting services as objects. The study and the analysis was framed "in ways that not only focus on this or that particular group, but in a way that catches the dynamic connections between people and institutions with and without power" (Lien & Melhuus, 2011,138). The pragmatic redefinition of the research project was done for two reasons. At the personal level, a study of Deaf people at their work places would require an intolerable myopic glance, a lesson learned the hard way earlier. At the methodological level, the decision was inspired by a pragmatism that "... proposes that we focus on the objects of concern and then, so as to handle them, produce the instruments and equipment necessary to grasp the questions they have raised and in which we are hopelessly entangled" (Latour, 2007, 814). Through identifying and then following the videophones and video interpreting services as the research objects and tracing the actors involved (human as well as non-human, material as well as ideological) - that constitute this object and is constituted by it, I aimed to avoid an uncritical reproduction of the categories attached to the objects. It was no longer a primary goal to study the service as a means predefined to achieve a politically defined end (inclusion of deaf people), but rather to problematise this connection, bearing in mind that "Technologies and moralities happen to be indissolubly mingled because, in both cases, the question of the relation of ends and means is profoundly problematized" (Latour, 2002, 248). Unveiling some of the processes that create the video interpreting

service, it seemed a viable and interesting case to study not *if* the technology and the related service increase disabled peoples' opportunities in the labour market, but how the video interpreting services were constituted as reflections or constituents of the same ideals.

The object of study

Examining an association of actors involved in using, providing and regulating video interpreting services as a springboard to trace and identify the subjects involved, is also an attempt to solve the problem of how to demarcate the subjects in social research on disability (Söder, 2009; Tøssebro & Kittelsaa, 2004). For the past two decades, the social and relational aspects of disability have gradually gained ground, and it would be foolish to look for a social scientist that does not recognize the significance of the social and material environment in the lives of disabled people. The empirically oriented researcher faces however a methodological challenge when disability becomes "a disablement process, rather than a population" (Tøssebro & Kittelsaa, 2004, 23), since the personal characteristic that potentially could define a population of individuals, is simply not there (ibid). Tøssebro (2009) writes that researchers tend to give their consent or discuss one or more of these concepts in the first pages of a report, and eventually also give their support to a political ideal, but in line with the assumed gap between the ideals and the realities, these perspectives (or ideals) evaporate from the text when the research subjects are operationalized, which often is a cruel consequence of the research question. Neither Tøssebro and Kittelsaa (2004), Tøssebro (2009) nor Söder (2009) suggest any easy way out of this dilemma. They conclude somewhat resigned that even though one may theoretically adopt the environmental view on disability, the individual focus (on impairment) is unavoidable when planning the research design. In line with the environmental perspective, the research subjects have been extended beyond individuals with impairments. The extension of subjects is however only a quantitative shift of focus, since "… merely acknowledging that the *subjects* that enter the political process are more complicated

and carry more weight of contingent history than originally imagined does not take us to the *object* of politics" (de Vries, 2007, 801-2). The formation of the issue, which defines the relevant public or actors involved, remains unexplored, and the ideals are as Tøssebro (2009) also states, taken for granted.

A focus on the subjects (i.e. disabled people) prior to the study, will indeed teach us more about the intentions, motivations, doubts and desires of these subjects. The goals or ideals at stake will however remain inside the black box, and a focus on the subjects will not necessarily bring us much closer to an understanding of why there is a gap between realities and ideals. A focus on the object may not only be one possible way out of the demarcation dilemma discussed by Tøssebro, Kittelsaa and Söder, it may also be a rewarding approach to explore the formation of ideals within disability politics. It retains the pragmatic and empirical focus on disability, without individualising the consequences of disabling processes. Through identifying, and then following the object of politics, the researcher may trace the web of associations of actors, human as well as non-human, material as well as ideological - that constitute this object. By unveiling some of the processes that create the connections – as well as the gaps - between realities and ideals, it may be possible to study the interaction between the ideals and the realities, without also reproducing and confirming this gap through an unconscious separation of the ideals and realities as two different and unrelated entities.

Methodologically, I did this by establishing the video interpreting service as the primary research object. Historical data was used to study how the services had been established in the US, Sweden and Norway, and how they were established in a process of co-production including expert knowledge, public administration and political issues (Asdal, 2008). Rather than defining the interpreters, politicians or deaf people as the primary subjects of research, these were identified as actors involved in the web of associations that constitute the video interpreting services, and their roles are described in relation to this object and each other. By

viewing the video interpreting services as networks of heterogeneous actors, without making any prior assumptions about the level or hierarchical position of the actors involved (both human and material), the focus in "Interpreted Ideals and Relayed Rights" (first article in the dissertation) is with how these networks construct and define the actors involved, and what kind of roles, agency and power positions are distributed through these networks. Inspired by de Vries (2007), the video interpreting services were studied as "objects of politics", and the political ideals that motivated and regulated the services in the three countries were identified as "issues", a concept inspired by Marres (2007).

Extending the scope

The video interpreting service in Norway had been running for a few months when I decided to resume the research project. With the slow growth in the number of users and limited outreach, it seemed very much like a work in process. Following development of the video interpreting service offered a rare opportunity to study the intertwinement of political decisions and technological opportunities in the making. This required fieldwork that had a more multisited approach than initially planned, as compared to the initial goal to only study the implementation of videophones and video interpreting services at work places. In order to understand how video interpreting services come about, I developed a strategy for "quite literally following connections, associations, and putative relationships" (Marcus, 1995, 97). Since major parts of the technology used for the new video interpreting service in Norway was physically located in Sweden, the number of geographical sites to visit was extended. When starting to unravel the actors involved in the emerging video interpreting service in Norway, visits to the Swedish cities Uppsala, Stockholm and Örebro were necessary to understand what was going on in Norway at the same time. The public video interpreting service that had been running in Sweden since 1997 was widely popular, but unlike in the US, this was a service regulated, financed and provided by several different public bodies. The

Swedish service did not only serve as a model for the Norwegian service; the video interpreting service that was emerging in Norway could not be identified as a *Norwegian* object since almost all the technology was imported from Sweden. For example, the server for the platform the interpreters worked from was provided by a major provider of video interpreting platforms located in Sweden.

The video interpreting service in Sweden also represented a video interpreting service in another context than in the rights based political system in the US. The services in the US and Sweden had been running continuously since 1997 (first as trials, then as permanent services). Juxtaposing the service in the US and in Norway would not only be an act of studying the services in different political contexts, it would also represent an asynchronic comparison, where the Norwegian video interpreting service would be described in a phase the US service left years ago. In a study that explicitly aimed to compare it to a similar service in the US that had been running and fast growing for almost a decade, it seemed a bit methodologically unjust to compare the services in these countries directly. The Swedish system could then serve as a backdrop to a comparative study that focused primarily on the Norwegian and US video interpreting systems. When I traced the Swedish sites for, and relationships to the video interpreting service in Norway, a new comparative dimension was also developed. Marcus (1995) argues that multisited ethnography that involves the study of objects whose "contours, sites, and relationships are not known beforehand" (ibid, 102), will have a comparative dimension that is integral to it, but the "comparative dimensions develop instead as a function of the fractured, discontinuous plane of movement and discovery among sites as one maps an object of study and needs to posit logics of relationship, translation, and association among these sites" (ibid). The project was thus extended to not only compare the video interpreting systems in two profoundly different welfare regimes (cf. Esping-Andersen, 1990) (the US and Norway), but also between two states with similar political systems (Norway and Sweden).

Sweden: Uppsala, Örebro, Stockholm

The targets of my first visits to Sweden in March 2009 were the provider of the studio platform in Uppsala, the national video interpreting service in Örebro and a videophone developer in Stockholm. During what turned out to be only the first of several visits to Sweden, I also met some Deaf people I knew from former activities. When revealing the purpose of my visit, we inevitably started to discuss their experiences with the video interpreting service and videophones. These talks were not formal interviews, but they represented a valuable source of "people talk" about the videophones and the video interpreting services. Later, a few formal interviews were done on video interpreting, and the comments in these interviews underscored what I also noticed in the informal talks. Typical issues raised were related to accessibility (operating hours, queues, complicated application procedures, which sometimes also made people refrain from obtaining a videophone), picture quality, and sometimes an ambiguity towards revealing too much to an interpreter, regardless of communication mode (real life or through a videophone) and the client confidentiality of the interpreter.

nWise

Among all the encounters I had with private individuals, public institutions and private businesses in Sweden, the Vice President of Marketing and Sales at the platform provider nWise turned out to be a key informant. nWise, an Uppsala-based engineering company has a solution that is the "most widely-used platform for interpreting and relay services currently available for deaf, hearing-impaired and speech-impaired people", according to their website (nWise, 2010). Video interpreting and text relay service providers worldwide (Europe, the US and Australia) have based their services on the MMX platform developed by nWise. The MMX platform for relay services combines a number of different features, such as an interpreter workstation, software for end-users, call center management, and charging and

statistics modules. The platform ties together a wide array of stakeholders involved in video interpreting and relay services, since they inevitably have to interact in order to provide, regulate or use the service. The platform they develop is the sign language interpreters' main tool to provide their interpreter services, as it includes not only a computer connected to a web camera and a headset that connects them to the telephone users, but also software to regulate queues and gather statistics on the number of users and length of calls (for financial calculations and reimbursement). nWise must therefore direct their attention, and collect information not only about how the interpreters work, but about various public institutions, specifications in public procurement documents and also what the Deaf end-users request in order to use their solution for individual calls. On the first visit to nWise, I was searching for information about their role in the establishment of the Norwegian video interpreting service, but also to learn about their Swedish market. The initial conversations that followed with the Vice President of nWise soon revealed to me the intricate relationship between the various actors. The "video interpreting services" was an object, not primarily in the material tangible sense of it, but in a sense inspired by Latour's postulate that an "object cannot come into existence if the range of interests gathered around the project do not intersect" (Latour, 1993a, 391). A viable video interpreting service could not come into existence or continue to exist if the public regulations, financial mechanisms, technical solutions, competencies of the sign language interpreters and the demands from Deaf people did not intersect. The conversations with the Vice President become an important catalyst to formulate the first analytical derivations about the field(s) I was trying to grasp.[15]

[15] I could sense a unique appreciation of my research project at nWise, which became evident on a later visit to nWise. I had asked to visit them for a few days to observe how they were working, and how the interplay between public project specifications and the issues between the engineers and their marketing personnel was discussed. They made a considerable effort by scheduling several core business meetings during my visit. Much of the activities in this company take place outside their two offices, through engineers who program directly connected to nWise computers (and may even be teleworking and not always be in the office), telephone conferences and other situations which are impossible for a single person to observe. nWise also has a user panel which meets once or twice a year, who met when I was there. Those meetings would otherwise take place over a

Making the networks tangible

Much of fieldwork consisted of encounters and studies of single actors involved in the development and distribution of videophones and provision of video interpreting services. This included participation at meetings, fairs or expositions where videophones or services were presented or discussed, and numerous formal and informal interviews with deaf users, service organisers, bureaucrats and representatives from different organisations. It was rarely possible to observe or talk to more than a tiny fraction of this large network of actors at once. Only by talking with, reading, registering and observing rules, interpreters, Deaf people, engineers and videophones one by one, in real life and online, was insight in their relationship to each other gradually gained. Repeated visits were made to Sweden, I did both formal interviews and participant observation in Norway,[16] spent hours online studying the home pages of service providers in all three countries, searched the large online archives of the Federal Communications Commission and participated at events where videophones and the video interpreting service was discussed, either by staged presentations or with booths at an exhibition. I was continuously in search of how the objects called video interpreting services were constituted, and especially with how the politics surrounding and motivating the video interpreting services was expressed.

Gradually, I was starting to see how the actors in the networks that constituted video interpreting services in Norway and the US, and also in Sweden were telling different stories. In Sweden and the US, these stories were well established, and the various actors seemed to

much larger time span, and hence, the relationship between them might not have been as observable as I experienced. I did not ask nWise to do this. The Vice President wanted to give me an as broad as possible impression of their work during the relatively short time I visited them. For note taking purposes I was allowed to record all meetings except one with my camcorder.

[16] I was always careful to make notes during the quite lengthy process of applying for and implementing a videophone in my office. These notes include the e-mail correspondence with the bureaucrats at NAV, their technician, the administration secretary and computer technician at my work place, in between my personal outburst of frustration when someone needed a signature from someone else, or I had to make sure technical information I did not understand at all was passed to and from the right people. This process was both interpreted in light of the seamless experience to get a videophone in US, and how I have started to view the system after my visit to Sweden. I saw both a system that certainly differed from that in the US, and I could literally see the work of making an object intersect.

share several, yet mutual conceptions of the purpose of the technology and the service, while the Norwegian object had not yet reached a state in which all the actors involved were engaging in the same process of crafting a sustainable service. The service had only been running for some months, the number of individual users was low and the demand was diminutive compared to the popularity of the US and Swedish services. One question I initially asked was if these differences were related to certain features in the different legislation in those countries. Norway and Sweden have similar welfare systems of the universal, social democratic type with an outspoken goal to reduce social stratification (Esping-Andersen, 1990), while the US belongs to another cluster of welfare states; which Esping-Andersen has called "liberal". The liberal system is characterized by means-tested assistance, modest universal transfers, modest social-insurance plans and the social stratification in these countries is to a large extent produced by market forces (ibid). The diffusion of videophones among Deaf people and the new video interpreting services that emerge from this technology is in the intersection between market forces and developments and the public sector, its organization of services and policy structures. Following the theory of welfare regimes, one would expect similar development of the video relay service in Sweden and Norway, while one would see a different development in the US. The theory of welfare regimes would however not suffice to explain the differences. In a study of school reforms in the US, Sweden and Germany, Klitgaard concludes that "the theory of welfare state regimes apparently has little to say about a crucial aspect of contemporary welfare capitalism, welfare services and public sector reforms" (Klitgaard, 2007, 465). This is supported by the study of labour market inclusion of people with disabilities. Hansen (2009) and Hansen, Andreassen, & Meager (2010) find few differences in the employment rates of people with disabilities across very different systems and institutions working to promote employment of these groups. In the case of video interpreting services, there indeed were

other factors than those that directly could be associated with the overall welfare regime in a particular country. I was starting to look for other stories that could explain the differences between the services I studied (now including Sweden), and reveal how the video interpreting services had emerged as political objects.

The focus was now definitely with the systems, and the fieldwork had gone multisited, which in "more practical terms (…) involves following processes in motion, rather than units *in situ.* It also involves a reconsideration of the politics of ethnography, away from an investigation of 'subaltern' peoples, seen in the context of an exploitative world system, towards an investigation of the system itself. This is achieved through 'following' various processes in motion" (Mitchell, 2010, 7). Multisited ethnography is thus "bound to shift the focus of attention to other domains of cultural production and ultimately to challenge this frequently privileged positioning of ethnographic perspective" (Marcus, 1995, 101). In such a context, the traditional distinction between the native and nonnative ethnographer is also blurred. It is difficult, if not impossible to demarcate or identify some ethnographers as more native than others if the object of investigation is a system, not a certain group of people. What characterizes those systems (which sometimes are also exploitative, cf. Mitchell in the citation above), is that those traditionally holding the privilege to be unmarked and regarded as nonnative, often represent the same privileged class or social segment as the people in power in those systems. In a multisited enquiry, where a system is in focus, the role as "native" becomes fluid, as does the role as an ethnographer.[17] It was however not only the sites of

[17] The professor's comment presented earlier has also functioned as an admonition to stay alert on topics, connections and incidents a native anthropologist runs risk of overlooking, since they may be so familiar. To retain the double gaze, while also recognizing the disadvantages of being an insider for ethnographic descriptions, a video recorder has insistently been used for all formal interviews and some open gatherings, if it was possible to obtain permission from the people present to make recordings. When the camera runs, I consciously place myself in the frame to become part of the context or conversation to analyse later. During the analysis and transcription of the interviews, my own comments and questions are included on par with my informants'. In this phase, I more clearly take on the role as a researcher, and one of several features I look for is how the topic in question is discussed between two people who may have a shared outlook on some of them. This method has repeatedly been experienced as emancipative, since the fear to overlook important information

fieldwork or the role of fieldworker that sometimes felt quite fluid and indefinite. Since the fieldwork took place at multiple sites, it was also interrupted by long sequences at the office where I searched for theories and literature that would help me understand what I had observed in the field. When I once again went out to gather more data at a conference, at interviews or in meetings with the actors involved, these theories also influenced what I noticed and observed. Data and theory circulated in an intertwinement where they mutually interacted with each other through my body and my vision.

Revisiting the US

Fortunately, the material collected in the US in 2006 was broad enough to spawn the sharpened focus of this thesis. Since the object of study was characterised by fast development, it was nevertheless time to return to the US to re-examine a few of the loose ends left behind (or rendered irrelevant in 2006), and to get a sense of how both videophones and the video relay service had development in the three years that had passed. A month long visit to the US in September 2009 was coordinated with a study visit by the secretary general and political advisor in the Norwegian Association of the Deaf, who went to the US to learn about the impact for Deaf people of the Americans with Disabilities Act. I volunteered as an interpreter (between American Sign Language and Norwegian Sign Language) for the group and provided them with contact information to some of the institutions and companies I had gotten to know in the US. In return, they allowed me to observe their meetings (when I did not work as an interpreter) and the conversations they had with the people we met. I thus did not have to play the role as a partial outsider, but could observe the discussions between the Norwegians and the Americans on topics that were of great relevance for my own research project. The way they asked about and explained their systems for interpreter provision,

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during the interviews is reduced and I may be part of and share the conversation of my informants in the moment of interaction.

telephone access, subtitles and other relevant issues to each other, also highlighted distinct national features I perhaps could take more or less for granted at that time, since I already was quite familiar with the American system.

A Federal Communications Commission workshop

At the end of the repeat visit to the US, I was invited to attend a workshop in the end of September 2009 at the Federal Communications Commission (FCC) premises in the governmental area in the southwestern blocks of Washington, D.C. This workshop was the first of a sequence of three workshops, which due to their proximity in time, though in different countries and arranged independently from each other in different contexts, represented a turning point in the pace of the fieldwork. The prequel to the workshop in the US was a recent requirement from FCC that all users of Video Relay Services and IP Relay should be able to make and receive calls using ten-digit numbers, not merely IP-addresses that earlier had functioned as videophone numbers. The rule had already been implemented, but there was some resistance by consumers to actually register for a ten-digit number and choose a default video relay service provider. The interoperability across various providers and videophone models that had been an issue in 2006 was gone, and anyone could call any service or any other videophone owner with their own equipment. The implementation of the ten-digit-number was not only about making videophone numbers more similar to ordinary telephone numbers, in accordance to the functional equivalence principle that permeates the telecommunication relay services in the US, but was also mandatory in order to be able to use the digital videophones for emergency purposes, when immediate identification of the caller's location was crucial in order to provide emergency assistance. Most of the about 40 participants were from various service providers and consumer and lobby associations, and about 1/3-1/4 of the participants were Deaf. The event was an open discussion between parties that expressed slightly different interests, but simultaneously shared a common basic

understanding of what video relay service is about, and had a common interest in identifying consumer behaviour in order to implement a best practice to change this behaviour. I was introduced as a "researcher from Norway", and one of my informants there also invited me to eat lunch with some of the "big names" of video interpreting in the US. The lunch only lasted for an hour and a half, but I experienced it as a definite highlight during my fieldwork. It represented a condensation of the information and ideas I had learned up until then about the video relay service in the US, and continued to learn about in the time that followed. At this lunch, I got an opportunity discuss many of the historical events I only had been reading about, ask questions, and got some first-hand information about key events in the development of video interpreting services in the US.

A Swedish Institute of Assistive Technology seminar

It would not be an understatement to say I was "high on data" when I returned home to Norway a few days later. Immediately on return I was invited to attend a Swedish meeting hosted by one of the major videophone stakeholders, the Swedish Institute for Assistive Technology. This was an annual seminar aimed at the regional officers in charge and prescribers[18] of alternative telephony (including both text- and videophones) and text- and/or videophone developers and manufacturers (who had the regional authorities as their primary market in Sweden). The hot topic of this meeting was the implementation of an EU directive on public procurements (European Union, 2004) and the new text- and videophone procurement procedures for the regional authorities. As a consequence of the anticipated change in procurement practice, most of the discussion was related to new videophone procurement and distribution processes. However, a lot of time was also given to product presentations of both video- and text telephones and discussion on the latest technological

[18] Swedish term: Förskrivare. This concept is quite entangled with the Swedish system for providing assistive technology. If an impairment can be documented by a medical professional, people may apply for various assistive technologies in order to compensate for the impairment and/or increase access to various arenas of life. The prescribers in each region advice end-users and provide assistive technologies.

developments. Approximately 50 people attended the meeting, and a handful were Deaf, mostly representing regional videophone prescribers and companies specialising in developing and selling videophones. Like in the US, I was introduced as a researcher from Norway, and invited to attend a dinner for some of the attendees in the evening. Again, I was engaged in a lively, and this time also a comparative discussion on video interpreting services. At the lunch after the FCC workshop, the discussion was mostly about issues directly related to the American system, while the Swedes were more curious to learn about the video interpreting systems in other countries. At this time, I was definitely no longer only an anthropologist gathering data, I was also becoming a provider of information and new perspectives on the work they did every day. At this stage, I could perhaps have refrained from getting involved in that type of discussion, since I was no longer only observing a system, but taking part in it. It was however with a feeling of "giving back" that I shared my information with this group of people, since many of them were also people I had talked with earlier and had received much valuable information from.

A National Insurance Agency workshop

Three weeks after the seminar in Sweden, there was a workshop outside Oslo, primarily directed at interpreter service managers and other officers working in the regional centres for assistive technology to prescribe videophones and other assistive technologies. Contrary to the US and Sweden, this meeting was not one between a group of actors who already were familiar with the service, and needed to update themselves or discuss anticipated changes. Rather, it was a meeting where the representatives from the video interpreting services management group informed the participants about the possibilities of the videophone and the video interpreting service. Some of the participants were familiar with the service before the meeting, but the information was structured in a way to inform and enlighten the audience about the opportunities of video telephony for the regional sign language interpreter services.

By encouraging their users to have a videophone installed at their respective workplaces, the interpreter service centres could expand their services and use their resources more effectively. They could provide more ad hoc assignments, and the videophones could also reduce the need to travel for short appointments. There were around 30 participants from regional offices. It was clearly announced as a closed workshop targeted at regional services. There was little of the dialogue between a variety of actors and organisations that characterised the other two conferences.

Mixed roles

My mixed roles as a potential user of these services and a researcher were handled differently by the organizers of the three workshops. I was invited by informants to the workshops in the US and Sweden. However, I had to register for the workshop in Norway after learning about it from an external source at the last minute. In the US and Sweden, I was invited to attend the video interpreting conferences by informants I had met earlier, and I had less of a "double role" (as "user" and "researcher") than in Norway. The workshop in Norway was primarily targeted at interpreters and officers at the regional centres for provision of assistive technology. The organizers had announced they could let representatives from user organizations attend, providing there was enough room. I registered as a researcher/PhD student, and was immediately told they could not guarantee I could attend the conference as the organizers were not sure they would be able to find an interpreter for me. This was a surprise, since I had not told them I was Deaf. Also, I had planned to bring my in-office interpreter who did not plan to attend the conference as a participant. A sense of paranoia struck me – did they not want me to attend because they saw me as a (potential) user of the video interpreting service, and wanted to discuss the service without the involvement of the users? Or, did they not want the scrutinuous presence of a researcher there, and used "lack of accessibility" as an excuse to fiddle with my attendance? I was eventually let in, only to find

out that working interpreters had been reserved for the workshop from the beginning. A Deaf assistant at a regional interpreter centre and a Deaf representative from a user organization were also attending. The concern the organizers had expressed regarding my attendance seemed to be without any foundation. Nevertheless, this experience became a confirmation of what I had observed earlier, and continued to see after the workshop. To a larger extent than in Norway, the activities in the Swedish and US systems were targeted towards and among a more heterogeneous network of actors than in Norway. In the first two countries, more agency was distributed towards the deaf consumers of the video interpreting service while the Norwegian service is more centred on the interpreters (see the two last articles in the dissertation for more on this). The organisers' encounters with my sometimes multiple roles hence also became useful in the quest for a way to describe the stories, positions and roles these networks produce through the videophones and the organization of the video interpreting services.

Mapping the systems

These events became important because they represented visible manifestations and tangible images of the actors involved in the networks that constituted the video interpreting systems I otherwise only observed a tiny bit of every time I looked. It was revealed to me how the actors involved give each other different roles and abilities to act. The three systems of video interpreting services are also subject to continuous "operations of evaluation, which actors depend on for the conduct of their action and their selective access to reality" (Thevenot, 2002, 57). The workshops can be conceived as moments of operations of evaluations, since they contribute to a configuration of a common shared idea of what the video interpreting service should be about and a specification of how the actors involved should engage themselves with the videophones. At all the meetings, the main issues were ongoing or anticipated changes related to either the service or the provision of videophones – and the

implications for the involved participants were discussed. Since the video interpreting services in these countries serve different scopes, the hosts of these meetings also mirror the diverse political stakeholders of the service. Certain images of the end-users were constructed and the meetings were also arenas for discussing topics of common interest. The participants varied, but mostly included service providers (represented by interpreters and/or managers), technicians, prescribers and representatives from organisations of end-users of the service or videophones.

The most important revelation from attending these conferences was however that I was not studying one object (video interpreting services) being implemented in different ways in three countries. Rather, I was dealing with three fundamentally different objects. The names given to the services in the three countries that I earlier had relegated to the linguistic basket, suddenly appeared as not only self-explanatory, but also as keys to understand what these three systems for video interpreting services were about. The different definitions used in public documents testify to profoundly different systems. In the US, the service is called "video relay service", the Swedes call the service "relay service via videophony" (Förmedlingstjänst via bildtelefoni) and the Norwegians label the service video interpreting service (bildetolktjeneste). These names quite effectively describe the three systems I by now was ready to map. In the US, the bulk of the discussion was confined to an issue about the right to functionally equivalent telecommunication services (as stipulated in the Americans with Disabilities Act and the Telecommunication Act), and it was all about relaying phone calls. The sign language interpreters are operators, and there is a sharp demarcation between what they call the *video relay service* and *video remote interpreting*, a distinction barely visible in Sweden and Norway.[19] As the Swedish name "*förmedlingstjänst*" indicates, there is

[19] During both visits to the US, the visibility of Video Remote Interpreting was diminutive compared to discussions and efforts on video relay services. Video Remote Interpreting was repeatedly referred to as "something else", and was in different ways marginalised as irrelevant to the video relay services and

a separation between the technology and the service not seen in the other two countries. The videophones are distributed by a different public institution than the video interpreting service, which is the responsibility of the Post and Telecommunication Agency. "*Förmedlingstjänst*" indicates a service focusing on passing on communication or information, and it is not restricted to phone calls. The sign language interpreters work alternately in a studio and in situations where they are present in person, and under the same working title. In Norway, the name indicates an emphasis on an interpreter service that is provided by way of pictures (video). The service is defined as an extension of the national sign language interpreter service, which is also reflected in the name, where the emphasis is on interpreting, and it indicates only the medium (picture/video) of this interpreting service. There is no reference to telecommunication issues (even though 75% of the assignments are what the Americans would define as video relaying). It is all about providing (and receiving) interpreting services by way of videophones, which are distributed by the service providers.

As ethnographic moments, these seminars established a relation between the understood and the need to understand (Strathern, 1999), and in practice, these moments also felt like moments when the larger context of the video interpreting services in each country was "discovered". Kuhn (1962) and Latour (1988) have however demonstrated that discoveries are rarely unexpected and are preceded by expectations that rest upon acquired knowledge. When these workshops were attended, I had already started to familiarise myself with actor-network theory, and was hence in search of connections in networks. When the fieldwork continued in the same manner as it had done before the three workshops or seminars, my observations mostly confirmed the differences I had already identified. The notes I had

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videophone business. Unfortunately, Video Remote Interpreting remained a blind spot during my fieldwork, and it was not until I started to compare the American system with the Swedish and Norwegian systems that I realised what I had missed in the US. My informants in the US barely talked about Video Remote Interpreting, and their experiences are with video relay services.

collected earlier were reorganized, and also made sense when interpreted in light of the three overarching definitions of the services. Until then, it had been a search for similarities and differences in the three systems. They did however resist direct comparison, partially since the composition of the various actors was so different, and their responsibilities diverged vastly. At this moment, I ceased to compare and juxtapose them directly with one another, and focused my analysis on understanding each one of them on their own terms, a process resulting in the first of the three articles "Interpreted Ideals and Relayed Rights" (Haualand, 2011). The further process of analysis and the theoretical inspirations are topics of the next chapter.

3. Conversations

Thinking with theories

The previous two chapters have represented two kinds of journeys. In the first chapter, I presented a sociotechnical context for the questions motivating this doctorate project. This was done in the form of a historical journey through some of the connections that established the field of inquiry. The second chapter was a presentation of the fieldwork as a journey, and the looping process that occurred in the meeting between the anthropologist and the field. A third journey is pursued in this chapter, where the theoretical considerations and lessons learned are in focus. The chapter is called *Conversations* of two reasons. At one level, it refers to the alternation between theories from Science and Technology Studies, actor-network theory and anthropology. At another level, it is about the continuous interaction between the field notes and documents, and the theoretical perspectives used to analyse them.

The analysis of the material collected is presented in three articles. These had to follow the strict format of the journals they were submitted to, which did not give much room for reflection about the theories that were applied in the analysis. The disposition in this last chapter is guided by the progress made and lessons learned when working on the articles. Before the theoretical concepts are introduced, I reflect on how Science and Technology Studies, and in particular actor-network theory, have been an important theoretical inspiration. The alternation between theories from anthropology and STS/ANT permeates all three articles and the three chapters that summarise the work on this thesis. Following now is an introduction to and discussion of the theoretical concepts and perspectives applied in the analysis, in the same order as I applied them in the work with the articles.

Inspiration from STS and ANT

In the preface, I mentioned that an experience of the continuous dualism in social anthropology was a reason for incorporating theories from STS and ANT in this thesis. In the previous two chapters, I have tried to refine this somewhat coarse accusation. The discussions have in particular been about two topics. The first was the traditional separation between "home and away" or the field as a demarcated geographical place preferably at another site than the anthropologists' home. This discussion was done with multiple references to Marcus (1995, 2010) and the discussions he has brought up on the increase in multisited ethnography and consequent blurring of the demarcation between various sites. The next topic was related to the ethnographer's role(s) in a context where people increasingly have similar references and positions. It may not always be possible to position oneself as an insider or outsider, when the field borders are blurred, or when the field is a process rather than a unit in situ (Mitchell, 2010). There is an abundance of categories and hierarchies involved in the field of communication, disability and technology that can easily be taken for granted, especially in a field where the anthropologist frequently moves in and out. In order to unveil these, there was a need for a conceptual toolkit that could alienate the familiar. By making the well-known strange, I hoped to establish a glance that partially could resemble the experience of an anthropologist arriving in an unfamiliar field. The toolkit needed to incorporate the technological in the social and to estrange the familiar, was found in ANT. In particular, it was the idea of symmetry in various facets that proved helpful. This principle is initially associated with the Sociology of Scientific Knowledge, and refers to an idea that the same kind of explanation should be given for all scientific phenomena explained (Bloor, 1976). The symmetry concept has however later been used in various ways. Some of these approaches have been fundamental for the analytic approach in this thesis. Soon, I will make explicit how

ANT was helpful in order to ease the struggles I had in a field where neither home/away nor us/them were obvious opposites.

Next, the approach to materiality and technology in ANT provided a valuable supplement to anthropological approaches to the same. In a study that explicitly studied a service that so clearly depended on material artefacts, there was need for a vocabulary that did not relegate the artefacts involved to symbols or tools that were simply used. The video interpreting services and the videophones were not simply clearly defined objects used by human subjects, who acted upon them. The technologies clearly had a role in how and which ways the subjects (humans) were given agency, and their abilities to use the technology. The videophones themselves, as well as their distribution had a role in how Deaf people could or wanted to access the video interpreting services. The technologies were not only tools, but also social agents. The separation of objects and subjects, or nonhumans vs humans became a third dichotomy in traditional anthropology that I had to grapple with. The widespread separation between subjects and objects, and the scant attention to the role of the material in contemporary high-tech communities, became another catalyst to explore what ANT had to offer.

A Material Language

Since communication technologies in general, and videophones in particular played such a major role for how and where the attention was directed during the fieldwork, Latour was an inevitable early read to expand the theoretical context for the observations. Latour was not totally unfamiliar at that time since he appeared as a standard reference in anthropological texts where the significance of the material realities or surroundings for social life were mentioned. Materiality has often been mentioned and rendered significant in anthropological texts by a reference to Latour's *We Have Never Been Modern* (1993b) or some of his other contributions in anthropological texts on contemporary societies in a Western or

Euroamerican context.[20] Quite early his points illuminated, and also directed the analytical path. Having observed use of videophones and other information and communication technology and acquired and used the same technological artefacts as my informants, seeing the power the technologies have in shaping and ordering people's lives was inevitable. A sharp distinction between people and the technologies they use seemed like a digression, since the technologies shaped people and made people social entities, and likewise, people shaped the technologies by the way they used them, so the technological gadgets people use also take a role as social actors. Latour's insistence on rendering both humans and nonhumans (or the material) symmetrical in a relationship where both are shaping the social, also fit my observations. This position is indeed not too different from that of Daniel Miller who also has argued that persons and things constitute each other through processes, relationships, transformations and flows (Borgerson, 2009; Miller, 2005, 2008). This is hardly surprising to an anthropologist, but it was in the works of Bruno Latour, John Law, Michel Callon, Ingunn Moser, Madeleine Akrich and many more that I found a language that explicitly treated the material in a symmetrical relationship to humans. These texts were also more often than traditional anthropological texts on material culture, concerned with the role of the material and networks of humans and non-humans in contemporary, Western societies. Compared to classic anthropological studies of axes, cocks, culm cottages and pottery, studies of scientific laboratories, scallop and salmon domestication, pellet machines, large hospitals and metro subway systems were more inspirational in a study of the high tech service video interpreting.

Anthropologists (and I am no exception) have however grappled with the partial transfer of agency from subjects to objects that characterises ANT-inspired approaches to studies of social life. It stands against all reason that things or objects should have any kind of

[20] With a few notable exceptions, especially in works concerned with new communication technologies (for examples, see the works of or anthologies edited by Escobar, 1994; Garsten & Wulff, 2003; Miller, 2005, 2008, 2010; Miller & Slater, 2000), the crux of the role of the material is often left with a reference to Bruno Latour, without further explicit analysis of the role of material objects in social life.

intentionality. Miller does however underline in an interview that people who are fascinated with ANT, are "not saying the object has intentionality; they're saying an object has agency where agency is often constituted by the unintended consequences of a thing" (Borgerson, 2009, 164). Madeleine Akrich (1992) and Oudshoorn et al. (2005) have explicitly described "the unintended consequences" with the concept "script". Under the subheading "Describing the script" and in the last article, this concept is discussed further. This is one example of how STS and in particular ANT provided a language by which I could study and analyse the dialectical relationship between the technologies and humans involved.

Another reason for being inspired by ANT was the need for a tool to unveil the process of objectification that I also was a victim of. In the first chapter, I wrote about how the process of objectification made people view communication technologies as something external to the body. Things' agency upon us is made invisible in this process, as we no longer see the relationship between the objects and our own ability to act. The more these "external" objects are taken for granted, the more invisible their role in and on our lives they become. This process does indeed present certain challenges to the anthropologist doing a study of the material in a well-known context. He or she will be in continuous danger of overlooking the significance of objects in the social life observed. This is why ANT became such a powerful tool in the analysis. With a continuous insistence on the significance of objects and their agency, and how the material is performed, not only acted upon, ANT revealed an approach that could be used to observe the relations and networks of relations between humans and nonhumans (as well as between humans and humans) that sometimes could be painfully familiar and hence invisible. Lien and Law (2011) have also mentioned this possible effect of ANT for anthropologists "at home"; "A performative approach sharpens our awareness of processes whereby these and other fundamental ways of knowing are being reproduced in a society which is, at the same time, so familiar to us that there is a constant risk of not noticing

the many ways in which realities constantly come into being" (Lien & Law, 2011, 69). This approach was greatly inspirational – and revealing - in a setting where most technologies had long been objectified to the anthropologist, and where the social categories seemed inevitable.

Proposing equality

The symmetric relationship between humans and nonhumans was but one example of the symmetry principle that was useful in my study. In Ingunn Moser's doctoral dissertation *Road Traffic Accidents: the ordering of subjects, bodies and disability* (Moser, 2003), disability was treated not primarily as a social construction based on exclusion and lack of accessibility, but analysed within a material framework that explained disability and normality using the same terms.

> *"Normal competent agency is (...) abled, or enabled, through networks that make paths for the flow of agency. People are not actors, they are enabled to act in and by the relations in which they are located, and become actors by having agency distributed and attributed. The difference is that with standardised abled actors, the distributedness, the networks and even the bodies tend to move into the background and become invisible. With disabled actors, however, the heterogeneous materiality and embodiment is always present and visible. And the reason it does not disappear into the background is that it is constantly problematic. It does not fit with the standardised packages and environments that allow agency to flow without constant interruption. The result is interruption, misfits and gaps" (Moser, 2003, 158).*

Moser's approach emerged as a possible answer to the epistemological struggle described in the previous chapter, when I strived to find a language by which I could analyse and describe the technological dependence that permeates any society, without isolating disabled people's dependence on technology as special or exotic.

Latour and Moser revealed a way to illuminate not only the "deviant" categories, but also how the cultural practices of the "normal" had been constituted. The symmetry principle deployed in ANT and in particular by Moser in her study of road traffic accident victims, revealed a language in which I saw a possibility to write about disabled and nondisabled people on equal

terms. This was in particular important to avoid the classification of deaf or disabled people as excluded *per se*, and by this reproduce the hierarchy the research question represented. Rather than simply anticipating exclusion, it was a goal to see how the idea of exclusion – and the consequent aspirations to include – was constructed through a complex interaction of politics, technology and humans. The symmetric language of several STS and ANT-inspired studies opened up for an opportunity to move away "from representation to the object itself" (Law, 2004, 54). To study technologies and videophones as technologies that potentially should enhance inclusion and participation of deaf or disabled people in the labour market, would imply a focus on the technologies and the actors involved as representations of a social hierarchy that divides people in groups of disabled and nondisabled or excluded and included. ANT revealed a perspective where inclusion, exclusion and disability were seen as effects of networks of humans and technologies, not only as the cause of these networks.

Flattening hierarchies

Further, an approach that simply assumes the existing hierarchies (of disabled and nondisabled, included and excluded) as facts would also limit insight into what the technologies do in their interaction with social entities like political regulations and various private and public institutions. The technology and the institutions are continuously reproduced, and "do not exist by themselves. They are being *crafted*, assembled as part of a hinterland" (Law, 2004, 54). This crafting is not something that belongs to a historical phase of construction or establishment, but exist as a continuous process, in which the objects are reproduced – or enacted, in numerous ways (Mol, 2002). By not presuming the significance of the social categories these objects have been classified or identified with in advance, the idea of symmetry was a conceptual tool to keep the observed social processes flat. For the present project, Latour (2005) was an inspiration to focus on the very production and enactment of a technology (videophones) and the related services (video interpreting services) to see how

these processes build and construct the social categories and hierarchies the implementation of a technology and service often is taken to be a consequence of. This would also represent a reverse approach to the study of services targeted at deaf or disabled people. Here, "reverse" does not mean a process of "studying up" and take the oppression or exclusion of disabled people as a given fact. Just as much as a "study down" to see how disabled people enter or leave the labour market, are given or denied access to particular technologies, etc., a "study up" takes the social categories as facts, possibly with a negative sign indicating that the existing structure oppresses large groups in a society. Rather, my notion of reverse resembles what Marianne Gullestad called to "study across", "in the sense that we frame our analyses in ways that not only focus on this or that particular group, but in a way that catches the dynamic connections between people and institutions with or without power" (Lien & Melhuus, 2011, 138). The starting point is not the experiences of deaf or disabled people with a particular object (for example a technology or service), but how this object is constructed, and constructs groups (for example disabled people). The hierarchy is thus not taken as the starting point. The hierarchy is a social construction that needs to be explained (Latour, 2005).

Destabilising the categories

The continued insistence on binary distinctions in anthropology, like the separation of "us" (the anthropologist) and "the other" (those the anthropologists study), subject and object, or the distinction between language and the object of analysis, establish the terms as prior to the relation between them (Strathern, 2011). With an aspiration to analyse the field with a perspective and a language where the agency or roles of the different actors involved were seen as effects of relations, the terms used would have to come after these relations had been traced, rather than prior to them. The distinctions, in particular the one between "home" and "away" has of course been heavily debated by anthropologists for the past decades, and the demarcations have definitely been blurred in the wake of globalism. Marianne Gullestad

argues in an interview that anthropology "must also illuminate the cultural practices of groups and categories who define themselves as the normal ordinary populations against which other categories are seen as deviant in some way, thus marking off realms for anthropological study. In other words, we need to stop taking our research objects as given, and must instead step back and examine how acceptable research objects have been historically constituted within the discipline" (Lien & Melhuus, 2011, 140).

By insisting on not taking social definitions, categories and groups for granted, ANT provides a valuable toolkit for the anthropologist doing fieldwork partially at home or at sites quite familiar prior to the formal research project. Traditionally, anthropology has been concerned with non-Western human worlds and a main method has been to "unsettle" oneself by immersion in a community that first appears as strange, and then gradually learn how these unfamiliar practices make sense (Harvey, forthcoming). To the more or less native anthropologist, the challenge is almost the opposite. We need to dismantle the familiar practices and "rename and reframe what is already known" (Narayan, 1993, 678), and theoretical texts are important sources of ideas with a potential to reframe and rename our observations. Like many anthropologists, I was not so concerned with establishing in advance a theoretical position to describe the observations. The theoretical texts I read before, parallel to and after fieldwork, offered ways to understand and reframe what I had come across. As written earlier, Latour started out as an obvious thinker to familiarize myself with when studying the role of technology in a contemporary, so-called modern society. Latour has claimed that for "... scientific, political, and even moral reasons, it is crucial that enquirers do not in advance, and *in place* of the actors, define what sorts of building blocks the social world is made of" (Latour, 2005, 41). I do not claim that STS/ANT is a morally superior approach (and it is not even a method, but a way of thinking), nor do I say that the analysis for this dissertation could not have been done by other approaches than those offered by ANT.

These offered a powerful tool to destabilise numerous social categories more or less taken for granted (Lien & Law, 2011). Reducing the explanatory power of the "social" and insisting that the "social" is what needs to be explained is a strong appeal – and a guideline – to trace the connections and relationships that are stabilized by technologies and techniques, before making conclusions about the social order they are embedded in – and sustain as well as subvert.

The Main Concepts

Marilyn Strathern writes that the social anthropologist's ethnographic practice has always had a double location, one in what is called "the field", and the other is at a desk (Strathern, 1999). Now the attention will move to the desk, and the books and articles influencing the analysis are discussed. In the remaining part of this chapter, the focus is on the theories used for the three articles, and the reflections made during writing them. Not all the concepts and considerations are explicit in the articles, so the discussion in this section is an elaboration of the theories that has inspired the analysis, and a discussion on why they appeared as relevant for the analytical work.

The three articles where the analysis is presented represent at least two kinds of sequences or hierarchies. One is that the three articles represent a chronological analytic development, in the sense that the articles were worked out one after another. Before they were written, there was an outline of the anticipated content and topic for each of them, but as the work and analysis of one article proceeded, issues not considered when the first outline was made, emerged as relevant for the next article(s) in process. Hence the articles can be termed as successive, in that the analysis of one had consequences for the analytic focus of the next. The other sequence or hierarchy is that these articles also represent three different epistemological approaches. The first article, "Interpreted Ideals and Relayed Rights", is primarily about

politics. The data is foremost historical and the sources are mostly archived documents, interviews with persons involved in the development of the services, and focus is on emergence or development of the video interpreting services as objects of politics. In the next article, "Calls for Inclusion or Redialling Exclusion", the current organisation and scope of the numerous actors involved in enacting video interpreting services in the three countries form the basis for an analysis to see what position the prevailing technology – the videophones – has within the three countries. By studying how the technology is part of, and embedded by three different sociotechnical systems, it is shown how both the users and the technology are given certain positions. In the third article "Scripts of Video Interpreting", these positions are in focus – and by this, it is the experiences of Deaf people who use the video interpreting in their respective countries that are analysed. The video interpreting services and the videophones are the topics of all three articles, but they have been studied from different angles and with different theoretical positions. These angles and positions also provided different frameworks to produce comparability. The discussion on comparability is pursued in the concluding section below called "Messages".

Realities and ideals – two sides of the same coin

"Interpreted Ideals and Relayed Rights" initially started out as an implicit critique of the "realities vs. ideal" approach in much of the current empirical research on welfare politics and the consequences for disability, which mainly focuses on issues of relevance to the politics of the welfare state (Moser, 2003; Tøssebro, 2009). My project is firmly placed within this research tradition, where disability research has traditionally focused on politics and how to reduce exclusion of disabled people. Tøssebro (2009) identifies two different types of research within welfare research on disability, which by and large has been confined to feedback to political processes, and in particular with a focus on how to increase and enhance the overall ideal of inclusion. One category is research, which confirms or reveals that there is

a gap between the ideals of inclusion, and the exclusion that often happens when the politics are applied in practice. A second category is research on why there is such a gap between ideals and realities. Tøssebro (ibid) encourages researchers to be more ambitious with regards to explaining why there is an unacceptable gap between ideals and realities, unintentional consequences, and to make the implementation of various measures targeted at disabled people subject to closer analysis. I agree that there is a need for more scrutiny of the implementation processes, but in the first article, I question the relevance of discussing the real and the ideal as if these were two entirely different entities.

The focus of disabled peoples' organizations has shifted from charity to a quest for equality and inclusion. Disabled people, their families, bureaucrats, schools and other public institutions are defined as relevant actors. As a consequence of this shift, the public discourse about disability is not so much about healing or curing, but about inclusion and making access.[21] A dissertation comparing the politics for and towards hard of hearing people in the Netherlands and Norway shows how the experienced gap between the goals of this politics and the lived realities evolves and changes in a mutual interaction between politics and practice, but the gap does not necessarily decrease when rights are expanded (Olaussen, 2010). When the expectations grow, the feeling of defeat when one fails to meet the ideals also increase, and the gap is expanded rather than reduced. The realities and the ideals are in other words two sides of the same coin. When inclusion (of disabled people) is established as an overarching goal in the politics of disability, the realities will be experienced in light of this goal. This could be seen as an example of a looping effect, where people or groups who are

[21] There is indeed a parallel and quite visible medical discourse on disability, especially related to genetics and the possibilities of preventing impairments or abolishing fetuses prior to fertilisation or before birth. This debate rarely touches the discourse of inclusion. One exception is when Marte Wexelsen Goksøyr, a woman with Down's syndrome entered the common room ("vandrehallen") in the Norwegian Parliament in 2011 during a debate on early prenatal ultrasound scan screenings and the declining birth rate of children with Down's syndrome. By asking if she had the right to live, she revealed how the question of participation and inclusion is closely related to medical discussions on disability, even though these two discourses rarely meet in public. This debate has continued in the media since then, and is one of the few public crossings between the medical intervention against/towards impairments and the ideal to create a society for all.

"classified in a certain way change in response to being classified" (Hacking, 1999, 123). In all the three articles that constitute this dissertation, a premise that political ideals and the experienced reality of everyday life mutually coproduce each other is either overtly discussed or used as a prerequisite for the discussions. By this, I do not only give consent to Tøssebro's call for more research on why there is a gap between the ideals and the reality. A study using the video interpreting services as a case also shows how the ideals and the realities change continuously and partially are informed by each other. By comparing the historical processes by which the service has come into existence and operation in USA, Sweden and Norway, I also make evident how a new "reality" (the video interpreting service) is defined by and defines the ideals it is set to reach. The politics of videophones and video interpreting systems took on different shapes and ordering under different political systems.

Inclusion is indeed an underlying goal of the video interpreting service politics in all three countries, but the comparative analysis in "Interpreted Ideals and Relayed Rights" also shows that the meaning of this ideal is not the same in the three countries. In order to understand the realities of the services, the ideals also have to be analysed. It is not possible to separate the real and the ideal in the implementation of the video interpreting service, since the video interpreting services are representations of both. How the videophones are distributed and how the video interpreting services are organized are both an experienced reality and also shape the ideals of the actors involved. Rather than asking if and how the implementation of the video relay service fulfils a political goal, the emerging construction of the video interpreting service in three countries was used to show how the ideal and the realities are constituents of the same process.

Issue formulation

As described earlier, inclusion is a certain way of organizing society, which eventually has come to be associated with disability. This has happened in a process, which may be

identified as an issue formation, a process in which "… objects and social groups are 'co-constructed'. Applying this perspective to public controversies requires that we treat the definition of public affairs and the organization of affected publics as practical *achievements* of issue articulation" (Marres, 2007, 771). Inspired by Marres, I conceive inclusion as an issue that is not only an abstract ideal or a political goal, but also a challenge or problem that has been co-constructed by both the social groups (organisations of disabled people, politicians and researchers) and the involved material and technological infrastructure. With this definition, inclusion could be seen as a political issue. As an issue, inclusion may be formulated in relatively uncontroversial terms, as an ideal or a goal. Since the issue however requires the action of more or less antagonistically affected actors, who often are limited by financial or other resource constraints, it may be controversial in terms of practical implementation. Issue formation is not only a discursive process, it is "… intervening in 'collectives' or 'life worlds' that include associations of material and social constituents" (Marres, 2007, 762). Taking the symmetry principle of STS into consideration, the research subjects may be expanded to material artefacts or constituents (various technologies and material infrastructure) as well as the interaction between humans and their material surroundings.

Objects of politics – an aim for praxis

The issue concept is fruitful when studying where and how politics is made, but the video interpreting services are also networks of technologies and humans involved in a quite tangible and visible practice. Thus, there was also a need for a focus on the video interpreting services as a kind of praxis. De Vries (2007) defines praxis as actions that aim at the activities themselves, not with the intention to produce some external end. He calls the target of these activities an object of politics, which not is "… a goal that is in the minds of subjects – not a matter of preferences, interests and plans – but what circulates in an association that has an

appropriate constitution and is understood as an aim" (de Vries, 2007, 806). In my analysis, I understand the video interpreting services in USA, Sweden and Norway as networks that are also objects of politics, entangled as they are by a wide range of actors. These actors involve Deaf people, interpreters and their employers, but also bureaucrats, engineers, telecommunication corporations and other institutions. These actors do not necessarily have to be conscious about the political issue formation that permeates the videophones they construct or use, or the video interpreting service they serve in one way or another. Their praxis towards this aim (called video interpreting services) is nevertheless a political act, since the video interpreting services are also objects of a certain politics, which however differ from country to country. The distinction between "issue" and "object of politics" enabled a study of the goal of the video interpreting services as something to be achieved (i.e. functionally equivalent telecommunication, increased accessibility or enhanced inclusion in work life through increased access to interpreters) separated from video interpreting services as a target of action, where the primary focus is to develop and sustain the service itself. The conceptual distinction still retained the connection between the video interpreting services as a political goal and the service as an aim for praxis, and with this, the analysis also showed how the ideals and the realities are both different features of the same process.

Technologies in systems

In the second article of this dissertation ("Video Interpreting Services: Calls for Inclusion or Redialling Exclusion"), the principle of symmetry was deployed towards the technologies in question. The videophones were not defined prior to the analysis as either a generic technology or as some kind of assistive technology, and were not placed in a hierarchy associated with disability and/or normality. A main argument in the article is that the integration of a particular technology and a related service in a larger sociotechnical system

has implications for how these technologies are perceived and defined, and thus how the users of this technology are viewed.

The view on technology and techniques, their inventions and uses as shaped by society is part of the store of knowledge in both anthropology and STS. Technologies shape people and grant them with value and social symbols, and likewise, people shape and put symbolic value in technologies by how they use them, so the objects people use also become social actors. Since the works of Robert Merton (1973/1942) and Thomas Kuhn (1962), sociologists of scientific knowledge as well as scholars from STS, have shown that science and technology is socially and culturally constructed. Anthropologists of material culture have since the works of Bronislaw Malinowski (1961/1922), Marcel Mauss (1954), Victor Turner (1967) and Igor Kopytoff (1986) (to name a few) demonstrated how artefacts are embodied with social meaning. The significance of exchange of arm- and necklaces in the social relations of the Trobriand islanders, the meaning of gifts and position of the milk tree for female fertilization are but a few of the numerous anthropological accounts of how people shape and are shaped by their material surroundings. Anthropologists have however tended to be more concerned with material aspects of non-Western or historic societies and cultures, while taking the materiality of contemporary or so-called modern societies for granted, and even regarded the study of materiality in the latter communities with some degree of resentment (Latour, 1993b; Lemonnier, 1993b; Miller, 1994, 2005; Pfaffenberger, 1992; Sigaut, 1994). Science and technology permeates public discourse and politics in the so-called industrialised societies, but are, as Pfaffenberger (1992), Miller (2005) and Latour (1993b) argue, also taken for granted or simply rendered invisible in (anthropological) studies of Western societies.

Pfaffenberger (1992) suggests that this invisibility rests on what he calls a grand narrative of Western societies; the “Standard View” on technology. This view separates the subjects (human thought, culture and action) from the objects (nature, artefacts and technology) in

Western thought, and his argument is in line with Latour's (1993b). The main points of the standard view are that a) technological artefacts are results of intentional processes of invention that follow identified needs, b) the form of a technology follows from its function, where eventual decorations and non-functional appearances are only matters of style, c) technology is cumulative (following an unilinear development from simple to more complex), and d) in a modern society, people have become less authentic as a consequence of their lives with and in a superficial material culture (Pfaffenberger, 1992). To get away from this arguably crude view of the role of technology, Pfaffenberger suggests an alternative conceptual model; *the sociotechnical system,* which he says "serves fruitfully to integrate anthropological findings about *pre*industrial societies into a coherent picture of the universals of human technology and material culture" (Pfaffenberger, 1992, 493). This concept seeks to override the distinctions Latour has described. It also served as a conceptual tool for both the historical outline in Chapter one of this dissertation, and the discussion in "Video Interpreting Services: Calls for Inclusion or Redialling Exclusion", where the distinction between assistive technology (technological solutions made for or with people with disabilities) and mainstream technology (technologies used by "everyone") is questioned. History has shown that it is often difficult to separate assistive technologies from more so-called mundane technologies, both in the process of invention or development of a certain technology or when it is implemented (see Chapter one in this dissertation for examples).

The sociotechnical system approach

The sociotechnical system concept elaborated by Pfaffenberger in "The Social Anthropology of Technology" (1992) draws on John Law's article "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion" (1987). Both Pfaffenberger's and Law's arguments bear resemblances to Michel Callon's argument in the article "Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay"

(1986). What all these articles have in common, is an argument that material artefacts, technologies and techniques always exist in networks of humans and nonhumans, which both stabilize and are stabilized by the form and the function of these objects. A technology is not necessarily acknowledged because of some innate or intrinsic attribute, or because it is an invention that responded to an identified need prior to its development. Rather, the success of an artifact or a technology is contingent on a "successful modification of social and nonsocial actors so that they work together harmoniously – that is, so that they resist dissociation" (Pfaffenberger, 1992, 498). Callon's article gives an exemplary insight in the process by which a sociotechnical system is constructed. He shows how it is dependent on both social and nonsocial actors and how some of the actors involved do have a more active role than others in order to create networks of actors that work together, so that the network itself resists dissociation. Callon introduces the "obligatory passage point" as a concept to explain how a few people, or a certain artifact come to function as a kind of gatekeeper for all the other actors involved. These gatekeepers or obligatory passage points work to define the roles and interests of all the other actors involved in the network, and as such, they also define the nature of the entities involved. Law is cautious that "there is almost always some degree of divergence between what the elements of a network would do if left to their own devices and what they are obliged, encouraged, or forced to do when they are enrolled within the network" (Law, 1987, 114). This is where the argument in the article "Video Interpreting Services: Calls for Inclusion or Redialling Exclusion" enters the discussion on the significance of studying sociotechnical systems in order to understand the role of a technology or a service that rests on this technology. In the first article, I showed how the current video interpreting services are objects of politics. They are aims for a praxis, and are as well explained by reference to a certain political issue. In the next article, the position of the objects of politics within three different sociotechnical systems is discussed. The videophones and the video

interpreting services are part of different sociotechnical systems in each of the three countries compared in this dissertation, and the analysis is illuminated by Law's argument above. The three systems also attribute the elements of the networks (cf. Law and Callon) with different roles and positions. This reveals that the same technology (here, the videophone) may be defined as assistive technology within one sociotechnical system, while it is conceived as a generic technology in another. A second argument in the article supports Pfaffenberger's assertion that a technology is successful when it is embedded in a system that resists dissociation, and such a system is characterised by a multitude of social, economic, legal, scientific and political actors that work together. Rather than assuming in advance that a technology is "assistive" or not, the sociotechnical system concept enable exploration of how a network of numerous actors position and categorise a certain technology. The analysis shows how the "assistiveness" of a technology is a network effect, and not an effect of the intrinsic attributes of a technology or its primary users. As material artefacts, they have different values – and they grant value to the people who use them. People and technologies interact in ways that may, or may not enable agency, and "as actor-network theory suggests, agency is not an *a priori* given feature of an actor but is the outcome of interactions between the heterogeneous actors in the network" (Oudshoorn et al., 2005, 86). When Law speaks of "divergence" this is also a testimony to how disabled people are obliged, encouraged or forced to act when they are left to their own devices, or in other words, how societies construct "objects as they construct people" (Kopytoff, 1986, 90). It is not only the technologies that exclude – it is the networks that constitute them that stabilize this exclusion. With this view, the question of power becomes an inherent part of the study of commodities and technologies, so "... the study of material culture often becomes an effective way to understand power, not as some abstraction, but as the mode by which certain forms of people become realized, often at the expense of others" (Miller, 2005, 19). With its explicit

discussion on the inclusive potential of the different systems for video interpreting services in the US, Norway and Sweden, the article "Video Interpreting Services: Calls for Inclusion or Redialling Exclusion" is probably the one closest to the initial question raised by this project: how the technology distribution systems enhance or hinder the inclusion of deaf people.

Describing the scripts

"Scripts of video interpreting" draws extensively on the analysis of the systems for video interpreting done in the two articles that were written first. In the last article, these systems are explicitly conceived as scripts, in which certain roles and expectations are inscribed by the engineers, bureaucrats, politicians and lobbyists. The analysis is in particular inspired by Madeleine Akrich in "The De-scription of Technical Objects" (1992), and the vocabulary offered in the same volume (Akrich & Latour, 1992). In these articles, a "de-scription" is the method by which the scripts of a certain technology are analysed and "read" by the analyst, and indicates a process that is the opposite of the in-scription done by those who invented and developed the technology. With this perspective, both the inventor and the analyst may be conceived as scribes, where one writes in the technology, and the other contributes to put this script or "tacit text" on paper.

The two articles "Interpreted Ideals and Relayed Rights" and "Calls for Inclusion or Redialling Exclusion" both reveal that the video interpreting services are not mere intermediaries for communication. They are entanglements of human resources, technological solutions and political decisions, which also mediate and relay various rights, roles and expectations. In the last article, the description is organised to show the various ways by which the video interpreting services construct their deaf users. The roles the deaf users take, or are allowed to take, can be "read" through how the services are organised. Oudshoorn et al. (2005) argue that the ideas the actors have about the other actors involved, is inscribed in the technical solutions that are developed. This is also true for non-technical artifacts or objects

like the video relay service, since the mutual agency of the actors involved in the video interpreting services were not given, and is "distributed among diverse (human as well as non-human) actors that jointly form a collective actor" (Oudshoorn et al., 2005, 86). This agency is however not distributed symmetrically; both the users and the technological artifacts are attributed with what may seem as a limited range of possible competencies, actions and responsibilities. All the three systems represent processes of simplification, in the sense that they limit or restrain the possible range of roles of the actors involved. In the last article I tried to show how these simplifications distribute certain roles of the deaf end-users in each country. The video interpreting services mediate certain roles, and could also be conceived as "networks that make paths for the flow of agency" (Moser, 2003, 158). No people, Moser (ibid) argues, are islands of independent agency, and their agency is always mediated through relations between bodies, actors and elements. The analysis draws on Miller's (2005) notion of the invisibility of material objects when they are taken for granted, and Moser's (2003) argument on how this invisibility is an effect of a network that works seamlessly to distribute agency. It is in the moment when some people cannot use an object, or are denied access to it, that the dependence on them is revealed. This is an argument put forth by Akrich as well, when she writes that the "mechanisms of adjustment (or failure to adjust) between the user, as imagined by the designer, and the real user become particularly clear when they work by exclusion, whether or not this exclusion is deliberate" (Akrich, 1992, 209). This exclusion may be an effect of what Oudshoorn et al. (2005) have shown, that the agency is not evenly distributed among the actors involved, and a script may include some while it excludes others. The mechanisms by how this happens, may have been put there by intent, or can be an unexpected outcome that foremost is noticeable by those who experience this exclusion, or in a process of describing these networks. When these networks exclude, or only distribute agency to certain actors (as is most prevailing in the Norwegian system for distribution of

videophones), the deaf users (who are endowed with limited ability to make changes) will experience that they are dependent on the actors that are provided with agency. When the agency however is distributed towards the deaf users, the effect is a concealment of dependence – and a sense of independence, which is an effect most prevailing in the American system for video interpreting. The Swedish system however reveals that multiple roles may be distributed through the different, yet parallel "ontologies" that jointly constitute the video interpreting service and the related system for provision of videophones. These exist not as different perspectives of the same service, but as scripts that exist in a "universe of relations" (Strathern, 2011, 94), and all work to constitute the other. In the US and Norway, the roles distributed through the video interpreting service systems were much more limited, and did not exhibit the same range of scripts as in Sweden. This is however, not to say that they do not exist, but is perhaps a sign that they have been silenced.

Throughout the last part of this chapter there are traces of direct comparisons between the three systems for video interpreting. These comparisons were enabled by the concepts *issue, object of politics, sociotechnical systems* and *scripts*. They are however external to the objects of comparison (the video interpreting services), but are at the same time a result of the insight gained through and after the multisited ethnographic fieldwork. In the next, and last, section the focus is on the very process of comparing, and the lessons learned from comparing.

Messages

Why should they be the same?

In the question at the very beginning of this dissertation; “Why are they so different?” there is an implicit assumption or expectation that there is, or at least should be, some kind of similarity or sameness between the video interpreting services in the US, Sweden and Norway. This rather naïve question guided the first fumbling phase of the fieldwork. There was a search for similarities and differences between services that appeared the same the moment they were performed. In the chapter “The journey”, I wrote how attending three workshops in three different countries within a short time became a turning point. It was then that a diametrically opposed question gradually took over: “Why should they be the same?” With this question, the similarity is doubted rather than assumed.

In this last section of this long introduction to the articles, the focus shifts away from the differences between the services. Following a discussion on anthropology’s uneasy relationship with comparisons, is a discussion on how the differences between the video interpreting services gradually became comparable through a conceptual toolkit heavily inspired by STS/ANT. STS and ANT have been influential along several tracks in this dissertation. First, they were helpful in defining the field as a socio-material network, where it was not a particular place or site that was interesting. With an emphasis on the field and the method as a crafting process, and the significance of the demarcations made by the researcher(s) for what is observed, ANT provided a perspective by which the non-geographic choice of field could be explained and defended. Next, STS and ANT-inspired concepts such as issue/object, sociotechnical systems, symmetry and script were helpful to illuminate the diverse processes and networks of relations behind the similarity on the surface of the

services. ANT provided a language by which I could analyse the humans and technologies involved with the same concepts. These concepts also helped me to destabilize the categories I often could take for granted when doing fieldwork in situations that were often familiar. A short summary of each of the three articles shows how the analysis was deployed with these concepts, and how they guided the way to the main messages of each article. In the last part of "Messages" there is a discussion on the context for comparisons these concepts created. The analytical process gradually replaced the apparent similarity between the services with a striking sense of difference. The idea that objects themselves are multiple (Law, 2004; Mol, 2002) made evident that it was not one defined object that had been compared, but many.

An industry of comparisons

The question "Why should they be the same?" could serve as a warning against all kinds of comparative studies, and in particular against the vast industry of international comparisons of welfare services, population developments and political measures that have grown steadily along with the expansion of transnational political alliances like the UN, EU and OECD. As written in the preface. international comparative studies of disability have mostly focused on regulations and financial provisions (Hvinden, 2009; Hvinden & Halvorsen, 2003). Comparative studies of the consequences of regulations and provisions have been complicated by differences in definitions, measurements, category motivations and legal stipulations. These differences could serve as a general caution towards the presumed utility of quantitative comparisons of regulations and provisions, since the regulations and provisions compared rarely apply to the same cultural or social contexts. Anthropological studies in and about welfare states seem to have confined the focus to in-depth descriptions of local institutions or practices, but "have struggled to make a positive contribution to the increasingly large-scale, cumulative and mechanistic modes of social inquiry that have come to dominate the social sciences over the last ten to fifteen years" (Niewöhner & Scheffer, 2010, 17). At best, the

comparative reports produced by these transnational institutions provide valuable background information for anthropological inquiries, but the contribution of anthropology to transnational comparative studies of welfare states has been infinitesimal. The marginalisation could be a sign of "what some view as anthropology's innate weakness: its idiosyncratic nature, based as it is on the practice of fieldwork" (Melhuus, 2002, 70), but it may also be a result of anthropology's own confrontation and subsequent detachment with its legacy as a comparative science.

Comparisons and comparative studies are some of the oldest aspirations in social anthropology. Anthropology built its early legitimacy as a science on the comparative method (Gingrich & Fox, 2002; Holý, 1987; Tsing, 2010). The discipline has however since the days of Franz Boas (1940 [1896]), and Leach's (1966) critique against Frazer's comparative method in *Golden Bough* (Frazer, 1900), been quite ambivalent about comparisons. Radcliffe-Brown claimed on the one hand that "without systematic comparative studies, anthropology will become only historiography and ethnography" (Radcliffe-Brown, 1951, 16), but also warned that general comparisons cannot give us particular stories. The early social studies of scientific knowledge (Kuhn, 1962; Merton, 1973) revealed the uncertain and social nature of all science, and caused a thorough self-examination (especially) in the social sciences. With an increased questioning of the possibility to construct universal categories that could be compared across different cultures and communities, explicit anthropological comparisons faced a rapid decline after the 1950s (Gingrich & Fox, 2002; Holý, 1987).

A major struggle in the anthropological uneasiness with comparisons is related to the question of whether or not it is possible to compare without violating the other tenet of anthropology, that of relativism. Relativism and comparisons could seem as an "unlikely conjunction" (Jensen, 2011, 1). The "unlikely conjunction" may be another reason why ethnographically founded transnational or trans-contextual comparisons of welfare services are almost non-

existent, and anthropological knowledge has been alienated in the comparative studies of welfare states. Marilyn Strathern has described the relationship between comparison and relativism quite to-the-point: “This distinction is between, on the one hand, taking a viewpoint to compare what is thus externalized from the point of comparison and, on the other hand, occupying a context that makes everything contingent on its own particularities” (Strathern, 2011, 90). In an attempt to make an ethnographically founded comparison of particular phenomena (i.e. the video interpreting services), one would have to find an analytical position from where these can be understood on their own terms, and simultaneously permit a cross-contextual view of the same services.

The confrontation with and scepticism toward comparisons have however not made comparisons evaporate totally from anthropological consciousness and practice. In the introduction to the compilation *Anthropology, by comparison* the editors make a distinction between outmoded comparisons based on grand theories that prevailed in the first decades of the 20th century, and the plurality of contemporary comparative methods of subaltern traditions in anthropology. The latter modes of comparisons are characterised by a contextually embedded tradition and are not so concerned about supporting major theories (Gingrich & Fox, 2002). Further, Gingrich and Fox make a distinction between three dimensions of comparisons. The two first, which they call the cognitive and methodological dimensions of comparisons, are more implicit or “weak” than the latter, which are termed the explicit or epistemological dimension of comparison. The initial spontaneous question “Why are they so different?” is an outburst of the cognitive dimension of comparisons, which is an essential element of human (and thereby also anthropological) life and cognition. The methodological dimension of comparisons can be traced in the continuous translations anthropologists do in the texts or talks about local contexts, since the audience in general come from a different context than the group or phenomena that has been studied (ibid). With

the last question "Why should they be the same?" the question of comparison moves towards an epistemological and explicit dimension, since it is the presumed similarity (or possibility to compare) that is questioned. Now, it is time to ask if and how the cognitive and methodological comparisons that have been pursued throughout the texts in this dissertation, can contribute to any insight beyond the specific contexts each article represents. This is done without any claims to produce or relate to any major theory. It should rather be seen as a humble attempt to contribute to the plurality of comparative methods in anthropology. The discussion that follows will hopefully also imply an appeal to anthropology to make a wider contribution to the comparative studies of welfare states than only delivering in-depth studies of single local worlds.

Producing comparability

In an interview with Borgerson (2009), Daniel Miller tells about his project on the meaning of denim, where he cooperates with anthropologists in Brazil, China and the UK (to name a few) and says: "Anthropology, though to live up to this promise and this premise, is supposed to be a basically comparative difference: the premise is you can understand denim a hell of a lot better in China if someone is also working on denim in Brazil and other places…. That is what anthropology was supposed to do" (ibid, p. 166). This is also what has been an effect of comparing the video interpreting services in three politically different contexts, rather than only focusing on the service in one country. A more concentrated study of a video interpreting service in one country could indeed have highlighted features this comparative study overlooked or rendered insignificant, but the particularities of each system would not be revealed as explicitly if they had not been compared to other systems. As a study of an object that is multiply situated, it had a comparative dimension integral to it (Marcus, 1995). How this comparison should be done, was however not obvious from the beginning, since the services in the three countries operated under different names, different legal contexts, and the

demand for the service varied immensely. To contrast the video interpreting services with each other and make use of juxtapositions would primarily help throwing light on particularities of each individual system (Sørensen, 2010), rather than providing generalisations across the three systems for video interpreting that are compared in this dissertation. A mere juxtapositioning of the three services would also violate the principle of relativism, since the services compared would not be analysed and understood entirely on their own terms. In the case of video interpreting, one could choose a comparative parameter like "inclusion of disabled people" and then compare the services as they are organized in the three countries according to this idea. This is indeed done in the discussion at the end of the article "Calls for Inclusion or Redialling Exclusion". The discussion is however done on the basis of an analysis where the systems' ability to distribute agency through sociotechnical systems is compared. To put "inclusion" as a normative and political concept prior to the analysis would not enable a relativistic description of each of the fields where video interpreting services are provided, since the "inclusion" parameter would infer the understanding of what is at play. Establishing analysis or parameters prior to fieldwork would shroud the inside description of the fields studied, and would in the worst case be a step back to the era of anthropology when the challenges of descriptions were discussed, while the categories remained unproblematic (Holý, 1987). Comparability should in any case be a possible result of ethnographic inquiry, not its starting point. It was only after the ethnographic moments that occurred from attending the three workshops within a short time, that the search for similarities and differences across the different systems for video interpreting ceased, and I started to understand the particularities of each and one of them. Only after this had been done, was it possible to start playing with external concepts that I had not found in the field, but whose relevance nevertheless were a result of the observations done through ethnographic fieldwork. The material collected could now be applied in a process of

meaning-production which retrieved the comparative aspiration as "fruitful and instructive" (Niewöhner & Scheffer, 2010, 4), rather than as paralysing.

The articles

As a qualitative study that goes beyond the financial and regulatory schemes that often are compared in international studies of disability politics, this dissertation illuminates that the roles, interests and expectations of the actors involved in the implementation are just as important as the financial and regulatory mechanisms. Three different aspects of video interpreting are discussed and compared in the articles. These may be read alone, but have been written in a successive order, where the latter articles partially build on the insight gained from writing the previous article(s). In the first article the politics behind the service is in focus, and what rights the different services are constructed to secure. In the second article, these "constructions" are analysed. What is compared is whether or not they are organized within a sociotechnical system that serves the whole population, or if they have been established as networks that are dedicated to provide a service to a smaller segment of the population. In the last article, the rights and the sociotechnical systems are taken as fundaments to discuss how they inscribe and redistributed certain roles and positions of the actors involved.

Summary of "Interpreted Ideals and Relayed Rights"

In the first article, "Interpreted Ideals and Relayed Rights" (Haualand, 2011), the empirical material is presented in the form of a historical outline, where the development and establishment of the video interpreting services in the three countries are outlined. The view of the video interpreting services is inspired by Latour (1993a, 1993b, 2005). They are analysed as intersections of users, technologies and politics that have been and continue to be assembled in a process in which the actors continue to define and redefine each other and the

roles they have. The video interpreting services include the telecommunication infrastructure, which connects the actors involved to each other, and the research, invention, and development processes that resulted in the technical equipment involved, and the continual development of new and enhanced functions. Without any one of the entities involved, the video relay service would not exist – it would not have been an object. Or, in the words of Latour: "An object cannot come into existence if the range of interests gathered around the project do not intersect" (Latour, 1993a, 391). The service is a political technology, in the sense that politics is performed through it. In other words, it can be studied as an object of politics, a concept inspired by de Vries (2007). Rather than focusing on where politics is made, de Vries (2007) proposes a focus on politics as an aim for praxis. Praxis is action that aims at the activities themselves, not with the intention to produce some external end. This aim is called an object of politics by de Vries, and he defines it as "… not a goal that is in the minds of subjects - not a matter of preferences, interests and plans - but what circulates in an association that has an appropriate constitution and is understood as an aim" (de Vries, 2007, 806). This distinction enables a study of the goal of the video interpreting services defined as something to be achieved (i.e. functionally equivalent telecommunication, increased accessibility or enhanced inclusion in work life through increased access to interpreters), separated from video interpreting services as a target of action, where the primary focus is to develop and sustain the service itself. However, the conceptual distinction still retains the connection between video interpreting services as a political goal and video interpreting as an aim for praxis. Video interpreting is a real socio-material artefact that people relate to as an object in itself, but the ideals or goals that define and motivate the services remain something to be achieved. The different organization, classification and financial models the video interpreting service has in different countries reveal that the video interpreting service is not only an object in the sense that it is an intersection of assembled interests and actors. Video

interpreting services are also objects of politics. Thus, what the actors involved do to sustain the video interpreting can be viewed as a political praxis where the activity is targeted at a specific object (in this case, the video interpreting service in a particular country). As objects, video interpreting may resemble each other in the three countries, but as objects of politics they differ considerably, as do the expected roles of the actors involved. An interpreter working for the Video Relay Service in the US is defined differently than an interpreter working for the video interpreting service in Norway or Sweden, even though the observable use of the service (by Deaf people) is more or less the same. Another important message from the comparative analysis in this article is that ideals and realities shape each other (cf. the discussion in Chapter 3). This connection is rarely discussed overtly by researchers of the gap-model of disability. More often than not, the ideals seem to be taken for granted or uncritically adapted from prevailing political documents on official disability politics. "Interpreted Ideals and Relayed Rights" shows that the realities are interpreted in light of the ideals, which continuously move as the realities change.

Summary of "Calls for Inclusion or Redialling Exclusion"

The next article, "Video Interpreting Services: Calls for Inclusion or Redialling Exclusion" (Haualand, forthcoming), retains the view on the video interpreting service as an object made possible by an entanglement of users, technologies and politics. The empirical material is presented in a way that traces the current (2010) relationship(s) between the numerous actors involved in organizing and providing the service. Another concept inspired by ANT is introduced: agency. The use of the agency concept is inspired by a major tenet from actor-network theory which states that agency is not an internal or intrinsic ability in any individual, but is a result of the continuous interaction between humans and non-humans in networks. Agency, or the ability to act, does not exist per se, but is reproduced and distributed in networks. Humans and material objects cannot be separated from each other. Agency is

mediated and distributed along paths in an entangled system of actors. Hence, the video interpreter systems also distribute agency, but they do so differently in the three countries compared. Agency is coupled with the concept of sociotechnical systems, defined by Pfaffenberger as "heterogeneous constructs that stem from the successful modification of social and nonsocial actors so that they work together harmoniously – that is, so that they resist dissociation" (1992, 498). By showing how the agency flows along networks that must always be constructed, the three systems for video interpreting are compared by their ability to distribute agency, and to whom. Assuming that power lies in the ability to act and to be distributed with agency, this article is possibly the most political of the three articles presented. It serves as an argument for the sector responsibility principle in disability politics. The analysis shows how isolated, special or external services or networks organised and targeted only towards a very limited part of the population, retains the mechanisms that keep some, and in particular disabled people, excluded. Again, the comparison was enabled by concepts that were not found in the field, but nevertheless gave a context by which the services could be compared.

Summary of "Scripts of Video Interpreting"

Another ANT-inspired concept paved way for a comparison of the roles the video interpreting systems distribute in the last article, "Scripts of Video Interpreting", submitted to the journal *Social Technology & Human Values*. The videophones and the humans and services involved are seen as inscribed with scripts that give certain representations of the technological objects involved and roles to the people who provide and use these technologies and the services (Akrich, 1992). These scripts are not confined to overt statements in public documents and information about the service in each country. The analysis in the third article builds on the analysis in the first two articles, as the videophones and the video interpreting systems are viewed as mediators, since they "cannot be counted as just one (…) Their input is never a

good predictor of their output; their specificity has to be taken into account every time" (Latour, 2005, 39). They are objects of politics that distribute agency in different ways, and as technical objects, they always contain a script (Akrich, 1992). Script is here understood as what has been inscribed in the object by the inventors, the engineers and manufacturers, whose work may have been encouraged by the expectations of external persons and institutions. The analysis shows that the videophones and the video interpreter services have indeed opened up new communication possibilities for sign language using Deaf people. In the organisation of these services, there are however also scripts running that simplify and demarcate the potential uses of the service, and give both the Deaf users and the sign language interpreters different roles in the three countries.

Constructing and crafting

All these comparisons of the video interpreting systems rest on concepts that are external to the objects of comparison, or what Sørensen (2010) calls *tertium comparationis*. Objects of politics, agency/sociotechnical systems and script work as conceptual tools that are external to the object of comparison, but simultaneously are a result of the insight gained through and after the multisited ethnographic fieldwork. The common topic for the analysis is video interpreting and the various ways it is explained and organised, but the analysis rests on analytical concepts that were not found in the field. This echoes the distinction between the *emics* and *etics* in anthropology, where the first refers to concepts and ideas that are regarded as meaningful and relevant to the native members of the community that is studied, while the latter encompass concepts that are used to describe this community, but mostly are considered meaningful to a community of scientists (Headland, Pike, & Harris, 1988; Lett, 1988). It is however important to underline that in the study of videophones and the video interpreting services, the etic concepts deployed in the analysis emerged in the interplay or looping between observations in the field and parallel acquisition of literature found of relevance or

that illuminated the observations. What these concepts all have in common is that they enabled what Niewöhner and Scheffer (2010) call a thick comparison. In order to make a thick comparison, it is not sufficient to describe and juxtapose the particularities of each video interpreting service, as has been done earlier (Haualand, 2010; Vogler et al., 2011). There is a need to unveil the services in their own contexts, and describe the services' position or role within these contexts or systems. The video interpreting services are also a result of as well as an intermediary for legislation, technology and disability politics in each of the three countries. In order to understand and then be able to compare these measures, technologies and regulations, there is a need to discuss how they are embedded in a network of a wide range of actors that need not have the same position or role in each country. This is parallel to the process Melhuus describes in her analysis of reproductive technologies and the involuntary childless in Norway. The facts she extracts from field work must be inscribed in "a wider context, a context that is basically my creation. I have to make a double move involving both decontextualizing and recontextualizing; on the other hand, I extract the data from their original local boundedness; on the other, I then reinscribe these data in a wider universe of meaning" (Melhuus, 2002, 85). This testifies to the two steps involved. First, there is a need to enter the field to understand what "goes on in there". The next step is then to recontextualise the observations, in order to be able to compare them. In a multisited fieldwork that spans over some long periods in the office, the theoretical and analytical concepts will emerge parallel to the observations from the field, since the literature that may illuminate the puzzled field notes are so readily at hand. The method as a crafting process (Law, 2004) indeed becomes very visible in such a setting.

A service multiple

The inspiration from STS and ANT has permeated both my view of the field, the actors involved and how I analysed and compared them. In the phase of finishing the dissertation,

there is however one more dimension to comparison than those already discussed. I have only gradually come to understand that the concepts used do not provide a comparative analysis of three video interpreting systems in three countries that are fundamentally the same. Nor are they representations of an idea or concept that is fundamentally the same, and only appear under different names. Nor does this dissertation propose a number of different perspectives on the video interpreting services. A last precaution is that the theoretical concepts do not represent etic concepts to account for what the actors involved would use emic concepts to talk about, if they were asked to explicitly explain the services. What I am trying to do with all these reservations on what the theoretical concepts do not intend to do, is to move away from the "power of bifurcation in how we (anthropologists, writers) compose our texts" (Strathern, 2011, 90). In the dissertation, three fundamentally different objects with different names are compared. Their similarity at first glance is deceiving, since it leads the analyst to believe that the services indeed are similar, only with some regional and organisational differences. The thick comparison rather rests on a notion of perspectivism, a concept inspired by Mol (2002), Law (2004) and Strathern (2011). This concept can be contrasted to perspectivalism, explained by Law (2004) and Strathern (2011) as the Euroamerican habit to bifurcate the language and the object of study, and the insistence on explaining plurality or perspectives as different views on an object that essentially is the same. Strathern writes that perspectivism, on the other hand, "implies an ontology of many worlds and one capacity to take a viewpoint" (2011, 92). In an attempt to borrow Strathern's words, it is the various ontologies of video interpreting services I have tried to grasp, and then a viewpoint has been established through the use of the etic concepts. This approach could resemble that of Annemarie Mol and her ethnographic study of atherosclerosis, *The Body Multiple* (2002). Mol confined her fieldwork to a Dutch hospital, and explores the multiple ontologies of atherosclerosis in this hospital (as it is enacted by patients, doctors, radiologists and other

groups at the hospital). While Mol confined her study to a disease that was enacted in multiple ways within the context of one hospital, the study of video interpreting services was initiated as a project that aimed to find different perspectives on the same object (in three different countries or political contexts). This project explores a phenomenon (the video interpreting services) that appears the same in the very moment of use in three different countries, and was initiated with an explicit comparative mission. The fieldwork, workshops and seminars revealed the multiple (and different) ontologies that were playing out in front of me. Actually, there were (at least) three different objects to study. When the multiplicity of objects is assumed, the focus on particular stories may be retained, without having to juxtapose them directly against one another.

A closer look

There is an intense exchange of experiences and ideas at an international level on various aspects of disability politics, often with a focus on a particular kind of legislation (i.e. related to anti-discrimination of disabled people), promising technologies (for example welfare/assistive technologies or in this case, video interpreting services) or financial and regulatory mechanisms to increase labour market participation of people with disabilities. In order to understand and then be able to compare these measures, technologies and regulations there is also a need to discuss how they are embedded in a network of a wide range of actors that need not have the same position or role in each country. Only when the focus is extended beyond people with disabilities and the services, institutions or legislation targeted at this group, is it possible to talk about inclusive research on disability.

Politics out of reach

It is the annual garden party where researchers, decision makers, politicians and bureaucrats from Ministries, organisations, and research and development institutes meet to network over free wine and beer on the lawn. In the crowd is also a former colleague I have not seen in a few years. After some small talk, he asks me why I left the research project we were cooperating on. He indeed hit a tender spot, but encouraged by a few glasses of wine I told him how I could not handle the double standard between the theoretical talk in the research group and the harsh exclusion I experienced at a personal level, especially from the very same people that talked about inclusion. He nodded with sympathy, and replied: "It was indeed a difficult project. We compared branches, different labour markets and technology distribution measures, but the politics remained out of reach."

What this last flashback and this dissertation show is that it cannot be assumed that technologies, their distribution and their politics simply represent different perspectives on or ways to organize ideas. Indeed, it also works the other way around. Technologies and how they are organized also shape ideas. When objects like those my former colleague mentioned are compared, their similarity should never be taken for granted. To grasp the full implications of their fundamental differences requires an approach that does not see them as isolated or self-contained entities, but as political actor-networks or network-actors. There is a need to take a closer look at concepts that appear the same in the large-scale matrixes and analysis by economists. A lesson learned from moving away from comparisons as an exercise in perspectivalism to a recognition of perspectivism, is that anthropology could and should contribute more actively to the transnational comparisons of regulations and provisions and their effects. If a closer look is taken, they may not be the same at all. Objects that appear the same need not be the same – and this should be revealed through the vision of anthropology.

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Appendix

Appendix – National systems of video interpreting - 2010

Legend

Blue: legislation and regulations

Purple: public authorities with legal mandate

Yellow: institutions, documents or organisations with consultative status

Orange: financial sources

Green: VI service providers

Pink: videophone providers to end users

Figure 1 Video interpreting and videophone provision in the US

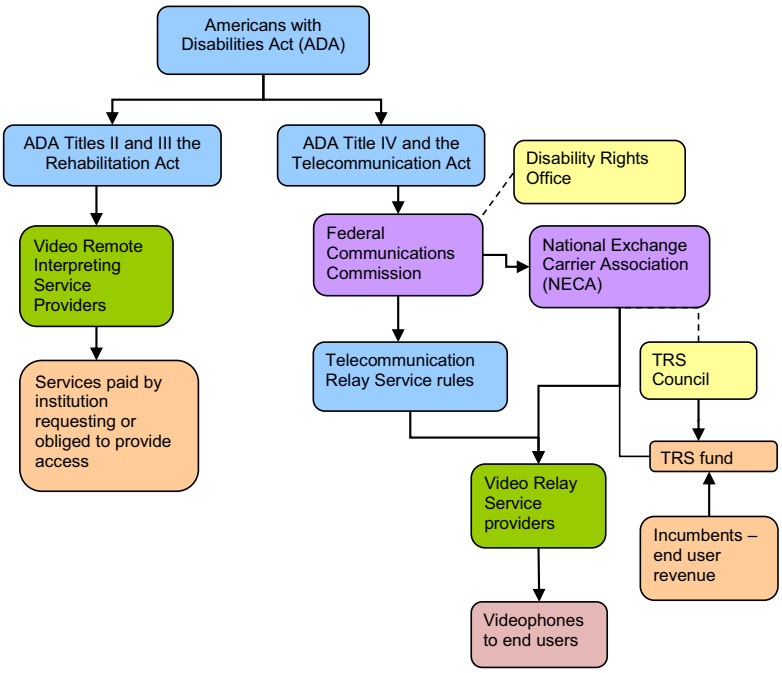


Figure 2 Video interpreting and videophone provision in Sweden

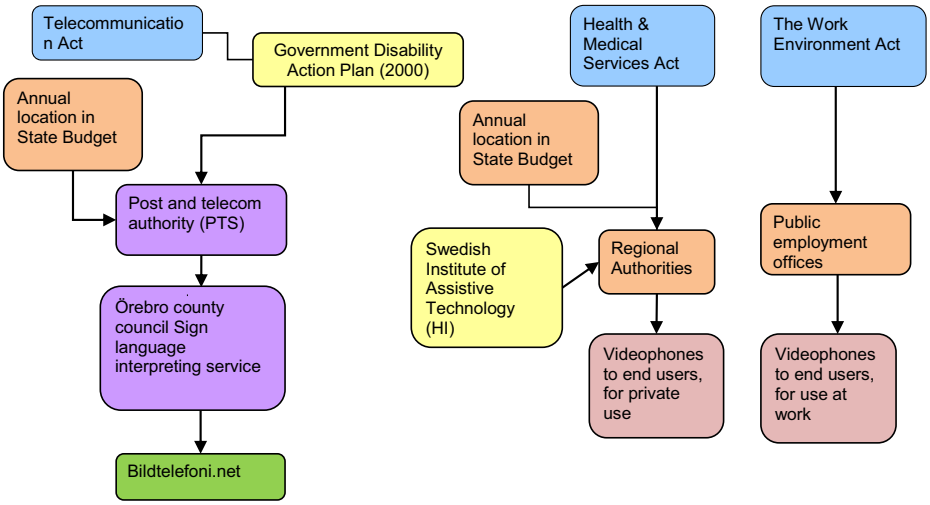
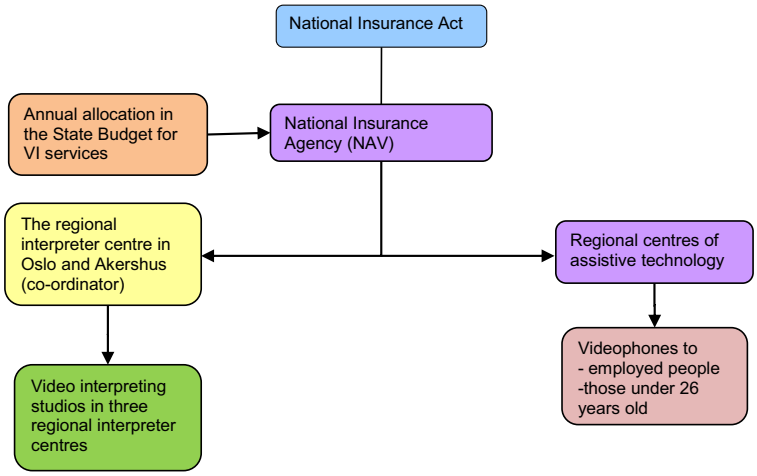


Figure 3 Video interpreting and videophone provision in Norway



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III