



CaringTV® value creation
for elderly people in Sendai, Japan



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**CARINGTV® VALUE CREATION
FOR ELDERLY PEOPLE IN SENDAI, JAPAN**

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Japan is expected to be the country with the highest percentage of elderly people in the world in 2025. In order to ensure quality care services for elderly people, Tohoku Fukushi University (TFU), Helsinki School of Economics, Laurea University of Applied Sciences and the cities Espoo, Vantaa and Sendai have established the research collaboration “Active Project”. Within this project, TFU aims at transferring the Finnish CaringTV® concept to Sendai. CaringTV is a service for secure broadcasting of interactive programmes and e-services.

The purpose of this study is to describe the potential creation of CaringTV value for elderly people in Sendai, Japan. Concepts which constitute the theoretical background of this study are: CaringTV, product value and elderly people in Sendai. Hence, this study looks at CaringTV as health care/social service from a product-developmental approach. The research questions are “What kind of value can elderly people in Sendai gain from CaringTV?” and “How can CaringTV create this value?”.

This study is a methodological linkage between qualitative social and marketing research. It rests upon symbolic interactionism and aims at the exploration of subjective viewpoints of the research participants. Three focused interviews with elderly people and their family members and two focus groups with elderly care professionals and experts were implemented in Sendai. The data was analysed inductively to develop findings on the research questions. Thereby, Mayring’s reductive qualitative content analysis method was applied.

The data contained much personal information on the elderly participants, so findings on their subjects of value and challenges in life could be developed. Subjects of value for the elderly participants are: physical and mental health, social well-being, independence, accessible environment, activities and financial stability. Challenges in life are: physical and mental health restrictions, lack of social connections, limited independence, access difficulties, lack of activities, financial difficulties and challenges when dealing with technical devices.

The main set of findings, however, centres on the creation of CaringTV value. Hereby, two types of categories could be developed: value opportunity attribute categories and enabler categories. Three types of value opportunity attributes define the possible value features of CaringTV in Sendai: (1) basic conceptual attributes (e.g. interactivity), (2) device-related attributes (e.g. high image resolution) and (3) attributes with personal impact on the elderly user (e.g. social participation). Five types of enabler categories describe features which enable the value: (1) the elderly CaringTV users themselves (e.g. elderly who live alone), (2) professional contact partners (e.g. care managers), (3) other contact partners (e.g. family members), (4) interaction content (e.g. services to support mental health) and (5) organizational features (e.g. university as CaringTV provider). A value opportunity attribute and enabler model was developed to illustrate their interdependence.

Recommendations are formulated in the discussion of the study on how to use the findings in the CaringTV transfer process.

Key words CaringTV, product value and elderly people in Sendai

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1 INTRODUCTION

The elderly population is growing worldwide (WHO 2002, 6-7). In the year 2025, Japan is expected to be the country with the highest percentage of elderly people in the world (WHO 2002, 8). Within Europe, Finland is expected to be one of the countries with the highest growth in elderly population by 2020 (Walker 2005, 2-6).

One of the main future challenges of many countries is to ensure quality services for the growing population of elderly people. In future, in proportion there will be less care professionals available to provide services to the growing population group of the elderly. (Raij & Lehto & Piirainen et al. 2009, 12) Furthermore, in Finland as well as in Japan public funding opportunities are decreasing, whereas the gross cost of public elderly care services is increasing. That is why elderly care services have to be innovatively adapted or replaced in order to meet the needs of the elderly population. (Erjanti 2007, 6)

In order to address these challenges, an agreement between Tohoku Fukushi University (TFU), Helsinki School of Economics, Laurea University of Applied Sciences (Laurea) and the cities Espoo, Vantaa and Sendai has been made to collectively research and develop adequate elderly care services for the future. The collaboration of the above-mentioned partner institutes and cities is named 'Active Project'. (Erjanti & Ogasawara 2009, 7) Through the Active Project network it was possible for Laurea to introduce the innovative service concept CaringTV to TFU in Sendai (Raij et al. 2009, 12-39).

"CaringTV® is a service concept where interactive programmes and chosen e-services are broadcasted on-line through videoconferencing and other technological platforms" (CaringTV leaflet 2010). CaringTV research and activities are presently embedded in the SAFE HOME research and development project run by Laurea, Turku University of Applied Sciences and financed by the European Union. (SAFE HOME project leaflet 2010)

Due to the interest of TFU in the CaringTV concept, an action research plan has been drafted by Laurea, SAFE HOME project and TFU, aiming at the transfer of the CaringTV concept to Sendai. The action research is an umbrella framework under which several student theses and other researches are conducted. (Lehto 2009) This thesis contributes to the action research by describing the potential creation of CaringTV value for elderly people in Sendai. Even though the CaringTV concept can be applied in diverse service settings for diverse clients, the focus of this study is on elderly people due to the arising future challenges within elderly care services.

What is more, there has been an increasing understanding recently of the importance to adapt business knowledge in public social and health sectors. Social marketers claim that a steadily growing global interest in applying business strategies in social and health sectors is noticeable. (Hastings 2007, 3-7) Furthermore, advocates of the newly developed field of social innovation tackle the opportunity of adopting innovation knowledge and skills in health care and social services (Green 2009, 96). Based on this tactic of addressing social and health care services from a business approach, the SAFE HOME project has also been focusing on the productisation of the CaringTV concept within the past year. Throughout the productisation process, the value of CaringTV for various client groups in Finland has been indentified. (Tolvanen 2009-2010)

This study now consequently seeks to describe the potential creation of CaringTV value for elderly people in Sendai not only based on social or health care theories. Instead, it combines social and health care theories with a new product development approach. In fact, theories from both fields formed the theoretical background of this study. Additionally, qualitative social research and qualitative marketing research guidelines were addressed when developing the research methodology. Thus, this thesis is even methodologically a linkage between social and health care science on the one and theories of economics on the other hand.

Furthermore, Laurea and TFU enabled me to implement the data collection of this study in Sendai, Japan. Through the invaluable support from TFU and Finland-Wellbeing Centre (FWBC), two focus groups and three focused interviews could be run. The findings from the focus groups and focused interviews are depicted at the end of this report.

2 THEORETICAL FRAMEWORK

In the following chapters concepts and theories on CaringTV, product value and elderly people in Japan are presented. This chapter informs the reader of this study with background information on the investigated subject of this research. Since this study follows inductive research premises, the theoretical background only serves as an explanatory research background. That is why this chapter is rather concise.

2.1 CaringTV®

CaringTV is a fairly new service concept which was developed by Laurea in cooperation with several research partners in Finland. It is now planned to transfer this service concept to Ja-

pan. This chapter shall give insight into the service concept itself, its researched achievements in Finland and its recent processes of productisation and internationalization.

2.1.1 The CaringTV concept

One CaringTV leaflet (2010) describes CaringTV as such: “CaringTV is a service concept where interactive programmes and chosen e-services are broadcasted on-line through video conferencing and other technological platforms”. This means that CaringTV is a service concept which enables secured communication and interaction between service professionals and clients or solely between clients who are physically not present at the same location. The technical channels used to enable the communication and interactions between the individuals, who are situated in different locations, are video conferencing or other technological platforms.

Service professionals working with the CaringTV concept can provide services to a single or several clients at the same time from a distance, without the services suffering any loss of interactivity. Services that previously demanded professionals and clients to meet physically at the same location can now be redesigned into e-services. Through the redesigned services into programmes or e-services the professional can deliver support and information to clients and at the same time facilitate the opportunities for clients’ participation and empowerment. (CaringTV leaflet 2010)

Moreover, CaringTV as concept has steadily been developed through Action Research being fully client-focused and further client-driven. The clients’ visions on how CaringTV could enrich their lives, as well as criticism towards CaringTV’s design or contents have always been used as basis for further concept development. This approach to service concept development entails that client participants in the research projects are as valuable as the researchers. It means that “his or her (the client’s) own knowledge, skills and abilities, values and experiences have been taken into account when developing virtual services”. (Raij et al. 2009, 15-18)

Research on CaringTV as a user-driven concept has been embedded in different research projects; in the past in the COPING AT HOME project and the GOING HOME project. Major research on these projects have paved the way for the present CaringTV concept definition, whereby numerous students of Laurea have contributed their theses as minor studies to the broader projects research frameworks. (Discussion with SAFE HOME project staff, 2010) The COPING AT HOME research project focused mainly on how CaringTV can support elderly family care givers, who reside at home with the elderly in need of care (Piiirainen & Sarekoski 2008,

10-16). The GOING HOME project instead elaborated how CaringTV can support the elderly and their significant others as friends or family members after discharge from a hospital (Raij et al. 2009, 27-28).

Finally, CaringTV studies are embedded in the SAFE HOME research and development project, which is run by Laurea, Turku University of Applied Sciences and funded by the European Union. The project rested upon an Action Research framework and user-driven methodology. Since 2009, the project's aim has been to study and develop health promoting e-services for different client groups. It will expire in the course of 2011. (SAFE HOME project leaflet 2010)

2.1.2 The purpose of CaringTV services in Finland

The main purpose of CaringTV is to support various client groups in living and coping at their own homes. CaringTV clients in Finland are elderly people and their families, families who gain child welfare support, people with disabilities and people who face mental health problems. (www.caringtv.fi 2011)

During the GOING HOME project in 2008, Lehto has elaborated new methods on how to support frail clients living at home via CaringTV. These methods are embodied in a "model of supportive methods using Caring TV" and are described as "promoting safety and mental health, support to rehabilitation (e.g. physical exercises, breathing exercises, relaxation), supportive methods (e.g. consultation, monitoring), activating situational support (e.g. peer group, discussions, participation), support to manage with self-care (e.g. medication, pain) and promoting activities of daily living (e.g. nutrition, sleeping)". (Raij et al. 2009, 29-30)

Furthermore, CaringTV research projects seek to improve the quality of life of elderly people who live at home (Raij et al. 2009, 15), the following text outlines a brief definition of the terms quality of life and subjective well-being. Finally, this chapter presents the research findings of Raij on indicators of quality of life based on the conceptions of elderly people, which have been used as guidelines during the CaringTV concept development process (Raij et al. 2009, 33).

The concept quality of life is rather complex, whereas determinants on quality of life have been defined differently by various scholars around the world. Traditional gerontologists tend to make use of indicators which are more health-related. More innovative scientists instead seek to develop and to apply indicators which look at quality of life in a holistic way. (Walker 2005, 6-7) Hooyman and Kiyak (2005, 112) for instance describe quality of life "as this combi-

nation of an individual's functional health, feelings of competence, independence in activities of daily living, and satisfaction with one's social circumstances".

Since 1994, the WHO (2002) has been defining quality of life as "an individual's perception of his or her position in life in the context of the culture and value system where they live, and in relation to their goals, expectations, standards and concerns." This WHO concept further emphasises the impact of one's capability to remain autonomous and independent on the quality of life of an elderly person. What is more, the WHO quality of life concept highlights the complex manner in which "a person's physical health, psychological state, level of independence, social relationships, personal beliefs and relationship to salient features in the environment" interdepend. (WHO 2002)

In addition, the concept of quality of life is related to the concept of subjective well-being. Depending on the approach one is looking at quality of life, subjective well-being of a person can either be considered to play an important role in one's perceived quality of life or could be used interchangeably with the term quality of life. Gerontologists nowadays lay less emphasis on researching quality of life in elderly people but instead centre on understanding and measuring subjective well-being. Gerontologists frequently refer to the undisputed "conceptual model of the determinants of subjective well-being" which entails the following determinants of subjective well-being: "demographic characteristics (age, gender, race/ethnicity and marital status), socioeconomic status, health, activities, social integration (multiple roles, religion, volunteering) and social ties and social support". (Binstock & George 2006, 320-333)

Theories on the human being as holistic being, e.g. by Rauhala, and theories on the human holistic being "with his or her own knowledge base, skills and abilities, values and experiences", have *inter alia* built the grounds for research works on indicators of quality of life in elderly. The findings of the research works are that indicators of quality of life based on the perception of elderly people are: "mental health (sense of belonging, absence of fear, mental stimulation, memory activation), nutrition (cooking skills, healthy food), activity (physical balance, physical workload, physical activation, right tools, empowerment), social support (availability of services, religious services, significant others, peer support, participation), habitat (security, safety, obstacle free) and health (knowledge of illnesses, good sleep, right medication, assessment and control, hygiene)". (Raij et al. 2009, 15-33)

2.1.3 The productisation and internationalization of CaringTV

In 2009 and 2010, SAFE HOME project staff, Laurea students and a consultant from Philips InnoHub worked together on the productisation, hence the product development of the CaringTV concept. During the very first steps of the productisation process named “consumer understanding”, CaringTV’s value chains, stakeholders and their concerns were elaborated. During this phase it became evident that CaringTV is a multi-stakeholder product, whereby the following stakeholders are identified; the elderly, their relatives, elderly care professionals working with the elderly, the elderly care provider companies and the municipalities funding the elderly care provision. Further on, the “financial, emotional and operational benefits” were specified in teamwork. During the second phase named “saleability” the team worked together on possible offering structures for launching the CaringTV product inside the Finnish health and social service market. (Tolvanen 2009 - 2010) Benefits of CaringTV which were identified during the productisation phase are listed in the official CaringTV flyer as “well-being at home, social relationships and life harmony, peace of mind, cost efficiency and innovative service research phenomenon” (CaringTV leaflet 2010).

What is more, the previous focus when researching and developing the CaringTV concept has ever been on the promotion and well-being of different client groups within Finland. The first research aiming at transferring the CaringTV concept to another country is the Action Research aiming at transferring CaringTV to the Sendai region, which this very thesis is embedded in. As the SAFE HOME project is applying Action Research and thereby user-driven methods, the Action Research aiming at the transfer of CaringTV to Sendai City lays great emphasis on user-driven methods, too. (SAFE HOME project leaflet 2010; Lehto 2010; Tolvanen 2009-2010)

2.2 Product value

This chapter gives an insight into concepts of product value. Hereby, the meaning of value opportunities and value opportunity attributes is also explained. In fact, the meaning of product value is considered of great importance in innovation and new product development processes. That is why this chapter moreover presents theories on innovation, product development and the meaning of customer understanding in product development. Eventually, this chapter also contains an own discussion on how to view CaringTV’s development from a product developmental point of view.

2.2.1 Definition of product value

When developing a new product it is of great importance to understand the customers. More precisely, a product developer ought to understand customers' needs, wants and desires towards the experiences created by a product, thus ought to understand which value the product or product experience has in the eyes of a customer. (Cagan & Vogel 2002, 2-8)

It was previously thought that a product was of good value if it embodied as many features for the lowest price possible. This approach has been abandoned and instead a more customer-oriented approach on value has emerged. Cagan and Vogel (2002, 57) advocate this modern approach and define the term **value** as:

“The level of effect that people personally expect from products or services represented through lifestyle effect, enabling features, and meaningful ergonomics, which together result in a useful, useable, and desirable product.”

Hence, if a product is useful and desirable in the eyes of customers it is consequently also valuable. What is more, people consider a product to be valuable if it supports and meets their own personal values. (Cagan & Vogel 2002, 57) Product value has a greater impact on a customer's decision making whether to purchase a product than cost. As a matter of fact, the higher the perceived value of a product in the eyes of a customer, the more the customer will be willing to pay a higher price for the product. (Cagan & Vogel 2002, 33-53)

2.2.2 Value opportunities and attributes

The term “value opportunities” is defined as “the attributes of value (emotion, aesthetics, identity, ergonomics, impact, core technology, and quality) that make up the elements people assess in products” (Cagan & Vogel 2002, XXX). Value opportunities can be used as basis on which to conduct product development as they help identify features which the product should exhibit in order to be of great value to the customer (Cagan & Vogel 2002, XXX).

Cagan and Vogel (2002, 62-68) present seven value opportunity classes, i.e. emotion, aesthetics, identity, ergonomics, impact, core technology, and quality (Table 1). Each of the value opportunity classes is subdivided into value opportunities attributes. Thus, for instance, the value opportunity ergonomics is divided into the attributes ease of use, safety and comfort. The complete list of value opportunities and their attributes is fundamental but can be widened or adapted if appropriate. (Cagan & Vogel 2002, 62-83)

Value Opportunity	Attributes	Product features
Emotion	<p>Sense of adventure</p> <p>Feel of independence</p> <p>Sense of security</p> <p>Sensuality</p> <p>Confidence</p> <p>Power</p>	<p>The product promotes excitement and exploration.</p> <p>The product provides a sense of freedom from constraints.</p> <p>The product provides a feeling of safety and stability.</p> <p>The product provides a luxurious experience.</p> <p>The product supports the user's self-assurance and promotes his or her motivation to use the product.</p> <p>The product promotes authority, control, and a feeling of supremacy.</p>
Aesthetics	<p>Visual</p> <p>Tactile</p> <p>Auditory</p> <p>Olfactory</p> <p>Gustatory</p>	<p>The visual form must relate shape, colour and texture to the context of the product and the target market.</p> <p>The physical interaction of the product (..) must enhance the product experience.</p> <p>The product must only emit the appropriate sounds (..).</p> <p>The product must have an agreeable smell (..).</p> <p>The products that are designed to be eaten (..) must have an optimum flavour (..).</p>
Product Identity	<p>Personality</p> <p>Point in time</p> <p>Sense of place</p>	<p>(..) the ability of a product to fit among, yet differentiate itself from, its direct competition (..).</p> <p>(..) a product (..) has to capture a point in time (..).</p> <p>Products must be designed to fit into the context of use.</p>
Impact	<p>Social</p> <p>Environmental</p>	<p>A product can have a variety of effects on the lifestyle of a target group, from improving the social well-being of the group to creating a new social setting.</p> <p>(..) the product focuses on minimizing negative effects on the environment (..).</p>
Ergonomics	<p>Ease of use</p> <p>Safety</p> <p>Comfort</p>	<p>A product must be easy to use from both a physical and cognitive perspective. (..)</p> <p>A product must be safe to use. (..)</p> <p>(..) a product should be comfortable to use and not create undue physical or mental stress during use</p>
Core Technology	<p>Enabling</p> <p>Reliable</p>	<p>Core technology must be appropriately advanced to provide sufficient features. (..)</p> <p>Customers expect (..) products to work consistently and at high level of performance over time.</p>
Quality	<p>Craftsmanship</p> <p>Durability</p>	<p>The product should be made with sufficient tolerances to meet performance expectations</p> <p>The craftsmanship must hold up over the expected life of the product."</p>

TABLE 1: Value opportunity and attribute chart (taken from Cagan & Vogel (2002, 62-68))

2.2.3 Innovation

The term innovation can be traced back to the 16th century and derives from the Latin term “*innovat-*”, meaning *changed* or *renewed*. The Latin verb “*innovare*” moreover means nothing less than to *make new* (Oxford Dictionaries. Innovation/ innovate 2011). Rogers (1998, 6-9) quotes Joseph Schumpeter who described five kinds of innovation in the 1930ies. He was in fact one of the first economists emphasizing the importance of innovation. According to Schumpeter, innovation takes place when (1) a new product is created or a feature of an existing product is improved, (2) when a new industry process is developed, (3) when a new market is accessible, (4) when new supply opportunities are opened up and (5) when an industrial company goes through alteration processes. Since that time, many definitions of the term innovation emerged. In 1993, e.g., the business council of Australia published the following definition: “In business, innovation is something that is new or significantly improved, done by an enterprise to create added value either directly for the enterprise or indirectly for its customers”. (Rogers 1998, 6-9)

Cagan and Vogel (2002, XiX), e.g., give an insight in innovation processes starting from planning a product to gaining approval for a product program. Only when focussing on each step of the innovation process, one will eventually be able to create and to develop a “breakthrough product” (Cagan & Vogel 2002, XXii). Guidelines and information given on how to develop breakthrough products can also be applied for developing breakthrough services. (Cagan & Vogel 2002, XiX-4) Chapter 2.2.5, *inter alia*, explains why guidelines for developing breakthrough products serve both, product and service development. Furthermore, due to the fact that product and service development follow the same rules, the terms product and service are used interchangeably throughout the whole research paper.

2.2.4 Product development

Cagan and Vogel (2002, 8) defined three key factors in a successful product development. The major key factor is to identify appropriate market places for a new product. Alternatively a product developer needs to adequately innovate a product which has already been launched on the market.

The second important factor in product development demands product developers to understand the future product customers and their needs. Thus, product developers are able to attach those features to a product, which make it truly “useful, usable and desirable”, hence valuable for the customer (Cagan & Vogel 2002, 8). The latter described task is in fact difficult, time- and also resource-consuming. Yet, it is one key task leading to product success.

Products which do not connect with customers' needs are doomed to failure. (Cagan and Vogel 2002, 5-8)

The third key factor in product development is the creation and management of a multidisciplinary team including professionals who bring together their knowledge on engineering, industrial design and marketing (Cagan & Vogel 2002, 4-8).

2.2.5 Customer-understanding

Opposite to social and health care professionals, who refer to a service user as client, product development and innovation jargon labels a product or service user as customer. That is why also throughout this chapter the term customer is used.

At times, innovative products or services, which at first sight appear to be superior, do not sell off well. This can be due to three different reasons: (1) customers are unable to use the product, (2) they are afraid to make use of the new product, or (3) they feel too attached to a prior brand or product. Whichever reason causes the failure of a product, the reason generally lies with the customer and hence with the company's lack of customer understanding. (Braag & Braag 2005, 215-217)

Breakthrough, hence innovative products are such which create a new market or through which an existing market is redefined based on true customer understanding. Indeed, the development of a new product is a difficult task. This task demands for proper planning and should be implemented by a multi-professional team. The task's main focus needs is to develop a product which "meets the needs, wants, and desires of the customer". (Cagan & Vogel 2002, 3-5)

As mentioned above, guidelines and information given on how to develop breakthrough products can equally be applied for developing breakthrough services. The difference between products and services can be described as such: a product is an item which enables service causing a sense of experience to a customer whereas a service is an active operation which itself directly causes a sense of experience. Since it is the needs, wants and desires of a customer towards these experiences of product and service, which ought to be met by product developers, new product development guidelines work well for both, new product and new service development. (Cagan & Vogel 2002, 7)

Scott Johnson, Sinfried and Altman (2008, 87) advise companies to "identify jobs to be done" when developing a product. This technique is based on the approach that customers con-

stantly face jobs, which they ought to do. When a customer buys a product, it would mean that he/she hires the product to accomplish these jobs. A product developer's task therefore would be to imagine which jobs a customer faces in his life, and what kind of product could take over or ease these jobs. This approach hence also highlights the importance of customer understanding. (Scott et al. 2008, 87-91)

In order to gain profound customer understanding, successful companies have lately understood to utilize qualitative research methods other than traditionally favoured quantitative methods. Further, it is recommended applying more than one scientific approach in customer research, as for instance marketing research solely. (Cagan & Vogel 2002, 8-9)

2.2.6 CaringTV as a product in development

The following chapter entails my own discussion on CaringTV as product from an innovative approach. As briefly depicted in chapter 2.2.5, CaringTV can be termed a product which is launched within the Finnish and soon, if adequate, also within the Japanese health care and social service markets. In order to ease the understanding, the following text will only describe CaringTV as product in development for elderly clients.

When looking at the three key factors in new product development as described by Cagan and Vogel (2002, 8), one could state that Laurea in cooperation with research projects and TFU has already passed the first challenge in developing CaringTV as a product. Indeed, market place opportunities have been discovered in that the elderly care service market is in need of innovative strategies, both in Finland and in Japan. Thereby, an innovative service concept has been developed to improve several traditional elderly care services. Furthermore, new service ideas which can be launched in addition to traditional elderly care services have been designed.

It could be argued that within Finland CaringTV developers have gained profound customer understanding through the application of action research and user-driven methods. This customer orientation has been the basis for service design and concept development (Raij et al. 2009, 14-15). Concerning the transfer of the CaringTV concept to Japan, a profound customer understanding still has to be developed. That is why this study focusing on CaringTV value for elderly in Japan is based on the perception of elderly people, elderly care professionals and experts in Sendai. As the SAFE HOME project lays great emphasis on user-centeredness (SAFE HOME project leaflet 2010) and as all CaringTV research processes have applied user-driven methods, this study also emphasizes the importance of customer understanding.

One could argue that to some extent during the development of the CaringTV product, Laurea and its partners succeeded in the third key factor, i.e. the integration of professionals from different scientific fields. The variety of professionals involved in the product development ranges from social and health care scientists, and even social and health care students, to business experts and one consultant. This multidisciplinary team is composed of other professionals, as suggested by Cagan and Vogel (2002, 8, 180-181). Although a high fluctuation in members took place, due to frequent structural changes, the multidisciplinary team has created a profound knowledge and experience base for successful CaringTV product development.

As depicted above, concerning the second key factor of successful product developing, CaringTV has kept a strong customer-focus and reached a high level of customer understanding. Yet, in order to develop a customer-based break-through product, one has to also focus on alterations in customers' needs, wants and desires (Cagan & Vogel 2002, 8-9). It could be argued that this very focus has been underlying CaringTV product development in Finland, too. As all CaringTV researches have been action researches, frequent crosschecking of research outcomes within the real-life setting was possible.

The value of CaringTV for elderly people in general could be defined as the level of the effect that elderly people personally expect from the CaringTV product. Furthermore, based on the "Health Belief Model", one pays a psychosocial price when adopting new, health-promoting behaviour (Tones and Tilford 2001, 346-352). Thus, the price elderly people and elderly care professionals have to pay when "purchasing", here using, the CaringTV product is the psychosocial price of adapting to new care services. The higher the value of CaringTV, the higher is the willingness of elderly people and elderly care professionals to adapt to the CaringTV product. And what is more, the higher the value, the higher is also the willingness of elderly people to participate in preventive care programs. The latter was named to be a problem by Professor Ogasawara during a conference concerning the CaringTV transfer to Japan (Ogasawara 2010).

In chapter 2.1.5, the productisation of CaringTV was described and the further possible benefits of CaringTV have been listed. One could argue that the benefits listed represent value opportunity attributes of CaringTV in Finland. Based on this assumption, the following value opportunity attribute table (Table 2) is drafted, based on the value opportunities chart from Cagan and Vogel (2002, 62-83). Its content is taken from the CaringTV leaflet (2010). Listed are CaringTV value opportunity attributes for Finnish customers as well as their scientific basis.

Value opportunity attributes of CaringTV in Finland	Caring TV features	Scientific basis
Well-being at home	promotes activities of daily living, supports to manage with self-care, activates situational support, offers supportive methods, offers support to rehabilitation and promotes safety and mental health.	COPING AT HOME, GOING HOME and present SAFE HOME research and development project research outcomes, see also model of supportive methods using CaringTV and indicators for quality of life
Social relationship and life harmony		
Peace of mind		
Cost-efficiency	enables cost savings for service providers	Studies on cost efficiency to come
Innovative service research phenomenon	is an innovative idea, creating several opportunities for studies on its effects and further development	COPING AT HOME, GOING HOME and present SAFE HOME research and development project research outcomes and articles on uniqueness of further research opportunities

TABLE 2: CaringTV value opportunity attributes (table content: straight quotes from the Caring TV leaflet)

2.3 Elderly people in Sendai as research context

“Elderly people in Sendai” is a fairly large topic and can be elaborated from various different approaches, be it demographic, cultural or religious, focusing on family, elderly care or societal structures. In this study “elderly people in Sendai” represents the broad research context which is described in the following chapters. The following topics are briefly outlined: the general definition of the term elderly people, growth of the elderly population in Japan, cultural and religious dimensions in the life of an elderly person in Japan, service structures for elderly people in Japan with special focus on elderly care services in Sendai region, challenges arising within elderly care services in Japan, and researches addressing these challenges.

As noticeable from the headings, some of the chapters focus on elderly people in Japan, not on elderly people in Sendai. The latter is due to the fact that on some specific topics literature about elderly people precisely in Sendai was not found. However, since elderly people in Sendai represent one regional group of elderly people in Japan, the focus on elderly people in Japan is eligible.

2.3.1 Definition of the term elderly people

This thesis' title is "Creating CaringTV value for elderly people in Sendai, Japan". Indeed, English social gerontology literature sources as well as the WHO rarely, if at all, apply the term elderly. They rather criticize this terminology for supporting superficial images of people above the age of 65 (Hooyman & Kiyak 2005, 6-7). Despite the risk that the term 'elderly people' creates a superficial image, it was nevertheless chosen in this study to describe the population group of people above the age of 65 years. The choice for the term 'elderly people' or briefly 'elderly' was made to ensure congruency with the previous studies conducted on CaringTV, of which most refer to term 'elderly people' (see for instance Raij et al. 2009). Applying the term 'elderly people' in this study does not seek to create a generalised picture of people above the age of 65, but the term should be considered as synonym describing the population group, which other social science authors presently refer to as 'the population of older people', 'older population' or 'older adults' facing the phenomenon of 'aging' (see Hooyman & Kiyak 2005 and WHO 2002) or 'people in old age' (see Walker 2005 and Takkinen 2000).

2.3.2 Growth of the elderly population in Japan

All over the world, the population group of people above the age of 60 years is growing the fastest. In comparison to 1970, until 2025 the number of the elderly is expected to grow by 223%. This means that in the year 2025 two billion elderly people will live on this planet, of which one fifth dwells in developed countries. Indeed, in future a higher mortality rate of elderly people is expected in some newly developed countries, *inter alia* due to AIDS. Still, based on the overall trend towards lower fertility rates and longevity, an enormous worldwide growth of elderly people will come to happen. (WHO 2002, 6-7)

After 1945, Japan has developed remarkably in the fields of technology, medicine and nursing, which has caused an increase in life expectancy of Japanese citizens. At the same time, despite striking developments in Japanese maternal and child health systems, a decline in the Japanese child birth rate has been noticeable since 1974. These two major developments in Japanese society give reason to assume that by 2050 every third Japanese citizen will belong to the population group of those aged 65 years and older. (Hatashita & Anderson 2004, 1-2) Thus, Japan will be the country with most citizens above the age of 65 in the year 2025 worldwide, with the percentage rising to 35.1% (WHO 2002, 8).

2.3.3 Cultural and religious dimensions in the life of elderly people in Japan

The two dominant religions in Japan are Shinto and Japanese Buddhism. Confucianism constitutes one aspect of Buddhism (Swanson & Chilson 2006, 3-4), that claims that human beings naturally feel affection for those who are closest. However, the teachings of Confucius demand training and discipline in order to turn that affection into active respect towards the beloved ones. (Saito 2007, 29-30) Furthermore, Confucianism demands explicit respect for elderly people. That is why elderly people in Japan traditionally play a crucial role in the family and society and are highly respected (Saito 2007, 29-30; Hooyman & Kiyak 2005, 54-59). Elderly in Japan are considered wise and experienced, whether in social, labour or spiritual settings. In their families, elderly further use to play an important role as they function as linkage between the deceased and the living. And, Japanese traditionally believe that after an elderly perishes, he/she guards the family from beyond. (Saito 2007, 29-30)

The respect towards the elderly traditionally reflects in filial piety and furthermore ancestor worship. That is why in Japan it is traditionally the children's duty to take care of their parents in old age. However, presently Japanese people increasingly resign from this traditional care structure, because of actual modernization processes within Japan. (Hooyman & Kiyak 2005, 54-59) In general it seems as if the active respect towards elderly in Japan as described above steadily diminishes. (Saito 2007, 29-30)

Beyond that, from a Buddhist point of view, senescence challenges elderly people, as they seek to control happenings but are not capable to do so anymore. Buddhism advises not to attach to things, meanings, happenings or realities around oneself. Instead it would be more important to live fully every single moment of one's life, to engage in truly human relationships and hence to become flexible to change. This approach can assist individuals when (re)thinking the meaning of their lives also during senescence. It can furthermore also function as ideological guideline in care professions. (Saito 2007, 38-39)

Sekentei is a Japanese term which means "social appearance, reputation or dignity in the community or public" (Asai & Kameoka 2003, 5) and is often referred to social pressure. *Sekentei* causes people to critically evaluate their own appearance within a community or in public. Likewise, Japanese people worry about the public judgement upon the care they offer to their elderly family member. In case an elderly receives public care, *sekentei* can cause that the elderly person's family members feel ashamed about not providing the care themselves. Moreover, the elderly him- or herself using public services might also feel shame, as the own family members do not express their respect towards him/her by providing the necessary care at home. (Asai & Kameoka 2003, 5-7)

2.3.4 Health and welfare services for elderly people in Japan

In Japan it is the traditional duty of the children to take care of their parents in old age. Yet, there has been a steady rise in the number of elderly care homes and hospitals for long-term stays of elderly people. The number of elderly people living with their families has decreased. The latter is due to Japan's modernization processes; the increase in employment rate of women, industrialization and urbanization trends and the shift in demographics. In order to guarantee long-term care for elderly in Japan, in April 2000 the Public Long-Term Insurance Act has been passed. (Hooyman & Kiyak 2005, 60) In translated texts from Japanese into English the term long-term care insurance is also often named nursing care insurance (Kobayashi et al. 2011, 205-206). Therefore in this thesis the two terms are used interchangeably.

Health and welfare services for the elderly are offered through the long-term care insurance system. Local governments are the insuring agencies. Insured persons who receive long-term care insurance are divided into two groups; the primary insured, who are at least 65 years old, and the secondary insured who are 40 to 46 years old. The insurance benefits cover two types of benefits; services of care prevention benefits and services of long-term care benefits. Care prevention benefits are nursing care prevention services, community-based nursing care prevention services and modifying houses. Long-term care benefits are in-home services, facility services, community-based care services and again modifying houses. Both benefit types include nursing care, home support care, rehabilitation, medical care, coping in daily life or even sales services. (Ministry of Health, Labour and Welfare 01 & 04, 2011)

The long-term care insurance gives benefit according to the level of long-term care needed by the care recipients. Elderly people eligible for preventative care belong to the groups requiring support 1 and 2. Elderly in need for other care belong to the groups requiring long-term care 1 to 5. Usually people in need of long-term care 1-2 still live at their homes, whereas most people in need of long-term care 3 to 5 live in care facilities. In Japan, about two million people were eligible to receive long-term care or support in the year 2000. In 2008, already four and a half million people were eligible to receive it. Yet the number of people, who actually used long-term care or support were smaller in both years. In 2000, only one and a half million people used long-term care or support, in 2008 there were slightly more than three and a half million users. It is expected that by 2025 there will be more than double the amount of long-term care or support users than in 2008. (Ministry of Health, Labour and Welfare 03 & 06, 2011)

In case a service provider wants to offer a new service to elderly people, the company has to first address the local government. The local government drafts an annual plan for welfare issues. It is therefore up to the local governments to give permission for the provision of new

services. However, the service framework is mainly fixed by the national government and only partly by the local government. The framework contains information about, e.g., how many providers are allowed to enter the elderly service market, or how many services can be offered. The government also decides on the division of the long-term care expenses for the diverse service types by percentage. (Kudo 2010)

Furthermore, the long-term care insurance finances two types of nursing homes for elderly people; namely *tokuyko* and *roken* nursing homes. *Tokuyo* nursing homes provide social care services and are terminal homes for elderly people. *Tokuyo* clients are not in need of health care or rehabilitation. Instead they need support in daily living as eating, taking a bath etc. Demented elderly people are also *tokuyo* clients. *Roken* nursing homes are intended for short-term stays only and provide rehabilitation. Elderly people stay in *roken* nursing homes after having been dismissed from the hospital and before heading to their own homes. Special professionals as medical doctors, nurses, occupational therapists, physiotherapists, etc., provide services at *roken* nursing homes. (Hagino 2010 email2)

TFU and its Health Welfare Medical Group Joint Facilities represent one type of innovative health care and welfare provider for elderly people in Sendai. The main focus of the joint facilities' services is on prevention. The joint facilities follow Buddhist principles as they combine doing and learning on a daily basis. The joint facilities offer diverse services to different client groups. At the same time professionals can research client phenomena they encounter. Students are allowed to train their newly gained theoretical knowledge inside the joint facilities. (Field visit 2010)

Most of TFU's joint facilities for elderly people are *tokuyo* nursing homes; Sendai no Sato, which is attached to the Dementia Care Research Training Centre, Sendan no Mori and Sendan no Yakata. There is also one *roken* nursing home, Sendan no Oka, a facility specialised on rehabilitation services. What is more, small satellite facilities for elderly people within their living community exist, too. These satellite facilities belong to *tokuyo* nursing home Sendan no Mori. One of these satellite facilities is a cafeteria, which is also used as employment support centre. The other satellite facilities are mutual community homes for elderly people or social service houses for different kinds of also other client groups. (Hagino 2010 email2; Field visit 2010)

What is more, the so-called care managers play an important role in the delivery of long-term care insurance benefits. The provision of services is primarily initiated through the care managers. Based on their assessment of the elderly people's needs, a service delivery plan is drafted and later on also coordinated. Hereby, the care manager is in steady contact with the elderly services users, who have the opportunity to give feedback upon the service effective-

ness. The care managers on the other hand are able to provide information and counselling to elderly people. (Kudo 2010)

2.3.5 Arising challenges

The shift in demographics, the growing numbers of employed women as well as urbanisation and industrialization often tends to disable Japanese families to provide their elderly family members with sufficient quality care at home. That is why the number of nursing care homes in Japan increases. In fact, the rising number in nursing care homes means that elderly people in Japan can be provided care services. Yet, the use of public services as from nursing care homes imposes a complex conflict to families. Conflicts arise because using public elderly care indicates that traditional values as filial piety are given up. (Hooyman & Kiyak 2005, 59) Furthermore, since Japanese people often base their actions on *Sekentei*, elderly in need of care and their families often refuse to use public services. They refuse to use public services in order to avoid shame and criticism from others. (Asai & Kameoka 2003, 7)

Besides, it is argued that in Finland as well as in Japan public funding opportunities are decreasing, whereas the gross cost of public elderly services is going to increase. That is why elderly care services have to be innovatively adapted or replaced in order to meet the needs of the population of the elderly now and in future in times of financial cutback. (Erjanti 2007, 5)

According to the increasing number of elderly people, also the need for elderly care services will grow within the following years. Due to an apparent relative reduction in elderly care givers' numbers, health or social services for elderly people will face challenges in near future. The cost a state or municipality has to invest in appropriate care provision for elderly will increase. In order to be able to deliver elderly services of adequate quality, innovation of services is inevitable. (Raij et al. 2009)

In times of the growing impact of Western values on Japanese society and thence also on Japanese elderly care services, Buddhist life approaches and values seem to be ruled down or simply neglected. It is considered to be of importance to discuss the option and to further reinstall Buddhist values in Japanese or even Western countries' caring professions. (Saito 2007, 39)

Presently in European societies there is a variety in lifestyles for elderly people to choose from. However, not all elderly people have free access to this variety of lifestyles, due to restricted health or financial resources. Therefore it is one main future challenge to fight the

marginalization of elderly people and to optimize their access opportunities. The optimization should enhance elderly people's full participation in society and thus increase their quality of life. (Walker 2005, 6) Japan's elderly care services are also considered to be in need of development, not only concerning cost-efficiency but also concerning the elderly clients' quality of life. (Ogasawara 2007, 9)

2.3.6 Previous and present research addressing these challenges

An agreement between TFU, Helsinki School of Economics, Laurea and the cities of Espoo and Vantaa has been made to collectively research and develop adequate future elderly care services. The collaboration of the above mentioned partner institutes and cities is named "Active Project". The project organises annual seminar events for its cooperation partners for sharing and enriching each other's developmental work. After each seminar articles are published by Laurea Publications in "Refurbishing Elderly Care", which give insights into the present developmental streams of the "Active Project". (Erjanti & Ogasawara 2009, 7)

One Active Project research focuses on the application of new service developments in elderly care services. The findings state that new service development has to focus on the concerns of elderly clients and their family members. Also, service personnel and service providers need to be addressed when seeking to enable more client participation in service development. The paper offers advice to service providers how to promote customer satisfaction. Two main issues are to offer client-orientated services and to integrate clients' families into the care of the elderly. (Hagino et al., 1-10)

Another Active Project paper first identifies features which represent effective and efficient elderly care service features in Japan and Finland. Based on theories from service innovation and service co-creation, the researchers secondly evaluated these representative features of effectiveness and efficiency. The findings of this paper are that highly-valued and efficient services exist when both, service providers and clients, engage in the service co-creation process. (Rajala et al, 1.5)

TFU is also interested in the transfer of CaringTV to Japan. The action research project, which addresses this transfer, started off in 2010. Before the data collection of this study commenced, the opportunities for CaringTV in Sendai were discussed. Back then, our cooperation assumed that elderly people requiring support 1 and 2 and long-term care 1 and 2 represent future CaringTV users to address first. (Kudo, 2010)

Besides, the City of Sendai supports the FWBC, which seeks to develop new business in the welfare field with latest technical equipment. The FWBC hence is a research and development unit focusing also on the challenge of elderly care services. The unit corresponds with the TFU joint facilities' *tokuyo* nursing home Sendan no Yakata. Several tenants regularly use space and cooperation with the FWBC main quarter. One of these tenants presently is Laurea. (FWBC 2011) In this report, the FWBC is abbreviated with FWBC.

3 RESEARCH PURPOSE AND QUESTIONS

The purpose of this qualitative research is to describe the potential creation of CaringTV value for elderly people in Sendai, Japan. The research questions are "What kind of value can elderly people in Sendai gain from CaringTV?" and "How can CaringTV create this value?". This study looks at CaringTV as health care and social service product.

The term value is taken from new product development jargon. Product value is defined as the level of affect customers personally anticipate from a product (Cagan & Vogel 2002, 57). Since the meaning of the term value is not commonly known, the research questions were presented to the participants as such: "What kind of benefits can elderly people in Japan gain from CaringTV?" and "How can CaringTV create these benefits for elderly people in Sendai?".

The study is embedded in an umbrella action research which aims at the transfer of the Finnish CaringTV concept to Sendai in Japan. Still, this study itself does not apply the action research approach. It solely aims at the exploration of the participants' subjective viewpoints on CaringTV value for elderly people in Sendai. The research design bases on the theoretical position of symbolic interactionism. What is more, this study can be considered a qualitative social research with marketing research purpose; it follows qualitative social research guidelines and seeks to develop recommendations for the further CaringTV product development process in Sendai.

Three focused interviews with elderly people and their family members and two focus groups with elderly care professionals and experts were implemented in Sendai. The data was analysed inductively to develop findings on the research questions. Thereby, Mayring's reductive qualitative content analysis method was applied. Since the data contained personal information on the interview participants also, findings on the interview participants' personal values and challenges in life could be developed. The main set of findings however evolves around the creation of CaringTV value. Hereby, two types of categories could be developed; value opportunity attribute and enabler categories. Value opportunity attributes define the possible

value features of CaringTV in Sendai. Enabler categories describe how CaringTV can create the value.

Concepts which constitute the theoretical background of this study are CaringTV, product value and elderly people in Sendai. These concepts were not used during the analysis process. Yet, they enabled the development of research purpose and questions and eventually shall enrich the discussion on the findings.

4 METHODOLOGICAL BACKGROUND OF THE STUDY

This study's purpose is to describe the potential creation of CaringTV value for elderly people in Sendai, Japan. In order to meet this purpose, data was gathered with qualitative methods in Sendai to gain close-by and subjective findings. The qualitative approach was chosen, because it enables precise and vivid findings. It integrates the viewpoints of its research informants as well as the subjective and social constructs of their living environments (Flick et al. 2008, 17). The qualitative research perspective of this study is the exploration of subjective viewpoints. The theoretical position of symbolic interactionism can be considered its guiding framework.

Furthermore, this study is based on the assumption that only true customer understanding leads to successful product value creation. The participants of this study are considered possible future CaringTV users, hence customers. Therefore their subjective thoughts on CaringTV value opportunities needed to be gathered. The methods used to gather these thoughts were focus groups and focused interviews.

Quantitative research assumes that the subject of investigation is sufficiently known by the researcher before the investigation commences. Therefore it is thought that special openness and flexibility during the quantitative research process are unnecessary. Qualitative research instead presumes that the researcher is a learner with originally insufficient knowledge about the empiric field. That is why the development of research questions, the regulation of the research process, the data and analytic interpretation processes have to be intertwined with the empiric field. Thus, a researcher has to embody a high level of flexibility and adaptability. Moreover, she has to be able to approach new research paths towards new research directions if the empiric field demands so. The adaptability and action flexibility of qualitative research are considered its principles as well as strengths. (Lamnek 2010, 23-24) It is inevitable that a qualitative researcher is sensitive and acts with fast reactions during the research process in order to achieve a high level of research trustworthiness (Lamnek, 2010, 83).

	Final thesis research design	Thesis plan design
Research purpose	To describe the potential creation of CaringTV value for elderly people in Sendai	To elaborate CaringTV value opportunities for elderly people in Japan
Basic orientation	Qualitative research	Qualitative research
Time frame	Spring 2010 - July 2011	Spring 2010 - January 2011
Interdependence with other studies	This thesis is part of an umbrella action research. The thesis contribution to the action research is delayed.	This thesis contributes to the mapping and planning phase of the umbrella action research.
Research perspective	Exploration of subjective viewpoints	Exploration of subjective viewpoints
Theoretical position	Symbolic interactionism	Symbolic interactionism
Social versus marketing research	Qualitative social research with marketing research purpose	Qualitative social research with marketing research purpose
Research approach	-	Grounded theory
Triangulation	Data collection method triangulation	Data collection method triangulation
Data collection method	2 Focus groups and 3 focused interviews	3 + n Focus groups and reactive observation and research diary in addition
Research diary	Yes, however no external structure. Personal notes which are not handed in for thesis evaluation. Instead thesis process will be depicted transparently in public thesis report.	Yes according to Silverman, should be handed in for thesis evaluation.
Participant Sampling	Theoretical sampling	Theoretical and purposive Sampling
Data analysis method	Reductive content analysis (Mayring's Qualitative Content Analysis)	Glaser's 6Cs

TABLE 3: Final thesis research design versus thesis plan design

The course of this qualitative research indeed demanded high flexibility and adaptability concerning the research design. The eventual research process differs strongly from the originally set up thesis plan. The differences to the original plan are found, e.g., in time-frame, sampling of informants, data collection set-ups, data collection methods, analysis method and even in research approach. Table 3 shall help the reader to keep a complete overview of the differences between thesis plan and final thesis research design.

Still, before approaching the next chapters it must be mentioned that the whole methodological process of this study is described in detail in three chapters (4-6). Chapter 4 describes the methodological background of this study, including research perspective, theoretical position, affiliation to social or marketing research, research approach, data collection triangulation and research diary. Chapter 5 focuses on data collection implementation in Sendai, and

hence gives detailed information on the data collection methods. Finally, the data analysis is elaborated in chapter 6. Throughout these three chapters, an insight into the changes to the original study design and the reasons for the replacements are given. It is further depicted why specific design features were changed in reaction to certain empirical life situations. The length and great detail of these three chapters is justified by the major changes the research design underwent. Conducting a research in a different cultural context demands high flexibility as well as reflectivity, which are both represented in the following text.

Besides it ought to be mentioned that in chapters 4 to 6 I refer to myself as “I” instead of applying the term “researcher” or “student”. By doing so I intend to create a more authentic and vivid picture of the research process (Silverman 2005, 305-306).

4.1 Umbrella research

This study constitutes a small part of an umbrella action research project aiming at the transfer of CaringTV to Japan. Action research focuses on changing a present real situation, is of participatory nature and further proceeds cyclically through different phases (Humphries 2008, 86; Denscombe 2003, 73-77). In cooperation with Japanese elderly care workers and the elderly themselves, the umbrella action research project seeks to meet the growing challenges of elderly care in Japan. The umbrella action research refers to its informants as participants, as they actively participate in the research process. The term participant, instead of informant, is therefore used throughout this study.

It was primarily planned that this Master’s thesis contributes to the action research’s mapping and planning phase. It was originally envisaged that the results of this work were handed in before the actual action phase of the umbrella research, i.e. the piloting of CaringTV in Japan, commences. However, due to diverse organisational problems the analysis of this thesis’ data had to be delayed for five months. Within these five months the piloting of CaringTV in Japan had already started. Therefore, the results of this study can contribute to the action research during the second or even third research phase.

Even though this study constitutes a part of a greater action research, it does not apply action research as research strategy itself. This is due to the fact that this study itself does not aim at changing a real-life situation, nor does it follow a cyclic process including an action phase. This study seeks to simply describe the potential creation of CaringTV value for elderly people in Sendai. Still, the focus groups and interviews increase the participation opportunities for people on-site in Sendai concerning the whole action research process (Bloor et al. 2001, 13-16).

4.2 Theoretical-methodological research background

In order to structure and plan the whole thesis process I found it helpful to clarify the theoretical-methodological study background. Especially German social research guidebooks helped to identify the matching methodological-theoretical embedment of this study. Hence the report reflects the German influence on a research which looks at a Finnish service product in the eyes of its possible future Japanese customers.

4.2.1 Qualitative research perspective: exploring subjective viewpoints

Qualitative research has developed in the recent years into a vast and heterogenic field of empiric investigation. In general, qualitative research claims to explore living environments through the eyes of the individuals living and acting in these environments. It wants to ensure a better understanding of social reality by offering accurate and close-by descriptions. (Flick et al. 2008, 13-17)

Three main qualitative research perspectives exist. The first perspective intends to explore subjective viewpoints; the second seeks to describe processes of how social situations are constructed and the third aims at analysing subsurface structures of social and personal life (Flick et al. 2008, 19; Lamnek 2010, 28). This study can be understood to fall in the first category as it seeks to explore the participants' subjective viewpoints on the creation of CaringTV value for elderly people in Sendai.

4.2.2 Symbolic interactionism

As depicted above, this study seeks to explore subjective viewpoints and therefore belongs to the first qualitative research perspective. In social research, different basic paradigms, meaning theoretical positions, are attributed to each of the three qualitative research perspectives. Theoretical positions which offer a framework for the first research perspective -the exploration of subjective viewpoints- are *inter alia* symbolic interactionism, phenomenology and Max Weber's "Verstehende Soziologie". (Flick et al. 2008, 19; Lamnek 2010, 28) Naturally, I aimed to find the suitable methodological-theoretical basis hence also a matching theoretical position for this qualitative social research.

According to Lamnek (2010, 372 - 375) in most literature sources focus groups as qualitative data collection method lack methodological foundation. Even though it is frequently used in marketing research and occasionally in scientific branches, its methodological development

has been poor. Qualitative social researchers often feel like they are doing focus groups freely rather than following a theoretical methodological path. (Lamnek 2010, 372-375) Moreover, in English social research literature it has also been discussed that focus groups' methodological and theoretical embedment is lacking. Therefore, Anglo-Saxon focus group researches often face difficulties concerning validity and reliability. (Bohnsack 2008, 372-373)

That is why Lamnek eventually defines the sociological theoretical basement for focus groups. It is symbolic interactionism which can be considered the sociological theoretical basis for focus group researches (Lamnek 1998, 36; Lamnek 2005, 37). Interviews are also a suitable method to explore subjective meaning and rest upon symbolic interactionism (Lamnek 2010, 28). This incident enforces an appropriate level of research trustworthiness. Despite the major changes throughout the thesis process including the research approach disavowal and method adaptation, symbolic interactionism is the methodological and theoretical stabilising framework of this research.

Indeed it can be considered too bacchanal to explicitly report about symbolic interactionism when conducting a focus group research. However, certain basic symbolic interactionism assumptions can help a researcher to make the right choices in a research process. (Lamnek 1998, 35-39) Moreover, due to this study's scope I also refrain from a detailed discussion on symbolic interactionism and interviewing. Since, however, symbolic interactionism premises guided me in planning and data collection phase, it is worthwhile reporting them as follows.

Symbolic interactionism assumes that the actions of people are based on the meanings that certain objects have in these people's eyes. Logically, a researcher has to be able to look at objects through the eyes of the research informants. Hence, the researcher has to see the meaning of the objects as developed by the informants. Therefore, a researcher has to neglect own meanings and imaginations of objects in order to be open for the informants' meanings. Further, symbolic interactionism calls for qualitative research with a flexible approach. In opposition to hypotheses-overloaded quantitative research, qualitative research can openly and freely explore the true meanings and activities of real life processes. Moreover symbolic interactionism entails that research shall lead through empiric investigation and inductive research activities to the development of hypotheses and theories. (Lamnek 2005, 37-38)

4.3 Qualitative social research with qualitative marketing research features

This study seeks to bring together social science and economic practices in the health care and social service field. Therefore, the question arose whether to implement traditional qualitative social or marketing research.

Qualitative marketing research seeks to develop recommendations or decision-making aids for all kinds of economy. Marketing research is usually not applied in the academic field and lacks scientific identity as well as theoretical embedment. Qualitative social research can be silhouetted against qualitative marketing research, as it is methodologically and scientifically much further developed. Beyond marketing research, quantitative research has always been favoured for being more developed than its qualitative counterpart. In order to improve marketing research, interaction and informational exchange between any scientific qualitative research on the one hand and qualitative marketing research on the other hand should be applied. These possibilities for interaction and exchange have however been hardly used. (Naderer & Balzer 2007, 5-17)

Qualitative marketing research is an interdisciplinary research approach which can be related to, but not equated with, qualitative psychological, social or ethnographic research. In the past, marketing researches have come to a general renunciation of an own theoretical background. It was assumed that highly theoretical, here academic, approaches do not match the praxis. That is why qualitative marketing research has often freely copied data collection methods and theories from other qualitative research branches whenever it has appeared beneficial. So marketing research often implements focus groups, but it must not be equated with the method's branch of origin, namely qualitative social research. (Naderer & Balzer 2007, 17-35)

Hence it is not surprising that there is only little literature on focus groups in qualitative marketing research which offers a distinct theoretical position. One source with implications on a theoretical embedment is Dammer and Szymkowiak's "Die Gruppendiskussion in der Marktforschung (Group discussions in marketing research)" (1998). The authors recommend using Wilhelm Salber's research approach named "Psychologische Morphologie" (psychological morphology) when conducting focus groups in marketing research. "Psychologische Morphologie" is made up by three key statements which all focus on motivation, first as a collective, second as a non-personal and third a dramatic process. Further, "Psychologische Morphologie" is compared to paradigms or analysis methods, such as psychoanalysis or in-depth hermeneutics. (Dammer & Szymkowiak 1998, 120) For the latter reference points, "Psychologische Morphologie" can clearly be listed among qualitative research of the third perspective which aims at analysing subsurface structures of social and personal life.

Since this study aims at the exploration of subjective meaning, the latter suggested “Psychologische Morphologie” cannot be applied. Moreover, since it was hard to find other in-depth theoretic and scientific references on marketing research, I consequently decided to generally proceed along the guidelines for qualitative social research.

Nevertheless, this study also meets the standards of qualitative marketing research as it is qualitative and its outcomes should develop recommendations for health care and social service economy. Likewise, this study proceeds along qualitative social research guidelines, yet the data collection methods are also highly popular in marketing research (Denzin & Lincoln 2003, 70-73; Denscombe 2003, 168; Bryman 2008, 473-474; Gray 2004, 230-231; Lamnek 2010, 372-375). Therefore, this thesis is a methodological linkage between social and health care science on the one hand and economics on the other hand. The above-mentioned lack of informational exchange between social and marketing research can for a start be covered by studies like this, seeking to integrate social research and economics.

4.4 The renunciation of a research approach

In the thesis planning phase, I had decided to bring the focus group data collection method and the grounded theory research approach together. Despite deficient literature on grounded theory in combination with focus groups, it can still be argued that research approach and data collection method match (Loos & Schärfer 2001, 59). Yet, due to organisational reasons I had to reject the grounded theory approach from the data collection phase onwards. Still, I did not choose another specific research approach to replace the grounded theory. For ensuring a high level of transparency the following text gives information on grounded theory as such, as well as my choice why to apply and to eventually reject it.

Grounded theory research seeks to create theories, concepts or categories based on empirical data (Glaser 1998, 3-5; Strauss 1987, 5-6; Denscombe 2003, 109-129; Silverman 2005, 378; Denzin & Lincoln 2003, 278-279). All grounded theory researches follow a process of induction (Denscombe 2003, 109-129). Induction refers to a process in which firstly qualitative data on the research questions are collected, secondly categories or concepts are developed from the data which thirdly are crosschecked with existing theories (Strauss 1987, 5-6; Hall & Hall 1996, 33). The concepts developed through grounded theory should be useful and applicable in practice also for those who supply the data to the research (Denscombe 2003, 112). This study basically meets these criteria of grounded theory. It clearly follows an inductive process as it tries to describe value creation concepts for CaringTV based on empiric investigation in the field. Also, the categories on CaringTV value which are derived from this study are even-

tually integrated in the umbrella action research project. They can therefore be considered useful and finally practical for the participatory umbrella action research.

Furthermore, in grounded theory research comparative analysis shall first lead to the creation of substantive and later on formal theories. Substantive theories are formed when developing different concepts into hypotheses of low generality. Formal theories on the next level are further developed hypotheses based on the substantive theories, which claim universal validity and generality. (Lamnek 2010, 100-103) During this study's planning phase it was assumed that due to the study scope the findings of this thesis can only lead to the development of substantive theories. Based on empirical investigation, participants' thoughts on CaringTV value opportunities were supposed to be turned into substantive theories. It was first thought that a further study with same purpose and questions, but different theoretical sampling, could lead to the creation of formal theories on CaringTV value for elderly people in Sendai or even Japan.

One essential, if not the most crucial, feature of grounded theory is theoretical sampling (Strauss 1987, 38-39; Denscombe 2003, 127; Hildenbrand & Straus 2008, 42) that aims to erect a sample which is of relevance to research purpose, theoretical background and position of the research (Silverman 2005, 130-131). Theoretical sampling also implies that data collection and analysis phase are not chronologically separated from one another. Instead, analysis after each data collection phase shall lead to first hypotheses and influence the further sampling of informants. (Hildenbrand & Strauss. 2008, 42) This means that while a researcher is already collecting and analysing data, she chooses whether to collect more data from the same or other sources in order to meet the research purpose (Denscombe 2003, 117).

In this study, changes in the data collection process eventually disabled pure theoretical sampling and hence the implementation of grounded theory. Instead of at least three similar heterogeneous focus groups two different types of focus groups and three focused interviews took place. Second, due to further organisational delays the whole data analysis could only take place four months after the last data was collected. It was hence impossible to adjust the sampling process during the analysis phase.

As discussed earlier, qualitative marketing research literature has never offered a suitable alternative to the grounded theory approach or otherwise theoretical orientation. I have neither come across a suitable alternative in qualitative social research guidebooks. That is why before selecting the analysis method, I eventually dismissed the idea to apply any specific research approach. Nevertheless, the research perspective and eventually also the theoretical position naturally remained the same.

4.5 Data collection method triangulation

The application of more than one data collection method, hence of method triangulation creates a richer data outcome since one of the data collection methods can compensate the weaknesses of the other and vice versa (Hall & Hall 1996, 44; Denzin & Lincoln 2003, 99; Humphries 2008, 98; Silverman 2005, 121; Denscombe 2003, 131-134).

4.5.1 Original plan: focus group discussion and reactive observation

Originally I had planned to apply overt, structured reactive observation of the participants' non-verbal statements in a controlled setting, in which the observed individuals are aware of the observation process. (Denzin & Lincoln 2005, 732; Bernard 2000, 376) I had intended to set up an observation schedule along methodological guidelines, which enables systematic data collection and eventually results in consistent data. (Denscombe 2003, 195)

Yet in Japan, two major reasons caused me reject the structured reactive observation. First, it is impossible to generalise Japanese non-verbal communication patterns (Hagino 2010c), wherefore it was impossible to draft a structured observation sheet. Second, I became aware that two focus groups and three interviews would create an enormous data flood simply of the participants' spoken words. I anticipated that the amount of audio data would be adequate for the scope of a Master's thesis. Back then I did not assume that I would finally be able to analyse only one fifth of the whole audio data.

Indeed, the rejection of reactive observation was adequate, because most focus group researchers anyway focus on the analysis, thus on the data collection of thematic discussion contents. They furthermore neglect the analysis of group processes in most cases (Lamnek 2005, 177-179).

4.5.2 Final triangulation: focus group discussion and focused interviews

What is more, another method triangulation combination emerged. Due to cultural reasons, three focused interviews needed to be implemented in addition to the two focus groups. Both, interview and focus group, are indeed suitable for method triangulation (Bloor et al. 2001, 8-9; Denscombe 2003, 114-115). Nevertheless, the reasons for this method triangulation can be found in practical social life and not in intentions to increase research trustworthiness. Therefore, a discussion on the purposeful triangulation of focused interviews and focus groups

is dismissed in this chapter. Whether the triangulation eventually does result in a higher level of research trustworthiness is discussed in chapter 8.2.3 of this report.

In order to support the analysis of focus groups and focused interviews, unstructured notes on non-verbal communication and the general group process were taken. Even though I decided against reactive observation, a special focus on non-verbal communication and group processes was kept. According to Lamnek, structured and methodologically-bound observation is not necessary for doing focus groups. Yet, he states that it can be useful to do unstructured observations like note-taking of important circumstances during the group sessions. (Lamnek 2005, 169-176)

4.6 Research diary

A research diary can guarantee that all alterations made on a research plan can be followed up and appear reasonable. It can provide essential information for the reader to understand crucial decisions made in a research process. Yet, the diary does not need to be analysed during a study. Instead, it can serve as backup information for the researcher and consequently increases the trustworthiness of a study. (Silverman 2005, 249-252)

Since this study focuses on the perception of individuals from a distinct cultural background it was of importance to maintain high researcher flexibility. Before the data collection phase, I faced uncertainties about the precise structure of the focus groups as well as on the observation schedule. During the stay in Japan these uncertainties could be removed and further changes on the thesis plan were made. Furthermore, before the actual data collection phase, I stayed in Japan for several weeks. During that time I got acquainted with Japanese elderly care systems and especially with cultural dimensions of the everyday-life of elderly people in Japan. This familiarization process for instance had an impact on how I presented myself during the focus group sessions. During my stay in Japan I was writing down these experiences into a diary as well as the experiences made during the on-going data collection. Yet, the diary itself is not published as part of this study. As consequence I obliged myself to deliver a very precise and detailed research report. The reports shall give sufficient insight into the course of this study.

5 IMPLEMENTATION OF THE DATA COLLECTION

Due to changes in the data collection process it is inevitable to dedicate a separate chapter on the implementation of data collection. In this chapter the implementation of the data collection is described in detail.

5.1 Participant sampling

This study's purpose is to describe the potential creation of CaringTV value for elderly people in Sendai. Based on symbolic interactionism principles, a researcher is committed to explore objects or circumstances through the eyes of the people involved (Lamnek 2005, 37-38). That is why it is inevitable to collect the data on-site from possible future customers, here users of CaringTV in Sendai. In this study, the term "research participants" refers to focus group and focused interview participants in Sendai. Because the umbrella action research refers to its informants as participants, this terminology is used also in this study. All participants of this study were sampled partly theoretically and partly judgementally.

Due to my original but rejected choice to do grounded theory research, my initial intention was to apply theoretical sampling. In the thesis plan I had erected a theoretical sample wish list of valuable research participants. I had planned to invite elderly individuals, elderly people's significant others, either family members or close friends, elderly care professionals, elderly care experts from either TFU or FWBC and TFU students to each focus group session. The term elderly care expert refers to professionals involved in research or politics in the field of elderly care.

Naturally, it was difficult to assess from a distance whether my choice of the participants was suitable in the Japanese cultural context. Because the data collection took place in Sendai, a City and culture in which I had never been before, I lacked population access and deep cultural sensitivity. In fact, the originally established theoretical sample did not fully match the research context. That is why, the participants needed to be sampled judgementally. Judgemental sampling takes place when a research she has to rely on gatekeepers who enable access to the phenomenon or people to be studied. For instance when a researcher faces difficulties in accessing a population group, she can apply judgemental sampling in order to define the research participants. (Hall & Hall 1996, 115)

Hence, based on my original sampling plan, our TFU and FWBC cooperation partners erected a judgemental sample. The cooperation partners' network and information on population groups in Sendai were the further basis on which the participants were selected. It was also

the cooperation partners who invited and empowered the participants to join the focus groups and interviews.

Finally, the partly theoretical and purposive sampling led to the following set of participants:

(1) Focused interview participants were elderly people and their relatives. Due to our cooperation partners' assumptions, in Japan it is more adequate to invite only the elderly person's relatives to such data collection method and not their friends (Hagino & Kudo 2010). Thus, TFU selected participants with different health conditions and family situations, who are yet all of Japanese nationality and live in their own homes.

- Interview 1 participants are an elderly man (participant 1 = P1) and his wife (P2) who live together. P1 is of 68 years and suffers from brain damage after an accident and uses day rehabilitation services of Tohoku-Fukushi affiliated facility. P2 is of 69 years and takes care of her husband at home.
- Interview 2 participant is an elderly man of 69 years (P3) who has come down with child jaundice. P3 therefore has been facing difficulties in walking ever since. He lives alone in his house.
- Interview 3 participants are an elderly lady (P4), her husband (P5) and their daughter (P6). P4 is 79 years old and suffers from Parkinson's disease. During her lively stage she was master of Japanese cultural ceremonies. P4 lives with her husband of 83 and daughter of 53 years, who take care of her at home. (Hagino 2010, email3)

Besides, it ought to be mentioned that all interviewees are facing difficulties in participating in society. In the case of interview 1 and 3 participants, the difficulties emerged with injury or disease in older age. Interview 2 participant has however faced equal participation difficulties since childhood. Furthermore, all participants were cognitively able to follow the promotion video and interview flow.

(2) Participants of focus group 1 are three elderly care professionals (TFU contacts) together with one expert on business development (FWBC contact). These participants (P7-P10) do not all belong to the same work field, but are all interested in developing and innovating elderly care business. The professionals each work in decision-making positions in the same care institution, which belongs to TFU's joint foundation facilities. Their fields of expertise vary from rehabilitation care, preventive care, community care to care manager work. (Hagino 2010, email3) It needs to be mentioned that one of the elderly care professionals is the care manager who attended the focused interviews with the elderly (see chapter 5.3.5). She had witnessed one interview before she attended the focus group and was therefore more prepared for the upcoming discussion than her focus group members.

(3) One academic researcher from TFU, who has conducted research on elderly care services himself, and other members of the City of Sendai working on elderly care matters were invited to focus group 2 (P11-P15).

My original idea to also invite students to the focus groups was rejected. In the discussion with Dr. Hagino and Prof. Kudo I was informed that Japanese students are very shy and would therefore probably not contribute to the focus group discussion (Hagino & Kudo 2010).

5.2 Focus groups

The term focus group refers to a conversation of several people about a specific thematic area, which is presented by a group facilitator (Silverman 2005, 12-13; Bryman 2008, 473; Lamnek 2005, 11). Marketing research has made frequent use of focus group as data collection method in order to increase customer understanding (Denzin & Lincoln 2003, 70-73; Denscombe 2003, 168; Bryman 2008, 473-474; Gray 2004, 230-231; Lamnek 2005; Lamnek 2010, 372-375). The frequent use of focus groups is based on the assumption that interactive stimulation of focus group members enhances the expression of individuals' opinions (Lamnek 2010, 377). Originally, focus groups were mainly used in marketing research. Yet nowadays, the term focus group is also applied in social sciences when describing formal group interviews with exploring or pretesting purposes (Denzin & Lincoln 2003, 70-73; Denscombe 2003, 168; Bryman 2008, 473-474; Gray 2004, 230-231).

All focus group positions assume that down-to-earth and everyday-life bound data is more likely to be found in group situations rather than in one-on-one interviews. Focus groups in marketing research are implemented to gather information which is useful for economy. The information shall give insight in customers', e.g., attitudes or ideas towards a specific product. Hence, marketing research focus groups have the purpose to simply explore certain information. Yet, focus groups can be useful for the exploration of information not only in marketing research, but also in social research, especially as a starting point for further research. (Lamnek 2005, 70-72)

Advantages of focus groups are that they can empower participants to utter their opinions freely. Participants might feel safer and less intimidated to open up within a group of people rather than in one-on-one interviews. Moreover, due to group dynamics the focus group discussion can lead the research towards unexpected content areas, which could remain unnoticed during one-on-one interviews. In addition, focus groups are affordable for the researcher and nevertheless harvest a rich data output. Disadvantages, however, are that if not planned well enough, focus groups cannot give space for sensitive questions. Besides, single

participants' opinions can be overruled by more dominant participants if the facilitator is inattentive. (Denzin & Lincoln 2003, 70-73; Humphries 2008, 94-95; Denscombe 2003, 169)

	Original Plan	Focus group 1	Focus group 2
Participant sampling	Theoretical	Theoretical and purposive	Theoretical and purposive
Participants' background	Elderly individuals, elderly people's significant others, elderly care professionals, elderly care experts from either TFU or FWBC and TFU students	3 Elderly care professionals (working in one service in institution belonging to TFU's joint foundation facilities) and 1 expert on business development	1 academic researcher of TFU (has been conducting research on services for elderly people) and 4 employees of City of Sendai (responsible for matters of the elderly)
Group nature	Heterogenic, artificial	Heterogenic, partly natural but loose	Heterogenic, artificial
Group size	5	4	5
Amount of groups	3-5	1	1
Facilitator	Left open for discussion with cooperation partners	Layman consulting experts, Dr. Hagino	Layman consulting experts, Dr. Hagino
Sheets distributed to participants invitation letters (IL), informed consent (IC), questioning route (QR), introduction text (IT)	IL, IC: days before the focus groups	QR, IT: in the beginning of the focus group session before the discussion commenced IL, IC: focus group meeting before beginning the session	Laurea invitation letter, QR, IT: days before the focus groups IL, IC: focus group meeting before beginning the session
Focus group course	Promotion video and taped session as stimulus, then discussion	Promotion video as stimulus, then discussion	Promotion video as stimulus, then discussion
Questions or themes?	Left open for discussion with cooperation partners	questioning route	questioning route

TABLE 4: Focus group original plan versus final focus group implementation

Early in the planning phase of my thesis I had decided to apply focus groups as data collection method. Since this study seeks to combine social and health care science with economic theo-

ries, it immediately seemed sensible to choose a data collection method which is favoured in marketing research. Further, the numerous positive focus group features meet the research purpose, namely to describe the potential creation of CaringTV value for elderly people in Sendai. However, after my arrival in Japan, our supportive cooperation partners of TFU and FWBC gave their opinions concerning the data collection plan. Together we drafted a second plan for the data collection. In the end only two focus groups were implemented. All other data was collected through interviews. The following chapter gives detailed account of the focus group planning and implementation process. In order to enable an overview, table 4 depicts the major changes between original focus group plan and eventual set-up of focus group 1 and focus group 2.

5.2.1 Nature of focus groups

One can differentiate between homogeneous versus heterogenic, artificial versus natural and loose versus cohesive focus groups. The choice for the group type, and hence the participant sampling, has to interrelate with the research purpose. The set-up of focus groups is very important, as it can either promote or discourage group communication. (Lamnek 2010, 394-399)

The benefit of homogenous groups is that group participants are more likely to feel understood and are therefore empowered to share own opinions (Morgan 1998, 61). The strength of heterogenic focus groups in opposition is that here communication can become more vivid and eclectic. Likewise, artificial groups represent a maximum of diverse opinion and therefore also lead to vivid and eclectic data. Natural real-life groups instead increase the level of trustworthiness as the data is closely interrelated with social reality. However, natural groups are often heterogenic as members of natural groups most likely have different positions and roles in this group or in society. Therefore, natural groups often function according to an own set of group rules and hierarchies, which can hinder free group discussions. (Lamnek 2005, 104-109) When looking at natural groups one can still differentiate between cohesive, for instance families, and loose groups, e.g. employers who do not work very closely with one another. Both, cohesive and loose focus groups are suitable for focus groups. No closer findings exist about the benefits or disadvantages of either group type in a focus group context. (Lamnek 2010, 398-399)

In order to gain vivid and eclectic data, I had initially planned to run heterogenic and artificial focus groups. To each group session I aimed to invite one elderly individual, one elderly people's significant other, either meaning family member or close friend, one elderly care professional, one elderly care expert from either TFU or FWBC, and one TFU student. Thus,

each focus group session was supposed to be made up by different individuals, meaning that each individual would have attended only one focus group and that people of different profession and background would have taken part in each session. All groups should have represented the same number in elderly, in their relatives, in elderly care professionals, experts on the field of elderly care and students. This group set-up plan was based on grounded theory which calls for theoretical saturation. Theoretical saturation implies that data collection has to be repeated under similar circumstances until no new data can be gathered. The data collection set-ups may indeed be adapted to the needs of a research, but shall initially still be similar. (Strauss 1987, 21; Denscombe 2003, 117)

Yet, in Sendai our cooperation partners explained that in Japan heterogenic and artificial focus groups could lead to unsatisfying research outcome. Due to Dr. Hagino and Prof. Kudo, as well as FWBC staff, Japanese people, especially elderly, feel intimidated to utter their real opinions within heterogenic or artificial groups. Notably the presence of highly educated individuals could have a very awing effect on the elderly, as well as their relatives. (Dr. Hagino & Kudo 2010; FWBC meeting 2010) Therefore we jointly made the decision to restructure the data collection plan. We agreed to conduct two different focus groups and three additional interviews.

The first focus group was made up by three elderly care professionals, who all work for the same company, and one expert in business development. The group was hence heterogenic and partly natural but loose, because three out of four participants work for the same company. As they do not work very closely together, they are only loosely connected. Because it was most practical for the participant gatekeepers, it was chosen to invite three participants from the same company. The group was further heterogenic since the three co-working participants belonged to different hierarchy levels of the company. It was also heterogenic because the fourth participant does not work for the same company, neither does he work in the same field. In the planning phase, it was thought that the differences in hierarchy are bearably light and should not disturb an open discussion flow.

The second focus group consisted of so-called elderly care experts, precisely one academic and four other representatives of the City of Sendai who are *inter alia* responsible for matters of the elderly people in Sendai. The group was therefore artificial and partly heterogenic. All participants seemed to have had a rather similar hierarchy position in Japanese society, although it might be argued whether the academic participant was considered to rank on a higher hierarchic level than the other participants.

Besides, the two focus groups were kept separately since their positions in Japanese hierarchies were too different (Dr. Hagino & Kudo 2010). By keeping the groups separate, while

each group was internally heterogenic, we hoped to create an open atmosphere and vivid focus group discussions.

5.2.2 Group sizes and amount of groups

Focus groups generally comprise a minimum of seven and a maximum of twelve participants (Lamnek 2010, 395-399). Nevertheless, it is also possible to invite only four to six participants to a focus group. Such small-sized focus groups are called mini-groups. In case of sensitive research topics in groups with, for instance, children or experts, it is beneficial to run such mini-groups. (Lamnek 2005, 129) The original thesis plan aimed at focus groups with five participants each. The group size was chosen to be rather small since matters on elderly care can still be considered a sensitive topic. Further, each participant's opinion should be given enough time and attention during the group session.

After the redesign of the focus group set-up, the amount of group members became partly vague. In the planning discussions with our cooperation partners in Sendai we consciously decided to invite five participants to each group. This choice was based on my original intention to implement small focus groups. In the time available it was however only possible to invite four participants to group 1, group 2 could instead be filled with five participants as planned. Even though group 1 comprised of less participants as suggested by Lamnek (2005, 395-399) it still had a strong discussion character and can be therefore be considered a mini focus group.

In general, it is assumed that most likely one focus group alone never produces sufficient data for a study (Bryman 2008, 477). This study's initial research approach grounded theory advises to conduct a study until it reaches a level of theoretical saturation (Strauss 1987, 21; Denscombe 2003, 117). Concerning the focus groups this would have meant that data collection should have continued until the researcher could predict what kind of data a further group would produce (Bryman 2008, 477). During the thesis planning phase I had assumed that three focus groups are necessary to gather sufficient data. Since focus groups, however, produce an enormous amount of data (Bryman 2008, 477), which can hardly be processed within a Master's thesis' scope, I indeed hoped that three focus group discussion would lead to theoretical saturation. I had thought, however, that if at site it was noticeable that three focus groups do not merely lead to theoretical saturation, one or two more focus group sessions should be implemented.

Eventually however, the grounded theory approach was overthrown. Based on the fact that similar focus groups could not be formed and repeated until theoretical saturation was

reached, theoretical sampling was impossible. Instead, the number of focus groups and interviews was fixed before the data collection process. This new turn in data collection was approved by Paula Lehto (E-mail 2010) before the data collection commenced. This small amount of focus groups in a research project naturally has influence on the level of trustworthiness of the study and will be discussed in chapter 8.2.3.

5.2.3 Data capture during focus groups

The original plan was to record the focus group sessions on audio and video, with recorders openly displayed to the research participants. Upon the advice of our cooperation partners (Hagino 2010 email1), the video recording was dismissed. Indeed, it is often recommended to video record focus groups in order to capture all participants' facial expressions or nonverbal communication signs as e.g. nodding (Lamnek 2010, 420; Lamnek 2005, 171). Yet it has been argued that the presence of video recorders can intimidate participants (Lamnek 2005, 172). Since the focus group discussions were most likely new and unfamiliar situations for the participants, I did not want to expose them to further intimidating conditions. In order to create a confiding atmosphere I relied on the advice of the cooperation partners.

Moreover, it can be useful to do unstructured observations like note-taking of important circumstances during the group sessions (Lamnek 2005, 169-176). That is why my fellow student and I took unstructured notes about non-verbal communication and group processes during the focus groups. The notes were taken along the according point of time of discussion or interview. The focus was laid on non-verbal communication because, at times, Japanese people politely expose verbal agreement, but simultaneously show non-verbal disagreement (Hagino 2010a). My fellow student is fluent in Japanese and was able to note the conversation content matching the non-verbal communication. Also, the facilitator paid attention to non-verbal communication and informed me after the sessions about his observations.

5.2.4 The focus group facilitator

During the focus group sessions the facilitator, often the researcher herself, seeks to systematically explore data which answer the prior research questions. Hereby it is the facilitator's task to create a safe group environment for open-minded conversation. (Denzin & Lincoln 2003, 70-73; Hall & Hall 1996, 158-159; Humphries 2008, 94; Denscombe 2003, 168-169) Therefore it needs to be planned carefully, who is the facilitator and which role does she play, e.g. as an expert. Also, the tasks a facilitator needs to be planned meaning how the

facilitator leads the discussion and how he can create the sense of safety and community. (Lamnek 2010, 400-402)

The focus group sessions were held in Japanese in order to guarantee equal contribution opportunities during the discussion. Since I do not speak Japanese, Dr. Hagino kindly moderated the focus groups on my behalf. He had offered himself as facilitator as he is familiar with CaringTV and his field of competence is in academic research (Hagino & Kudo 2010). A focus group facilitator can act in the role of a layman who considers the participants as valuable and very important experts (Lamnek 2005, 141). Further, the role of the facilitator in the focus group sessions should not be intrusive, since the qualitative data which is collected must not be manipulated by the facilitator (Bryman 2008, 480; Bloor et al. 2001, 48-49).

Furthermore, the facilitator was asked to neither lead the participants towards certain possible contents nor to expose his own opinions on the questions. That is why the facilitator was assigned to follow the prepared questioning route and to empower the participants to freely answer and discuss. Moreover, in Japanese communication it rarely happens that one speaker interrupts another. Instead, Japanese people often take their time in answering and are not used to discuss impulsively. (Hagino & Kudo 2010) That is why the facilitator's tasks were more to encourage all participants to speak than to preserve respectful communication culture amongst the participants. Naturally it was also the facilitator's tasks to create a feeling of safety and trust. Concerning focus group 1 it was the facilitator's special concern to avoid that co-workers' hierarchy structure would hinder a free and equal discussion. Concerning focus group 2 it was kept in mind that a high level of confidentiality, and thus a feeling of trust, had to be ensured.

Overall it seemed as if the facilitator in both groups interacted with the participants as planned. He appeared very attentive and empowering, and his talkative part always lasted for only short moments. However, the facilitator himself actually mentioned after the discussions that he had partly taken a too active and leading role in the discussions.

5.2.5 The role of students and other spectators during the focus groups

My own role during the focus group sessions was rather passive. I only spoke to the participants in the very beginning in order to introduce myself and eventually in the end of the sessions to thank for their participation. We had first considered asking an interpreter to join the focus groups for simultaneous translation in order to enable me as researcher to interfere with the discussion. I rejected this idea, however, since I had assumed that steady interpretation in the background of a discussion would intimidate the free discussion of the partici-

pants. Besides, I deeply trusted in the skills of the facilitator, so my fellow Laurea student and I only acted as observers and took unstructured notes during the interview course.

Furthermore, it needs to be mentioned that interested spectators from TFU and FWBC were present in both groups. Focus group 1 was attended by the interviewer, who wanted to observe the group facilitator's actions. Additionally, two members of the research board of TFU were present to observe the data collection implementation. Focus group 2 was attended by one FWBC staff constantly and partly by two other staff members who welcomed and thanked the participants.

In fact, it did not show whether or how far the participants were intimidated by the amount of spectators. At one point during focus group 1, the facilitator addressed the present research members and my fellow student for information on a certain issue. Students and the research members were not otherwise involved in the discussion of focus group 1. The spectator of focus group 2 commented on the discussion at the end of the sessions, while during the group discussion he only communicated nonverbally and gathered notes. The consequences of the spectators' presence are discussed in chapter 8.1.3-4 of this report.

5.2.6 Focus group course

The two focus groups followed the same pre-set structure. The final structure hardly differed from the originally set up plan. Both groups started off with personal introductions. Japanese business manners imply friendly gestures, such as a polite smile as well as soft and kind speech. It is naturally also adequate to be aware of female- and male-specific bowing techniques. (Nakamura 2010) Especially in the introduction sessions, I paid close attention to these basic cultural rules.

After the personal introduction, the participants were asked to freely choose their place around a conference table. In both focus groups coffee was offered to create a welcoming atmosphere. Even though group 2 had already received invitation letters and informed consent forms, in both groups invitation letters and informed consent sheets were distributed and time for reading and signing was given. The group facilitator gave a short welcoming address in which he informed about research purpose and background as well as about audio recording, confidentiality and note-taking. He then opened the official introduction round as focus group warm-up. Further warm-up was considered unnecessary and inadequate for both focus group sessions (Hagino 2010c).

It is rather usual that a focus group facilitator confronts the group with some stimulus at the beginning of the meeting in order to give a basic direction for the discussion (Denscombe 2003, 169; Lamnek 2010, 377-378 and 401). For this reason, the CaringTV promotion video was shown in English to the participants. Unfortunately, despite my original expectation, the video could not be shown with Japanese subtitles. That is why the facilitator had prepared a small introductory text, which he read to the participants before the video show, summarising its content (see Appendix 5). During the video show, he additionally pointed out the CaringTV devices and translated important information given in the video. It was originally planned to also show the participants a previously taped CaringTV session from Finland. Unfortunately, Laurea was not able to supply such a video. After the video show the facilitator initiated the group discussion by following the pre-set questioning route.

The necessary time frame for a focus group depends on the amount of participants and questions. By multiplying the number of participants by questions and by relating this number to the estimated discussion duration, the average time per question and participant can be calculated. (Lamnek 2005, 109-111)

Focus group	Number of participants	Number of questions	Estimated length of discussion in minutes	Minutes per participant and question
1	4	5	50	2,5
2	5	5	50	2

TABLE 5: Plan for the focus group time frame (table structure taken from Lamnek 2010, 111)

Our cooperation partners suggested that the two focus group sessions each should last one hour. A one-hour focus group would have left approximately 50 minutes' time for discussion. Hence, as depicted in table 5, in focus group 1 each participant would have had two and a half minutes' time to answer one question. In focus group 2 each participant would have had two minutes' time to answer a question. This ratio theoretically enables the participants to answer the questions in depth (Lamnek 2005, 111). Practically however, this ratio did not suffice and thus both focus groups discussions lasted approximately 90 minutes and only ended after all questions had been asked.

In contrast to the interviews, the focus group sessions were rather formal. The participants displayed fewer emotions. In both cases, the group members seemed to be a little cautious at first, as people answered one by one and gave a lot of time to others to respond. Also, the participants of both groups did not interact very much with each other in the beginning. In focus group 1 most participants initially only addressed the facilitator. In focus group 2 most

participants did at first only address the participant from TFU, not the facilitator. Also, during the first 30 minutes, one focus group 2 participant steadily looked at me when talking. After a while however, the participants of both groups interacted more with each other and responded rather quickly to each other. At some points, especially towards the end of the discussions, the participants laughed together, which gave the impression that the atmosphere in both groups was relaxed after all. Moreover, all observers stated that none of the participants displayed nonverbal communication which would have indicated that any participant did not mean what he/she had expressed verbally.

5.2.7 Focus group questioning route

In the thesis plan I had not yet formulated the themes or questions for the focus groups. I wanted to work on those only after having discussed with our cooperation partners in Sendai. The latter was due to considerations on my behalf to create a pleasant focus group atmosphere, which empowers free contribution of all participants. I was bearing in mind that Japanese and Western European communication styles differ.

Focus group guidelines recommend running less structured sessions, with facilitators asking only few and general questions to the participants (Bryman 2008, 480). Yet the choice between loose topic guides and more structured questioning routes is given (Lamnek 2005, 96-98). Japanese discussion culture is rather calm and chary. Besides, common Japanese people are not used to discussion contexts, where they are asked to spontaneously answer or even take the lead in a discussion flow. Japanese are instead used to organise themselves in groups with one distinct leader. (Hagino & Kudo 2010; Hagino 2010b) Therefore it was logical to eventually prepare a questioning route that should enable the facilitator to sustain the group discussions by frequently presenting new questions. The questioning route had the further purpose to release the group facilitator from responsibility towards the precise data collection (Lamnek 2005, 98).

Naturally the questioning route is based on the two research questions, namely “What kind of value can elderly people in Sendai gain from CaringTV?” and “How can CaringTV create this value?”. The focus group participants had already heard about CaringTV or a similar service product before I invited them to join the research (Hagino 2010a). Five focus group questions were developed. In case the discussions would have proceeded too quickly, three additional back-up questions were drafted. Dr. Hagino kindly translated all questions into Japanese including some minor terminology changes necessary in the Japanese language context. The focus group questions can be found in original and adapted versions as appendices 3 and 4, respectively.

It needs to be mentioned that the questioning route, as well as the brief introduction text composed by the mediator Dr. Hagino, were sent to all focus group participants before the data collection. Japanese people prefer to share their opinions only after having thought them through. This can lead to silent breaks in discussions and hence a loss of time. Furthermore, the participants might have felt uncomfortable during the focus groups without knowing the upcoming questions. (Hagino & Kudo 2010) In order to ensure a relaxed atmosphere and vivid discussion our cooperation partners recommended sending the questions in advance.

5.2.8 Focus group setting

A focus group is usually held in a formal and given setting (Denzin & Lincoln 2003, 70-73). The initial intention was to also invite the heterogenic focus groups to a formal setting, e.g. the FWBC or TFU premises. Because the plan on the focus groups had changed, the changes on the setting were also performed.

The original plan was to keep the artificial and heterogenic focus groups in a formal, given setting provided by either TFU or the FWBC. Yet, focus group 1 took place in a formal setting: a meeting room at the workplace for three of the four participants. Our cooperation partners had chosen this setting to ease the access for the majority of participants to the focus group. Focus group 2 was run in a formal setting, in the FWBC, which was an unfamiliar setting for four of five participants. This most formal setting in a room with options to see the CaringTV promotion video on a wide-screen seemed most suitable for this focus group with participants of high public status.

5.3 Focused interviews

The first idea we developed in Sendai was to run a third focus group together with all elderly and their relatives. For practical reasons, however, it was not possible to bring all elderly and their relatives together. It was also thought that elderly and their relatives would feel comfortable to discuss only in natural coherent groups (Hagino 2010a). Therefore we eventually decided to interview the elderly and their relatives separately.

Because the time frame between the final decision on running the interviews and the actual data collection was rather short, it was impossible to prepare the interviews profoundly. The interviews were based on focus group guidelines due to a lack of literature review about interviews as data collection method. As focus groups belong to the methodological area of qualitative group interviews (Denzin & Lincoln 2003, 70), I could initially justify the usage of

focus group guidelines. After the data collection phase I came across literature upon focused interviews which back up this justification. The literature sources claim the similarity in structure and implementation between focus groups and focused interviews.

	Interview 1	Interview 2	Interview 3
Participant sampling	Theoretical and purposive	Theoretical and purposive	Theoretical and purposive
Participants	Elderly person (male, 68 years, brain damage after accident, uses rehabilitation services) and his wife who lives with and takes care of her husband	Elderly person (male, 68 years, suffered from child jaundice, difficulty in walking ever since)	Elderly person (female, 79 years, Parkinson's disease, was highly educated in Japanese cultural ceremonies), her husband and daughter who all live with and take care of the mother
Participants' group nature	Heterogenic, natural, coherent	No group, only 1 participant	Heterogenic, natural, coherent
Number of participants	2	1	3
Amount of interviews	1	1	1
Interviewer	Layman consulting experts, Dr. Hagino	Layman consulting experts, Prof. Kudo	Layman consulting experts, Prof. Kudo
Distributed sheets to each participant (invitation letters: IL informed consent: IC questioning route: QR introduction text: IT)	IL, IC: interview meeting, before beginning IT and QR: were read to the participants	IL, IC: interview meeting, before beginning IT and QR: were read to the participants	IL, IC: interview meeting, before beginning IT and QR: were read to the participants
Course	No visual stimulus, but verbal information then discussion along questioning route	Promotion video as stimulus then discussion along questioning route	Promotion video as stimulus then discussion along questioning route
Questions or themes?	questioning route	questioning route	questioning route
Setting	Informal, home	Informal, home	Informal, home
Observation	Overt note taking by two people	Overt note taking by two people	Overt note taking by two people
Others present	Care manager	Care manager	Care manager

TABLE 6: Three focused interview structures in comparison

It is worthwhile giving an insight into the theoretical background of interviews, which can be belatedly referred to the implemented interviews of this study. The central focus underpinning all qualitative interviews is on those themes which the interviewees consider relevant (Froschauer & Lueger 2003, 16).

Major criteria of qualitative interviews are:

1. that the interviewees structure the course of the interviews through their contributions,
2. that the interviews are generally useful but often applied only in the beginning of a research,
3. that the purpose is on the exploration of subjective viewpoints of the interviewees,
4. that one or several individuals can be interviewed,
5. that the interviewer's role is rather soft and considerate,
6. that questioning arrangement is roughly structured
7. and that open questions are posed (Froschauer & Lueger 2003, 35).

Several types of interviews exist which are used in qualitative social research. One interview type is the focused interview as theoretically developed by Merton and Kendall. (Hopf 2008, 351-355) Focused interviews are also known and applied in marketing research (marktforschung.de 2008). Focused interviews are closely related to the focus group method. In comparison to focus groups, the number of interview participants can be comparably small. Moreover, a focus interview is feasible with even one participant. Similarities between focus groups and focused interviews are that both expose the participants to a stimulus and focus on a thematic subject. Either topic guides or questioning routes affect the course of focus groups and focused interviews. Yet, both data collection methods enable free participant statements on the stimulus and subject. Thus both methods cannot be considered as rather structured interviews. (Hopf 2008, 353-355)

In the following chapters the implementation of the focus interviews is depicted in detail. Table 6 illustrates the differences and similarities between the three implemented interviews.

5.3.1 Focused interview configurations

In total, three elderly people and their relatives were interviewed. The interview participation was voluntary. The interviews each comprised of one to three participants. It was not due to no-shows that the number of participants was partly small. In fact, the families had decided that the number of participants was sufficient. In the case of the one-participant interview it became clear on-site that his only relative lived too far away to join the group.

Each elderly person and their relatives were interviewed within their natural, coherent family setting. The benefits of the natural, coherent group nature for this study are explained above. Moreover, the group of interview participants is also heterogenic, since the different

family members most likely have different positions and roles in their group or in society. Therefore, natural groups often function according to their own set of group rules and hierarchies. A disadvantage of the heterogeneity hence is that it can hinder free group discussions (Lamnek 2005, 104-109).

5.3.2 Focused interview setting

The interviews with the elderly and their relatives took place in natural settings, in their own homes as voluntarily agreed on by the interviewees. The natural setting was chosen due to practical reasons to ease the access to the interviews for the elderly and in order to stimulate a feeling of safety amongst the participants. The interviewees decided at which place in their homes the interview would proceed. In all three interview situations we were asked to gather around a table in the living room of the family.

The participants' homes differed from one another. Participants of interview 1 invited us to their Western-style home within a modern, upper middle-class city district. The house was comfortably furnished and well-equipped with new technical devices. Interviewee 2 lived alone in an old Japanese-style house in need for minor repairs. The furniture was basic, but the living room was pleasantly decorated with pieces of self-made art. Participants of interview 3 lived in a typical middle-class home which is furnished in Japanese style according to basic Japanese middle-class standards.

5.3.3 The interviewer

For the same reasons that Dr. Hagino moderated the two focus groups, a Japanese-speaking interviewer was appointed for each interview. Prof. Kudo kindly moderated two interviews with elderly and their relatives. Prof. Kudo's field of competence is in immediate work with elderly people, as he had worked as a care worker for elderly before (Hagino & Kudo 2010). Due to time management reasons and professional competences, Dr. Hagino had taken the interviewer role in one of the interviews. In chapter 7.2.3 it is discussed in how far the interviewer shift is disadvantageous for the outcome of the study.

Due to the fact that the interviews were planned along the guideline for focus groups, the interviewer was assigned the same role and tasks as the focus group facilitator. Hereby, the interviewer kept in mind that family-bound hierarchies and rules might influence the discussion flow.

Throughout the interviews, both interviewers acted very politely and friendly, which was mirrored in the interviewees' talkativeness and mainly open body language. During the interviews it seemed to me as non-Japanese speaker, as if the interviewers were hardly intrusive as they rarely interfered in the interviewees' answers. Yet, the interviewers partly claimed after the interviews, that they could have leaned back even more. The interview transcripts affirm the interviewers' concerns partly; the interviewers kept back their own opinions, still they partly offered answering options to the participants to support the interviewees' idea-flow. Furthermore, the interviewers paid attention to the family-bound rules and hierarchies, which influenced the discussion flow, by empowering more silent participants to speak.

5.3.4 The students' role during the interviews

Compared to the roles of the interviewers, my role as researcher was to remain rather passive during the interviews. I introduced myself in the beginning and thanked at the end for participation. Otherwise, my fellow Laurea student and I took unstructured notes during the interview course.

The whole time, we European students applied our knowledge on the Japanese culturally adequate behaviour codex. The interviewees seemed positively appealed by our behaviour, as they reacted with smiles and open body language to our appearance.

5.3.5 The care manager's role during the interviews

A care manager who is regularly working with the interviewees attended the interviews in order to create an atmosphere of trust. She had originally also informed the participants about the study and asked for their participation. Later on, when we entered the interview setting, the care worker introduced us to the participants. As interview warm-up and to help the participants relax and adapt to the new situation, the care manager primarily carried out her regular counselling session. During that time interviewer and note-takers sat quietly and respectfully aside.

After the counselling had finished, the actual interview situation commenced, during which the care manager was asked to remain passive. Her assigned role was not to answer any questions or to state any opinion on the interview content. Yet, she was allowed to empower the participants to share their opinion and ensured an atmosphere of trust through her presence.

The care manager's presence seemed to truly support the interviews. She steadily disclosed open and friendly body language and speech. She also managed to bridge situations in which the interviewees appeared tensed or kept silent. It was observed by all that, especially during interview 2, the care manager was able to reduce the interviewees' timidity towards answering the questions. Yet, in the transcripts it is noticeable that the care manager partly led the answers as she also offered answering options to the interviewees. The answering options seem to root in the care manager's knowledge on the interviewees' life situations. By offering answering options, she nevertheless managed to empower the interviewees to ideate and answer in depth.

5.3.6 Focused interview course

The interviews' course was almost the same as for the focus groups. The interview commenced with a welcoming speech in which the facilitator informed about research purpose and background as well as audio recording, confidentiality and note-taking. All interviewees were aware that interviewers and care manager work for either TFU or a Tohoku-Fukushi-affiliated facility. It was further explained that research owners and note-takers are students of Laurea. It was also described that Laurea cooperates with TFU and hence was also an affiliated facility for transferring CaringTV to Sendai. The interviewees understood that their opinions will influence the further development of CaringTV in Sendai that they thus themselves can benefit from their statements during the discussion as clients of the Tohoku-Fukushi-affiliated facility. The interviewees joined the interviews due to their interest in contributing to a study on CaringTV and in developing their life situations to a better.

The introduction text on CaringTV was then read to the elderly. I had formulated the CaringTV introduction text in simple words, as I had assumed that the focus group introduction text contains too many technical terms for the interview participants. Yet, even though the CaringTV introduction text was kept simple, the participants found it hard to understand the whole CaringTV concept. The interviewers had to answer questions concerning the service product several times.

After the introduction text, the CaringTV promotion video was shown to the participants. During this time, the interviewer pointed out the CaringTV devices and gave necessary information to understand the video. Due to technical problems the video could not be shown in one interview. Therefore, the interviewer had to explain the video content and CaringTV device features orally. In interview 3, the CaringTV video was shown a second time in the middle of the interview session due to a request of the participants. After showing the video,

the interviewer continued along the pre-set questioning route until all questions were asked. The interviews lasted as planned, i.e. approximately one hour each.

When looking at the participants' verbal and nonverbal contributions during the communication flows, all three interviews strongly differed. In interview 1 and 3, family-bound hierarchies and rules seemed to emerge, as some participants quickly answered on behalf of another silent participant. In interview 1, the elderly lady was strongly taking over the lead when answering the questions. She spoke with a firm voice, active gesticulation and kept eye-contact with all. Her husband was often very calmly sitting beside her, barely had eye-contact with others or shared his opinions. According to the care manager, the husband's calmness in body language could be traced back to his brain damage. Yet especially when talking about his previous work place or colleagues, his body language became vivid and he smiled.

In interview 2, the only interviewee seemed rather intimidated by the new situation at first. He immediately asked the care manager to sit next to him and in the beginning kept eye-contact, mainly with her. He also partly hid his face behind his hands when he did not have an immediate answer. Yet he shared his opinions and towards the end of the interview displayed a more open and relaxed body language.

Interview 3 participants unequally contributed to the interview conversation. The elderly lady appeared very shy and uttered her opinions only rarely with a few words. Her husband and daughter instead answered most questions quickly and at times fiercely. They partly tried to motivate the elderly lady to answer more questions, but often these attempts remained unsuccessful. The elderly lady mainly kept her eyes on the floor and held her hands tight in her lap. Husband and daughter instead kept steady eye-contact with us and used open body language. At some point, the elderly man even moved closer with his chair to the interviewer. According to the care manager, the lady's restricted contribution is firstly due to her personality, as she has always been a shy person, and secondly to the Parkinson's disease and medication. Still, all three interviews had in common that according to observers, interviewers and care manager all verbal statements can be considered valid. On no occasion did the participants voice statements which conflicted their body language.

5.3.7 Focused interview questioning route

Again due to a lack of time to read more on interviewing methods, the interview questions were posed along focus group guidelines. Due to Japanese communication culture I had decided to draft questioning routes for focus groups as well as for interviews. Especially in the

interview situations with less than four participants it seemed reasonable to define questions instead of discussion themes. I also assumed that discussion themes hardly match with the nature of an interview. The questioning route was moreover supposed to guide the interviewer, especially since two different interviewers were appointed for the three interviews.

The questioning route for the interviews partly differs from the questioning route for the focus groups. Both routes are based on the two research questions. The research questions of this study are “What kind of value can elderly people in Sendai gain from CaringTV?” and “How can CaringTV create this value?”. It might be argued that people, who for the first time hear about CaringTV, more easily answer the HOW first and then the WHAT question. In comparison to the focus group participants, the interview participants have probably never heard about a service product such as CaringTV. That is why the first few questions focus on how the elderly could and would like to use CaringTV. The further questions try to make participants think about the value elderly gain when using CaringTV the way they could and would like to.

In opposition to the focus groups, the questioning route as well as the CaringTV introduction text was not sent to the participants before the interviews. I assumed that the interview frame would leave enough time and flexibility for silent breaks. Moreover, I had worried that the text and questions would have confused the participants, as they most likely had never heard of CaringTV before the interviews. The questioning route is listed as appendix 2 at the end of this report.

5.3.8 Data capture during focused interviews

The data capture of the interviews complies with the data capture of the focus groups. Audio records were taken, but video recording was dismissed. For the interviews it seemed even more necessary to reject the video recordings as they took place in the participants' home. Hence, only the spoken word was recorded during the sessions. Furthermore, unstructured notes were taken by my fellow Laurea student, the interviewer and me during the interviews.

6 QUALITATIVE CONTENT ANALYSIS

In general, there are three forms of analysis: (a) descriptive, (b) reductive and (c) explicatory analysis. Descriptive analysis can hardly be considered scientific, as it stands for abstract data reproduction and is hence only an analysis' preliminary stage. (Lamnek 2005, 178-179) Marketing research with exploratory purpose often applies descriptive analysis of focus group

data. This is also warrantable in exploratory social research for economic or time-saving reasons. However, in such cases data evaluation and analysis are not considered to be the strength of research. (Lamnek 2005, 71-72) The reductive form of analysis refers to data reduction and the eventual production of valuable findings. Such analysis can be quantitative and qualitative, but always asks for the development of categories. The explicatory form of analysis is highly scientific, but is actually rarely applied. (Lamnek 2005, 178-203)

In this study it seemed most adequate to choose a reductive analysis method for analysing the interview and discussion transcripts, even though descriptive analyses are often applied in marketing research. Since qualitative marketing research is in need of development (Naderer & Balzer 2007, 5-17), I deliberately selected the more advanced analysis form from the social research field.

The choice on the reductive analysis form remained valid throughout the study. Yet the data collection changes also forced me to replace the original analysis method. The following chapters shall give an insight into originally and finally chosen analysis methods.

6.1 Original analysis plan and alteration

This study was originally planned as grounded theory research, wherefore the analysis method was initially chosen out of Glaser and Strauss' analysis method spectrum. Grounded theory implies analysis procedures which eventually lead to the production of categories, concepts or theories from raw data. This procedure includes the tools of theoretical sampling, theoretical saturation, coding and constant comparison. (Bryman 2008, 541-545; Denscombe 2003, 119-122; Glaser 1998, 3-4) Coding is an essential part of grounded theory (Bryman 2008, 542). Throughout the years, Glaser and Strauss have developed different guidelines and approaches for coding (Strübing 2004). The data of this study was supposed to be coded substantially and theoretically, whereby I had planned to apply Glaser's (1978, 55-74) 6 C's for the theoretical coding process. My first intention was to analyse focus group and observation data in Japan during the on-going data collection phase. Theoretical sampling would have been frequently reconsidered. The data collection and analysis process would have come to an end once theoretical saturation would have been reached.

However, since the grounded theory approach needed to be rejected, also this first analysis plan could not be put into action. The change in analysis methods can be generally considered of benefit for this study since the eventual methods adequately meet the whole research purpose.

6.2 Mayring's qualitative content analysis

After I had rejected the 6 C's analysis method I aimed to find a suitable substitute. As it is depicted later on, the two data collection methods followed the same guidelines. That is why, in order to maintain research coherence, I selected one new analysis method applicable for both, interviews and focus groups.

As analysis methods for focus groups often are taken from qualitative interview or from content analysis approaches (Lamnek 2005, 177-179), a reductive qualitative content analysis was used. The analysis method belonging to the group of reductive qualitative analyses is named qualitative content analysis ("qualitative Inhaltsanalyse") as developed by Philipp Mayring. This method belongs to the group of content analyses and can be applied for the analysis of any form of data from communication contexts. (Mayring 2010, 11; Mayring 2008, 468-467) Therefore it is an appropriate method to analyse the audio-recorded data from both, focus groups and interviews. Mayring's method furthermore roots *inter alia* in symbolic interactionism (Mayring 2010, 32-33), and hence fits the theoretical position of this study. Besides, some analysis methods applied in questioning route interviews (Schmidt 2008, 447-456) could not be used here for practical demands on the data collection process. Other analysis methods such as "Dokumentarische Methode" (Nohl 2009, 8-11), Bohnsack's "Dokumentenarische Interpretation" (Lamnek 203-217) or system analysis (Froschauer & Lueger 2003, 142-143) were not applied as they do not match this study's explorative purpose.

Application of Mayring's qualitative content analysis procedure		
Major themes	Step no	Steps of qualitative content analysis
Data identification	1	Definition of the data material available for analysis
	2	Analysis of the situation in which the data was produced
	3	Description of the formal features of the data material
	4	Description of the irregular features of this study's data (additional step in this study)
Development of analysis questions	5	Description of analysis approach
	6	Description of the theory-driven differentiation of the questions
Qualitative content analysis technique	7	Decision upon the suitable analysis technique(s): <ul style="list-style-type: none"> • summarization/<u>inductive category development</u>, • <u>explication</u>, • structuring
Analysis selection criteria and analysis units	8	Selection of data parts to be analysed
Analysis implementation	9	Analysis process

TABLE 7: Application of Mayring's qualitative content analysis procedure

Mayring has developed a structured procedure for doing qualitative content analysis (see Table 7). This procedure is divided into eight steps which are accompanied by analysis rules. The first seven steps can be considered analysis pre-steps which have to be implemented before addressing the eighth step, the actual analysis itself. (Lamnek 2005, 195-197) Due to the irregular features of this study, an additional analysis pre-step (step 4) needed to be added. The following chapters describe the implementation of the eight analysis pre-steps. In chapter 7 the findings of the qualitative content analysis are presented.

6.3 Data identification

First of all, Mayring's method always demands data identification. Data identification entails three steps: (1) the definition of the data material available for analysis, (2) an analysis of the situation in which the data was produced and (3) a description of the formal features of the data material. (Mayring 2010, 48-55; Lamnek 2005, 195-197) In addition this chapter entails, as step (4), a description of the irregular features of this study's data.

6.3.1 Definition of the data available

This study's data material can be defined as follows: the data for analysis originate from the spoken word during three focused interviews and two focus groups. Focused interviews and focus groups were both implemented in Sendai, Japan in October 2010. The interviews and focus groups were held in Japanese language and produced a rich amount of data. Yet only one fifth of the original data transcript could be translated into English. That is why our Japanese cooperation partners reduced the data amount to 20% of the original transcript length. They finally chose those text parts which include most valuable information answering the research questions. Hence, the reduction based on the judgement of our cooperation partners on the most representative text parts.

For defining the data material, Mayring (2010, 52-54) also recommends describing the participants who produced the data. All participants of this study are briefly described in chapter 5.1. In the case of the focus group participants it is assumed that this brief description suffices. The focus group participants share their viewpoints on CaringTV based on their experiences as professionals. Hence the description of their professional backgrounds meets Mayring's requirements for data material definition.

In case of the interview participants however, a brief description of the participants' backgrounds seemed inappropriate. The interview data shows that the interview participants

based their viewpoints on the use of CaringTV upon their personal life experiences and value systems. In fact, the interview participants represent CaringTV's future end-users. Thus it is helpful to analyse interview data which describes the interview participants. Therefore chapter 6.1 also presents findings on the interview participants as such. This step can be further justified by Cagan and Vogel (2002, 2-8). They argue that when developing a new product it is of great importance to understand the customers. Precisely, a product developer ought to understand customers' needs, wants and desires towards the experiences created by a product, thus ought to understand which value the product or product experience has in the eyes of a customer. The findings on the participants' life situation also answer the two research questions as well as the research purpose.

6.3.2 Analysis of the situation in which the data was produced

For the analysis of the situation in which the data was produced I used, *inter alia*, the observation notes which were taken during the data collection sessions. The analysis of the data production situation has to entail information of the people involved in the interview data inquiry process, of the target group for whom the data is gathered, of the concrete data production situation as well as of its socio-cultural background. (Mayring 2010, 53) It is sufficient to analyse the data collection situation descriptively, hence to describe the data collection sessions (Lamnek 2005, 177-179). As the implementation of the focus groups and focus interviews was after all rather complex, the descriptions on focus group and focused interview sessions are presented separately and in detail in chapters 5.2-3.

6.3.3 Description of the formal features of the data material

The formal features of the data from interviews and focus groups demand a detailed explanation. All interview communication was audio-recorded and transcribed according to our cooperation partners' transcription model. However, only 20% of the transcribed data could be translated. The original transcript I received contained an English translation aside the Japanese text. In the translated transcripts, the interviewer's and care manager's speeches were marked through appropriate capital letters (e.g.: interviewer/ facilitator = F, care manager = CM or C). Fill-ins, such as "ehm" or alike were left out and dialect was transferred into standard Japanese. When spoken content could not be understood, dots (...) were set in the text. Laughter or other significant sounds as agreeing "hmm" were not transcribed. It was originally planned that the content of speech was matched with the point of time of the speech. However, after the transcriptions were shortened and translated, the time-point references were lacking. Besides, the transcripts do not indicate where data was cut out.

Before starting the analysis process I edited the transcript versions. All Japanese text was cut out from the transcripts. What is more, because in the original transcripts participants' initials partly overlap, I gave new initials to all participants (P1-P15), interviewer (I) and focus group facilitator (F). Additionally, accordant lines were marked along the text. The following extract from interview 1 transcript depicts the final transcript form.

T = Talking person, L = Line

T	L	Data
I	1	If you could use CaringTV, who would you want to talk with?
P2	2	Get diagnoses like in a hospital. Talk with friends of Sendan-no-oka.
P1	3	A hospital doctor.
P2	4	What would you ask a doctor?

TABLE 8: Data transcript extract 1

6.3.4 Irregular features of the data

Due to interpretation and reduction, the transcripts contained some additional information which is not usually found in transcripts. Moreover, some parts of the data are hardly or not at all comprehensible. The following examples demonstrate how I dealt with these irregular features of the interview and focus group data.

After reduction, some information necessary for comprehension was added in brackets after the respective texts. The content in brackets often seems to stem from the participants, but it was deleted for data reduction. That is why I included such content in the further analysis process.

T	L	Transcript version	Data used for analysis
P1	P1	U-san. (A friend of Sendai-no-oka)	U-san. (A friend of Sendai-no-oka)

TABLE 9: Data transcript extract 2

At some points, other content was also set in brackets which seemingly does not originate from the participants themselves. Instead, the content was either added by transcribers or interpreter. Such content referred to, e.g., Japanese terms which cannot directly be translated into English and was also used as for data analysis.

T	L	Transcript version	Data used for analysis
P6	45 - 47	Tanka is also good. (Tanka is a traditional Japanese poem containing five lines of 5, 7, 5, 7 and 7 syllables. She said actually “song”, but I guess that it meant Tanka in this situation.)	Tanka is also good. (Tanka is a traditional Japanese poem containing five lines of 5, 7, 5, 7 and 7 syllables. She said actually “song”, but I guess that it meant Tanka in this situation.)

TABLE 10: Data transcript extract 3

Unfortunately, at times the translated transcript entails ambiguous statements, e.g. the participants’ statements and even interviewer’s question refer to “it” or “this” etc. as communication object. Hence, in such cases one can only assume what content “it” refers to, but total certainty is not given. Unfortunately, many text parts entail such ambiguity and I therefore decided to include my assumptions on some statement’s meaning into the data pool.

T	L	Transcript version	Data used for analysis
I	2	Who would you want to talk with through this?	Who would you want to talk with through this (<i>CaringTV</i>)?
P3	3	The person who I can trust most. (...)	The person who I can trust most. (...)

TABLE 11: Data transcript abstract 4

Additionally, some data extracts within the given context are meaningless for those who could not witness the whole interview content. Therefore, I needed to reject complete statements for their meaninglessness at times.

T	L	Transcript version	Data used for analysis
I	9- 10	If you go there once, can you speak using this at least once?	<i>“there” and “it” = not clear, Question cannot be understood</i>
P3	11	I do.	<i>Consequently: disavowal of statement</i>

TABLE 12: Data transcript extract 5

Now and again, the interview transcripts included a main question immediately followed by a sub question. These main questions were apparently not verbalized in the interview session, because no accordant speaker was announced in the transcript. In such cases I laid no focus on the main question, as it was not concretely connected with the following participants’ statements.

T	L	Transcript version	Data used for analysis
	1	Who would you like to be in contact with through this device?	<i>Speaking person not indicated in transcript. Consequently: question was disregarded during analysis</i>
I	2	Who would you want to talk with?	Who would you want to talk with via CARINGTV?
P3	3	Siblings. (...)	Siblings. (...)

TABLE 13: Data transcript abstract 6

Nonetheless, despite all attempts to clarify and visualise the original data, many unclear statements remained. If I had disregarded all ambiguous statements, the amount of data would have decreased immensely. Therefore, in various situations I chose one possible interpretation of the data. It ought to be argued that another researcher might have understood the same statements differently. An in-depth discussion of this problem is given in chapter 8.1.5.

6.4 Analysis questions

In addition to data identification (6.3), it is necessary to define the analysis questions before commencing an analysis. This demands statements about (5) the analysis approach and (6) the theory-driven differentiation of the question. (Mayring 2010, 56-58; Lamnek 2005, 195-197)

The analysis approach of this study naturally goes hand in hand with the research purpose, which is to describe the potential creation of CaringTV value for elderly people in Sendai. Due to customer-orientation principles, CaringTV value has to be defined based on future customers' opinions. That is why they were asked to share their subjective viewpoints about CaringTV. The further purpose of this analysis is to summarize and, if necessary, explain the participants' subjective viewpoints about the creation of CaringTV value. Thus, the analysis focus is on the objects discussed in the text, not on the interviewees' emotional, cognitive or motivational backgrounds etc.

Furthermore, even though this study follows premises of symbolic interactionism and applies inductive analysis techniques, a theoretical research background exists. The theoretical background represents the empiric value created by others, upon which this study seeks to develop new findings (Mayring 2010, 57-58). Only based on the theoretical background on CaringTV, elderly people in Sendai and value opportunities, research purpose and questions could be defined. The theories presented in chapter 2 drove the differentiation of the research and analysis questions.

When our cooperation partners reduced the data, they selected data which answered best the two research questions. By this reduction and thus preliminary data analysis stage, the re-research questions and the analysis questions were equivalent. Yet, for analysing the remaining translated data, it seemed worthwhile to add one analysis question. When analysing the data based on the research questions only, some seemingly valuable data stayed unattended. Through adding the question, I aimed to ensure that all possibly valuable data could be used for analysis.

In order to give space to all statements the elderly made, e.g., about themselves, their life situation or their values, the analysis question is kept very open: This question was only used for the analysis of the interview data:

- (I) What information do the elderly interview participants disclose about themselves?

The next two analysis questions were used for the analysis of both, focus group and interview data. They focus on value opportunity attributes and not on value only. The latter is due to the fact that only value opportunity attribute statements were found in the data. Describing value opportunity attributes is in fact describing value features. The focus of these two analysis questions upon value opportunity attributes is discussed in chapter 8.3.2.

- (II) What kind of value opportunity attributes can elderly people in Sendai gain from CaringTV?
- (III) How can CaringTV create these value opportunity attributes?

6.5 Qualitative content analysis technique

In the next (7) step of qualitative content analysis, the suitable analysis technique has to be chosen. Mayring describes three analysis techniques, which can be applied either separately or in combination with one another; summarization or inductive category development, explication and structuring. Qualitative social research usually favours data explication and structuring (Mayring 2010, 63-67). Yet, this study's research design called for the application of inductive category development and explication techniques only.

Subjective interactionism calls for inductive research activities (Lamnek 2005, 37-38), therefore inductive category development was chosen as first analysis technique. It enables the development of a category system purely based on empiric data. The inductive analysis process seems of great importance to a study, which develops recommendations for health care or social welfare economy in general. Presenting findings based on a deductive approach might alienate the participants from their own statements. On the contrary, the participants might more likely re-identify themselves with findings from inductive analysis processes. Thus, in-

ductive findings from participants' subjective viewpoints empower the participants' further participation in the service development process.

Furthermore, considering the fact that the value opportunity recommendations are developed for another country, it seems even more important to present the findings based on the subjective viewpoints only, but in the discussion part chapter 8.3 they are also discussed in the light of existing theories. Thus, those responsible for CaringTV in Sendai have the choice to either interpret the findings within their own set of theories, or to evaluate them in the light of European theories.

In addition to inductive category development, explication as context analysis was necessary to explain those data extracts, which would have otherwise remained incomprehensible (Mayring 2010, 85-86). Explication was applied when participants' idioms were ambiguous and their meaning of importance in the category development process. Explication indeed has deductive features, as dictionary definitions for terms are also used to identify the meaning of participants' idioms. However, it is sought to identify the idioms' meanings through the direct data context in the first place.

As this study is based on subjective interactionism premises, Mayring's summarization and structuring techniques were not applied. Both techniques have deductive features, since data shall be summarized or structured according to theoretical criteria or the questions posed during the data collection phase (Mayring 2010, 92-94).

6.6 Analysis selection criteria and analysis units

After having chosen the analysis technique, one has to next (8) select those data parts which will eventually be analysed (Lamnek 2005, 197). Mayring claims, that one has to appoint selection criteria, based on which material for further analysis is chosen. These selection criteria naturally come along with the analysis questions and enable the disavowal of unserviceable data. (Mayring 2010, 83-85)

The initial selection criteria for reducing the data to 20% of its original size, was to select data which holds the most relevant content to answer the two research questions. Yet, this initial data selection also resembles incipient summarization features, as participants' statements were shortened akin to paraphrasing. The summarization of the data could however not follow precise rules as described for instance by Mayring (2010, 92-109). The latter would have exceeded the cooperation partners' organisational resources available for this study.

What is more, I adjusted the data selection criteria for the remaining amount of focus group and interview data. The latter was necessary in order to gain the best possible research outcome from the little amount of data available. All selection criteria strongly link to the content of the three analysis questions.

For the analysis of the interview participants' statements about themselves, an independent selection criterion was chosen. It does not emphasise selecting positive statements. This is based on the fact that statements often describe elderly people in terms of what they are not able to do anymore, than in terms of what they still can do. To answer analysis question (I) it seemed of importance to also analyse such negative statements:

- (I) All statements which include information about the interview participants.

All other selection criteria are as follows:

- (II) All positive statements on CaringTV value opportunity attributes for elderly people in Sendai,
- (III) All positive statements on how CaringTV can create these value opportunity attributes.

The emphasis of these selection criteria was on positive statements answering the analysis questions, which contained, e.g., information on what could be done with CaringTV in Sendai. In contrast, statements which contained information about what could not be done were left aside. First of all, there were hardly any negative statements concerning questions (II-III) in the data. Second, the purpose of this study is met, if the potential creation of CaringTV value for elderly people in Sendai is described. There is no need to emphasise explicitly what kind of product value would not exist. In fact, the description of possible value already indicates what other value does not exist. Consequently, the effects of this choice on positive statements will be discussed in chapter 8.2.5.

Moreover, Mayring (2010, 59) demands the definition of a coding unit, which is the smallest unit data to be analysed, a context unit, which is the largest data part to fall under one category and an analysis unit that decides, in which order the parts are analysed. In this study, the coding unit was chosen to be 1 word. Yet, towards the end of the analysis process I came to the conclusion that the bigger the coding units, the easier the category development. The usage of larger coding units means that most coding units could be used for the development of different categories. One coding unit, e.g., held information on who would create certain value opportunity attributes in what specific way for what kind of elderly people in Japan.

No limit was set for the context unit, but two analysis units were defined: the first covering all interview data, and the second covering all focus group data. On purpose interview and

focus group data were divided into two evaluation units. For answering analysis question (I) only the first evaluation unit, the interview data, was used. To answer analysis questions (II-III) it still seemed worthwhile to run two evaluation unit analyses separately before integrating their findings. The two separate analyses shall emphasise differences and similarities in findings from the different participant groups: elderly and their families on the one hand, and care professionals and experts on the other hand. The two findings were integrated by putting both units' developed categories together and by then analysing the categories along inductive category development guidelines. Chapters 7.3-4 present the integrated findings from focus group and interview data. Separate findings from interviews and focus groups are attached as appendices 6 and 7 of this report.

7 FINDINGS

In the following chapter all findings from the qualitative content analysis process are presented. Chapter 7.1 shows the findings to analysis question (I). They illustrate the elderly participants' subjects of value and challenges in life.

- (I) What information do the elderly interview participants disclose about themselves?

Chapters 7.2-5 present findings to the remaining three analysis questions:

- (II) What kind of value opportunity attributes can elderly people in Sendai gain from CaringTV?
- (III) How can CaringTV create these value opportunity attributes?

As findings two main categories were developed; value opportunity attribute and value enabler categories. The correlation of value opportunity attributes and enablers is visualized in a model in chapter 7.2. Chapters 7.3-4 illustrate value opportunity attributes and enablers in detail. Chapter 7.5 demonstrates some practical examples on value opportunity attribute and enabler correlation.

At times, the content of a participant's idioms seemed important during the qualitative analysis process, but appeared unclear to me. Then, explication of the idiom was implemented. When presenting categories which include such unclear idioms, the use of the explication technique is mentioned. The explication processes are attached as appendix 8 to this report. Furthermore, focus group 2 data must not be displayed at any point in this report for confidentiality reasons. Hence, only quotes from interviews and focus group 1 are displayed. Besides, all interview quotes are marked as I1-3 (Interview 1-3) before displaying the accordant transcript lines in brackets. Focus group 1 quotes are only followed by the accordant focus group transcript lines in brackets.

7.1 The elderly participants' values and challenges in life

Plenty of interview data describing the elderly interviewees was found, from which two main categories emerged. The first category centres on subjects the elderly participants value: SUBJECTS OF VALUE. The second category centres on the challenges the interviewees experience in life: CHALLENGES.

Most challenges mentioned by the participants interestingly link to the subjects of value. The challenges then base on the fact that the elderly cannot gain full value from the subjects of value. Yet, there are some subjects of value for elderly people, which are not bound to restrictions or other challenges. Besides, the participants face challenges when dealing with technical equipment, which do not link to any subject of value. Table 13 presents SUBJECTS OF VALUE and CHALLENGES IN LIFE in correlation with each other. Only the challenge category which relates to a subject of value category is placed right beside it.

SUBJECTS OF VALUE:	CHALLENGES IN LIFE:
PHYSICAL HEALTH	PHYSICAL HEALTH RESTRICTIONS
PHYSICAL HEALTH CARE	
MENTAL HEALTH	MENTAL HEALTH RESTRICTIONS
PEACE OF MIND	MENTAL BURDEN
INTELLECTUAL GROWTH	LIMITATIONS TO INTELLECTUAL GROWTH
SERVICES WHICH SUPPORT MENTAL HEALTH	INSUFFICIENT SERVICES WHICH SUPPORT MENTAL HEALTH
SOCIAL WELLBEING	LACK OF SOCIAL CONNECTIONS
HUMAN RELATIONSHIPS	TRAUMA ABOUT HUMAN RELATIONSHIPS
RECOGNITION from others	
DIRECT COMMUNICATION	
INDEPENDENCE	LIMITED INDEPENDENCE
SELF-DETERMINATION	LIMITED LEVEL OF SELF-DETERMINATION
HAVING OWN SPACE	
ACCESSIBLE ENVIRONMENT	ACCESS DIFFICULTIES
BARRIER-FREEDOM	INSUFFICIENT BARRIER-FREEDOM
ACCESS TO THE CITY CENTRE	ACCESS DIFFICULTIES TO THE CITY CENTRE
ACTIVITIES	LACK OF ACTIVITIES
TRAVELLING	LESS TRAVEL OPPORTUNITIES
CULTURAL ACTIVITIES	LACK OF CULTURAL ACTIVITIES
FINANCIAL STABILITY	FINANCIAL DIFFICULTIES
	CHALLENGES WHEN DEALING WITH TECHNICAL EQUIPMENT

TABLE 14: Subjects of value and challenges in life

7.1.1 Subjects of value for the elderly participants

SUBJECTS OF VALUE	
PHYSICAL HEALTH	I: What is most important in your life? (I1, 122) P2: Health. (...) Nowadays I feel pain in different places. I worked too hard and I have been affected by that. (...) (I1, 123-125)
PHYSICAL HEALTH CARE	P2: Everything goes through N-san (<i>elderly advisor at the rehabilitation centre</i>). It wouldn't work well, if we could not talk to N-san first. It's important. (I1, 33-34)
MENTAL HEALTH	
PEACE OF MIND	P2: The most important thing for me is my mental state (peace of mind) because it's an everyday thing. (I1, 37-39)
INTELLECTUAL GROWTH	P3: I want to enlarge my capacity. I want to continue this until die. I want to keep growing. (I2, 16 -17)
SERVICES WHICH SUPPORT MENTAL HEALTH	P2: (...) And I-san (<i>care manager</i>) understands me very well, because I can speak about even unnecessary things with him/her. He/She understands us. (...) I have got over my worries in this way. I want help like this. It's better to have this kind of thing. (I1, 48-55)
SOCIAL WELL-BEING	
HUMAN RELATIONSHIPS	P3: They are important. And human relationships, too. It's the most difficult and the most important. (I2, 84-85) P3: There used to be "Gakidaisho" [school bullies, but also playground leaders] in the old days. But they do not exist now. Children just play with computer games. (I2, 89-90) (...) P3: It's most important. It's important to give chances to such play and education. (I2, 97) P6: We feel we don't have enough space when we always have connections with many people. On the other hand, we can talk about many things and they can ask us many things if it's an exercise issue. (I3, 96-98)
RECOGNITION from others	P2: I suppose he really enjoyed his work. He did his best there and his achievement was recognized by people around him. Perhaps it's the reason why he goes there. (...) (I1, 165-166)
DIRECT COMMUNICATION	P6: He (P5) is the type who wants to meet people directly. He is an analogic type not a digital type. (...). He wants to go (<i>to meet people</i>) by himself when he can move.(...) (I3, 78-80) P6: It's like Skype. I used to talk with my friends with it when I was in abroad. I felt like I was far from friends because there was a time lag. I talk with them by Skype because of the low cost. But I didn't want to talk about something serious. If we talked it, we would say, "Shall we meet again and talk properly?" (I3, 26-29)
INDEPENDENCE	
SELF-DETERMINATION	P3: People there (<i>at the day services</i>) can leave freely, if they want. I like to have a free atmosphere. (...) (I2, 31-32)
HAVING OWN SPACE	See I3, 96-98
ACCESSIBLE ENVIRONMENT	
BARRIER-FREEDOM	P3: (...) It's most important, then of course welfare. There are many small problems like the gap between the pavement and the road. I went to Yamagata and saw the Orgel (music box) museum. There weren't any gaps there. (I2, 71-74)
ACCESS TO THE CITY CENTRE	P3: I'm going to be active (there). Old people can also enjoy (being in the city centre). When we want to be in a peaceful place, we can always go to the park. (I2, 66-67)
ACTIVITIES	
TRAVELLING	P1: I used to really love travelling abroad and went there often. I took her with me a few times. I should have done it when I was younger. (I1, 143- 144) P2: He travelled with his friends and spent so much money. (I1, 145)
CULTURAL ACTIVITIES	P6: She (P4) does flower arrangement when she is in a good mood. (I3, 49) P5: She makes colour drawings when she is in good mood. (I3, 50)
FINANCIAL STABILITY	I: What is most important in your life? (I2, 70) P3: Financial stability is the most basic thing.(I2, 71)

TABLE 15: Subjects of value

One participant stated that health is most important to her, hence that she strongly values health. In the context of health, the participant once referred to the condition of her husband, who suffers from a brain damage. The brain damage has an impact on the husband's physical health. Therefore it is assumed that the participant referred to PHYSICAL HEALTH on the one hand. It is worth mentioning that own or family members' experiences of health deterioration seem to increase the value of physical health.

Closely related to the topic physical health is the topic PHYSICAL HEALTH CARE. Indeed, all participants also talked about the health care services they use. Hereby they mentioned, which health care services are valuable to them. Various professionals' services are of value to the elderly. The professionals mentioned are doctors, care managers, care manager's care assistant, elderly advisor and head of the rehabilitation centre as well as professionals from the whole rehabilitation centre. Also, a masseuse beneficially contributes to the life of one elderly (P5). The example of the masseuse shows, that professionals are also then valuable for the elderly, when they offer their service spontaneously.

During the interview, P2 also referred to the importance of stress management in the context of health. She further stated the importance of her mental state or peace of mind. Hence MENTAL HEALTH is of value to this elderly participant. Another participant talked about the importance of personal development. It is assumed that P3 here referred to INTELLECTUAL GROWTH. The ability to grow intellectually through diverse stimuli can be understood as one indicator of mental health.

In the context of the mental health, the participants also talked about the value of SERVICES WHICH SUPPORT MENTAL HEALTH. They explained that it is important to be able to talk with professionals directly. P2 explained in detail what kind of health care or social service professional brings most value to elderly people. Health care or social service professionals, who have experienced the same as the elderly deliver the most valuable services to elderly people. Furthermore, professionals who offer opportunities to talk about even small problems, offer more valuable services. It ought to be mentioned that P2 also suggested that students should join elderly people. Thus, the students could gain a more profound understanding of the elderly people's life situations.

Naturally, not all elderly gain the same value from specific services. For instance, a caretaking elderly might have less urge to communicate with a doctor than the elderly family member in need of care. In general, health services which address mental health issues are of greater value than physical health care services to caretaking elderly.

Participants from all interviews value SOCIAL WELL-BEING. The term social well-being covers different subjects of value the participants mentioned: HUMAN RELATIONSHIPS, RECOGNITION and DIRECT COMMUNICATION with other. P3 considered HUMAN RELATIONSHIPS, here connections with people, as most important, hence as most valuable in his life. Other participants talked about the value of seeing and meeting people or friends and having company. In the eyes of one participant, it is also important to enable children to develop human relationships with others. P3 believes that real play and education is more valuable to children than playing computer games. He stated, that through playing such games he himself as child felt respected. However, when elderly are not able to network with friends directly, they appreciate gaining indirectly information about former social contacts. Thus, P1 and P2 value seeing pictures of former school friends on a PC. It is also worthwhile mentioning that P1, who was strongly involved in working life before retirement, finds it highly valuable to network with his former work colleagues and bosses. Connecting with his former work place gives him most pleasure.

Yet concerning being social, not all interviewees feel the same. P4 seems to lay less emphasis on meeting others. The latter might be due to fact that she faces communication problems based on Parkinson's disease. Besides, P6 mentioned that having too many connections with people might decrease individual space, hence independence. However, she contrasted that connections can be useful, e.g. when doing physical exercise.

Elderly people further value RECOGNITION from others, here in terms of respect. P1 strongly emphasized that his former work place still is of great importance to him. The reason for the work place still being important can be found in the fact, that P1 was recognized by people at work. What is more, P3 values the recognition he gained during his childhood from another boy. The other boy had treated P3 like a human being despite his disability. P3 also values that citizens, here elderly or people with moving disabilities, are asked for their opinions on city planning. The latter can also be understood as a means by which elderly people gain recognition, in this case recognition from official boards.

DIRECT COMMUNICATION with people is also very valuable to elderly people. First of all, communication as such is valuable. Second, direct communication, with communicators being physically present in the same room, appears to be more valuable to elderly people than communication via technical means. One participant even mentioned that she could not have serious communication via Skype.

To communicate directly does not only seem to be more valuable to elderly people, but to be more natural, too. When imagining a communication situation with students, P2 incidentally suggested meeting directly, for instance for joint eating and drinking. Yet, elderly people are

also open to communicate with people via technical devices. In case of P4, she does not respond to the phone when she does not want to talk via technical devices.

Furthermore, INDEPENDENCE is of value to the interview participants. The term independence covers the subjects SELF-DETERMINATION and HAVING OWN SPACE. The term independence first of all stands for the ability to SELF-DETERMINATION. It indicates the participants' urge to move freely in society whenever they feel like it. This ability can thematically be split into two topics; the topic of being able to move (see PHYSICAL HEALTH) and the topic self-determination. For example, going out is very important for P2 because due to her husband's disability, she is strongly bound to her home. Furthermore, P3 attends day services, which seem to create value to him. He especially values the free nature of the self-help groups.

As mentioned above, P6 values individual space, and worries that having too many connections might restrict her individual space. Here, the term keeping your individual space is understood as to live an independent life without people permanently interfering into it. Indeed, this statement could be also understood in terms of privacy. However, the later findings contain a privacy category, which is understood in terms of having the right to keep your private life secret.

The participants otherwise value ACCESSIBLE ENVIRONMENT in life, meaning the possibility to access, e.g., the city centre or other public locations. Environment is accessible when there is BARRIER-FREEDOM. P3 e.g., the same participant who enjoys the free atmosphere of the day services, also emphasized the importance of welfare. It is assumed that by welfare, the participant referred to barrier-free moving opportunities for elderly people or people with physical disabilities. Furthermore, elderly people like P3 want to be able to freely ACCESS the CITY CENTRE of Sendai.

ACTIVITIES in general are valuable to the participants. Two types of activities are mentioned during the interviews; TRAVELLING and CULTURAL ACTIVITIES. Several participants indeed value travelling, whether small or long distances. It can also be considered one way of moving about independently. Yet, it is listed here as travelling stands for more than simply the value of independence. It can be considered a meaningful and joyful activity for the participants as such. P1 and P2 used to travel a lot in the past, but regret that it is hardly possible anymore. P2 even mentioned that P1 was willing to spend a lot of money for travelling. P3 furthermore still enjoys travelling small distances.

Besides, CULTURAL ACTIVITIES are of great value to most participants, too. Hereby cultural activities can also serve as means to release stress. Several Japanese cultural and artistic activities were mentioned: flower arrangement, colour drawings, music or calligraphy among

others. However, not only hobby-like cultural activities are of value to the elderly. P2 also enjoyed attending the summer festival of Sendai City.

P3 further mentioned CIP 1.7 FINANCIAL STABILITY as most important aspect in his life. P3 was yet the only participant mentioning financial stability as important in life.

7.1.2 Challenges in the lives of the elderly participants

PHYSICAL HEALTH RESTRICTIONS	P2: His illness is caused by a brain contusion, a subarachnoid haemorrhage. A blood vessel somewhere in his brain burst. He has got some handicap. He can't do anything by himself from start to finish. (..) (I1, 95-102)
MENTAL HEALTH RESTRICTIONS	
MENTAL BURDEN	P2: The situation will be harder in the future, and I can't get rid of my stress by just doing calligraphy. I don't go out for practically any other reason except calligraphy. I don't have a place to release my stress. (..) (I1, 137-139)
	P2: (..) When it's just us talking about problems, it feels heavy.(..) (I1, 56-57)
	P2: It's important that actually I shouldn't complain.(..) (I1, 157)
LIMITATIONS TO INTELLECTUAL GROWTH	P3: (..) People become senile when they get old. So I can't expect a lot. (I2, 21-22)
INSUFFICIENT SERVICES WHICH SUPPORT MENTAL HEALTH	P2: Even an excellent consultant can't understand our pain, if he/she has not experienced the same thing. If they use only their knowledge which they have got from just studying, it is... (..) (I1, 48-50)
	P2: (..) It would be different if I was meeting people from Sendan-noka (<i>rehabilitation centre</i>) on a daily basis. Even if they told me it was okay (to contact them whenever?) I would probably consider many things and hesitate. (..) (I1, 39-41)
LACK OF SOCIAL CONNECTIONS	P2: I like singing too. We often sang together a long time ago. But it's boring to do it with just the two of us. (I1, 129-130)
TRAUMA ABOUT HUMAN RELATIONSHIPS	P3: People with a disability can be suspicious because they have got a trauma about human relationships. (I 2, 4-6)
LIMITED INDEPENDENCE	
LIMITED LEVEL OF SELF-DETERMINATION	I: How about you? You said that it's not easy to go out. (..) (I1, 168) P2: In my situation I can go out if I spend money and leave him. (I1, 169)
ACCESS DIFFICULTIES	
INSUFFICIENT BARRIER-FREEDOM	P3: Miyagi prefecture is a so-called welfare prefecture. But I have not heard of such a reputation here. (I2, 79-80)
ACCESS DIFFICULTIES TO THE CITY CENTRE	P3: And it's a small request. I wish that facilities for the elderly could be located in the centre of the city. (I2, 60-61)
LACK OF ACTIVITIES	
LESS TRAVEL OPPORTUNITIES	P2: (..) It's travel what I feel is most inconvenient. (..) (I1, 140-141)
LACK OF CULTURAL ACTIVITIES	P2: I like singing too. We often sang together a long time ago. But it's boring to do it with just the two of us.(I1, 129-130)
FINANCIAL DIFFICULTIES	
CHALLENGES WHEN DEALING WITH TECHNICAL EQUIPMENT	P1: I can turn on the TV, and change the channel. (I1, 104) P2: At last he's learned how to do it. Sometimes when the remote control doesn't seem to work properly, he presses many buttons and gets into a panic and it becomes impossible to do. If he says it didn't connect, then he probably has not changed the switch well.. (..) (I1, 105-108)

TABLE 16: Challenges in life

The first and seemingly major challenge, elderly people face in life, is HEALTH RESTRICTIONS. The participants experience restrictions in both, PHYSICAL and MENTAL health. P1 has suffered from a brain contusion wherefore he also faces severe restrictions in life, as well as difficulties in coping alone at home. Furthermore, his wife P2, who also is an elderly lady, suffers from pain in different places. Yet, she takes care of her husband at home, whose condition will not improve anymore, but deteriorates with age. Another participant, P4, has come down with Parkinson's disease wherefore she faces moving and communication difficulties, these also showed during the interview.

As mentioned above, the participants do also face mental health restrictions. The restrictions in mental health derive from MENTAL BURDEN, LIMITATIONS TO INTELLECTUAL GROWTH and INSUFFICIENT SERVICES TO SUPPORT MENTAL HEALTH. Mental burden of the participants takes many forms; e.g. P2 suffers from mental distress, as she does not have a place to release all her stress. Aside the stress, P2 mentioned having heavy feelings and worries. P2 stated that talking only with her husband about problems aggravates the state of mental well-being. Yet, despite all health burdens, P2 also mentioned at the end of the interview that she should not complain about her situation. Besides, P3, who considers intellectual growth as valuable theme in his life, also stated that aging has a negative impact on the growth capacities. He himself does not expect growing a lot, as age causes senility in people.

What is more, the participants are overall rather content with the health services. Yet, P2 said that there is an INSUFFICIENCY concerning the SERVICES TO SUPPORT MENTAL HEALTH. Partly, consultants cannot understand the elderly people's pain as they have not experienced the same. Consultants with knowledge from studies alone do not provide sufficient services. The latter might result in the fact that some elderly hesitate to contact the service professionals regularly. Otherwise the reason for this hesitation could be found in the fact, that elderly are not in daily contact with service professionals.

Most participants stated that they have fewer connections to other people, than they would like to have. The LACK OF SOCIAL CONNECTIONS has an impact on the mental well-being of the elderly. Some participants face a loss of excitement, as they mainly stay at home amongst themselves. Less connection to other people brings boredom to the everyday-lives of elderly people. And, as mentioned concerning mental health, when elderly people talk only amongst themselves about problems, it feels heavy.

P3 furthermore mentioned that people with a disability, whether elderly or not, are often suspicious about their fellow human beings. The suspiciousness bases on TRAUMA FROM HUMAN RELATIONSHIPS which might cause difficulties in developing new contacts. It could in-

deed be argued that only few elderly people face such trauma, yet the challenge ought to be listed as well.

The participants face challenges in life, since their valuable INDEPENDENCE is LIMITED. Due to health restrictions elderly spend more time at home than before. Hence, due to the health restrictions they now have LIMITED LEVEL OF SELF-DETERMINATION in form of limited power to decide themselves when and where to move. The only possibility for a care-taking elderly to keep a certain level of independence and to leave the house sometimes is to spend money, probably for paying care personnel. What is more, not only the physical health has an impact on the level of independence. The restriction of independence can also have a negative impact on physical health.

In fact, no participant directly said that he or she faces challenges as ACCESS DIFFICULTIES in Sendai. Yet, P3 questions Miyagi prefecture's commitment towards "welfare", here barrier-freedom. Sendai City is the capitol of Miyagi prefecture. Hence, it might be argued, that P3 faces access difficulties in Sendai. Also he uttered the wish for facilities for elderly people in the city centre. It is assumed that P3 faces INSUFFICIENT BARRIER-FREEDOM and ACCESS DIFFICULTIES TO THE CITY CENTRE.

Due to fewer connections to others and due to mental health restrictions, the elderly face a LACK OF ACTIVITIES. Precisely, elderly people face LESS TRAVEL OPPORTUNITIES and a LACK OF CULTURAL ACTIVITIES, as travelling becomes problematic when the physical health is restricted. Beyond, as described above, cultural activities can be boring when doing them alone. Furthermore, P4 only engages in cultural activities when she is in a good mood.

The fact that care-taking elderly need to spend money to be able to leave the house could eventually cause FINANCIAL DIFFICULTIES to elderly people. The interview participants did not mention financial difficulties themselves, but it can be envisaged that such difficulties emerge in future.

All participants claimed that they face CHALLENGES WHEN DEALING WITH TECHNICAL EQUIPMENT. These challenges are based on the fact that elderly did not have to learn how to use complicated technical equipment in the past. Furthermore, elderly people find it difficult to start learning how to use technical equipment at their age. In general, complicated functions of a technical device cause elderly mental distress. In case of P1, who faces severe health and moving restrictions, dealing with technical equipment is very demanding. He can only remember taking three steps in a row. In case P1 does not manage to handle equipment, the situation causes him to panic, making it impossible to proceed with the activity.

7.2 CaringTV value opportunity attributes and enablers model

The following chapters present integrated findings from interview and focus group data answering analysis questions (II-III). Developed categories are either CaringTV value opportunity attribute or value enabler categories.

Three types of value opportunity attribute categories exist answering analysis question (II): BASIC CONCEPTUAL ATTRIBUTES, DEVICE-RELATED ATTRIBUTES and ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY USERS. What is more, categories which emerged as answers to questions (II-III) can be considered enabler categories, as they enable elderly people in Sendai to gain the value opportunity attributes. Through inductive category development, five different enabler category types emerged: ELDERLY CARINGTV USERS, PROFESSIONAL CONTACT PARTNERS, OTHER CONTACT PARTNERS, INTERACTION CONTENT and ORGANIZATIONAL FEATURES. The sub-categories of these eight main categories are presented along quotes from the data in the following chapters.

In fact, the three value opportunity and five enabler categories can be linked and interdepend on one another. Many participants explained which combination of enablers creates certain value opportunity attributes for elderly people. Therefore, this chapter presents a model (figure 1), which visualizes the basic correlation between CaringTV enablers and value opportunity attributes.

The radial diagram within the model depicts the correlation between the enabler ELDERLY USERS, PROFESSIONAL CONTACT PARTNERS, OTHER CONTACT PARTNERS and INTERACTION CONTENT. INTERACTION CONTENT forms the core of the radial diagram, as it contains information on the immediate interaction through which the elderly CaringTV users, their contact partners and service professionals interact with one another. The radial diagram also allows for linking a person through INTERACTION CONTENT with another person from the same group of people. A professional nurse from the nursing station, e.g., could counsel a professional care worker via CaringTV about how to support an elderly client in need of care.

The enablers ELDERLY CARINGTV USERS and OTHER CONTACT PARTNERS are considered similar, as individuals from both groups can be termed CaringTV end-users. This similarity is emphasized through the same category colour. PROFESSIONAL CONTACT PARTNERS and INTERACTION CONTENT are each presented in different colours, as they are not so closely related to each other.

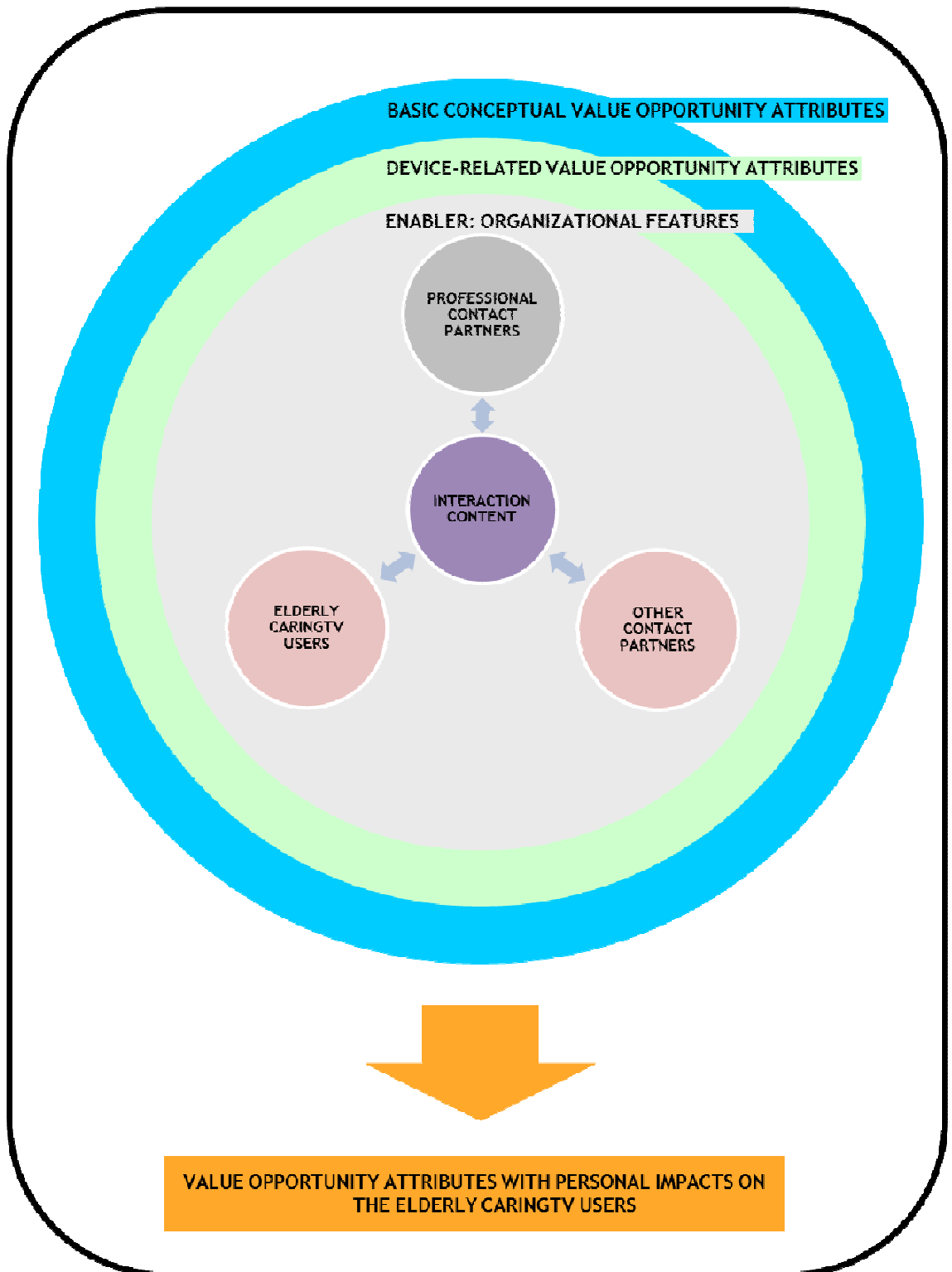


FIGURE 1: CaringTV value opportunity attribute and enabler model

ORGANIZATIONAL FEATURES, BASIC CONCEPTUAL ATTRIBUTES and DEVICE-RELATED ATTRIBUTES are considered omnipresent CaringTV features. Their presence is depicted by the three circles surrounding the radial diagram. The position of each circle was not defined by data. Hence, the position does neither describe the importance of each category type nor does it indicate any other type of ranking.

Moreover, the interaction process between different people within a system of omnipotent features and attributes leads to the creation of VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY. That is why an arrow points from the radial diagram within the circles to the value opportunity attribute category box below.

Besides, enabler and value opportunity attribute categories partly overlap, meaning that at times a category can be considered both, value opportunity attribute and enabler. Social participation, e.g., can be considered a value opportunity attribute, but can also be a feature which enables other value opportunities as joy or peace of mind. In such a case, the category is listed as value opportunity attribute.

7.3 CaringTV value enablers

Five different enabler category types exist. These categories answer analysis questions (II-III). They are named enablers as they enable elderly people in Sendai to gain the value opportunity attributes.

7.3.1 Elderly CaringTV users in Sendai

The first group of CaringTV value enablers are the elderly CaringTV users in Sendai. They are listed as enabler category because only by them CaringTV can be realized.

The first main category developed from the interviews is named ELDERLY CARINGTV USERS IN SENDAI. Even though the participants often used the term *people* instead of *elderly*, the context indicates that the term *people* refers to *elderly people*. All listed categories describe types of elderly persons which are represented in Sendai City. Many elderly user categories developed from interviews and focus groups are identical. Yet, the focus group findings can be divided into three types of elderly users from focus groups: INDIVIDUAL ELDERLY, ELDERLY GROUPS WITHIN THE REGIONAL COMMUNITY and OTHER ELDERLY COMMUNITIES . This division was transferred to the final findings.

ELDERLY CARINGTV USERS IN SENDAI	
INDIVIDUAL ELDERLY	
IN GENERAL	
BABY BOOM GENERATION	P8: It could be used as a device for the Dankai generation (the baby-boom generation), people in their 50s and 60s. (36-37)
AFTER HEALTH CARE FACILITY STAY	FG2 (the corresponding quote is taken from focus group 2 and must not be displayed)
WITH MILD SYMPTOMS	P7: It's worth using for the people who have very mild symptoms. There is a difficulty using it with depressed or lonely people. It's also useful for people who have difficulty walking. (70-71)
WITH DIFFICULTY MOVING	P7: It's worth using for the people who have very mild symptoms. (...) It's also useful for people who have difficulty walking. (70-71)
WITH SEVERE DISABILITY	P7: (...) I would rather say that it's better to use for people who are heavily handicapped. (...) (228-232)
WITH MENTAL PROBLEMS	FG2
WHO ARE LESS INVOLVED IN SOCIETY	P7: The elderly who live alone have become less involved in society. Through CaringTV, it might be possible to get those people to participate more in society. (28-30)
WHO LIVE ALONE	P6: If I live alone and use a wheelchair, it's not good for me to exercise just watching a DVD. (...) (13, 31-33)
ELDERLY WHO TAKE CARE OF THEIR ELDERLY FAMILY MEMBERS	P2: His (P1's) illness is caused by a brain contusion, a subarachnoid hemorrhage. A blood vessel somewhere in his brain burst. He has got some handicap. He can't do anything by himself from start to finish. (...) These are all my jobs. (...) (11, 96-101)
ELDERLY GROUPS WITHIN THE REGIONAL COMMUNITY	
SELF HELP GROUPS AS CORE OF THE REGIONAL COMMUNITY	P8: It can be useful to provide programs to the regional self-support group by using CaringTV. It can be provided to the place where the group gets together, but not to the individual person. To a group of 3 people, or to a group of 100 people, the group size doesn't matter. The system would be providing the device for people who find meaning in using it with a group. (...) (235, 238)
USERS OF REGIONAL COMPREHENSIVE SUPPORT CENTRE	FG2
DAY SERVICES CLIENTS	P6: Yes. So if people don't want go to a place like.. (<i>the day services</i>). People can manage to do things together using the device, while they have their own space. (13, 74-75)
ELDERLY PEOPLE IN THE REHABILITATION SERVICE CENTRE	P2: If you want to enjoy talking with someone who would you want to talk with? (11, 5) P1: U-san. (A friend of Sendai-no-oka (<i>a rehabilitation service centre</i>)) (11, 6)
ELDERLY WHO LIVE IN HOMES FOR THE AGED	P6: In places like homes for the aged energetic people can do something together. But when somebody wants to stay in their room because of their health condition, it's good to use that device. (13, 107-109)
OTHER ELDERLY COMMUNITIES	
IN GENERAL	P8: We have to gather at least once and help to make communities. We should make the system provide information which groups of people can be interested in. (161-162)
ELDERLY PEOPLE IN A SELF-HELP CLUB	P2: In the present circumstances, there is nobody special I would like to talk to. (...) I would probably consider many things and hesitate. If there was something like a club which is different from Sendai-no-oka, then the situation would be different. (11, 36-42) (...) P2: People who can understand our problem and chat about what to do in different situations. (11, 45-46)

TABLE 17: Elderly CaringTV users in Sendai

INDIVIDUAL ELDERLY are represented by different kinds of individual elderly people, who could be individual CaringTV users in future. The data indicates that at times one elderly person belongs to more than one user-category. This means that there may be elderly people WHO, e.g., LIVE ALONE and have DIFFICULTY MOVING. Moreover, during the focus groups

there were slight discussions whether CaringTV should first address elderly WITH MILD SYMPTOMS or elderly WITH SEVERE DISABILITY. The data transcript did not offer valuable clues as to whether the group developed one opinion which elderly group to address first. That is why all mentioned elderly groups are presented aside each other. Besides, ELDERLY WHO TAKE CARE OF THEIR ELDERLY FAMILY MEMBERS was added here to describe an elderly participant and the role she finds herself in. As she explains that she would like to use CaringTV for certain purposes, the category was formed.

Besides, ELDERLY GROUPS WITHIN THE REGIONAL COMMUNITY describes five kinds of groups of elderly which exist within the regional communities and could form CaringTV user units. This means that elderly group members would use CaringTV together as a group to contact other people. Furthermore, individual elderly could contact such groups via CaringTV. One participant from focus group 2 had the vision to develop SELF HELP GROUPS through CaringTV into the CORE OF THE REGIONAL COMMUNITY. Other regional communities which could use CaringTV are listed in Table 29.

Apart from the already existing group forms for elderly people there should also be OTHER-types of CaringTV ELDERLY COMMUNITIES. Elderly people could be motivated to form new groups or to contact existing CaringTV communities of elderly people. Such CaringTV communities could supposedly be formed by elderly from different regions but with similar interests. E.g. such a CaringTV community could function as SELF-HELP CLUB for elderly people in challenging life situations. It is not clear from the data whether the community members would only meet via CaringTV or also personally. However, this community type is different from the already existing forms of groups within the regional communities, wherefore an independent category was formed. Naturally, all users of such communities can also be considered elderly CaringTV users.

7.3.2 Professional contact partners

PROFESSIONAL CONTACT PARTNERS for elderly people are listed in Table 30. Contact partner categories are also enabler categories as they enable the interaction process, they take part in or initiate interaction via CaringTV. Indeed, there are also enabler categories which describe other possible CaringTV contact partners for elderly people in Sendai. Yet, in the final category structure the service professional contact partner categories are presented separately.

PROFESSIONAL CONTACT PARTNERS	P10: (...) The CaringTV can't substitute for visits completely. (...) (23)
DOCTORS	I: If you could use CaringTV, who would you want to talk with? (I1, 1) (..) P1: A hospital doctor. (I1,3)
NURSES	P7: The visiting nursing station sends a nurse to the user's home. But it's not always necessary to go and see them. There are cases when it's unnecessary to go. We would have cases where we would only need to give advice, if we check their condition through the screen. (...) (49-51)
CARE MANAGERS	I: (...) could you tell me the actual person you would want to talk with? (I1, 25-26) P2: The Care Manager and this person. (...) (I1, 27) P10: As a care manager, we can use it for the care service staff meeting which is held regularly. (...) (58-62)
CARE WORKERS	P10: (...) If the family and care worker can ask for instructions by using the device, the helper can have peace of mind that they are getting care. (112-118)
PHARAMCISTS	FG2
REHABILITATION PROFESSIONALS	P7: Professionals of rehabilitation go to the user's home and try to improve their activity. But users don't put the program into effect when professionals don't go to their home. Visiting cases should be cut down, and instead of it we give them directions on the screen and let the users do their program. (...) (76-79)
PHYSICAL EXERCISE PROFESSIONALS	P6: (...) On the other hand, we can talk about many things and they can ask us many things if it's an exercise issue. (...) (I3, 79-99)
STUDENTS	P2: (...) I want students to join us and learn about our problems. (...) If we have the chance to talk with them, perhaps we could notice something we never noticed before. And if they can understand our problems and conditions, it could be useful for their program. (...) (I1, 56-60)
A PROFESSIONAL PERSON OF TRUST	I: Who would you want to talk with through this? (I2, 2) P3: (...) The person who I can be myself with and talk from the heart, people like I-san (the Care Manager who is there) (...) (I2, 3-4)

TABLE 18: Professional contact partners

Nine different groups of professional contact partners were mentioned by the participants. Primarily the participants stated that most professionals would offer only parts of the regular services, but should not substitute the complete services by CaringTV. Interview and focus group participants stated rather often that DOCTORS and CARE MANAGERS are suitable CaringTV contact partners for elderly people. Yet only focus group participants discussed the opportunity to also include NURSES and PHARMACISTS and CARE WORKERS in the CaringTV network. Furthermore, without mentioning the precise professional background of rehabilitation workers, participants recommend to also include REHABILITATION PROFESSIONALS into the CaringTV network. In addition, one interviewee explained that she would participate in physical exercise programs via CaringTV. The PHYSICAL EXERCISE PROFESSIONALS are listed here because P6 added once the term "service provider" in the context of exercising. Nonetheless, physical exercise is also presented in INTERACTION CONTENT. Focus group and interview participants also considered STUDENTS as possible CaringTV contact partners for elderly people. The participants argued that the contact with students should be part of the students' curriculum or study program. Hence, the students would not contact the elderly on a

private basis, but as professionals in training. Furthermore, STUDENT services should be offered by students from different health care and welfare fields to train health checks and counselling.

In fact, A PROFESSIONAL PERSON OF TRUST does not properly fit into the list of professionals. Yet, it is presented here, as for one interview participant it was of importance to talk to a professional he can trust most. P3 hereby referred to the care manager as example. It is assumed, that P3 would hesitate to contact a professional he does not trust via CaringTV. It might be possible that for several elderly people a trustful relationship with professionals is one prerequisite for the successful use of CaringTV.

7.3.3 Other contact partners

OTHER CONTACT PARTNERS	
PERSON OF TRUST	I: Who would you want to talk with through this? (I2, 2) P3: (...) The person who I can be myself with and talk from the heart, people like I-san (...) (I2, 3-4)
FRIENDS	P2: If you want to enjoy talking with someone who would you want to talk with? (I1, 5) P1: U-san. (A friend of Sendai-no-oka) (I1, 6)
FAMILY MEMBERS	P10: One device for each home. It's good to use it for elderly, children, and grandchildren as well. (...) The number of users won't increase, if we aim only at the elderly as the target user group. (248-259)
EX-COLLEAGUES	I: If you could use CaringTV, who would you want to talk with? (I1, 1) (...) P1: S. (Ex-colleague) (I1, 9) P1: K. (Ex-director of Fuji Electric who lives in Tokyo.) (I1, 10)
PEOPLE ONE HAS NEVER MET BEFORE	P3: Chances to see new people and more choice. I hope they will make that kind of a system. (...) (I2, 45-47)
PEOPLE FROM AROUND THE WORLD	P3: (...) I'd like to talk with people from around the world. It'd be interesting to know the thoughts of the foreign elderly. (I2, 38-39)
YOUNG PEOPLE	P3: I do. I like to get a variety of young people's thoughts. (I2, 11)
MOTHERS OF TODDLERS	FG2
PEOPLE WITH DISABILITIES	FG2
CHILD CARE COUNSELLING USERS	P10: For example using for counselling about child care. (251)

TABLE 19: Other contact partners

The remaining CaringTV contact partners represent various types of other individuals, who are neither elderly people nor service professionals. These OTHER CONTACT PARTNERS are similar to the elderly user categories, because in the long run other contact partners can also be considered CaringTV end-users. Yet, as the focus of this study still is on elderly people as CaringTV end-users, contact partner and elderly user categories are presented separate from

one another. Besides, OTHER CONTACT PARTNERS cover a range of people of all generations. OTHER CONTACT PARTNERS is divided into PERSON OF TRUST and PEOPLE ONE HAS NEVER MET BEFORE, whom elderly could contact via CaringTV.

The quote which led to the development of PERSON OF TRUST also led to the development of the category A PROFESSIONAL PERSON OF TRUST. One participant (P3) explains he wants to talk to a person of trust via CaringTV. P3 furthermore describes his care manager to be such a person of trust. Yet, further information on the term PERSON OF TRUST does not exist, wherefore it seems to be adequate for non-professionals as contact partners, too.

Familiar acquaintances or family members of the elderly person can be considered the elderly individuals' persons of trust. That is why FRIENDS, FAMILY MEMBERS and EX-COLLEAGUES are presented as further sub-categories. It is worthwhile noticing that elderly people would not use CaringTV to contact family members who live close by. Otherwise it was highly important to P1 to contact former work colleagues and bosses via CaringTV.

The remaining group of individuals, elderly would like to contact is made up of PEOPLE ONE HAS NEVER MET BEFORE. Two types of individuals are described as examples of people, one has never met before; PEOPLE FROM AROUND THE WORLD and YOUNG PEOPLE in general. MOTHERS OF TODDLERS, PEOPLE WITH DISABILITIES and CHILD CARE COUNSELLING USERS represent the other possible CaringTV user groups. The focus group discussions brought up these three groups. In the discussions the groups were not directly associated with the elderly CaringTV users. Instead it was discussed, that these people could be future CaringTV users, too. However, the latter group of CaringTV users is also listed here, as they could also be possible future contact partners for elderly CaringTV users.

7.3.4 Interaction content

CaringTV interaction content is presented in this main category. It is firstly divided into seven different types of services, which can be offered to elderly people. Furthermore, most service types are divided into concrete interaction forms. At times, these concrete forms emerge in more than one service type. Beyond, for most categories, the participants' expressions for interaction or service forms are chosen for naming the categories. Yet, sometimes external terms were used, based on my understanding of the participant statements' meanings.

For presenting this group of categories, neutral language was chosen. Indeed, during interview and focus groups the different participants mainly talked about possible interaction

forms from their point of view. Professionals, e.g., talked about checking elderly people's health conditions, whereby elderly people talked about explaining their health condition to the doctor. Still, in the separated findings from interview and focus group data (see appendices 6 and 7) these different viewpoints are noticeable. Category titles that integrate the actions of both, service users and providers, were chosen. At all times, the interaction forms are presented without attaching information on the actors involved.

What is more, during the discussions participants talked about the possibility to offer the above listed services mainly as preventative nursing services. Yet, some participants also highlighted the possibility to offer these services as long-term care benefits for people, who have become less active than preventative nursing care patients. Consequently, the services could be offered as long-term care insurance, or care prevention benefits and services of long-term care benefits. As mentioned later on, the nursing care insurance would need to be changed for CaringTV being able to provide the services.

INTERACTION CONTENT	
TELEMEDICAL CARE	
HEALTH CHECKS	P7: The visiting nursing station sends a nurse to the user's home. (...) We would have cases where we would only need to give advice, if we check their condition through the screen. (49-51)
HEALTH DIAGNOSIS	I: If you could use CaringTV, who would you want to talk with? (I1, 1) P2: Get diagnoses like in a hospital. (...) (I1, 2) P1: A hospital doctor. (I1,3)
PREDICTION OF HEALTH OUTCOMES	FG2
MEDICAL INFORMATION	FG2
REHABILITATION SERVICES	
HEALTH CHECKS	FG2
INTERACTIVE PHYSICAL EXERCISE/ REHABILITATION PROGRAM	P7: Professionals of rehabilitation go to the user's home and try to improve their activity. (...) Visiting cases should be cut down, and instead of it we give them directions on the screen and let the users do their program. (76-79)
HOME SUPPORT SERVICES after hospital stay	
MEDICAL INFORMATION	P10: For people whose condition is settled are forced to leave the hospital in order to cut their stay in there. (...) If the family and care worker can ask for instructions by using the device, the helper can have peace of mind that they are getting care. If there is a system which lets their family cooperate with medical specialists any time, we can increase home support services. (112-118)
HEALTH CHECKS	FG2
INTERACTIVE PHYSICAL EXERCISE/ REHABILITATION PROGRAM	P6: Even only a 5 minute exercise program every morning or every evening would be different from using a DVD. A DVD is one way. I guess I could continue more easily if there was interaction. (I3, 86-88)
EMERGENCY SYSTEM SERVICE	
SERVICES TO SUPPORT DAILY LIFE	
PROGRAMS ABOUT NUTRITION	P7: It's nice to have a delivery meal which links to a cooking program. There is a menu for people who find it impossible to go shopping by themselves, and they use it for order now. If they can choose the

	meal that they see on the cooking program of the day, the choice will be wider and they will feel more freedom. (209-212)
INFORMATION ABOUT NUTRITION	P7: In Japan it would be nice, if they could exchange information for example about local specialities, such as the different ways to make pickles between people in the mountains and the coastal area. (30-32)
PROGRAMS WHICH LINK TO SHOPPING	P9: The virtual world will turn into the real world using the CaringTV. (...) and we can sell and buy stuff using mail-order service. (38-39)
INFORMATION WHICH NOW COMES IN PAPER FORM	FG2
INFORMATION ABOUT COMMUNITY ASSOCIATIONS	FG2
SERVICES TO SUPPORT MENTAL HEALTH	
COUNSELLING SERVICES: <ul style="list-style-type: none"> • FRANK TALK • SOLVE PROBLEMS 	P2: (...) I want such a place where we can talk frankly. I have got over my worries in this way. I want help like this. It's better to have this kind of thing. (54-55)
INFORMATION ABOUT COUNSELLING SERVICES	FG2
PROGRAMS WHICH LINK TO NUTRITION	P7: (...) It is useful for preventing senile dementia, if there is a program to activate the user's memory. Programs like giving tasks to the users to think about what they want to eat today. (...) (54-56)
EDUCATIONAL INFORMATION	FG2
CULTURAL PROGRAMS	P2: The situation will be harder in the future, and I can't get rid of my stress by just doing calligraphy. I don't go out for practically any other reason except calligraphy. I don't have a place to release my stress. If there is somewhere we can solve our problems while we have fun, I think it'd be nice. (...) (11 137-140)
SERVICES TO SUPPORT SOCIAL PARTICIPATION	
INTERACTIVE COMMUNICATION WITH OTHERS: <ul style="list-style-type: none"> • KEEP IN TOUCH • EXCHANGE DIFFERENT THOUGHTS • FRANK TALK • SOLVE PROBLEMS 	P2: It's nice to know what kind of life he is having while I go on a trip somewhere. (11, 177)
INFORMATION ABOUT COMMUNITIES	P1: There is S-san at Sendan-no-oka. I can talk about my problems with him. He listens to me frankly. So I also talk with him. (11, 84-85) (...) P1: He is easy to talk to when I met him. (11, 90) P2: Do you want to talk with such a person on the TV phone? (11, 91) P1: Yes. (11, 92)
HOBBIES: <ul style="list-style-type: none"> • DAY SERVICE ACTIVITIES • CULTURAL PROGRAMS 	CM: What do you think, P3? (...) Could you use it for things you do at the day service every month and enjoy the company while staying at home? P3: I could.
PHYSICAL EXERCISE	P7: If we don't think that staying home is negative thing, it's great that they can enjoy themselves without going out. The hobby which gives people satisfaction without going out. (138-139)
OTHER ACTIVITIES	I: What kind of program do you want? (13, 41) P5: Tea ceremony. (13, 42) P4: Shuji. (Shuji is a name for Japanese calligraphy, the same as "shodo".) (13, 43) P5: Japanese flower arrangement. (13, 44) P6: And poems for recitation. Tanka is also good. (...) (13, 45-47) P6: If I live alone and use a wheelchair, it's not good for me to exercise just watching a DVD. It's better to receive comments from someone watching after they see my reactions, then I can follow the comments and move. (13, 31-33) P9: (...) We can have competition on the TV (...) (38-39)

TABLE 20: Interaction content

The term TELEMEDICAL CARE emerged in focus group 2. Several interaction forms mentioned in both, interviews and focus groups, can be listed as part of telemedical care. Because the data did not clearly indicate an overlapping of the terms, HEALTH CHECKS, HEALTH DIAGNOSIS, PREDICTION OF HEALTH OUTCOMES and MEDICAL INFORMATION are presented separately from one another. HEALTH CHECKS can be understood as interaction, in which a professional contact partner checks the condition of an elderly user via CaringTV. PREDICTION OF HEALTH OUTCOMES means that doctors or physiotherapists could predict possible health outcomes to support elderly and their family members. Also the provision of MEDICAL INFORMATION on the elderly people's individual problems was mentioned.

The second type of services which can be offered to elderly people via CaringTV is REHABILITATION SERVICES. In the context of rehabilitation care, professionals could offer HEALTH CHECKS and INTERACTIVE PHYSICAL EXERCISE/REHABILITATION PROGRAMS.

The third service type which can be offered to elderly people via CaringTV is HOME SUPPORT SERVICES after a hospital stay. Home support services are services for people who left the hospital and are still in need of special care or support at home. These services can include the following offers: MEDICAL INFORMATION from nursing care station to families, care workers and nurses at site, and HEALTH CHECKS. Furthermore, INTERACTIVE PHYSICAL EXERCISE/REHABILITATION PROGRAM could also be offered as part of HOME SUPPORT SERVICES after a hospital stay.

The fourth service type which could be offered via CaringTV is an EMERGENCY SYSTEM SERVICE, which can be understood as service for elderly, which they call upon in case of an emergency.

The fifth service type is SERVICES TO SUPPORT DAILY LIFE of the elderly people. Several different service forms emerged in the focus groups only, which support the elderly person in her/his everyday life routines. The category title SERVICES TO SUPPORT DAILY LIFE is not mentioned in the data, but was added after having grouped its subcategories together. PROGRAMS WHICH LINK TO SHOPPING could be ones in which elderly people can buy and order products via delivery services. On the other hand, the elderly people could connect to the home helper, who does the shopping. Thus, the home helper could show products to the elderly via CaringTV and they could choose what to buy. Otherwise one could provide INFORMATION WHICH NOW COMES IN PAPER FORM or INFORMATION ABOUT COMMUNITY ASSOCIATIONS via CaringTV. Such associations work on ensuring road safety for elderly people or preventing fraud.

The sixth service type that can be offered via CaringTV is SERVICES TO SUPPORT MENTAL HEALTH to ensure peace of mind, mental fitness or absence of dementia. Such service forms can be COUNSELLING SERVICES, including FRANK TALK and SOLVE PROBLEMS, which were added because the elderly people frequently mentioned these terms. Hereby, the elderly strongly emphasized the importance of talking frankly with service professionals or other contact partners (see also SERVICES TO SUPPORT SOCIAL PARTICIPATION).

The term FRANK TALK was taken directly from the data and its meaning was clarified by using Mayring's explication technique. The detailed explication process is depicted as appendix 8. Briefly, one can state that the meaning of "frank talk" here is to talk in an honest and open way, also about unnecessary things and small problems, and entails that the talking person feels understood and is taken seriously by the listener. Hence, in the first place it is very important to just talk about their problems to a professional and only in a second step to solve the problems. What is more, another participant used the term "talk from the heart". This term's meaning was also clarified by using Mayring's explication technique (see appendix 8). For its similar meaning "talk from the heart" was integrated into FRANK TALK and hence COUNSELLING SERVICES.

Furthermore, focus group 2 also discussed the importance of providing INFORMATION ABOUT COUNSELLING SERVICES. Other service forms that can support the mental health are PROGRAMS WHICH LINK TO NUTRITION to prevent senile dementia, EDUCATIONAL INFORMATION to enable elderly to learn and CULTURAL PROGRAMS to offer the opportunity to release stress.

The last service type which can be offered via CaringTV to elderly people in Sendai is SERVICES TO SUPPORT SOCIAL PARTICIPATION. First of all, via CaringTV the INTERACTIVE COMMUNICATION WITH OTHERS is enhanced. Hereby, the elderly interview participants specially focused on the different kinds of communication: KEEP IN TOUCH, EXCHANGE DIFFERENT THOUGHTS, FRANK TALK and SOLVE PROBLEMS. One can naturally KEEP IN TOUCH in many ways and hereby exchange different kinds of information, memories and stories. Besides, elderly people could keep in touch with family members when travelling somewhere. Otherwise, elderly can EXCHANGE DIFFERENT THOUGHTS with various kinds of communication partners, e.g. with young or foreign people. The content of FRANK TALK has already been described above. Yet here, the special emphasis is on frank communication in informal situations. Additionally, it was suggested to provide INFORMATION ABOUT COMMUNITIES the elderly users could join in. Further services offered via CaringTV, which also support social participation, are HOBBIES, PHYSICAL EXERCISE and OTHER ACTIVITIES. The interview participants further described two types of hobbies: DAY SERVICE ACTIVITIES and CULTURAL PROGRAMS. Day service activities can be meetings of people who listen to music and drink coffee together. Cultural activities are Japanese tea ceremony, *shuji*, *ikebana*, *tanka*, singing or

karaoke. PHYSICAL EXERCISE is also listed here, as it should be possible that it is not only implemented in the context of rehabilitation, but as a leisure time activity with other people as well. OTHER ACTIVITIES which support social participation are all those that cannot directly be linked to one of the already mentioned types, e.g. casino programs, competitions or games.

7.3.5 Organizational features of CaringTV

ORGANIZATIONAL FEATURES	
LOCAL GOVERNMENT	P7: (...) The university or the local government should start it first as we expected. (185)
INDUSTRY/ PRIVATE PARTIES	FG2
UNIVERSITY/ UNIVERSITY FOUNDATION	P3: (...) In Japan as well, for example, it would be good if Fukushi (welfare) university takes the lead to make an organization like a foundation with the other universities. (12, 49-51)
NURSING CARE INSURANCE	P7: We need a system where the nursing care insurance covers the cost of CaringTV, and thins out substantial services of the insurance. We need to improve the system efficiently. (53-54)
SERVICE PROVIDERS	FG2
PROVISION POSSIBLE THROUGH COSTSAVINGS	P7: (...) Visiting cases should be cut down, and instead of it we give them directions on the screen and let the users do their program. We can save our resources by repeating this. If it is so, it would be acceptable for the administrative office to buy the device and set it up in the user's home. (...) Otherwise it won't spread. (76-82)
SELF-HELP GROUPS	FG2
INDIVIDAL CARINGTV USERS	P9: It is necessary to let people spend money to use this. Under present conditions we can't manage to use it without the users' expenditure. At most, the University can manage to get a subsidy and provide a PC, then we can use it only about 1 or 2 years. (199-201)

TABLE 21: Organizational features

A further category emerged from answers to analysis question (III). This category centres on the organization of CaringTV within the social welfare and health care system of Sendai. It belongs to the enabler categories, as through the organizational features CaringTV as such can be launched on Sendai's health care and welfare market. Yet, as this categories represents omnipotent CaringTV components, it differs from other enabler categories. Still, due to the fact that elderly people do not actively experience how CaringTV is organized within the social welfare and health care system, these categories are no value opportunity attributes.

The organizational features of CaringTV were mainly discussed during the focus group sessions, above all in focus group 2. Here it became evident that organizing CaringTV in Sendai consequently also means providing the services, hence bearing the costs. That is why these findings present options on which party in Sendai could cover the expenses for CaringTV and at the same time function as official CaringTV provider.

Beyond, it is almost impossible to represent the focus group statements in an adequate findings structure, especially since only 20% of the discussions could be translated into English. It is hard to conceive whether the groups come to a conclusion on what is the best way of organizing CaringTV in Sendai, or not. That is why all mentioned options of organizing CaringTV are listed in parallel. It is assumed that the people responsible for organizing CaringTV in Sendai have already chosen the most reasonable organizational features.

One possible CaringTV provider, at least to some extent, is the LOCAL GOVERNMENT. Further, INDUSTRY/PRIVATE PARTIES and the UNIVERSITY or a UNIVERSITY FOUNDATION could take a major role in providing CaringTV. Otherwise, the NURSING CARE INSURANCE system could be improved and thus enable the introduction of CaringTV. Also, SERVICE PROVIDERS could cover the cost for the CaringTV provision. The latter might, *inter alia*, be possible through COST SAVINGS. Eventually, it could be also considered to ask SELF-HELP GROUPS or INDIVIDUAL CARINGTV USERS to at least partly bear some costs for CaringTV provision.

7.4 CaringTV value opportunity attributes

Three types of value opportunity attribute categories exist as answers to analysis question (II): BASIC CONCEPTUAL VALUE OPPORTUNITY ATTRIBUTES, DEVICE-RELATED VALUE OPPORTUNITY ATTRIBUTES and VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY.

The first two attribute types could also be considered suitable answers to analysis question (III). Indeed, they explain to some extent how CaringTV can be enabled. However, they are categorised as value opportunity attributes. The reason for this is that these two omnipresent CaringTV features can be experienced by the users.

7.4.1 Basic conceptual value opportunity attributes

The term BASIC CONCEPTUAL VALUE OPPORTUNITY ATTRIBUTES did not emerge from the data itself, but was added after having gathered accordant themes into one group. These represent intangible CaringTV features which elderly people would experience when using CaringTV. All other terms, which are used here, were directly mentioned during the group discussions.

BASIC CONCEPTUAL VALUE OPPORTUNITY ATTRIBUTES	
INTERACTIVITY	P9: If interaction is important, the mobile phone can be used as a TV phone, and interaction happens between the TV watcher and the digital TV system by using 4 buttons. (148-149)
CUSTOMER ORIENTATION	P7: Interesting parts are different for each person. It's necessary to make many channels (208)
PRIVACY	P10: We need to consider ways of ensuring that we do not leak users' private information. (197)
COMFORT	FG2
VISIBILITY	P2: Communication with his friends makes him the most happy. But there are only voices on a phone, so he only talks about really necessary things. When you can see your friend's face, we can see also their life condition a little bit. (I1, 152-154)
EFFICIENCY and EFFECTIVENESS	P10: In the case of nursing care level 1, we visit each user once a month. But there are big gaps among level 1 users. Some people need our visits 4 to 5 times a month, and some people don't need a visit every month. The care managers visit them every three months now. But we reduce their visits to once a half year, and then we let them hear about the users' condition through CaringTV, how about this? On the other hand it will take away the users' independence, if the care managers are involved in their life too much.
CARINGTV AS ONE OUT OF SEVERAL SOLUTIONS	P2: (...) It's good to use it effectively, but there are other solutions for this problem. It's necessary to use different ways. [i.e. not just staying at home] (66-71)

TABLE 22: Basic conceptual value opportunity attributes

The first conceptual attribute that elderly people would gain when using CaringTV is INTERACTIVITY. Further, CaringTV should bring along CUSTOMER ORIENTATION as conceptual value opportunity attribute. Customer orientation here stands for designing suitable CaringTV services for different user types. PRIVACY is a further important conceptual attribute that CaringTV should create. Here, privacy is meant in terms of confidentiality so that users have the right to keep information on their private lives secret. Then, COMFORT would be the next value opportunity attribute that comes along with CaringTV. Based on one statement from focus group 2, elderly would not have to visit the regional support centres as often as before when using CaringTV instead. Also in focus group 2, VISIBILITY was defined as keyword when talking about CaringTV benefits for elderly people in Sendai. Many other statements were found on the positive effects of seeing each other when communicating from a distance.

Furthermore, CaringTV can be understood to generate EFFICIENCY and EFFECTIVENESS in care services. The latter would indeed be of value not only, but also, to elderly people. Finally, one interview participant further claimed that CaringTV cannot be considered the only solution to the challenges elderly people face in life. Instead, CaringTV should be one out of several solutions for tackling life's challenges.

7.4.2 Device-related value opportunity attributes

The term DEVICE-RELATED VALUE OPPORTUNITY ATTRIBUTES is partly taken from the data. The category term was chosen, as its categories describe the features, the elderly people would like to experience concerning the device or its use.

DEVICE-RELATED VALUE OPPORTUNITY ATTRIBUTES	
LECTURE HOW TO USE	P2: (...) He (P1) has got some handicap. He can't do anything by himself from start to finish. (...) He can remember about three things even he tries his best. If there are clear instructions about which buttons to press and when then it's easy.. (I1, 96-103)
HOUSEHOLD APPLIANCE	P9: If we consider using this for activities, it's better to use a familiar device like a household appliance. (40-41)
EASY USE	P9:(..) It is meaningful to join society by using a device which is easy to operate. Their connections to other people won't be closed by using this.(..) (96-97)
NOT TOO EASY USE	P9: The people who belong to the baby boomer generation, can get used to such equipment. If we have a very complicated device, the elderly can't use it. But if it's too simple, they will say, "I don't need to be looked after by this", and then they will refuse it. (..)
HEAD DECK	FG2
TOUCH SCREEN	P3: The touch panel which you showed a short time ago. That way was easy. There aren't any buttons and it's simple. Even elderly people can understand if it is simple. (I2, 56-57)
VOICE CONTROL	FG2
BIG PUSH-BUTTONS	P5: It's easy to press if it's big. (I3, 38)
FEW FUNCTIONS ONLY	P5: When we don't press the right button it is all right if the operation is a simple one. But if there are many functions it'll be complicated. (I3, 105-106)
HIGH IMAGE RESOLUTION	FG2
CONNECTION WITH MOBILE PHONE	FG2
PORTABLE DEVICE	P2: (...) It's better to go out, but not stay at home all the time. (...) If it's possible, I'd like to use it (CaringTV) outside. (I1, 74-79)

TABLE 23: Device-related value opportunity attributes

The first device-related attribute for elderly people in Sendai should be a LECTURE HOW TO USE CaringTV. The latter could ensure that elderly people are not stressed by the idea to use a device they do not know how to handle. Second, CaringTV should be designed and introduced to elderly people as HOUSEHOLD APPLIANCE that is to be like a familiar device or home electronics. Third, CaringTV should be EASY TO USE for elderly people. Five suggestions on how to enable the easy use exist: the use of a brain-wave controlled HEAD-DECK, TOUCH SCREEN, VOICE CONTROL panel, BIG PUSH-BUTTONS and FEW device FUNCTIONS ONLY.

Fourth, the USE of the device should NOT be TOO EASY though, especially for younger and fitter elderly. Fifth, a HIGH IMAGE RESOLUTION is an important device attribute, especially when thinking of doctor services via CaringTV. Sixth, CONNECTION between CaringTV and MOBILE PHONES should be installed for more flexible use of the device. Finally, one interview participant had ideas for an alternative device form of CaringTV. She stated interest in a de-

vice that could also be used away from home. Hence, she stated interest in a PORTABLE CaringTV DEVICE.

7.4.3 Value opportunity attributes with personal impact on the elderly users

The last and most important type of value opportunity attributes can be clearly defined as attributes, which elderly people experience personally. Therefore they are named VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY USERS. These emerge based on the immediate interaction which takes place on CaringTV. This means that the attributes with personal impact are interaction- and customer-bound. Five main value opportunity attributes with personal impact on the elderly users emerged: MENTAL HEALTH MANAGEMENT, PHYSICAL HEALTH MANAGEMENT, INDEPENDENCE/MANAGING AT HOME, SOCIAL PARTICIPATION and SOLIDARITY.

The term MENTAL HEALTH MANAGEMENT does not exist as such in the data, but was added after having grouped its five subcategories. It shall indicate that the participants are enabled to manage their mental health via CaringTV. MENTAL HEALTH MANAGEMENT covers five subcategories: PEACE OF MIND, INTELLECTUAL GROWTH, ABSENCE OF DEMENTIA, JOY and MOTIVATION.

One interview participant hopes to gain more PEACE OF MIND through contacting people via CaringTV. Focus group participants also assume that CaringTV can ensure peace of mind, here for care workers and family members of elderly people. Other data extracts, which referred to a similar feeling as peace of mind, were integrated into the sub-category PEACE OF MIND. Some of these data abstracts only describe the absence of unpleasant emotional states. Still, they link to the feeling of peace of mind in total, here relief, absence of stress and worries.

The term INTELLECTUAL GROWTH could not completely be drawn from the data. One participant strongly emphasized the fact that he wants to develop himself through the usage of CaringTV. Such personal development can be understood as intellectual growth of a person as well. Other topics which were integrated into INTELLECTUAL GROWTH were: understanding different people, understanding new things about the own life situation and learning. What is more, also the elderly people's contact partners can experience intellectual growth. When young people, students or people in general, get to understand elderly people, they benefit thereof. Students who understand elderly people's life situations will become better consultants in future. Furthermore, the crime rate like the murder on elderly would decrease, if people in general intellectually grow through understanding elderly people.

VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY USERS	
MENTAL HEALTH MANAGEMENT	P10: If the family and care worker can ask for instructions by using the device, the helper can have peace of mind that they are getting care. If there is a system which lets their family cooperate with medical specialists any time, we can increase home support services. (15-118)
PEACE OF MIND	P10: If the family and care worker can ask for instructions by using the device, the helper can have peace of mind that they are getting care. If there is a system which lets their family cooperate with medical specialists any time, we can increase home support services. (15-118)
INTELLECTUAL GROWTH	I: What kind of service or contact would you like to get when using the device? (I2, 13) P3: I want to develop myself. I want to get good things from young people because I would like to be a better person. (I2, 14-15)
ABSENCE OF DEMENTIA	P7: It is useful for preventing senile dementia, if there is a program to activate the user's memory. (54-55)
JOY	P7: If we don't think that staying home is negative thing, it's great that they can enjoy themselves without going out. The hobby which gives people satisfaction without going out. (138-139)
MOTIVATION	P9: (..) If there are communities, people can be motivated to join...(163)
PHYSICAL HEALTH MANAGEMENT	
STAYING ACTIVE	P6: (..) And I guess that we must feel like both of us [service provider and user] depend on each other. It's boring without that feeling. We feel we get more attention and are more active if we get many messages from the other side. (..)
KEEPING UP PHYSICAL CONDITION	FG2
PREVENTION FROM FURTHER ILLNESSES	P7: It is useful for preventing senile dementia, if there is a program to activate the user's memory. Programs like giving tasks to the users to think about what they want to eat today. This is a tool which the home helper and user finds out how to use. (..) (54-57)
INDEPENDENCE/ MANAGING AT HOME	P7: It's like insurance. People can manage somehow because of the connection with CaringTV. (48)
SOCIAL PARTICIPATION	P9: The elderly who live alone have become less involved in society. Through CaringTV, it might be possible to get those people to participate more in society. (28-39)
	P2: (...) If it's really impossible to go out or meet people, then it'd be nice to use this for the company. If it's possible, I'd like to use it outside. If that were impossible, it'd be fun to get together with people in the evening with this. (...) (I1, 76-79)
SOLIDARITY	P10: As a care manager, we can use it for the care service staff meeting which is held regularly. Many offices are involved, if the user is heavily handicapped. 6, 7 offices are involved at the most. It's difficult to find a suitable day for both the user and family member. It will be almost a 100 percent attendance, if we hold a meeting through CaringTV. We can improve solidarity among us. (58-62)

TABLE 24: Value opportunity attributes with personal impact on the elderly users

Because dementia is a common mental health phenomenon amongst elderly people, ABSENCE OF DEMENTIA is listed here specifically. In fact, through interaction on CaringTV, focus group participants would seek to prevent elderly people from getting senile dementia. JOY represents similar descriptions of mental well-being stated by the participants, such as satisfaction, fun and happiness. MOTIVATION refers to elderly people being motivated to do things through the use of CaringTV. Not only elderly people, but also professionals would feel more motivated towards their work when working with CaringTV. The latter naturally has again a positive effect on elderly service users.

PHYSICAL HEALTH MANAGEMENT is divided into three sub-categories: STAYING ACTIVE, KEEPING UP PHYSICAL CONDITION and PREVENTION FROM FURTHER ILLNESS. This is feasible as all three sub-categories refer to the topic physical health. The term HEALTH MANAGEMENT as such is taken straight from the data, where it referred to care workers who are responsible for the health management of elderly people in need of care. Here PHYSICAL HEALTH MANAGEMENT shall indicate that the participants are enabled to manage their physical health via CaringTV.

INDEPENDENCE/MANAGING AT HOME refers to elderly people coping at their own home. The term independence emerges twice in the data. Otherwise, participants talked about elderly people being able to stand on their own feet or MANAGING. The words AT HOME are added in the category title, as it is there that CaringTV is meant to support elderly people.

SOCIAL PARTICIPATION surely represents a value attribute which was stated frequently in many diverse ways during focus groups and interviews. Indeed, numerous possible synonyms and sub-themes fit under SOCIAL PARTICIPATION, such as network, connections and contacts, meet others, join others, make friends, etc. As all these sub-categories do not contain specific relevant information, they are not displayed as findings. The term SOCIAL PARTICIPATION instead demands for more specific attention. In the context of the discussions, social participation is understood as being or doing things with or for others. It is further assumed that by another used expression “to participate in society” similar content is indicated. The latter is concluded from the fact that at no point during the group discussions participants talk about political or economic participation of elderly people. Instead, the only focus when talking about participation is on participation in happenings with other people for the sake of being together with others.

The fifth value opportunity attribute is SOLIDARITY. It is not integrated into SOCIAL PARTICIPATION, even though solidarity emerges in social situations between people. Yet it seems as if the Japanese meaning of SOLIDARITY is of a more specific nature. That is why it is listed here separately.

7.5 Examples on the interdependence of categories

Here, two examples from the interviews on the categories' interdependence are presented: P2 is an ELDERLY WHO TAKES CARE OF her ELDERLY FAMILY MEMBERS. She would like to contact the CARE MANAGER or ELDERLY PEOPLE IN A SELF-HELP CLUB via CaringTV. From the care manager she would like to obtain SERVICES WHICH SUPPORT MENTAL HEALTH. The immediate interaction she would like to indulge in with the care manager is COUNSELLING SERVICES, more precisely FRANK TALK and SOLVE PROBLEMS. With ELDERLY PEOPLE IN A SELF-HELP CLUB she would like to enjoy INTERACTIVE COMMUNICATION WITH OTHERS, again FRANK TALK and SOLVE PROBLEMS. Thus, she would gain value from CaringTV, here PEACE OF MIND and hence would be enabled to MANAGE her MENTAL HEALTH.

P3 is an elderly WHO LIVES ALONE and WITH DIFFICULTY MOVING. He would like to use SERVICES WHICH SUPPORT SOCIAL PARTICIPATION, specifically he would like to enjoy INTERACTIVE COMMUNICATION WITH OTHERS precisely to EXCHANGE THOUGHTS with PEOPLE he HAS NEVER MET BEFORE. Such people could be PEOPLE FROM AROUND THE WORLD or YOUNG PEOPLE. Thus, CaringTV would be valuable to P3 in that he would experience INTELLECTUAL GROWTH and hence also the value of MENTAL HEALTH MANAGEMENT.

Another example is taken from the focus group data: In the long-term care insurance frame of preventative nursing care benefits, different PROFESSIONAL CONTACT PARTNERS could offer different kinds of services, such as INTERACTION CONTENT to SELF HELP GROUPS AS CORE OF THE REGIONAL COMMUNITY. More precisely, the professionals would provide SERVICES TO SUPPORT MENTAL HEALTH, here COUNSELLING SERVICES and SERVICES, WHICH SUPPORT SOCIAL PARTICIPATION, e.g. PHYSICAL EXERCISE and HOBBIES. These different activities could create several benefits to the elderly in the self-help groups: MENTAL HEALTH MANAGEMENT in form of PEACE OF MIND and JOY as well as SOCIAL PARTICIPATION.

8 DISCUSSION

8.1 Ethical considerations

In social sciences, the term research ethics represents all principles which apply to the relationship between researchers and research objects, here called research participants (Hopf 2008, 589-590). In fact, at times a researcher has to choose between acting responsibly towards research participants and acting scientifically correct in favour of the research outcome. In such cases, the researcher always has to give preference to his responsibility towards the people, not to science. (Denzin & Lincoln 2003, 88-89) Ethical considerations in qualitative research typically deal with issues such as informed consent, right to privacy and

protection from harm. Further ethical considerations usually address covert or overt use of tape recorders. (Denzin & Lincoln 2003, 88-89; Hopf 2008, 590)

Another highly relevant ethical consideration deals with the researcher's impact during data collection and analysis of the data. The authors claim that, e.g., the way an interview is led or the way conclusions are drawn in a research always are based on the researcher's moral and political belief system. The impact of the researcher hence influences the truthfulness of the final report. (Denzin & Lincoln 2003, 88-89; Silverman 2005, 257-258)

8.1.1 Informed consent

Due to ethical considerations participants have to be informed about the research and asked for their written consent if they are willing to join as participants (Silverman 2005, 258). All research participants of this study were informed in an invitation letter about the background of the research. The invitation letter also emphasised voluntary participation in the research. It further entailed an informed consent sheet to be signed by the participants. Invitation letter and informed consent sheet were written by me in English and translated by TFU into Japanese. My primarily attached CV was left out in the final Japanese version because in Japan, it is perceived rather awkward to do so in invitation letter. The fact that TFU invited the participants on my behalf was enough proof that I was a trustworthy student researcher (Hagino 2010a). An English version of the invitation letter and informed consent form can be found in appendix 1 of this thesis.

Due to the short time available between final planning and data collection, only focus group 2 received the invitation letters and informed consent forms days before the meeting took place. In addition, focus group 2 participants also received invitation letters from Laurea of Applied Science. In order to justify the focus group attendance, the City of Sendai workers needed the additional more official invitation letter from the Finnish University. Unfortunately, focus group 1 and all interview participants only received the letter and consent form at the beginning of the data collection sessions. The data collection, however, only started after the letters had been read and the forms signed.

It could truly be argued that the participants in interviews and focus group 1 were inhibited in their decision to join the research or not. Thus, it could have been that the presence of the researcher team pressured the participants to join the study. However, the responsible care manager had asked the interview participants in advance and in peace whether they were interested in joining a research. The focus group 1 participants, on the other hand, had been asked in advance by TFU and FWBC staff. It is assumed that already then basic information

about the research background was given and a free decision on participation was possible. When necessary, detailed explanations were given, as well as time to read the informed consent sheet in peace. Additionally, the invitation letter empowered the participants to withdraw from the research at any time if they felt uncomfortable.

8.1.2 Privacy

The participants' identity is kept private in all cases. They are presented in this report as participants 1-15. In fact, a lot of information about the interviewees is presented in the findings chapters 5.1 and 7.1. Still, it is assumed that plenty of elderly people in Sendai share similar life situations. Consequently, readers of this paper cannot recognize the interview participants from the crowd of elderly people in Sendai. Yet, it might be argued that focus group 1 participants could be recognized by co-workers through the description of their profession given in chapter 5.1. The close description of the profession of the participants seemed necessary to discuss its impact during the data collection. And, even in the unlikely event of co-workers recognizing the identities of focus group 1 participants, the co-workers would not be able to match quotes with participants. The latter is due to abstract participant abbreviations in the quotes. Participants of focus group 2 however, are hardly described at all because of their explicit enquiry to keep data and backgrounds highly confidential.

8.1.3 Protection from harm

At all times, it was the first research aim to protect the participants from harm. The term harm stands for any kind of disadvantages or danger. It can arise from publishing the participants' identity or when findings on a certain group of individuals is considered damaging or disadvantageous by the individuals themselves (Hopf 2008, 597-598). First of all, through keeping their identity secret, the participants were kept from harm. For the discussion of the identification problems of focus group 1 refer to paragraph 8.1.2. In fact, focus group 1 participants did not share any personal information, but simply their professional opinions on CaringTV.

Second, the findings developed do not describe any participant group, whether elderly people, their family members, professionals or other experts in negative terms. Findings on analysis question (I) indeed describe elderly people's challenges in life. Yet, this description does not depreciate elderly people. Instead it seeks to enable people from other generations to develop empathy and understanding for elderly people. Findings on analysis questions (II-III)

furthermore all focus on CaringTV as service product. Hence, none of the participants are described personally.

Third, one can extend the statement of Hopf (2008, 597-598) on how harm can be created. Actually, participants can also experience harm during the data collection process. Here, it can emerge during stressful focus group discussions on sensitive topics (Morgan 1998, 91-93). The latter can be assumed for focused interviews as well. Since the questioning route of this study mainly focused on less personal and sensitive topics, I sought to avoid stressful discussions. In fact, the elderly participants shared voluntarily a lot of information on their life challenges. For this reason, it is assumed, that the elderly did not feel harmed. The focus group participants only discussed their ideas on CaringTV. What is more, focus group is a participant-empowering data collection method. Thus, also the focus group participants were supposedly protected from distress during the discussions.

It could, however, be argued that the size of the research team present in the data collection phases added stress to the participants. During the interviews four people confronted the elderly with the interview situation, while in the focus groups sometimes there were up to six persons in addition to the participants. Based on TFU's and FWBC's interest and respect towards the research and the participants, however, the research team size was adequate. It needs also to be mentioned that observers present in focus group 1 apparently were friends of the participants.

When discussing possible harm for participants, one should also lay attention on the role of research sponsors, who finance or contract the researchers. If the relationship between sponsor(s) and research participants are too close, either non-favourable or too favourable data could emerge and negatively influence this relationship as well the study in whole. (Morgan 1998, 89-90)

Although I was sponsored by both, Laurea and TFU, neither university functions as official sponsor of this study. Laurea kindly granted a travel stipend as well as the coverage of data translation by, while TFU provided their excellent personnel resources to implement the data collection and to support me in accustoming to Japanese culture. Indeed, the existing strong relationships between participants, interviewer, facilitator, care manager and observers might have influenced the participants. It might be argued that the participants could have felt stressed by the presence of sponsoring parties. However, even without Japanese language skills, I had the impression that the participants seemed rather relaxed during the data collection sessions. What is more, I strongly assume from the discussions I had with our Japanese cooperation partners that in no case the findings could harm the relationship between them and the participants.

Beyond, the decision to interview elderly people together with their family members can be considered a major ethical decision towards the protection from harm. In order to empower the elderly to share their opinions, they were interviewed separately from people of higher status in Japanese society. Additionally, their personal care manager attended the interviews in order to create a trustful and hence relaxed atmosphere. Indeed, the two different focus group set-ups were also based on the ethical approach to protect participants from harm.

8.1.4 Overt audio-recording

Covert tape-recording during interviews is mainly considered unethical, although it might lead to more authentic data (Hall & Hall 1996, 161-164). Despite the risk of flaws, the data collection sessions of this study were overtly audio-taped. Besides, video-taping of interviews and focus groups was rejected. According to our cooperation partners in Sendai, focus group and especially interview participants would have felt too intimidated by video recording.

8.1.5 Impact of the researcher

It could be argued that for a Western European researcher it is difficult to adequately collect and analyse Japanese participants' data. Naturally, my political and moral belief system, and hence my value system, to some extent influenced the research process. In order to minimize my personal impact on the research process, I stayed in Japan for two months. During that time I kept a diary in which I reflected my personal familiarization and acculturation process. During the familiarization process I grasped a better understanding of the life and thus of the moral and political belief system of elderly people in Japan. I had the great opportunity to attend Japanese language and culture lectures, from which I gained new insight into Japanese culture. After all, I had stayed one month in Japan before the first interview took place. During that time I was in close contact with Tohoku-Fukushi researchers, especially with Dr. Hagino. In cooperation we adapted the data collection plan so that it would suit the Japanese context. The alterations of the data collection plan are precisely described in chapter 5.

Unfortunately, it was not possible to analyse the data in Japan although this was planned as soon as possible after the sessions. In this case, I would have been able to immediately ask Tohoku-Fukushi staff for interpretation help. Because video-recording was rejected for ethical reasons, I could not discuss the participants' behaviour patterns with Japanese researchers either. Hence, when processing the notes from interviews and focus groups and when analysing the data I had to cope alone with the problems. Especially, when facing difficulties

concerning ambiguous data extracts, my cultural background might have influenced the category development process. Therefore, the result might indeed be a rather European set of findings.

8.1.6 Impact of the sponsoring universities

Since both universities are interested in the transfer of CaringTV to Japan, outsiders could argue whether the universities sought to deliberately bias the research. Prejudices towards business-driven service development might lead to the assumption that the main goal of product developers, in this case the universities, is to “sell” the product (CaringTV) under any circumstances.

In general however, this assumption can be considered naïve and false. Product developers have understood that the main goal is not to sell masses of poor products to people, but to add value to products. Furthermore, in the case of CaringTV, one can state that the main interest of launching the product in Japan is to tackle the challenges of elderly care. Thus the improvement of the quality of life of elderly people is the focus of attention. Therefore, it would be counterproductive to bias data, which was produced by future end-users or professionals. In fact, only through understanding the clients’ values and needs concerning the product, the product can be successfully launched in the market (Cagan & Vogel 2002, 2-8). Biasing this kind of research would eventually lead to a distorted product development process. The resulting product would not match the end-users interests and needs so that the end-users would not want to use the product. Logically, none of the universities has an interest in such a product development process.

Nonetheless, it needs to be argued whether certain choices for data implementation and reduction had an unintended impact on the research. In fact, one could claim that selecting mainly participants who are connected to TFU’s joint foundation facilities biases the research. Furthermore, it might be argued that appointing interviewer and facilitator from TFU had an impact on the research. Likewise, the participation of one TFU researcher in focus group 2 could also have influenced the data or the presence of observers in focus groups and the presence of a care manager in interviews might affect the research outcome. In fact, the participants might have wanted to give pleasing answers to the whole research team. Also, the data reduction process might have unintentionally biased the findings, as another 20% of the data for further analysis could have been chosen.

The truth is that I cannot be sure of an unintended effect on the findings. Yet, considering the fact that this qualitative study was the first of its kind, these ethically spoken inauspi-

cious research steps could be deferred. All critically depicted research steps were implemented for practical reasons. The lack of opportunities caused the choice on ethically questionable implementation forms.

8.2 Trustworthiness

The trustworthiness of a research can be measured by applying accordant research quality criteria. Constant quality criteria are applied in quantitative research, e.g., validity and reliability (Lamnek 2010, 127-128). In qualitative research, however, three different positions on the use of quality criteria exist. The first position favours adopting and transforming quality criteria from quantitative research. The second position demands for the application of own qualitative research criteria. The third post-modernist position instead calls for a rejection of any criteria. (Steinke 2008, 319-321)

Thus, it is not surprising that different guidelines for discussing the trustworthiness of a qualitative study exist. A known representative of the first position, e.g., is Silverman (2005, 209-210) who recommends measuring the quality of a qualitative study in terms of validity and reliability. Lincoln and Guba objected the simple adaptation of validity and reliability and in 1985 developed four other quality criteria: credibility, transferability, dependability and confirmability. These criteria are nowadays frequently applied by qualitative researchers (Polit & Beck 2008, 539). Yet also Lincoln and Guba's criteria relate to quality criteria from quantitative research. Representatives of the second position strongly criticize this kind of criteria. They instead formulate specific criteria on the basis of, *inter alia*, methodological qualitative research features. (Steinke 2008, 319-320) Representatives of the third position again decline both kinds of criteria.

To solve the differences and frictions between the different positions, Steinke (2008, 321-331) developed a new set of quality core criteria: "intersubjective traceability, indication of the research process, empiric anchorage/grounds, limitation, coherence and relevance". The criteria are on the one hand depicted rather profoundly, but on the other hand leave enough implementation opportunities for different types of qualitative research. (Steinke 2008, 321-331) The latter criteria are adopted in the discussion on trustworthiness of this study.

8.2.1 Intersubjective traceability

The traceability of the research process enables a critical evaluation of the produced findings. Intersubjective traceability can be ensured through implementing the following three

steps, first documenting the research process, second interpreting the research process in groups and third applying codified research methods. (Steinke 2008, 324-326)

When reading this report, one will quickly notice that great emphasis was laid on documenting the research process as precisely as possible. Due to major changes during the implementation phase and due to data collection taking place in a culturally different environment, the latter was important for ensuring intersubjective traceability. The report includes theories I had come across before conducting the thesis. The presentation of previous theories enables the reader to decide whether truly new findings were developed in this study. Data collection methods and data collection context are also described in detail in the report. Furthermore, the data capture and data transcript forms are reported. In addition, the analysis method is explained, and concerning the findings all categories are presented aside with the most representative data extracts. Only in case of focus group 2 data, the extracts were left out for confidentiality concerns. Eventually, all problems which occurred during the research process are reported honestly.

In fact, I faced restricted opportunity chances to discuss and interpret the research process in groups. Before heading to Japan, I naturally discussed all research plan steps with my student fellows and lecturers. Being in Japan, I was allowed to discuss with Dr. Hagino about the thesis process. I was also able to discuss the thesis process with another German Master student of Tohoku University.

8.2.2 Indication

A research process also needs to be evaluated based on its indication, hence its adequacy. The indication of several research features can be evaluated: indication of the research approach, of research methods, of transcription rules, of sampling strategy, of single methodological decisions within the whole research context and of evaluation criteria. (Steinke 2008, 326-328)

Before addressing the indication of the single research features, one could discuss the adequacy of allowing a European student implement this kind of qualitative study in Japan. As explained in chapter 8.1.5, European researchers with all their subjectivity may have an impact on the research process, hence also on the trustworthiness of the findings. Yet, this research was a learning opportunity wherefore a further discussion of the researcher influence on the trustworthiness is neglected. Beyond, in qualitative research the impact of the researcher on the findings can never be fully eliminated.

Concerning all mentioned research features, this report gives detailed information on the research features' indication, from research approach to evaluation criteria. Thereby, the report depicts how far the original thesis plan needed to be changed throughout the research process. In the original research plan all features, theoretical position, research approach, sampling strategy, data collection and analysis methods, were chosen based on their adequacy for the research purpose. In the planning phase, it was assumed that subjective interactionism, grounded theory, on-going theoretical sampling, data collection in several heterogenic focus groups and Glaser's 6Cs analysis method would suit the research purpose best.

However, due to the cultural research context, the data collection method had to be changed. Our Japanese cooperation partners explained that the use of heterogenic focus groups is not adequate to gain answers on the research questions. Instead, it was of importance to ask elderly people separately about their views on CaringTV. Hence, this single methodological decision adequately meets the research purpose and raises the findings' trustworthiness. Yet, the consequences which came along with this decision only partly support the trustworthiness of the findings. For practical reasons, however, such consequences could not be avoided. The adequacy of research features, which increase or decrease the level of trustworthiness is discussed below.

One research feature, which was not influenced by the data collection method change, is the study's theoretical position symbolic interactionism. This incident enforces an appropriate level of trustworthiness. Despite major changes throughout the thesis process, including research approach disavowal and method adaptation, symbolic interactionism is the methodological and theoretical stabilising framework of this research. It furthermore adequately meets the research purpose.

Besides, the disavowal of a research approach can be considered an adequate decision. In fact, many researches in the social work or nursing care field do not even claim applying a specific research approach. Furthermore, it is explained in chapter 4.4.2 that grounded theory was after all not the most adequate approach for this study. The grounded theory was left behind, as analysing between the data collection sessions and on-going theoretical sampling was impossible. The disavowal of the grounded theory approach raises the level of trustworthiness.

Moreover, the disavowal of the research approach demanded for a new analysis method outside the spectrum of Glaser and Strauss' analysis methods. Eventually, the most adequate method, Mayring's qualitative content analysis, was applied. The switch of analysis methods can be truly considered a gain for the trustworthiness of this study. Indeed, the qualitative

content analysis more adequately meets the research purpose than Galser's 6Cs analysis method.

On-going theoretical sampling would have contributed to the trustworthiness of this study. It allows to adjust the participant sample according to analysis results and research purpose. In this study, the participants were only initially sampled theoretically. For practical reasons there was no opportunity to adequately adjust the sample during the data collection process. Still, when looking broadly at the participants' backgrounds the initial sample is adequate.

Yet, when looking at the participant sample in detail, one can point out sample features which lower the trustworthiness of the findings. One could criticise inviting mainly such participants, who have connections to Tohoku-Fukushi joint facilities. Also the decision of inviting a Tohoku-Fukushi researcher to focus group 2 is debatable. For reasons given in chapter 8.1.6, the connection to Tohoku-Fukushi joint facilities and the strong relationships amongst the participants might decrease the level of trustworthiness. Furthermore, it is questionable to also invite the care manager, who was present in the interviews, to a focus group. She might indeed be biased by the interviewees' statements. Nonetheless, these unfortunate sample choices were made and should be kept in mind when working with the findings of this study.

The original plan to apply data collection method triangulation remained, yet the data collection methods themselves partly changed. Observation was not implemented, instead focused interviews were conducted in addition to focus groups. Data collection method triangulation was planned and implemented to raise the trustworthiness of this study. Nonetheless, the purpose of running two focus groups and three interviews is debatable. Indeed, the interviews were supposed to create a trustful atmosphere, in which the elderly participants openly share their viewpoints on CaringTV. Yet, they were also implemented for realistic reasons, as it was practically difficult to bring elderly people together to form a focus group. Hence the decision on interviews was not only made based on the interviews' indication for the whole research process. The latter might have a negative effect on the trustworthiness of the study.

Concerning the suitable number of focus groups, Bryman (2008, 477) recommends running several focus groups until the researcher can predict what kind of data the next group would produce. In this study, the number of focus groups was already fixed before commencing the data collection phase. This decision was made for practical reasons, not for indication matters. Therefore, the trustworthiness of the findings could be questioned, too.

Furthermore, some small-scale decisions during the data collection process also have to be mentioned. Certain data collection actions might lower the level of trustworthiness for lack-

ing research indication. For example, the interviewer triangulation does not appear truly adequate. Yet, the drafted questioning route and the communication between the interviewers again increase the trustworthiness. Or, as depicted in chapter 8.1.6, the decision on facilitator/interviewer and the presence of observers from one sponsoring university can be considered inadequate. Besides, in the first interview session, the CaringTV demo video could not be displayed, which also represents an inadequate situation in a research process.

Unfortunately, transcripts also do not exist in adequate form. The data reduction to 20% of the original transcript size is obviously one of the major trustworthiness constraints. Based on reduction and translation by different individuals, the meaning of the transcripts is partly hard to comprehend. Furthermore, the time-points of the speech are also lacking in the transcripts. However, even though I could not influence the decision upon data reduction, I nonetheless tried to keep up a level of trustworthiness through detailed data description in chapter 6.3.3.

8.2.3 Empiric anchorage/grounds

Empiric anchorage/grounds are given, if the testing of hypothesis or development of theories happened through empiric research work. All theories which are developed in a research have to be strongly linked to the raw data. Several steps enable empiric anchorage of a research, from the usage of codified methods to communicative validation from participants. (Steinke 2008, 328-329)

As this study did not aim to develop theories or test hypotheses, I lay less emphasis on a detailed discussion on the given steps. Yet, I can state that, based on the inductive approach of this study, the findings are empiric and thus data-bound. Still, a possible distortion of the participants' meanings might have taken place due to my European background. Indeed, a final communicational validation of the findings through the participants could clarify whether I interpreted the data correctly. However, due to the scope of this study and the cooperation with Japan, validation of the findings through participants cannot be put into action.

8.2.4 Limitation

The criterion limitation is used to define the ambit of the research findings. Here, it needs to be analysed if the same findings would emerge when conducting the same research in, e.g., another context or with other participants. Two techniques can help to define the ambit of

the findings, first contrasting two studied cases and second analysing deviant or extreme cases. (Steinke 2008, 329-330)

It needs to be argued that the scope of this study did not allow for applying these two techniques. What is more, the findings of this study do not claim universal ambit. Instead, this study is considered a starting point, based on which many other studies will follow. Only by doing so, it is finally possible to develop a customer-orientated and suitable CaringTV service product in Sendai.

8.2.5 Coherence

Coherence of the theories or findings developed is one further quality criterion. It should be checked whether the developed findings are coherent and contradictions with the data were addressed. All contradictions and open questions from the analysis process should be honestly reported. (Steinke 2008, 330)

First of all, the findings as such appear rather coherent, as space for diverse answers on different levels was given. However, not all contradictions which emerge from the data are reported in the findings. The latter is due to the fact that the selection criterion (II-III) focused on positive statements about CaringTV only. In fact, many contradictive statements were found in the interview data. One family, e.g., considered CaringTV useful for one type of activity, which was not of interest for another family. Further, concerning elderly people listed as CaringTV users, some elderly said that they would like to use CaringTV even though they live with a family member. Other elderly participants stated that elderly, who live with family members, do not need CaringTV. In such cases, the activities or type of elderly person in need of CaringTV were listed without special comments. It is assumed that amongst the variety of elderly people in Sendai, there will always be people who enjoy services which are not enjoyable for others. Listing all options for CaringTV shall help create a vast service offer, from which elderly people can freely choose their preferable activity. Hence, the discussion of such contradictions on the use of CaringTV in the interview data was considered dispensable.

However, other contradictive data extracts also exist because the reduced and translated transcripts were sometimes hard to understand. If I had outlined all these potential contradictions, the report would have exceeded its scope. That is why, when looking at the criterion coherence, the quality of this research is debatable. This, however, is due to organizational reasons which are reflected in the reduced and transcribed data.

8.2.6 Relevance

A research also has to be evaluated based on its relevance. Hereby, one can question whether research questions are relevant and in how far the findings contribute to an existing situation or problem (Steinke 2008, 330). As described in the beginning of this report, the research questions are relevant. They seek to clarify how CaringTV can be launched in Sendai. By defining the potential creation of CaringTV value for elderly people in Sendai, the service product can be adequately developed. Hence, the findings enable those responsible for CaringTV to tackle challenges in product development. The findings are presented clearly and can be therefore used as one out of several suggestions for CaringTV development.

8.2.7 Reflective subjectivity

Reflective subjectivity is a value criterion which explores how far the role of researcher's own impact on the research is reflected. The researcher is hereby considered as subject with own research interests, assumptions, expectations, communication style and personal background. The researcher is furthermore considered as a subject within the social world that she/he researches. There are four questions which guide the evaluation of reflective subjectivity (Steinke 2008, 330-331):

1. Does the researcher observe her-/himself during the research?
2. Does the researcher reflect personal preconditions which could have an impact on the research?
3. Does a trustful relationship between researcher and participants exist before the data is collected?
4. Does the researcher reflect her/his experiences when entering the data collection context?

These matters, relating to myself and the universities, are discussed in chapters 8.1.4-5 in detail. Concerning matters of reflective subjectivity, I can only refer to own reflectivity within the research process.

At all times during this research, I kept reflecting on my own role in the research process. I kept a research diary, which is however not published in this thesis, for it contains very personal experiences. It includes notes on my emotional experiences and analytic thoughts during the research. It furthermore contains many reflective thoughts on my role as European student when interacting with Japanese participants and when analysing Japanese data. Furthermore, I also reflected my personal preconditions before applying to conduct a study in Japan. I considered my strengths in cultural adaptation, social networking, independence and self-confidence in my thesis work as preconditions to cope in Japan. Besides, a trustful rela-

tionship between me and the participants did not exist before the interviews and focus groups. Still, I studied the Japanese behavioural codex before entering the data collection situations, in order not to estrange the participants. Furthermore, trustful relationships between the facilitator, interviewer, care manager and the participants did already exist. Indeed it might be argued that even though the research diary is not published within this report, the whole report demonstrates reflective subjectivity.

8.3 Findings

In this very chapter, the findings are discussed in detail. Hereby, the discussion focuses on the amount of findings, the content of findings, the findings in the light of existing theories and the findings in the light of their cultural context.

8.3.1 Amount of findings

The purpose of this study is to describe CaringTV value for elderly people in Sendai. Answers to the questions: “What kind of value can elderly people in Sendai gain from CaringTV?” and “How can CaringTV create this value?” were developed as findings of this thesis. It can be argued that the amount of findings is rather large.

In the report additional findings are presented which only answered the research questions in retrospect. Findings on analysis question (I), the interview participants, can be considered such a subsequent answer. However, these findings are relevant for the development of CaringTV in Sendai. First of all, one can consider the findings on the research participants as prerequisite to develop a truly customer-orientated service product. Secondly, the findings on challenges which the elderly participants face in their lives can be considered the ethical justification for launching CaringTV on the health care market in Sendai.

Furthermore, the range of findings is also wide, as the findings on analysis questions (II-III) are of completely different nature. Especially analysis question (III) was kept rather wide and hence various categories emerged. What is more, rather differentiated categories are presented as findings. The differentiation was considered necessary, even though it caused a long findings report, because various types of possibilities shall be presented on how CaringTV can be developed in Sendai. By creating a differentiated range of findings, more varied services and activities can be eventually offered to elderly people in Sendai. Furthermore, through presenting differentiated findings, their content closely represents the statements of the participants. The latter shall support the customer-orientation during the product development process.

Due the great amount of findings, the presentation of linkages between all the categories needed to be neglected. Only a few examples of how CaringTV can create precise value opportunity attributes are given.

8.3.2 Content of findings

It ought to be mentioned that until the analysis stage of this thesis, slightly different research purpose and questions existed. The original research purpose was to describe the creation of CaringTV value opportunities for elderly people in Sendai. Accordingly, research questions were: “What kind of value opportunities can elderly people in Sendai gain from CaringTV?” and “How can CaringTV create these value opportunities?”. Initially, analysis questions (II-III) also focused on value opportunities. Cagan & Vogel (2002, XXX) claim that value opportunities are the attributes of product value. Value opportunities can be “emotion, aesthetics, identity, ergonomics, impact, core technology, and quality”. Value opportunities are further subdivided into value opportunity attributes. The value opportunity “emotion”, e.g. can be subdivided into the value opportunity attributes “sense of adventure, feeling of independence, sense of security”, etc. (Cagan and Vogel 2002, 62-68)

However, the research questions handed out to the participants and the questioning routes did not contain the term value opportunities because it was assumed that most participants are not familiar with its meaning. Therefore, I asked the participants to imagine the possible value or benefit they would gain from CaringTV. Based on the participant-friendly formulation of research questions and questioning route, the participants did not discuss about value opportunities. Instead, describing value opportunity attributes occurred naturally for the participants. The following general example illustrates why participants more naturally describe value opportunity attributes than value opportunities. A regular Japanese citizen, e.g., is unlikely to explain that she/he would like to gain an emotion from a product. Instead she/he would claim that she expects to feel independent when using the product.

Thus, in this study, I could not develop findings on value opportunities as such. That is why analysis question (II-III) needed to be adapted into: “What kind of value opportunity attributes can elderly people in Sendai gain from CaringTV?” and “How can CaringTV create these value opportunity attributes?”. Eventually, findings on CaringTV value opportunity attributes and enablers were developed.

In fact, I had the option to keep the prior research purpose and questions. Then I should have claimed that it was impossible to develop findings on value opportunities by the means applied. Such a result would have logically been scientifically correct. Yet, I chose to adapt

research purpose, questions and title at the same time I adapted analysis questions (II-III). Hereby, only the term “value opportunity” was replaced by the term “value”. In fact, the decision to belatedly adapt one term in thesis title, purpose and question can be scientifically justified, too. My basic mission as researcher has always been to describe the creation of CaringTV value for elderly people in Sendai. Describing CaringTV value opportunities was solely a structuring tool to more closely describe CaringTV values.

Furthermore, describing value opportunity attributes is not only more natural for participants. It can also be considered a tool to more closely describe the value of a product. Hence, the purpose of this study, to describe the value of CaringTV, is met by the description of the value opportunity attributes listed in the findings. Besides, it should be mentioned that also the CaringTV leaflet from 2010 only lists CaringTV value opportunity attributes, but no value opportunities for its customers in Finland. The adaptation of one term in research title, purpose and question can be considered adequate, because the participants were never confronted with the term value opportunity. It could be argued that already at the very beginning, when adapting the research questions for the participants, I could have noticed the need to adapt research title, purpose and questions.

What is more, the findings as such mostly go hand in hand with each other. Findings on analysis question (I) nicely meet many findings on analysis questions (II-III). The latter indicates that CaringTV is a suitable solution to most challenges elderly people face in life. For instance, most SUBJECTS OF VALUE go hand in hand with the VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY. Thus, MENTAL HEALTH MANAGEMENT and PHYSICAL HEALTH MANAGEMENT comply with PHYSICAL HEALTH, MENTAL HEALTH, as well as PHYSICAL and MENTAL HEALTH RESTRICTIONS. Another example is the parallel between SOCIAL PARTICIPATION, SOCIAL WELL-BEING and LACK OF SOCIAL CONNECTIONS. Many subjects of value also go hand in hand with BASIC CONCEPTUAL VALUE OPPORTUNITY ATTRIBUTES. Here, one example can be given on the analogy between the conceptual value opportunity attribute CUSTOMER ORIENTATION and the subject of value RECOGNITION from others. Additionally, EFFICIENCY and EFFECTIVENESS, e.g., complies with the subject of value FINANCIAL STABILITY. When developing and promoting CaringTV for elderly people in Sendai, it is for sure worthwhile focusing on the parallels between the findings on analysis question (I) and analysis questions (II-III).

It is also interesting to note that CHALLENGES WHEN DEALING WITH TECHNICAL EQUIPMENT is the only mentioned challenge which does not relate to a subject of value. Regarding CaringTV, this means that elderly people would use a device despite the challenges they usually face with technical equipment. At the same time they do not gain an immediate related sub-

ject of value. This fact underlines the importance to design a CaringTV device which is truly easy to understand for elderly people.

Furthermore, only positive statements (II-III) on value opportunities and the creation of value opportunities were used for analysis, because most elderly participants did not state clear criticism or refusal to use CaringTV. The research's purpose is also not considered to explore what cannot be done and affected with CaringTV. Yet, in this discussion it is worthwhile mentioning the possible connection between findings on analysis question (I) and criticism of CaringTV. As shown, elderly people explained what they generally value in life. Hereby, some of the challenges and subjects of value let us gain a glimpse on what elderly people might dislike about CaringTV. Elderly people for instance value HUMAN RELATIONSHIPS and DIRECT COMMUNICATION. It might be argued that the elderly participants' statements on these subjects of values indicate their worries concerning CaringTV. P3, e.g., once emphasized the importance of real play and education for children and expressed his dislike towards computer games. It is possible that P3 hereby tried to state that he is also critical towards CaringTV for its technical features. The latter possibility should naturally be taken into consideration when launching CaringTV in Sendai.

Furthermore P6 once stated that having too many connections restricts people's individual space. It might be argued that she worries that CaringTV also restricts her personal INDEPENDENCE. Here it could be worthwhile bringing in the value opportunity attribute INDEPENDENCE/MANAGING AT HOME. The focus group participants indeed came up with the conclusion that CaringTV can create a feeling of independence for the elderly people. It might be worthwhile explaining to the elderly, how this feeling can be created so that they would not have to fear a loss of their independence.

It should also be mentioned that findings from interview and focus group data are presented separately as appendices. By this, the differences between elderly people's and professionals' and other elderly care experts' viewpoints can be pointed out. For product-development premises of customer-orientation, it is crucial to display the end-users' viewpoints also independently. In fact, elderly might not comprehend all VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY USERS mentioned in the focus groups. For instance, elderly people might not immediately grasp the idea of SOLIDARITY. Professionals responsible for the CaringTV development should lay special emphasis on explaining such attributes carefully to the elderly end-users.

8.3.3 The findings in the light of existing theories

Existing theories on product development, gerontology, health care and social services promoted the implementation of this study. Product development theories describe the necessity to develop customer-orientated products which create value to consumers (Braag & Braag 2005, 215-217). Product value can be divided into value opportunities and value opportunity attributes (Cagan & Vogel's 2002, XXX). For reasons given above, findings on value opportunity attributes exist: BASIC CONCEPTUAL VALUE OPPORTUNITY ATTRIBUTES, DEVICE-RELATED VALUE OPPORTUNITY ATTRIBUTES and VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY. These findings adequately describe the value which CaringTV could create to elderly people in Sendai. Describing a product value based on customers' statements seems to meet the latest trend in product development.

However, as mentioned before it was not possible in this study to inductively develop value opportunity categories according to Cagan & Vogel's (2002, XXX) definition. Even though the value of a product can be described through value opportunity attributes, it is also interesting to have a look at possible CaringTV value opportunities. In fact, it would exceed the scope of this study to provide a profound discussion of possible CaringTV value opportunities. What is more, a profound, scientific development of value opportunities would call for a deductive analysis process. Still, in the following text I will present an *ad hoc*, hardly scientific suggestion on value opportunities which match VALUE OPPORTUNITY ATTRIBUTES. This suggestion is based on value opportunity definitions in Cagan & Vogel's (2002, 62-68) value opportunity chart. It shall enable the reader to make up her/his mind whether the definition of value opportunity classes is truly necessary.

PEACE OF MIND and JOY could clearly be listed as attributes of the value opportunity "emotion". INDEPENDENCE/ MANAGING AT HOME, SOLIDARITY and MOTIVATION could also be listed as "emotion", as the participants feel independent, motivated and as well as the solidarity with others. Cagan & Vogel (2002, 62-68) present in their chart emotional attributes as "sense of adventure, feeling of independence, sense of security, sensuality, confidence and power". Most of these attributes differ from this study's findings. Yet interestingly, INDEPENDENCE/MANAGING AT HOME in terms of feeling independent is also listed by Cagan & Vogel. They (2002, 62-68) describe that the attribute emerges when a product creates a feeling of freedom from restraints.

Next, Cagan & Vogel file the value opportunity "aesthetics", which does not match with any of the study's findings. Yet, INTERACTIVITY, CUSTOMER ORIENTATION, VISIBILITY, EFFICIENCY AND EFFECTIVENESS and CARINGTV AS ONE OUT OF SEVERAL SOLUTIONS could be listed as attributes of the value opportunity "product identity". INTERACTIVITY, VISIBILITY and EFFI-

CIENCY AND EFFECTIVENESS could be considered personality attributes, which describe “the ability of a product to fit among yet differentiate itself from its direct competition” (Cagan & Vogel 2002, 62-68). CUSTOMER ORIENTATION and CARINGTV AS ONE OUT OF SEVERAL SOLUTIONS could be considered “sense of place” attributes as they guarantee that CaringTV “fit(s) into the context of use” (Cagan & Vogel 2002, 62-68).

SOCIAL PARTICIPATION; MENTAL HEALTH MANAGEMENT with its remaining sub-categories and PHYSICAL HEALTH MANAGEMENT could be listed as attributes of the value opportunity “impact”. Hereby the term value opportunity impact would need to be understood in terms of mental, social and physical health impact. The attribute “social impact” is also described by Cagan & Vogel (2002, 62-68). It emerges when a product has “a variety of effects on the lifestyle of a target group, from improving the social well-being of the group to creating a new social setting”. “Environmental impact” could be deleted from the list of attributes.

What is more, attributes PRIVACY, COMFORT, LECTURE HOW TO USE, HOUSEHOLD APPLIANCE, EASY USE and NOT TOO EASY USE could be considered attributes of the value opportunity “ergonomics”. LECTURE HOW TO USE, HOUSEHOLD APPLIANCE, EASY USE and NOT TOO EASY USE would then be “ease of use” attributes. PRIVACY could be understood as “safety” attribute and COMFORT naturally as “comfort” attribute.

CONNECTION WITH A MOBILE PHONE, PORTABLE DEVICE could be listed as “enabling” attributes of the value opportunity “core technology”. And eventually HIGH IMAGE RESOLUTION can be considered a “craftsmanship” attribute of the value opportunity “quality”. However, the meaning of Cagan and Vogel’s “enabling” must not be associated with the enabler categories developed in this study.

Thus, based on this brief listing of all VALUE OPPORTUNITY ATTRIBUTES according to Cagan & Vogel’s (2002, 62-68) value opportunity chart, the following list of CaringTV value opportunities for elderly people in Sendai emerges: emotion, product identity, impact, ergonomics, core technology and quality. In fact, it could be argued that the exact definition of value opportunities is not necessary for the CaringTV development process in Sendai.

Apart from product development theories, one can also discuss this study’s findings in the light of theories of gerontology, health care and social services. As described in chapter 3.3, the growth of the elderly population in Finland, Japan and many other countries causes major demographic changes (WHO 2002, 6-7). These changes challenge elderly health care and social services and call for the development of new services, products and service structures. One main challenge is to ensure elderly people’s quality of life (Walker 2005, 6). Also, in Japan elderly care services need to be developed in terms of cost efficiency and with concern

to elderly people's quality of life (Ogasawara 2007, 9). That is why an agreement between TFU, Helsinki School of Economics, Laurea and the cities of Espoo and Vantaa has been made to collectively research and develop adequate future elderly care services (Erjanti & Ogasawara 2009, 7). As this research seeks to offer recommendations for the development of Car-ingTV for elderly people in Sendai, it again meets the pulse of our time. Also, when looking at the findings of this study, many parallels between them and quality of life themes emerge.

Hooyman and Kiyak (2005, 112) describe quality of life "as this combination of an individual's functional health, feelings of competence, independence in activities of daily living, and satisfaction with one's social circumstances". The WHO (2002) concept of an elderly person's quality of life emphasises the interdependence of "physical health, psychological state, level of independence, social relationships, personal beliefs and relationship to salient features in the environment". It further highlights the importance of autonomy and independence. Raij has furthermore developed indicators for quality of life based on the perception of elderly people. These indicators are: "mental health, nutrition, activity, social support, habitat and health" (Raij et al 2009, 32). Recently, gerontologists have also been focusing on subjective well-being which is determined by "demographic characteristics, socioeconomic status, health, activities, social integration and social ties and social support" (Binstock & George 2006, 320-333). Indeed, all four theories focus on the importance of health and social context of the elderly person. Further themes which are stated by more than only one theory are: independence, mental health or psychological state, environmental features or habitat, activities in general and daily living.

When looking at these theories and the findings of this study, many interesting parallels emerge. Concerning SUBJECTS OF VALUE for the elderly participants, many similarities exist to quality of life features or indicators. Subjects of value for the participants of this study are: PHYSICAL HEALTH, MENTAL HEALTH, SOCIAL WELL-BEING, INDEPENDENCE, ACCESSIBLE ENVIRONMENT, ACTIVITIES and FINANCIAL STABILITY. Existing parallels can be found in physical and mental health, the social context and independence of elderly people. Hereby, INTELLECTUAL GROWTH can be understood as mental stimulation (Raij et al, 2009, 32). The theme obstacle-free habitat (Raij et al 2009, 32) is embodied in ACCESSIBLE ENVIRONMENT. ACTIVITIES moreover match Raij's (2009, 32) indicator activity. To conclude, the described similarities indicate that quality-of-life themes for elderly people in Japan are rather similar those already developed in general.

What is more, VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY also share similarities with quality-of-life themes and indicators. The attributes are divided into: MENTAL HEALTH MANAGEMENT, PHYSICAL HEALTH MANAGEMENT, INDEPENDENCE/ MANAGING AT HOME, SOCIAL PARTICIPATION and SOLIDARITY. Similarities to quality-of-life indica-

tors and themes are found in physical and mental health, social context and independence. Interestingly, SOLIDARITY is not mentioned by any of the three theories on quality of life for elderly people. It could be argued that a feeling of solidarity is more important for Japanese people. Finally, one could conjecture that CaringTV can increase the quality of life of elderly people in Sendai to some extent. If so, CaringTV contributes to the development of elderly care services in Japan in terms of cost efficiency and with concern to elderly people's quality of life (Ogasawara 2007, 9).

CaringTV in Finland in fact, *inter alia*, seeks to improve the quality of life of elderly people who live at home (Raij et al. 2009, 15). What is more, Lehto (2008, 64) defined that CaringTV can enrich the life of any client, as it offers a range of different supportive methods which be described as

- (1) promoting safety and mental health,
- (2) support to rehabilitation (e.g. physical exercises, breathing exercises, relaxation),
- (3) supportive methods (e.g. consultation, monitoring),
- (4) activating situational support (e.g. peer group, discussions, participation),
- (5) support to manage with self-care (e.g. medication, pain) and
- (6) promoting activities of daily living (e.g. nutrition, sleeping) (Raij et al. 2009, 29-30).

In fact, the findings on how CaringTV can enrich the life of any client in Finland have many similarities to the findings of this study. One could argue whether INTERACTION CONTENT can be considered a model of supportive methods using CaringTV in Japan. Similarities which can be found between Lehto's (2008, 64) model and the INTERACTION CONTENT findings are indicated in the table below.

LEHTO'S MODEL OF SUPPORTIVE METHODS IN FINLAND	FINDINGS OF THIS STUDY
(1) promoting safety and mental health	SERVICES TO SUPPORT MENTAL HEALTH/ EMERGENCY SERVICE SYSTEM
(2) support to rehabilitation	REHABILITATION SERVICES
(3) supportive methods	TELEMEDICAL CARE/ SERVICES TO SUPPORT MENTAL HEALTH
(4) activating situational support	SERVICES TO SUPPORT SOCIAL PARTICIPATION
(5) support to manage with self-care	TELEMEDICAL CARE
(6) promoting activities of daily living	SERVICES TO SUPPORT DAILY LIFE

TABLE 25: Lehto's model and findings of this study

Beyond, when discussing the findings in the light of existing elderly service structures in Japan, one has to primarily focus on the possible position of CaringTV within the long-term care

insurance system. Indeed, the findings only refer to the term nursing care insurance system. Yet, as already described in chapter 2.3.4, the terms long-term care and care insurance must be used interchangeably in this report.

As mentioned in the findings, the focus group participants talked about the possibility to offer the CaringTV INTERACTION CONTENT mainly as preventative nursing services. Yet, some participants also highlighted the possibility to offer these services as long-term care benefits for people who have become less active than preventative nursing care patients. Consequently, the above listed services could be offered as long-term care insurance benefits, as services of care prevention benefits and services of long-term care benefits. In any case the long-term care insurance system would need to be changed for CaringTV being able to provide the services. It was not discussed precisely how far the insurance system would need to be changed. Indeed, a detailed discussion of the necessary insurance system changes would exceed the scope of this study and report.

Nonetheless, one should still approach the discussion on where to place CaringTV within the insurance system, by looking at findings ELDERLY CARINGTV USERS. In the findings, the elderly users are basically described in terms of their personal backgrounds and community activities. Here, participants discussed the options to address individuals from all different levels of long-term care need: elderly people with slight problems who live at home (requiring support 1-2, probably also requiring long-term care 1-2) and also elderly people with severe problems, even if living in an elderly care facility (requiring long-term care 3-5). Still, it seemed as if the main focus throughout the discussions was upon the first group of elderly. If so, one could argue that CaringTV should be offered rather as service of care prevention benefits than as service of long-term care benefits.

8.3.4 The findings in the light of cultural context

In the previous chapter it appeared as if the cultural differences between Japanese and European cultures had only little impact on the subjective viewpoints towards CaringTV. Indeed, C 8.5 SOLIDARITY is one value opportunity attribute finding which does neither match any theories of quality of life for elderly people, nor Lehto's model of supportive methods. Dictionaries (Oxford Dictionaries. Solidarity 2011) define solidarity as follows: "...unity or agreement of feeling or action, especially among individuals with a common interest; mutual support within a group...". Hence, solidarity arises amongst individuals, who together interact in a group. In Japan, the importance of solidarity might be based, *inter alia*, on the influence of Confucianism on Japanese culture. Confucianism calls for constitutional order in society or a community and disapproves the individual striving for appreciation (Shimada 2007, 25-27).

It is not clear for what reason so many similarities exist between findings of this study and quality-of-life themes or the model of supportive CaringTV methods in Finland. This result might be due to the fact that a subjective European researcher strongly biased the analysis process. Another possibility is that actually elderly people and care experts in Sendai truly have similar viewpoints on CaringTV.

At times, some ambiguous data statements are assumed to base on cultural bound communication styles. As mentioned before, elderly interview participants shared a lot of information on what they value in life. Sometimes, the participants emphasized the importance of certain issues, which at first sight cannot be logically associated with the discussion about CaringTV. It has already been discussed in chapter 8.3.2 that some of the mentioned issues possibly indicate participants' criticism of CaringTV. Indeed, some of the challenges and subjects of value let us gain a glimpse on what elderly people might dislike about CaringTV. I focus once again on an example given above: P3 once emphasized the importance of real play and education for children and expressed his dislike towards computer games. It is possible that P3 tried so state that he is also critical towards CaringTV for its technical features.

The latter assumption can be supported by Sohar's (1997, 4-8) reflections on Japanese communication patterns. She states that there is a tendency among Japanese politicians to avoid saying NO in debates. Instead, Japanese politicians give answers on critical topics, which can be interpreted in different ways (Japanese term: *tamamushiiro no kaitou*). Thus, it is sought to avoid "damaging" another person's face and to keep up a harmonic atmosphere. This kind of communication pattern also accounts for common citizens, who are not involved in political debates. Furthermore, in many communication situations in Japan, the *yoroshiku*-rule is applied. This rule implies that I do my best to please you, wherefore you do your best to please me.

Hence, in case P3 wanted to criticise CaringTV he might not have wanted to do so directly in order to keep up a harmonic interview atmosphere. Yet, in criticising computer games he might have wanted to claim his worries indirectly. Indeed, the Japanese research team present during interviews and focus groups claimed that all participants had openly stated their opinions on CaringTV. Nonetheless, the Japanese research team might not be aware of my understanding of open statements. After all, it might be possible that the participants stated CaringTV criticism according the *yoroshiku*-rule, which was quickly noticeable to the research team, yet not to me.

Besides, in general it was assumed that the participants felt rather relaxed and stress-free during the interviews and focus groups. In fact, it might be possible that I interpreted the participants' behaviour hastily. Sohar states that in Japanese discussions, also due to the

yoroshiku-rule, people's speeches hardly overlap. When comparing German and Japanese discussion styles, Sohar points out that applying German competitive communication styles in Japan could damage the relationship, especially of people of higher hierarchy. In fact, Japanese people give much space to their communication partners to comment or to answer a question. (Sohar, 2007, 12- 19) Hence, the apparently relaxed atmosphere in interviews and focus groups might also base on the general tender Japanese communication style.

Participants of interview 3 openly talked about possible CaringTV value, value enablers and users. Yet, P5 and P6 always claimed that they themselves or P4, suffering from Parkinson, are not in need of CaringTV. They stated that as long as elderly people live with their family members, they do not want to use CaringTV. Yet at the same time, e.g., P4 mentions that she would like to use CaringTV to join cultural activities. In the transcripts I received, the participants do not address this contradiction in statements. It is not sure, whether such a discussion took place but was cut out during the reduction or whether there was no discussion at all. In case there was no discussion, the reasons for that might be due to the *yoroshiku*-rule. Furthermore, P5 and P6 might have preliminarily stated that there is no need for CaringTV, due to *sekentei*.

Sekentei is a Japanese term which means "social appearance, reputation or dignity in the community or public" (Asai & Kameoka 2003, 5) and is often referred to when talking about social pressure. In case an elderly receives public care, *sekentei* can cause that the elderly person's family members feel ashamed about not providing the care themselves. Moreover, the elderly him- or herself using public services might also feel shame, as the own family members do not express their respect towards him/her by providing the necessary care at home (Asai & Kameoka 2003, 5-7). Hence, P5 and P6 might have felt obliged to first of all state that they are not in need of CaringTV. It is worthwhile keeping this possibility in mind. In fact, in further researches or when offering CaringTV in Sendai, some elderly people might reject CaringTV for *sekentei* reasons.

Furthermore, and fortunate for this research, P2 very openly talked about subjects of value and challenges in her present life. This information can indeed be very valuable for the CaringTV development process. At the end of the study she stated that CaringTV could be "useful for complaints". Yet a little later she states that she should not complain. This contradiction might also derive from *sekentei*. Generally, *sekentei* makes people ponder about what other individuals think about the own appearance in public (Asai & Kameoka 2003, 5-7). *Sekentei* might have caused P2 to eventually take back claims on her own neediness.

Besides, it is in fact surprising that none of the participants had mentioned the meaning of belief or religion in their lives. Hence, statements on CaringTV in connection to religion or belief do not exist. Indeed, before the data implementation phase, I had assumed to also

come across the meaning of belief and religion for elderly people. My assumption was based on articles, which explained the influence of Japanese Buddhism on elderly care structures. It needs to be questioned whether religion and belief still play an important role in the life of elderly people in Sendai. If so, it could be argued that elderly people in Sendai cannot imagine using CaringTV at all for religious purposes.

8.4 Recommendations for further studies

Concerning CaringTV, several studies should and will follow the process of launching the service product in Sendai. In the beginning of research projects, focus group research can be helpful for creating a first picture of the phenomenon studied. Based on the findings of a focus group research, further specific research can be implemented (Lamnek 2005, 71). The latter does logically not only apply for focus group research. Qualitative research in general enables precise and vivid findings. It integrates the viewpoints of its research informants as well as the subjective and social constructs of their living environments (Flick et al. 2008, 17). Qualitative research presumes that the researcher is a learner with originally insufficient knowledge about the empirical social life. (Lamnek 2010, 23-24) This qualitative focus group and interview study sought to develop precise and vivid findings as a starting point for later research activities. Based on the findings of this study, preliminary CaringTV product development shall be possible. Additional studies and researchers could create more representative or, if necessary, detailed findings on elderly people and CaringTV.

First of all, other studies could be implemented to verify the findings of this study. Thus uncertainties concerning the analysis of Japanese data as well as the impact of the sponsoring universities could be overcome. For this, participants who are not connected to TFU could be invited to the research project.

What is more, a quantitative survey on the opinion of elderly people in Sendai about CaringTV could create representative findings with greater ambit. It could be furthermore of benefit to research indicators for quality of life based on the perception of elderly people in Japan. Such indicators could support the development of services and products which seek to enhance elderly people's quality of life. Concerning CaringTV itself it could be useful focusing on more Japanese end-users than the elderly, too. In fact, during the focus groups other population groups than the elderly were considered as possible CaringTV users. A similar research to explore CaringTV value for these different population groups appears useful. Besides, CaringTV value for clients in Finland could also be researched in order to enhance the CaringTV development within Finland.

When implementing any qualitative research in Japan, it is certainly useful taking the cultural context discussed above into consideration. Because of possible difficulties during interpreting and analysing Japanese data, future researchers should allow extra time for analysis. Thereby, steady consultation with Japanese cooperation partners and possibly participants seems highly beneficial. Besides, experiences made during this study's data collection should also be taken into consideration. This very important when collecting data by communication with participants. It ought to be remembered that, due to Japanese culture, relationships between participants from different hierarchic background can inhibit the discussion flow.

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Hagino 2010b: Dr. Hagino, Hiroo. 15.10.2010. Informal discussion on communication culture and hierarchy systems in Japan. Sendai: car ride to an interview (not for research)

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Hagino & Kudo 2010: meeting of Dr. Hagino, Hiroo & Lecturer Kudo, Kenichi & Stahl, Carmen. 06.09.2010. Discussion upon thesis plan and possible data collection in Sendai. Sendai: TFU campus/ office for international affairs

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LIST OF ABBREVIATIONS

Laurea:	Laurea University of Applied Sciences
TFU:	Tohoku Fukushi University
FWBC:	Finland Wellbeing Centre (in Sendai)

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APPENDIX 1 Invitation letters and consent form

I Invitation letter and background information on my research

Dear Mr. / Mrs _____,

my name is Carmen Stahl, I am a social welfare worker from Germany who presently studies the Master of Health Care Degree Programme at Laurea in Finland. Your contact information was given to me by our cooperation partner TFU or Finland Wellbeing Centre in Sendai. In this letter, I would kindly like to ask you to participate in my Master's thesis research.

Research content:

The elderly population is growing worldwide which poses an increasing challenge for most countries to ensure elderly people's quality of life. TFU of Sendai, Helsinki School of Economics, Laurea of Espoo (Finland) and the cities Espoo and Vantaa (Finland) have made an agreement to collectively research and develop adequate elderly care services. This study constitutes one part of this cooperation project.

This study seeks to describe CaringTV value opportunities for elderly people in Japan. CaringTV is a concept where interactive programme and chosen e-services are broadcasted on-line through videoconferencing and other technological platforms. The term value opportunity derives from the field of economics and refers to the benefits which a product creates for people. The main research questions of this study are "What kind of benefits can elderly people in Japan gain from CaringTV?" and "How can CaringTV create these value opportunities for elderly people in Japan?".

In order to meet the research purpose focus group discussions are implemented in fall 2010 in Sendai. Each participant is invited to one group interview which lasts each one hour. Participants invited to the group interviews are all involved in elderly care in Sendai. In the group interview, the participants are first introduced to the CaringTV concept and then asked to share own opinions on the CaringTV concept. The participants do not have to acquire special knowledge on the subject before participating in the interview.

The focus group discussion will be audio taped. The data will be dealt with confidentially. In case a participant feels uncomfortable about participating in the study he/she can withdraw at any point of the research. Eventually the study will be published and made accessible to all participants.

Since I do not speak Japanese, the group interviews are moderated by one of our Japanese speaking cooperation partners. This cooperation partner further helps me to comprehend the comments from the participants correctly.

In case You would like to participate in this study and to contribute to the innovative development of elderly care services in Japan and Finland, I would feel very honoured and grateful.

In order to give your consent on participation, please fill in the form below and return it latest on the focus group discussion date to me or to TFU. If you have any further questions on the research please do not hesitate to contact our cooperation partners at TFU or me via email. Attached please find my CV to introduce you to my professional background.

II Consent Form

Background Information of Participant:

Please put a cross in the appropriate field and fill in the needed information:

I am:

- Elderly Person
- Relative or friend of an elderly person
(precisely: _____)
- Elderly Care Professional
(precisely: _____)
- Elderly Care Expert from TFU or the Finnish Research Centre (field of expertise: _____)
- Policy maker of Sendai City (function: _____)

Age: _____ years

Gender: female
 male

Nationality: _____

Consent:

I hereby certify that I was informed about the process of the study, which I will participate in. I further certify that I allow Carmen Stahl to use of the data deriving from my participation in her Master's thesis research.

Signature, date and place (name will not be published or used in any report)

APPENDIX 2 Questioning route/focused interviews

QUESTIONING ROUTE: Focused interviews (elderly and their family members)

PART I: Imagine you could use CaringTV:

1. What would you like to use it for?
 - 1.1 Who would you like to be in contact with through that device?
 - 1.2 What kind of service/ contact would you like to get when using the device?
2. What should the CaringTV device look like/ function/ work, so that you would like to use it frequently?

PART II: Imagine you can get all the services and contacts through CaringTV, which you have just imagined (part I):

3. What kind of changes would take place in your life?
 - 3.1 What different areas or themes of your life are of importance to you?
 - 3.2 What kind of changes would happen in these different areas of your life?

(To facilitator: make the elderly think about different areas in their lives which are of importance: social contacts, health, religion, etc. Allow the elderly and family members here also, to think again about the HOW questions!)

APPENDIX 3 Questioning route/focus groups original version**QUESTIONING ROUTE: Focus groups (elderly care professionals and other experts) - original version****PART I:**

1. Please think about the different dimensions of the life of an average elderly person living at home, and discuss what kind of value/ benefits the elderly can gain from CaringTV concerning these dimensions! (e.g. health, social network, ..)
2. Please think about elderly person with special needs and discuss what kind of benefits the elderly could gain from CaringTV concerning these dimensions!

PART II:

3. Please discuss what needs to happen on a
 - 3.1 practical level (what kind of services, services provider, service content)
 - 3.2 structural level (concerning law regulations, long-term insurance, financing)
 - 3.3 technical level (development of the CARINGTV device)for the elderly to gain the benefits from CaringTV!

PART III ADDITIONAL QUESTIONS IN CASE THERE IS TIME LEFT:

- 4.1 Who else involved in elderly care (other stakeholders as professionals, family members, etc) would gain value/benefit from CaringTV?
- 4.2 What kind of value/benefit would they gain?
- 4.3 How would they gain that value/benefit?

APPENDIX 4 Questioning route/focus groups final version

QUESTIONING ROUTE: Focus groups (elderly care professionals and other experts) - adapted version (by Hagino, Hiroo 2010)

PART I:

- 1 Please think about the different dimensions of the life of an average elderly person living at home, and discuss what kind of value/ benefits the elderly can gain from CaringTV concerning these dimensions! (e.g. health, mental health, bonds in community and social bonds, housing, meal, transportation)
- 2 Please think about elderly person with special needs and discuss what kind of benefits the elderly could gain from CaringTV concerning these dimensions!

PART II:

- 3 What kind of obstacles there are in Japanese society? How shall we achieve the fruits of CARINGTV, which we have discussed above? Please discuss what needs to happen on a
 - a. practical level (what kind of services, who offers the services, service content)
 - b. institutional/ system level (concerning law regulations, long-term insurance, financing)
 - c. technical level -difficulties to use personal computer- (development of the CARINGTV device)

for the elderly to gain the benefits from CaringTV!

PART III ADDITIONAL QUESTIONS IN CASE THERE IS TIME LEFT:

- d. Who else involved in elderly care (other stakeholders as professionals, family members, etc) would gain value/benefit from CaringTV?
- e. What kind of value/benefit would they gain?
- f. How would they gain that value/benefit?

APPENDIX 5 CaringTV introduction texts

CARINGTV INTRODUCTION TEXTS

FOCUSED INTERVIEWS:

CaringTV is an innovative project, which is researched and developed in Laureain Finland (where Tuomas and Carmen study). CaringTV enables telecommunication (phone and eye contact) between people, who are physically separated. You will soon see the telecommunication device in the promotion video. Through CaringTV it is possible for elderly people to stay in touch with their relatives or friends. In addition, through CaringTV it is possible for elderly people to stay in touch with social welfare and health care workers without leaving home. Elderly who have such a device at home can participate in activity sessions, interactive talk shows or in one-on-one meetings with health care and social welfare experts. The services are always secured, so that nobody can enter or disturb the communication. In Finland CaringTV is designed to support and promote elderly people in living at home. (Stahl, Carmen 2010)

FOCUS GROUPS:

CaringTV is a simple system for TV broadcast, TV phone and also TV conference by using internet.

This system has the possibility to provide 1) interactive chatting with elderly person living at home, 2) consultation between the elderly person living at home and specialists like nurses, social workers, etc. including tele-diagnosis by nurses, 3) broadcasting TV program for health preventive services and also interactive lecturing for volunteer groups, 4) information for family on elderly care and 5) community information for their daily life.

In Finland local government pays the cost for devices and provides them to the elderly person living at home for free for preventive services. With collaboration with university such services are provided. (Hagino, Hiroo 2010)

APPENDIX 6 Value opportunity attribute and enabler findings from the interviews

Interview findings on CaringTV value opportunity attributes and enablers

Enabler categories:

ELDERLY CARINGTV USERS IN SENDAI
INDIVIDUAL ELDERLY CARINGTV USERS
ELDERLY WHO LIVE ALONE
ELDERLY WHO LIVE ISOLATED
ELDERLY WHO LIVE IN HOMES FOR THE AGED
ELDERLY WHO HAVE DIFFICULTIES LEAVING THE HOUSE/ MOVING
ELDERLY WHO TAKE CARE OF THEIR ELDERLY FAMILY MEMBERS
ELDERLY CARINGTV USERS IN COMMUNITIES
ELDERLY PEOPLE IN A SELF-HELP CLUB
ELDERLY IN THE DAY SERVICES
ELDERLY PEOPLE IN THE REHABILITATION SERVICE CENTRE

PROFESSIONAL CONTACT PARTNERS
DOCTORS
CARE MANAGERS
PHYSICAL EXERCISE PROFESSIONALS
STUDENTS
A PROFESSIONAL PERSON OF TRUST

OTHER CONTACT PARTNERS
PERSON OF TRUST
FRIENDS
FAMILY MEMBERS
EX-COLLEAGUES
PEOPLE ONE HAS NEVER MET BEFORE
PEOPLE FROM AROUND THE WORLD
YOUNG PEOPLE

IMMEDIATE INTERACTION
KEEP IN TOUCH
TALK ABOUT WHAT IS HAPPENING TODAY
SHARE MEMORIES
CHECK HOW OTHERS ARE DOING
EXCHANGE DIFFERENT THOUGHTS
GET TO KNOW OTHER PEOPLE'S THOUGHTS
TALK TO OTHER PEOPLE ABOUT OWN THOUGHTS
MANAGE MENTAL BURDEN
FRANK TALK/ TALK FROM THE HEART
SOLVE PROBLEMS
HEALTH CHECKS
EXPLAIN THE OWN PHYSICAL CONDITION
GET A HEALTH DIAGNOSIS

INTERACTIVE PHYSICAL EXERCISE
HOBBY ACTIVITIES
DAY SERVICE ACTIVITIES
CULTURAL PROGRAMS

ORGANIZATIONAL FEATURES
UNIVERSITY FOUNDATION AS ORGANIZER

Value opportunity attribute categories:

BASIC CONCEPTUAL VALUE OPPORTUNITY ATTRIBUTES
INTERACTIVITY
ABILITY TO SEE PEOPLE
CTV AS ONE OUT OF SEVERAL SOLUTIONS

DEVICE-RELATED VALUE OPPORTUNITY ATTRIBUTES
INSTRUCTIONS for use of device
TOUCH PANEL
BIG PUSH-BUTTONS
LITTLE FUNCTIONS ONLY
PORTABLE DEVICE also

VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY
MENTAL HEALTH MANAGEMENT
PEACE OF MIND
INTELLECTUAL GROWTH
JOY
BEING ACTIVE
SOCIAL NETWORK
COMPANY
GETTING TOGETHER WITH PEOPLE
GETTING ATTENTION

APPENDIX 7 Value opportunity attribute and enabler findings from the focus groups

Focus group findings on CaringTV value opportunity attributes and enablers

Enabler categories:

ELDERLY CARINGTV USERS IN SENDAI
INDIVIDUAL ELDERLY
IN GENERAL
BABY BOOM GENERATION
AFTER HEALTH CARE FACILITY STAY
WITH MILD SYMPTOMS
WITH DIFFICULTY MOVING
WHO ARE HEAVILY HANDICAPPED
WITH MENTAL PROBLEMS
WHO ARE LESS INVOLVED IN SOCIETY
WHO LIVE ALONE
ELDERLY GROUPS WITHIN THE REGIONAL COMMUNITY
SELF HELP GROUPS AS CORE OF THE REGIONAL COMMUNITY
USERS OF REGIONAL COMPREHENSIVE SUPPORT CENTRE
DAY SERVICES CLIENTS
OTHER ELDERLY COMMUNITIES

PROFESSIONAL CONTACT PARTNERS
DOCTORS
NURSES
CARE MANAGERS
CARE WORKERS
PHARAMCISTS
STUDENTS

OTHER CONTACT PARTNERS
ELDERLY'S FAMILY MEMBERS
FRIENDS OF ELDERLY PEOPLE
PEOPLE OF ALL GENERATIONS
MOTHERS OF TODDLERS
HANDICAPPED PEOPLE IN GENERAL
CHILD CARE COUNSELLING USERS

IMMEDIATE INTERACTION
TELEMEDICAL CARE
CHECKING ELDERLY PEOPLE'S CONDITIONS
PREDICTION OF HEALTH OUTCOMES
MEDICAL INFORMATION
REHABILITATION SERVICES
CHECKING ELDERLY PEOPLE'S CONDITIONS
INTERACTIVE PHYSICAL EXERCISE/ REHABILITATION PROGRAM
HOME SUPPORT SERVICES after hospital stay
MEDICAL INFORMATION
CHECKING ELDERLY PEOPLE'S CONDITIONS
INTERACTIVE PHYSICAL EXERCISE/ REHABILITATION PROGRAM
EMERGENCY SYSTEM SERVICE
SERVICES TO SUPPORT DAILY LIFE
PROGRAMS ABOUT NUTRITION
INFORMATION ABOUT NUTRITION
PROGRAMS WHICH LINK TO SHOPPING
INFORMATION WHICH NOW COMES IN PAPER FORM
INFORMATION ABOUT COMMUNITY ASSOCIATIONS
SERVICES TO SUPPORT MENTAL HEALTH
COUNSELLING WHEN IN TROUBLE
INFORMATION ABOUT COUNSELLING SERVICES
PROGRAMS WHICH LINK TO NUTRITION
EDUCATIONAL INFORMATION
SERVICES WHICH SUPPORT SOCIAL PARTICIPATION
INTERACTIVE COMMUNICATION WITH OTHERS
INFORMATION ABOUT COMMUNITIES
HOBBIES
PHYSICAL EXERCISE
OTHER ACTIVITIES

ORGANIZATIONAL FEATURES
LOCAL GOVERNMENT
INDUSTRY/ PRIVATE PARTIES
UNIVERSITY
NURSING CARE INSURANCE (IMPROVEMENT OF NCI SYSTEM NECESSARY)
SERVICE PROVIDERS
PROVISION POSSIBLE THROUGH COSTSAVINGS
SELF'HELP GROUPS
USERS

Value opportunity attribute categories:

BASIC CONEPTUAL VALUE OPPORTUNITY ATTRIBUTES
INTERACTIVITY
CUSTOMER ORIENTATION
PRIVACY
COMFORT
VISIBILITY
EFFICIENCY and EFFECTIVENESS

DEVICE-RELATED VALUE OPPORTUNITY ATTRIBUTES
LECTURE HOW TO USE
HOUSEHOLD APPLIANCE
EASY USE
HEAD DECK
TOUCH SCREEN
VOICE CONTROL
NOT TOO EASY USE
HIGH IMAGE RESOLUTION
CONNECTION WITH MOBILE PHONE

VALUE OPPORTUNITY ATTRIBUTES WITH PERSONAL IMPACT ON THE ELDERLY
MENTAL HEALTH MANAGEMENT
PEACE OF MIND
LEARNING
JOY
MOTIVATION
PHYSICAL HEALTH MANAGEMENT
STAYING ACTIVE
KEEPING UP PHYSICAL CONDITION
PREVENTION FROM FURTHER ILLNESSES
INDEPENDENCE
SOCIAL PARTICIPATION
SOLIDARITY

APPENDIX 8 Explication processes

EXPLICATION OF THE TERMS FRANK/ FRANKLY

1. The text extracts in need of explication are **frank** and **frankly**. The terms seem to be of special meaning in the interview and are used several times by the participants. The text extracts stem from interview 1:

P2: (...) I want such a place where we can talk frankly. I have got over my worries in this way. I want help like this. It's better to have this kind of thing. (54-55)

P2: So we need more frank occasions. (66)

P1: There is S-san at Sendan-no-oka. I can talk about my problems with him. He listens to me frankly. So I also talk with him. (84-85)

The question stirring the explication is: what is meant by **frank/ frankly** in this specific interview?

2. For lexical definition of the terms **frank** and **frankly** the online web pages of Oxford dictionaries (Oxford Dictionaries 2011) and Cambridge Dictionaries (Cambridge Dictionaries 2011) are used.

Definition of the adjective frank:

- "(...) open, honest, and direct in speech or writing, especially when dealing with unpalatable matters(...)" (Oxford Dictionaries. Frank 2011)
- "honest, sincere and telling the truth, even when this might be awkward or make other people uncomfortable" (Cambridge Dictionaries. Frank 2011)

Definition of the adverb frankly:

- "in an honest and direct way: She spoke very frankly about her experiences." (Oxford Dictionaries. Frankly 2011)
- "in an open, honest, and direct manner: she talks very frankly about herself" (Cambridge Dictionaries. Frankly 2011)

3. For explication of the terms **frank** and **frankly** the immediate text context from the interview is used, too:

P2: (...) I have the chance to talk with I-san most. And I-san understands me very well, because I can speak about even unnecessary things with him/her. He/She understands us. When he/she comes without a business reason, when only two of us talk about even very small problems, he/she takes the issue seriously. I want such a place where we can **talk frankly**. I have got over my worries in this way. I want help like this. It's better to have this kind of thing.

The participant states that she would like have such a place, where one can **talk frankly**. Such a place for frank talking is described as:

- A place where it is possible to talk about unnecessary things
- Where it is possible to talk about small problems
- Where the talker's issues are taken seriously
- Where the talker feels understood

Another text extract refers to the term **frank**:

P2: I'm glad he has got U-san as a friend. So we need more **frank occasions**. These people (Carmen and Tuomas) study this, because there must be a need for future generations. But if we use this, we won't go out. We can do everything at home. The trend is going rapidly in this direction. It's good to use it effectively, but there are other solutions for this problem. It's necessary to use different ways. [ie. not just staying at home]

Here the term **frank occasion** is not defined. The sentence before and after the statement in **frank occasion** seem to address other topics.

Also in the further text extract, the term **frankly** is simply used, but not defined:

P1: There is S-san at Sendan-no-oka. I can talk about my problems with him. He listens to me frankly. So I also talk with him.

However, here the term frankly is not used to describe a dynamic activity which is done frankly, Instead the passive action listening is described to be frankly, which appears a bit confusing.

5. When linking all above mentioned descriptive features of the terms frank and frankly, we get to the following paraphrases:

- **Frank**

One is frank, when being honest, sincere and telling the truth also about unnecessary things and small problems, whereby the listener might feel uncomfortable but takes the frank person seriously and understands him/her.

- **Frankly**

In an honest and direct, detailed way, which requires understanding and taking things seriously.

6. The explication was crosschecked by setting the new definition of the term frank/ frankly back into to the context of the whole data:

- **Talk frankly**

Is to talk in an honest and open way also about unnecessary things and small problems, and entails that the talking person feels understood and is taken seriously by the listener.

- **Frank occasion**

gives room for communication, in which one communication partners is honest, sincere and tells the truth also about small problems and unnecessary things, and feels understood and taken seriously by the other.

- **Frank listening**

Entails listening to unnecessary things and small problems whereby the listener takes the talker seriously and gives him/her the feeling he/she is understood, so that he/she can get over the worries.

EXPLICATION OF THE TERM TO TALK FROM THE HEART

1. The text extract in need of explication is “**talk from the heart**”. This term was used in interview 2.

P3: The person who I can trust most. The person who I can be myself with and talk from the heart, people like I-san (the Care Manager who is there) and E-san. (I2, 3-4)

The question stirring the explication is: what is meant by “talk from the heart”?

2. For lexical definition of the term talk from the heart the online web pages of Oxford dictionaries (Oxford Dictionaries 2011) and Cambridge Dictionaries (Cambridge Dictionaries 2011) are used.

Talk from the heart is no registered term in either one of the two dictionaries.

Though, from the heart is defined in Oxford’s dictionary as:

- “with sincere feeling”
(Oxford Dictionaries. From the heart 2011)

Cambridge’s dictionary only registered the term: from the bottom of my heart:

- “very sincerely”
(Cambridge Dictionaries. From the bottom of my heart 2011)

3. For explication of the words frank and frankly the immediate text context from the inter-

view is used, too:

I: Who would you want to talk with through this?

P3: The person who I can trust most. The person who I can be myself with and talk from the heart, people like I-san (the Care Manager who is there) and E-san. People with a disability can be suspicious because they have got a trauma about human relationships.

P3: From the beginning I told I-san that I would speak to him/her directly. If I didn't, trust wouldn't develop with the case workers. I tell the care workers the same thing.

The participant states that **he talks from the heart**, when:

- He is with the person he can trust most
- When he can be himself
- He speaks directly

5. When linking all above mentioned descriptive features of the talk from the heart, we get to the following paraphrase:

To talk from the heart means to talk sincerely and directly in a trustful manner.

6. The explication was crosschecked by setting the new definition of the term frank/ frankly back into to the context of the whole data.

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