RESEARCH PLAN

SAFE AND SOUND

THE INFLUENCE OF ARCHITECTURE ON THE SOCIAL SAFETY AND INDIVIDUALITY OF ELDERLY

MSC 3/4 DESIGNING FOR CARE

Colophon
Delft University of Technology
MSc3 Dutch Housing Graduation
Studio 2020-2021
AR3AD110 Designing for Care

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Introduction

The graduation studio focusses on the aging society and mainly the elderly who are in need of care. Current elderly housing in the Netherlands is not suited for the needs of the elderly. Therefore there will be a huge challenge to supply with the need of future elderly homes. The main question of the studio is: 'How do we want to live when we are old and when we need care and what kind of buildings and neighbourhoods do we need to make that possible?'. With this question in mind, the students are asked to develop a new concept of dwelling for elderly, based on research of their own interest in the field. The title of the studio indicates 'living in an inclusive environment', which means that the students will make a design in which the elderly are included in society, instead of excluding them.

For me the social aspect of the studio was an important element to choose this graduation studio, but the specific target group of elderly was the deciding factor. My mother passed away when I was almost three years old and my grandparents on my father's side helped my father to take care of us. They are very special to me and I always wondered what would happen if they could not live in their own house anymore. The graduation studio gives the opportunity to make a design for them and others. Through literature, case-studies and observational research, a new concept for elderly homes can be developed. The new concept can only be developed through understanding the target group. The housing corporation Habion, who is specialized in housing for elderly, invited us to stay in one of their elderly homes, so we can see and experience how elderly live.

During the stay in the elderly home in Loenen aan de Vecht, it was clear that there are multiple kinds of groups. The first ones are the residents who didn't like being with one group only, so they rather stayed in their rooms and invite people in there. Then there are the residents who still have an active life outside of the building, but also want to have some interaction with the other resident. Finally, there are residents who join the group activities as much as possible. The first group, the invisible residents, often value their privacy and mistrust strangers. The socially isolated elderly think that they need to be alone, because they are insecure, or they think that it makes them happy (Van Houten, 2015). However, according to the research of an American psychologist Julianne Holt-Lunstad (Schoonen, 2020), social isolation has a harmful effect on the health of the elderly. The lack of contact causes stress and therefore problems with blood pressure and your immune system (Schoonen, 2020). The socially isolated elderly can be self-reliant in the beginning, but when they get older, the problems will get worse and professional help is needed. According to researcher Anja Machielse (Van Houten, 2015), professionals are a temporary fix, the society needs to step up and help their socially isolated. Especially when the amount of elderly is rising in the future.

Another group that could benefit from the same way of living are the people with a mild form of dementia and their partners. Some of the residents in Loenen aan de Vecht were living there, because their partner started to suffer from dementia and they had to move to an enclosed care facility. The moving is

very difficult for both the people with dementia and their partners. Besides, people suffering from dementia don't want to be secluded from society, but want to be participating in the neighbourhood (3Bplus, 2019). The elderly and people with dementia deserve to have a home where they can stay until they die and where they can rely on the help of others. Their last home should make it more easy for both parties. Therefore, I want to explore the following research question:

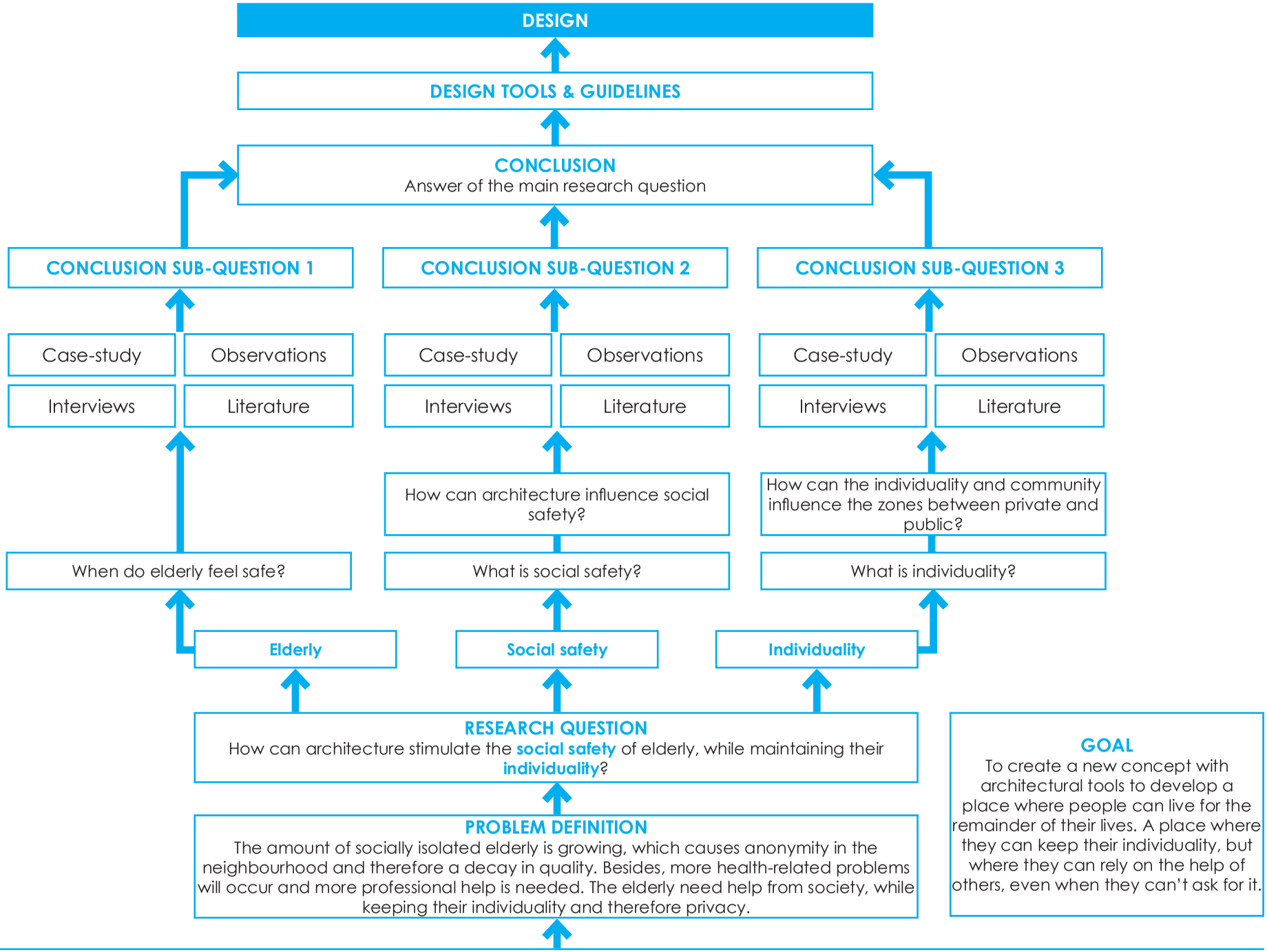
*How can architecture stimulate the **social safety** of elderly, while maintaining their **individuality**?*

Safety and individuality go side-by-side. They both relate to being independent, but the individuality expresses the freedom of not being part of the group, while safety means that there are people who will notice if something is out of the ordinary. Social safety is in this research not the safety from criminality, but the safety from feeling weak.

To be able to answer the research question, sub-questions should be researched. These questions are based on the themes of the main question. These questions are:

- What is social safety?
- When do the elderly feel safe?
- How can architecture influence social safety?
- What does individuality mean?
- How can the individuality and community influence the zones between private and public?

My goal is to create a new concept with architectural tools to develop a place where people can stay for the rest of their lives. A place where they can keep their individuality, but where they can rely on the help of others, even when they can't ask for it. Here, the elderly can feel safe and included in their neighbourhood, but also feel safe when they are alone at home. The posed problem should be solved through architecture, but also through the help of the network of the elderly. The preconditions of the architectural concept should make it easier to provide with that help.


DESIGN
DESIGN TOOLS & GUIDELINES
CONCLUSION
Answer of the main research question
CONCLUSION SUB-QUESTION 1
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Case-study
Observations
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Case-study
Observations
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Case-study
Observations
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Literature
How can architecture influence social safety?
How can the individuality and community influence the zones between private and public?
When do elderly feel safe?
What is social safety?
What is individuality?
Elderly
Social safety
Individuality
RESEARCH QUESTION
How can architecture stimulate the social safety of elderly, while maintaining their individuality?
PROBLEM DEFINITION
The amount of socially isolated elderly is growing, which causes anonymity in the neighbourhood and therefore a decay in quality. Besides, more health-related problems will occur and more professional help is needed. The elderly need help from society, while keeping their individuality and therefore privacy.
GOAL
To create a new concept with architectural tools to develop a place where people can live for the remainder of their lives. A place where they can keep their individuality, but where they can rely on the help of others, even when they can't ask for it.
Researcher

Research methods

The studio Designing for Care is a user-centred research, which means that the human in relation to architecture is the most important element. The research is mostly on an anthropological base, because most of the research is conducted in a way that we can obtain a better understanding of what it is like to be old and see the problems they are facing. Underneath is an elaboration of the different methods and why these methods are used in the research.

Observational research

The housing corporation Habion, which focusses on elderly homes, invited us to stay a week in one of their elderly homes and see for ourselves what problems the elderly are facing. Our studio is designing future elderly homes, so it is therefore important to experience the problems/opportunities and positive points in the current elderly homes. The best way to get into the problem is participatory observation. Now, the elderly are humanized, instead of being an abstract description of a target group. During the stay, interviews with different elderly were conducted and observations were made. The two tools (interviewing and observations) complement each other. As an observer, the elderly are seen in a neutral way. What are they doing and how? After observing, the why becomes important. Why are they doing it that way? The interview could therefore be an addition. The observer 'confronts' the elderly with their behaviour and tries to get an answer. The interview is also a tool to get extra information about the previous life of the elderly, their daily activities and other problems we can't see by observing.

Literature

After the observations in the elderly home, the problems of the current elderly homes became visible and the research can be developed further through literature. Through literature the theme of social safety and individuality are further explored and explained. Researchers like Jan Gehl, Ruth Soenen, Machiel van Dorst, George de Kam, Barrie Needham, Jane Jacobs and Talja Blokland, are thinking about the perspective of humans and how the building environment influences the perspective on that space. There are differences in the way they do their research. Researchers like Jacobs and Blokland talk about how the actions of the users can change the environment, while for example Gehl and De Kam & Needham have it the other way around. Their research is about how the environment and architecture can influence the behaviour of the people using that environment. Because this studio is so human-centred, we can look in the field of sociology and use the research that has been conducted in that field. The literature is used to find out to define social safety and individuality and see when people, in particular elderly, feel safe. What role does architecture play in creating safety? The information derived from the literature is ordered and compared. This research has become a foundation for further research and for the new concept of future elderly homes.

Reflection on learning process

The course Research Plan helps us to develop a research plan through the subjects of Methods, History and Theory. Through lectures and how-to sessions we had to reflect on our own methods and when and why we use them.

Methods

At the start of the course we had an introduction about methodology and methods. This was at the very beginning of the studio, so we did not start our research yet. However, the studio has a very clear subject and the methods in our research have their origins in the field of anthropology. As architects, we have to work in multiple disciplines and we have to find a balance between those fields. For each of the disciplines, different approaches for research can be used. In the lecture about methods, a few epistemes, or frames of value and thought, were shown and I tried to think which one we would probably use (Havik, 2020). Our studio is human-centred: we are asked to design a new concept for the elderly, which is a very specific group. Therefore, we would do our research in the field of praxeology, which is about social-spatial practices and user perspective. For architecture, praxeology has become more important over time. Praxeology has its origin in the field of philosophy, where it has become more clear that there needs to be a definition for the study of human actions. The human has become involved in architecture: instead of only designing aesthetical pleasing buildings, the architect is also thinking about who is using this building. After the first six weeks of research, I started to look back at what we have done so far. It is true that most of what we have done is in the field of praxeology. I have followed elderly in neighbourhoods and have seen what they were doing. I have done fieldwork in an elderly home, where we have conducted interviews with the elderly. With the focus of praxeology, I'm able to learn what the our target group, the elderly, need and wish. Through the research, the elderly have become humans in flesh, instead of an abstract description of a target group. Besides the praxeology, I also tried to learn how the elderly perceive their environment and why they felt that way. What do they prefer in their building and what does architecture contribute to that? This research is sensory and is more related to phenomenology. All these different techniques to research give various ways of visualize the information and I try to experiment with that.

History

Historical research plays a smaller part in our studio than sociological research. We try to perceive our target group, so we interview them and use tools, like a walker or blindfold, to be like them. However, there is a reason why we have to develop a new concept for the elderly. Therefore, historical research becomes more interesting. Over the years, the elderly homes have constantly changed, but not always in the best way. The elderly started to become less human and were just products in the factory of the care-system. Now we try to create friendlier homes for the elderly, but it is useful to use the materials that are already there, to see where things go wrong or right in the past. Tools like archives or historical mapping can help to develop a base on which you can substantiate your problem statement and further research.

Theory

For theory, why is the most important question. First of all, why are we researching the elderly homes? The percentage of elderly is rising the Netherlands over the next decade, so we have to find a way to provide the elderly with their needs and be able to provide them with the care which is already under pressure. We try to solve this big problem, but in the meantime, we find new problems by constantly asking why. That is what architects do. We are a problem-solving enterprise and we find those problems through the questions: when, where, how, for who and with what purpose? If you constantly ask yourself these questions, you will further develop your research and create a strong argument for the design in the end.

Reflection on relation between:

Project topic, studio topic, Master track Architecture and Master program

The MSc 3 Studio 'Designing for Care – towards an Inclusive Living Environment' is looking for new concepts in architecture for elderly who are in need of care. In the Netherlands the elderly housing is undergoing some changes, due to the demographic transition to an aging society and the change in policy of the care-system.

"[…] Firstly, the elderly homes, built in the 1960s, do not respond to the desires of the elderly of today, who want to be self-supportive and not excluded from society.

[…] Secondly, new architectural designs for people with care demand need to offer an environment for a mixed community as care giving needs to undergo a change of attitude from professional to unprofessional support by family members and the neighbourhood, and thirdly, the elderly themselves need to be empowered as much as possible to gain their place in the society" (Jürgenhake, n.d.).

The studio tackles some bigger social issues in the Netherlands and tries to find a solution through architecture. The research 'Safe and Sound' develops some architectural tools to make it easier for society to help their elderly neighbours. The architectural tools, based on literature research, observational research and case-studies, are the foundation for a new architectural concept and design. The design will be developed on multiple scales and therefore interact with the context and the user. Architecture is not on one scale, it is the interaction between the different levels. If the design would be focused on one element, the design will fail on the others and will lose its importance. The multi-disciplinary approach is an important aspect of the master program. The design will be stronger if it is substantiated with research. The Bachelor and Master taught us that the academic attitude of architecture comes forth in the constant exchange between different domains, like literature and design. As Van Dooren (2013) says: making the implicit explicit through constantly experimenting and reflecting.

Reflection on theoretical framework

Architecture uses practice-based research. Hypotheses in the field of architecture can only be verified through the results of built buildings. However, the research following the hypotheses have a certain level of complexity due to the many connections of architecture with other fields. Architectural researchers therefore also look in fields like anthropology and sociology. All those different researches have influence on the current architectural field. But, where does this place my research in all the other architectural researches?

As explained before, the design studio 'Designing for Care' focusses on user-centered research, so humans in relation to architecture. The research uses therefore studies in the field from sociology. The topic social safety among elderly uses different methods in the field of sociology.

In the fieldwork week, observational research has been conducted. How do the elderly interact with each other and how do they use the spaces they live and roam in? These participatory observations show what problems the elderly are facing and what could be improved. Jan Gehl (2011) uses very similar approaches in his book *Life between Buildings*. By studying the public life in cities, Gehl points out the issues cities are facing in public spaces. He sees the space between the buildings as a different dimension of architecture and tries to show how the society changes the character of this space. The reason why this research is so important is that he conduct his architectural research on the scale of the people. He is an architect doing sociological research.

Gehl's research is based on one of the most influential people in humanistic planning: Jane Jacobs. In her book *The Life and Death of Great American Cities*, she discusses the problems in neighborhoods of American cities and uses anecdotes from what she sees on the streets to provide with solutions. She is not an architect, but a journalist and that gives new insights for other architects (Jacobs, 1961).

Gehl and Jacobs both use different settings than my research. They are both looking from an urban scale, while the research on social safety among elderly is looking at the building. Still they all have the user in common and how architecture can help with safety and interaction. The participatory observation also means doing interviews with the elderly to understand the observations better. The observations raises the question of what people are doing, but the interviews can give more insight in why they are doing it. Talja Blokland (2008) uses the essay *Ontmoeten doet ertoe* to show why people need social interaction. She uses literature research and examples of people to give a better understanding of meeting with other people in the neighbourhood.

The research week in the nursery home in Loenen aan de Vecht is what makes this research stand out. Architects do not stay in a nursery home for a week to get to understand their target group. The fieldwork gave the opportunity to observe the elderly from a closer distance. The combination of observational research and participatory research made the week interesting. First, it was possible to see what the elderly were doing without you interacting. Then if observations needed more explanation, it was possible to ask the elderly why

they were doing what they were doing. The interviews gave a better understanding of the problems they are facing, what their daily habits are and what they prefer in their living environment. The literature research is an important addition to the fieldwork research. Not everything can be answered by observing, so the literature research is needed to strengthen the fieldwork research.

One of the main topics of the research is individuality and in particular the transition from public to private to create moments of interaction. For architecture, the transition is an interesting topic, because architecture is a tool to express publicness or privateness of a space. Researchers like Altman (1975), Lofland (1998), Van Dorst (2005) and Van de Wal & Van Dorst (2015) all have their own opinions on that topic. Firstly, Altman divides the zones from private to public in territories. The private zone is the primary territory, the public zone is the public territory and the area in between the two is the secondary territory. The territories are created through the influence of the physical borders on the human behaviour (Altman, 1975). Lofland calls them public, parochial and private realms, where the space isn't defined by materials, but by the users (Lofland, 1998). Van Dorst's privacy-zoning theory says that materialization marks the function of a space and is therefore the opposite of Lofland (2005). Van Dorst's theory is the expected function of the space, while Lofland's theory is the real outcome of the function. Van de Wal & Van Dorst (2015) come up with the theory of privacyscript, which influences the readability of a privacy-zone. They go back to having three domains: the private, parochial and public domain (Van de Wal & Van Dorst, 2015). Van Dorst is co-author of the *Privacyscript* and it looks like that he has a different opinion on privacy-zoning: his theory from 2005 shows that he thinks that there are no clear divisions in the zones from private to public, but in *Privacyscript* they use the three zones. For me, a combination of Lofland, Van Dorst and Van de Wal & Van Dorst is the way to approach the transition from public to private. Not every space can be defines: some have multiple functions which are caused by how people are using the space. However, it is useful for the users to give definitions to spaces, like someone's backyard can be defined as a private space. The users know therefore how to materialize the space and how to behave in it. In the route from public to private architecture can be used to create certain expectations of the space. For example smaller communal spaces in the hallway for neighbours to come together and space in front of a door on a gallery could be used for private purposes. People can meet each other on these routes and therefore recognize each other, which will create safety.

Besides literature and observational research, case-studies are also analyzed in the research 'Safe and Sound'. For now, two case-studies are used. Both projects are designed by the same architectural firm. The first project is the ParkEntree in Schiedam and the second project is called Romeinhof, located in Enkhuizen. Both are design by the architectural firm Inbo. The projects are chosen because of their research topic in combination with the target group of elderly. The projects both try to find solutions for the problems of anonymity and helping each other. The case-studies could be helpful for the research to see how others have implemented architectural tools to solve these problems. I chose two projects of

the same architectural firm to see if they implement the same design principles in multiple projects or if they use different principles. According to Teegavarapu & Summers (2008) case-studies can be implemented in more characteristic requirements than surveys, interviews and experiments, but there is always the danger that it could be subjective. To make it less subjective, it is of importance to make a list of criteria in the search of case-studies. Besides, it will narrow down the search for case-studies. The method of case-study is suitable for the development of theories in design research (Teegavarapu & Summers, 2008).

The combination of literature research in the field of sociology in architecture, participatory observation through observations and interviews, and analyzing case-studies is important for this research, because it highlights different aspects of user-centered, architectural research. These methods change from looking as outsider to the problems of elderly architecture, to letting the elderly participate in the research by listening to their problems. It is important for the elderly to let them be heard, to get rid of the anonymity and therefore create more social safety. The research 'Safe and Sound' uses different methods in understanding the elderly and translates their needs in design tools for a new concept in which the elderly can live out the rest of their lives.

Literature

3Bplus (2019). *Ouderenzorg: nieuwe woonvormen en wonen met technologie*. Consulted on 13-10-20, from https://3bplus.nl/ouderenzorg-nieuwe-woonvormen-en-wonen-met-technologie/

Altman, I. (1975). *The Environment and Social Behavior*. Monterey: Brooks/Cole Publishing Company

Blokland-Potters, T. V. (1998). *Wat stadsbewoners bindt: sociale relaties in een achterstandswijk*. Kampen: Kok Agora.

Blokland, T. (2009). *Oog voor elkaar: veiligheidsbeleving en sociale controle in de grote stad*. Amsterdam: Amsterdam University Press.

Blokland, T. (2008). *Ontmoeten doet er toe* (Essay). Consulted on 26-10-20, from https://docplayer.nl/77751-Ontmoeten-doet-er-toe.html

Gehl, J. & Svarre, B. (2013). *How to study Public Life*. Washington DC: ISLAND PRESS

Gehl, J. (2011). *Life between buildings: Using Public Space*. Washington DC: ISLAND PRESS

Havik, K.M. (2020). *Lecture 1: Methods of Analysis.* Consulted on 02-12-2020, from https://brightspace.tudelft.nl/d2l/le/content/278709/viewContent/1955506/View

Lofland, L.H. (1998). *The public realm, exploring the city's quintessential social territory.* New Jersey: Transaction Publishers.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York City: Penguin Random House

Jürgenhake, B.M. (n.d.). *Designing for Care – Towards and inclusive living environment* (course guide).

Schoonen, W. (2020). *Een gebrek aan sociale contacten? Dat is net zo schadelijk als roken*. Retrieved on 22-10-2020, from https://www.trouw.nl/nieuws/een-gebrek-aan-sociale-contacten-dat-is-net-zo-schadelijk-als-roken~b0a82139/

Teegavarapu, S. & Summers, J.D. (2008). *Case Study Method for Design Research: A Justification.* Consulted on 17-12-2020, from DOI: 10.1115/DETC2008-49980

Van Dooren, E., et all. (2013). Making explicit in design education: generic elements in the design process. *International Journal of Technology and Design Education*.

Van Dorst, M.J. (2005). *Een duurzaam leefbare woonomgeving: Fysieke voorwaarden voor privacyregulering* (Doctoral thesis). Consulted on 27-10-20, from http://resolver.tudelft.nl/uuid:6af7e7a1-0572-4678-a5e5-cc31af2d9d3f

Van Houten, M. (2015). *Sociaal-geïsoleerde oudere kan niet zonder beroepshulpverlener*. Retrieved on 23-10-2020, from https://www.trouw.nl/nieuws/sociaal-geisoleerde-oudere-kan-niet-zonder-beroepshulpverlener~b3fc3c0d/

Van de Wal, H. & Van Dorst, M.J. (2015). *Privacyscript – De invloed van architectuur op sociale interactie in woongebouwen*. Bussum: Uitgeverij Thoth

General practical references

ParkEntree, Schiedam, Inbo

Romeinhof, Enkhuizen, Inbo