Shared spaces in a domestic environment

Vera Vorderegger
Exporelab 19
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*Primitive future house* (Fujimoto, 2008)
My fascination for this research is the declining need for people to possess things. People are becoming less materialistic, a few recent developments are showing that people seem to want to share more possessions with each other, but they are not (yet) open to share spaces with each other.

Perhaps this is due to our current cultural expectations about living in a domestic environment. Because we live in fixed patterns, we are in a way constrained in our living behaviour. However something is changing, our lifestyle is becoming more isolated, although we are increasingly looking for social contact, on the internet for example. This contradiction interests me the most.

‘Why don’t we share?’

This research intends to provide better understanding of the social behaviour of users and the possibilities for sharing spaces in the domestic environment. Our expectations of the shared space, change in the domestic environment and personal needs for space and privacy run as guiding elements throughout the study. Can sharing spaces on a long term contribute to a more social environment?
‘A chair is still a chair
Even when there’s no one sitting there
But a chair is not a house
And a house is not a home
When there’s no one there’

Space Caviar, 2014, p. 13
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‘The way we live is rapidly changing under pressure from multiple forces - financial, environmental, technological, geopolitical. What we used to call home may not even exist anymore, having transmuted into a financial commodity measured in square meters, or sqm. Yet, domesticity ceased long ago to be central in the architectural agenda.’

Space Caviar, 2014
1. Introduction

1.1 Problem description

In a study published last year researchers found that all of the mothers’ stress hormones spiked during the time they spent dealing with their belongings (Hill G., 2013). Our fondness for stuff affects almost every aspect of our lives, as well as for example our housing size and storage room. Not only our stuff but also our behaviour in our every day live affects the use of spaces and the things we find comfortable or not.

In architecture today we experience a lot of different spaces used by different people. We are used to fill the space with our own habits and stuff. Because of this cultural expectations about living in a domestic environment these days, we are in a way constrained in our living behaviour. We still sit at tables, sleep in beds, rest on sofas, cook in kitchens, wash in bathrooms, just as we have done for centuries, because we are used to it (Space Caviar, 2014, p. 12).

In other cultures this ‘used to’ is different. In Japan they, for example, do not use the western names for their spaces in the dwelling. ‘Zashiki’ is the first room, ‘naka-no-ma’ stands for middle room. The spaces in a house are described without naming the function. The spaces in a Japanese house are therefore more flexible than in a western house. Sleeping for instance is possible in more than four rooms, instead of only the one: the (western) bedroom (Leupen & Mooij, 2008).

‘What would happen if we gave the user permission to act differently from what they are used to?’
A different aspect is that we move so fast these days that we rarely slow down to talk to our neighbours, much less to have them over for dinner. Our social system is becoming more isolated. Our life style is changing. Recent trends suggest that ever more single people will live alone in small apartments. This development is everything but sustainable (Hill C., 2013).

Even in the time of social systems, such as ‘de OV-fiets’, ‘Airbnb’, ‘blablacar’, and ‘Facebook’, where it is shown that people are prepared to share more private possessions with each other, the people are only prepared to share their possessions temporary. Is it also possible for people to share their possessions in a domestic environment on a long term basis? What is the benefit of sharing and does a shared space in a domestic environment contribute to social contact of the users?
1.2 Structure of the research

After the brief overview of the social context of this topic and why a discussion of the interest in the subject in the first place, it is time to ask some questions to guide the rest of the research. The structure of the research and the research approach can be determined. Four research methods have been used for the different parts of the research. The methodologies used are: case study, interview, observation and literature research.

The research is divided into two main parts; the context and the usage. Prior to the exploration of these two subjects the ‘problem description (1.1)’ was given. And the ‘structure of the research (1.2)’ and methodology will be given in this chapter. After the exploration of the two main parts a conclusion and design proposal will follow. The goal of the research is to get a better understanding of the social behaviour of users within the existing domestic domains and their interest to share spaces in the domestic environment. The overall main question of the research is therefore:

‘Where are the possibilities (and limitations) within the domestic domains for sharing spaces and activities with multiple users.’

Chapter two, referred to as the ‘context (2)’, will explore four topics; the change of domestic rituals, the users, the domestic activities and domains. The overall method of this chapter is literature research.

The ‘change of domestic rituals (2.1)’ will be discussed first answering the following question: ‘In what way did our domestic rituals change and what do we expect in our home nowadays?’ To answer that question different researches have been studied. One of the sources is the collection of texts of Cieraad, Huisman, Gaillard, & et. al. In their collection they describe 100 years of living in the Netherlands, from 1900 till 2000.
The second source is a book written by Space Caviar called the ‘SQM: The Quantified Home’. This book is published for the 2014 Biennale Interieur in Kortrijk, it draws the scale of our rapidly changing lifestyle using data, fiction, and a critical selection of homes and their interiors.

The research will then consider the different ‘users (2.2)’ prepared to share and thereby answers the following question: ‘What kind of users are prepared to share spaces in a domestic environment on a long term basis?’ This will also be researched through literature. The different life stages in a person’s life according to Erik Homburger Erikson will function as a support to find the target group of users.

‘The dwelling as a centre of activities (2.3)’ will be discussed thereafter. With reference to the literature the different activities in and around residential areas are described, answering the next question: ‘Which activities according to literature are existing in and around residential areas?’ The common activities in the domestic environment are described according to a PhD research of Meesters, who has researched the meaning of activities in the dwelling and the residential environment, and according to Leupen and Mooij, who wrote a manual for designing houses. Another big source is the thesis of Warner van Haaren, who wrote his master thesis on the private and collective home, through reading his thesis and an interview more was learned about the activities, do’s and don’ts in collective housing and privacy in a dwelling.

The last section of the first main part considers the ‘domestic domains (2.4)’ existing in the residential environment, answering the following question: ‘What domains are there in the residential environment and what do they indicate?’ Literature research is used to explain this. And in this last section a scheme is introduced which shall be used as a guiding element throughout the rest of the research.
Chapter three, referred to as the ‘usage (3)’, considers two topics; the activities performed in and around residential areas and the different domains in a domestic environment. On the basis of the scheme, introduced in chapter two, the different activities are distributed over the domains. Different points of view have been taken into account. The first view considers the distribution of activities over the domains using literature research. The second view is questioning the users and the third and fourth view is exploring two case-studies (the practice). The overall question of this chapter is; ‘Where do the different activities according to the literature, the users and the practice fit within the domestic domains?’

The result of the literature study in chapter two is shown in the first part of chapter three. This is mainly how the scheme was filled in regarding the ‘past and present (3.1)’ and an explanation.

The second part is a research set up by myself. The ‘experiment (3.2)’ was interviewing over 15 respondents, recent graduates or older. They were asked about their domestic activities and their place in a private or collective home. The empty scheme, shown to the right, was presented to the group of participants. The participants were asked to distribute the activities into this scheme. When the participants thought an activity was individual, they placed it to the left side of the scheme. If the activity was regarded as collective (the activity is suitable for more than one person, for example ‘chatting’), it was placed to the right side of the scheme. If the activity was suitable for a private space, the participants placed it to the top of the scheme and if it was suitable for a shared space, they placed it to the bottom side. For example: an individual activity in a private space will have it’s place in the left top part of the scheme. The participants were also asked to add more activities, suitable for a domestic environment, if they thought something was missing.
The results of the experiment will thereafter be analysed and be shown as a filled scheme. Through this experiment the users view on different activities is studied.

The third and fourth part of chapter three researches two collective living environments or in other words two cohousing projects. By researching the cohousing projects not only a lot can be learned about the domestic domain, but also what practically can be done collectively and what not. The existing projects are in a way a social experiment regarding collective living. The projects also show how collective housing can be managed and controlled and how the built environment can be designed to strengthen the communal identity and social cohesion of the individual households.

The first case study of a collective living environment is ‘Vrijburcht in Amsterdam (3.3)’. This project is researched by interviewing the architect, Hein de Haan, an observation on the site and some articles in the journal DASH number 8. This project was chosen because there is an important existing connection with the neighbourhood, but the dwellings are at the same time mostly private.

The second case study on the other hand is more collective, but has less connection with the surrounding neighbourhood. This case study is ‘Windsong Cohousing in Canada (3.4)’. A site visit was unfortunately not possible due to the distance, but this project was also researched through articles in the journal DASH number 8.

The concluding chapter, referred to as ‘conclusion (4)’, combines the acquired knowledge, provides an answer to the research question in the form of the ‘research conclusion (4.1)’ and describes a ‘design goal (4.2)’ based on this answer.
In the scheme below we can see how the different topics within the research are related to the design and the location. The research will form the outline that guides the design throughout the design process.
'A home is more than a roof over one’s head or a financial investment. It can provide a sense of security and comfort, or elicit feelings of frustration, loneliness, or fear.'

McCamant & Durrett, 1988, p. 17
2. Context

2.1 Change of domestic rituals

In English there are two words existing for a domestic place: the house and the home. The house is referring to the outside border and the actual building and the home is a place where you live. A house or dwelling accommodates a home. The boundaries of home can be much wider than the boundaries of the house (Meesters, 2009, p. 11). But what makes a house a home? In this chapter the most important developments in a domestic environment over the years are explained and described. What has changed and what do we expect in our house and home nowadays? The goal is to gain a better understanding of what has changed in our domestic environment.

The way we live has changed over the years. The domestic environment is subject to many influences, for example the materials we use, the time and place it was build and the domestic rituals we were used to at that time. Some houses have survived hundred of years, while others may be regarded as an endangered species. In this part of the research it is not so much the physical changes that will be explored, but more the way we use our house or home. In what way did our domestic rituals change? This part of the research will also focus on the public and private sphere and even more about what the public sphere took from the private sphere.

According to Irene Cieraad living is more than just an interior; it is a meaningful activity that extends to the farthest corners of the house and these days even into the garden. A table is not just a table, but is connected to all the activities a table can be used. The living rituals have changed significantly over the past century. Furniture has modified in form or function.
The same applies to the rooms in the house; living has evolved over time and literally moved through the house. Today we are for example used to eat a warm meal everywhere except on the toilet. Dining on the couch is normal today, but was unacceptable before. The same applies to the kitchen, the shower and the bathroom. Today the kitchen is the place for a meal together, where it was previously only the place to cook. The bathroom is today a place where we do not only get clean, but also go to relax (Cieraad, Huisman, Gaillard, & et. al., 2000).

So living has literally moved through the house, but in what way did our domestic rituals have influence on that? And what are our domestic rituals and how do we explore that? A research of the floor plan is a good start, since the floor plan of housing is basically a plan of living as an everyday cultural activity. An everyday activity, or living ritual, follows a certain pattern. Living rituals are the connection between the inner and outer world, the link between the domestic and social life (Cieraad, Huisman, Gaillard, & et. al., 2000).

Until about 1950 in the Netherlands, every class had its own characteristic floor plan for housing; working class, middle class and upper class. After 1950 we speak of bachelor apartments, nursing homes, students flats etcetera, the type of homely living context becomes the indication of the name of the housing type. The furnishing and the way the home was used was a way to demonstrate the living standards of a higher position, not always the most efficient way to use the space.

Often one room was appointed as ‘nice room’ and used only for special occasions. The remaining space was opposite to the ‘nice room’ and used very intensively. The intensive used spaces were used in a multifunctional way, for example when the stove would burn in the winter because of the cold, they would also cook on the stove. The dishes would be cleaned next to the toilet, everything that was dirty in one room, the so-called ‘dirty room’.
In the twenties the kitchen came into the house. This resulted in extremely unhygienic areas. The toilet, kitchen and shower, as we now know, in one space (Cieraad, Huisman, Gaillard, & et. al., 2000).

Bedrooms and bathrooms did not exist in the early 19th century, except in homes of the elite and upper middle class. In the twenties bedrooms, kitchens and even a toilet started to appear in the floor plans of the working class, a private bathroom on the other hand still does not exist. For a weekly bath the residents went to the municipal baths. In the 60's, when the public bathhouses were associated with poverty, many started to improvise a shower in or around the kitchen. For the middle class, it was a different story; the bathtub was not included in the kitchen because it was beneath their status. This is how the class system in the Netherlands has led to the combination of a bedroom with a bathroom.

The floor plan of a typical middle class house in the Netherlands consisted of a front- and backroom and a corridor that ran from the front door along the front- and backroom to the kitchen in the back of the house. The corridor illustrated the roles of the household, where the men worked outdoor and the women were responsible for the household. The baker, milkman, greengrocer etcetera all came by at the front door (Cieraad, Huisman, Gaillard, & et. al., 2000). The men were responsible for the public sphere, working outside the home, bringing in the money. The women were responsible for the private sphere, cleaning and cooking (Space Caviar, 2014).

The kitchen has been developed in the 20's from a practical, efficient workplace into the most prestigious area in the house. The backroom was the most private room and acted as a total living room, so that in the winter only one room needed to be heated. The front room was for visitors and much more formal. World War II marked a break in thinking in classes and set a broad democratic movement in motion. The distinction between the front and back door, between living and dining room (front and back room) was lost first.
In the seventies, the corridor and the kitchen became incorporated in the living space. More young married couples that were working outdoors during the day resulted in less provisioning through the front door (Cieraad, Huisman, Gaillard, & et. al., 2000).

This timeline of domestic connections is confirming what literature in the first part of this chapter already was pointing out, that the house evolved over time. Physical structures like clean water supply, electric lighting, radio, television and internet connected the house to the outside world. As Dionne Warwick suggests in her 1964 hit ‘A house is not a home’, the domestic sphere is so much more than the sum of the functions it performs; it is a unique moment where architecture acts as a bridge between intimacy and sociality (Space Caviar, 2014, pp. 13-14). In other words the outside world came into the inside ‘private’ world of the domestic environment.
2.2 Users

‘The presence of other household members is both its greatest weakness and its greatest strength’

Heath & Kenyon, 2001

When talking about the user of the domestic environment there are plenty of points of view. Everybody is (already) living somewhere and has different requirements for his or her house. The requirements are depending of age, culture, education and a lot more. To make the research and design more valuable, this research is focussing on one target group. Which one to choose? And why?

The different life stages in a person’s life according to Erik Homburger Erikson have been used to choose the target group (Erikson, 1977). In his opinion there are eight stages in a persons life. The first five phases are not usable for this research. This is the age from birth till 18 years. In these phases of your life you are dependent on your parents. The last three phases are functional for this research. In these phases you are independent and seeking for social contact. The first part of the first phase, from 18 till you graduate, you are most of the time already sharing in a student flat. The requirements of living are very low, you don’t have a lot of money and you are still dependent on your parents or a loan. In the last phase, from 55 till you die, you require more and more nursing. It is not always possible to be totally independent at that age.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Birth till 18 months</th>
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<tbody>
<tr>
<td>Phase 2</td>
<td>18 months till 3 year</td>
</tr>
<tr>
<td>Phase 3</td>
<td>3 till 5 year</td>
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<tr>
<td>Phase 4</td>
<td>6 till 12 year</td>
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<tr>
<td>Phase 5</td>
<td>12 till 18 year</td>
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<tr>
<td>Phase 6</td>
<td>18 till 35 year</td>
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<tr>
<td>Phase 7</td>
<td>25 till 55-65 year</td>
</tr>
<tr>
<td>Phase 8</td>
<td>55-65 till death</td>
</tr>
</tbody>
</table>
The social behaviour and benefit plays a big role in this design and research. The caring and nurturing benefit in living together is less important. As a result of this the elderly and last phase will fall off as a target group. The remaining phase is from recent graduates till the age of approximately 55.

With this remaining life phase there are two appointed living groups. The young and high potentials and singles over 50. The young and high potentials are young adults between 25 and 35. They just graduated, have their first job, do not earn a lot of many, but to much to still live with some roommates, they are single and the world is lying in front of them. In 2050 there are an estimated 700.000 of young and high potentials in the Netherlands (Timmermans-Dalhuisen, 2014). The other group is the singles over 50. Recent trends suggest that ever more people will be single over 50 and live alone in small apartments (Hill C., 2013), everything but sustainable..

Both of these groups are flexible and open for living with others. They are already used to it or they are looking for more social contact. Therefore the target group, with the focus on social benefit is from recent graduates till the age of approximately 55-65.
2.3 The dwelling as a centre of activities

The dwelling is a central setting in people’s everyday life. This can be deduced from the many diverse meanings a dwelling has. Its meanings can be functional, for example having a roof above one’s head. Its meanings can also be social, for example being together with family or friends. The dwelling can be an indicator of one’s position in society. Or people may regard it as an economic investment. Most of these meanings are related (either directly or indirectly) to a wide variety of activities. In this light, the dwelling can be viewed as a centre of activities. Doing so indicates the connection between activities and meanings (Meesters, 2009).

This part of the research distinguishes the most common activities that are performed in a domestic environment. The common activities in the domestic environment are distinguished according to a PhD research of Meesters (2009). Who has researched the meaning of activities in the dwelling and the residential environment. Which meanings are important for which activities? The PhD of Meesters contains a big interview research with over 600 respondents regarding the meaning of activities in the dwelling.

Activities are performed in a different setting of the domestic environment. For example, eating can take place in the kitchen, but also in the living room. Each sub-setting has its own set of activities, which gives insight into the functionality of that setting (Meesters, 2009).

To get a general impression of which activities are important for the respondents in their dwelling, they were asked to mention some activities they perform in both the dwelling and residential environment. The following categories of activities in and around the dwelling were mentioned: cooking, eating, being together with family, working at home, cleaning, children playing, hobby, being outside, relaxing, entertaining guests, being at
the computer, personal care, sleeping, maintenance of dwelling and gardening. The categories for activities in the residential environment are the following: going out, recreation, going to a club, bringing children to school, going to work, doing daily errands, fun shopping, visiting friends, doing sport (Meesters, 2009).

Because there are such a wide variety of activities, it is useful to consider the extent to which activities form coherent groups. The groups of activities according to Meesters are the following: family life, household, social leisure, passive leisure, active leisure, other leisure and other activities.

A different perspective on the topic is given by the research of Leupen and Mooij. According to Leupen and Mooij: a few basic activities always bring you back into the home, regardless the culture, location, time of building etc. Different analyses about the use of the dwelling in different cultures show that a few recurring activities almost always find their place in or around the house (Leupen & Mooij, 2008). The basic activities according to Leupen and Mooij are, coming together, sleeping, cooking, eating, washing and working. Within these categories a lot of sub-categories are covered. Washing for example includes washing clothing, yourself and the dishes (Leupen & Mooij, 2008).

For this research the most important activities are described considering social contact or privacy and the activities that are mostly performed in and around the dwelling and the residential environment. Some domestic activities encompass multiple activities. These activities have similar needs or do not need to be defined individually (Haaren, 2014). The activities used for further research can be seen on the following page. The symbols and text will define what is meant by the activity in a broad sense.
Going to bed, getting sleepy, dressing, read/relax in bed, is the activity **sleeping**.

**Showering** contains personal care, taking a bath, cleaning yourself.

**Going to the toilet** and washing your hands.

**Reading** of the newspaper, books, tablets, e-readers, the post etc.

**Cleaning** spaces and objects in every way possible and also clearing the room from mess and the maintenance of the dwelling

**Playing music** contains listening to music and dancing.

**Eating** is having breakfast, lunch, dinner and a snack during the day.

**Watching a screen** together or alone where something is shown, a movie, the news etc. it is all **watching television**.

**Chatting** to each other, to the phone, to yourself in other words having a conversation.

**Cooking** is part of a functional activity of producing food, but also an activity where people come together to socialize.

**Watching** a screen together or alone where something is shown, a movie, the news etc. it is all **watching television**.

**Relaxing** includes various activities, all activities associated with leisure. For example being at the computer and fun shopping.

**Studying** is teaching yourself something in a work-setting by reading, writing or drawing.
2.4 Domestic domains

In a domestic environment a lot of domains can be recognized. These domains of a domestic environment are in a way the relation with the location. The domains show us what is private and what is more public and everything in between. For this research the transition from a residential area to a public area is interesting to examine. The domains considered are private, collective and public. The transitional area between the different domains will also be discussed. The difference between private and public, is that private spaces are owned or rented by a (private) person, public spaces are for everybody. They are still owned, but owned cooperatively. More differences will be indicated according to this research.

In the rest of the research the empty scheme, shown on the right page on top, will be populated. In the same scheme on the left we can see the private domain and on the right the public. In the image on the left page below the scheme is filled in with the activities based on the previous literature research. All of the activities are regarded as private, there is no transition to the public area and no collective area.
Activities distributed over the domains based on the literature research of the past (own illustration, 2015)
‘Privacy can be a social act, if the system to which it belongs generates active exchanges, produces energetic relationships that connect the individual with the community, balancing the need for isolation with the need for an audience.’

Space Caviar, 2014, p. 290
3. Usage

3.1 Past and present

In chapter 2.4 a scheme was introduced. In chapter 3 the scheme will populated with the activities, introduced in chapter 2.3, following the literature research, the users en the practice. In this particular chapter the different activities and the domains will be distributed following the present. The result of the literature research regarding the past can be seen on page 23. The scheme below is the result of the literature research related to the change of domestic rituals. In this scheme we can see that some activities tend to occur in the public area. There is no big transition and still no collective area visible. Our way of living is nowadays still rather private, but there are some more openings towards the public area compared to the past.

Activities distributed over the domains according to the present
(own illustration, 2015)
3.2 Experiment

The experiment in chapter 1.2 is below described in more detail. The aim of the experiment was to investigate the different activities and how possible users are interpreting them. The goal is to understand which activities according to the users are suitable for sharing with one other. For each activity the users were asked whether it was an individual activity or a collective activity and whether they thought the activity was more suitable for the private space rather than the shared space. Over 15 participants participated to the experiment. The participants are mostly graduates or older, this is the group that is probably the most flexible, but also part of the target group for the design.

The right page scheme shows the combined result of all the participants. The activities shown in the scheme are; sleeping, showering, going to the toilet, reading, cleaning, playing music, eating, watching television, chatting, cooking, washing, relaxing and studying. It is not possible to draw conclusions from this scheme, there is too much information. The only thing we might see is that less activities are collective and at the same time suitable for the private space (the upper right part is rather empty, compared to the other parts). To understand the users better the results of the experiment need to be further analysed.

During the experiment the participants were asked to use their own interpretation for the activities and add activities when they thought something was missing. Only five activities were added. Having breakfast and lunch, trading things, smoking and dancing. Having breakfast and lunch is a specific interpretation of eating and therefore a subdivision of the activity eating. Smoking and dancing have been regarded as part of relaxing in a broader sense. Trading things can be seen as a different category, but since only one participant mentioned this activity it was not taken into account.
Combined experiment result of all the participants (own illustration, 2015)
For further analyses the different activities are displayed separately in the left page schemes. Every scheme represents the outcome of one activity for all the participants together. A lot can be observed from these schemes. The activity sleeping for instance is mostly located in the left upper part of the scheme and is therefore more an individual activity in the private space, whereas relaxing and playing music are much more scattered and have almost no preference towards a space or, individual or, collective specification. Or does it only seem like they have no preference? To explore that question more we need to observe the schemes in a different way.

Per activity a blot was drawn. The result of the blots together is shown in the scheme below. The blots per activity look very different, but it is still not possible to see a final result. We can only see that the activities are different. And same as in the scheme on page 27 we can see that some parts of the scheme have less activities (lighter colour) and others are more ‘popular’ (darker colour). The middle of the scheme is for example darker than the right upper part.

Result of the blots together (own illustration, 2015)
To get an interesting conclusion that can be used during the design process it is convenient to categorise the different activities. Three categories have been identified: extreme alone, extreme together and divided. The schemes of the participants were transformed into the scheme on this page, below. The subcategories are also visible. The scattered (divided) section has for instance three subcategories: divided suitable for the shared space, but tending to be an individual activity or tending to be a collective activity.

In the middle the activities with no preference at all are visible. Between the most extreme and divided there is a subcategory tending to be individual but with no obvious preference for the shared or private space and tending to be a collective activity with a preference towards the shared space. Naturally extreme alone focuses on the private space as an individual activity. Extreme together has on the other hand a obvious preference for the shared space as a collective activity.

<table>
<thead>
<tr>
<th>EXTREME ALONE</th>
<th>DIVIDED</th>
<th>EXTREME TOGETHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual activity</td>
<td>individual activity</td>
<td>individual activity</td>
</tr>
<tr>
<td>private space</td>
<td>private space</td>
<td>private space</td>
</tr>
<tr>
<td>collective activity</td>
<td>collective activity</td>
<td>collective activity</td>
</tr>
<tr>
<td>shared space</td>
<td>shared space</td>
<td>shared space</td>
</tr>
</tbody>
</table>

Activities distributed over a few categories (own illustration, 2015)
The most divided and a bit divided activities can be seen as flexible, there is not an obvious preference and therefor they could fit in a private or shared space as an individual or collective activity. In the image below opposite and flexible activities are shown. The blue activities are opposite of the green activities, the black activities are flexible. Sleeping, showering and going to the toilet: all three activities are regarded as an individual activity in a private space, are described as opposites of chatting, seen as a collective activity in a shared space. The same counts for the activities reading, eating and watching television. These three activities are opposites in being an individual activity or collective. Reading is considered as an individual activity, whereas eating and watching television is considered as collective activities.

The remaining six activities are categorised as flexible, as described above. Relaxing and cleaning are the most flexible activities, but also washing, studying, playing music and cooking are labelled ‘flexible’.

Opposites and flexible activities (own illustration, 2015)
In a different lay-out the same scheme looks like the picture below. In this format it is easier to compare the filled in scheme of the participants. The most divided activities are in the middle: relaxing and cleaning. The activities tending a bit in any direction are lying in the middle of a colored square and the activities that have an obvious preference are at the border of the two.

For example cooking, playing music and chatting are lying at the border of a collective activity and the shared space. Playing music and cooking did not fit in the extreme category before, but in this image it is in the same category as chatting, that was earlier regarded as extreme.

*Distributed activities in the scheme (own illustration, 2015)*

The conclusion of this chapter is the following scheme showing how the activities are distributed over the three different domains. In contrast to the previous scheme of the past and the present the collective domain and the transition are now visible. The collective domain is best compareable with the shared space in the experiment.
According to the categories derived form the experiment the activities are distributed. This means that the most extreme individual activities, sleeping, showering and going to the toilet, are located in the most private part of the scheme (left). Chatting on the other hand is found in the most collective part (right middle). The other more flexible activities or activities tending towards individual or collective are distributed between the private and the collective domain.

The bar per activity is visualising which domain the activity is tending towards. Relaxing and cleaning are the most flexible for instance, they show no preference, their bar is therefor the longest, stretching from the private to the collective domain.
The first case study is situated in Amsterdam in the Netherlands. The research consisted of an interview with the architect, Hein de Haan, a visit to the site and an article describing the project.

The motto on the website of Vrijburcht is: a lot can, a little should. Vrijburcht presents itself as a place that can offer more than a life behind your own front door. It is a safe and pleasant environment to live, work, play, and care. The shared facilities and spaces offer opportunities to meet and inspire. The diversity of lifestyles can lead to surprising collaborations. By using the theatre, café and various activities people can enjoy the social aspects of Vrijburcht (Vereniging van Eigenaren Vrijburcht, 2013).

But how did it start? The city of Amsterdam held a competition in the year 2000 for a collective residential building on the south-western point of Steigereiland. Steigereiland is a part of IJburg that consists of a series of artificially constructed islands in the IJmeer in Amsterdam. The Vrijburcht foundation was set up especially for the Competition. It consisted of a group of
friends, among whom architect Hein de Haan of CASA architecten. The design consists of a closed building block surrounding a communal green inner courtyard. All the houses can be accessed from this inner courtyard. The broad gallery with its elevated street on the first floor forms the second communal external space in addition to the inner court at ground level. The houses on the third and fourth floor can be reached via stairs from the deck. The deep volume on the waterfront is accessed by means of staircases in light courts in the middle of the volume. These courts are reached from the inner garden via narrow straddling passageways.

Hein de Haan designed a basis structure for the houses, which allowed plenty of opportunities for further personal elaboration. The building not only accommodates a wide diversity of house types, it also contains a whole range of facilities for the residents and their neighbourhood. For the residents there are collective facilities such as a children’s playground, guest accommodation and a greenhouse where people can enjoy a meal together. Some houses have a small business unit attached to their private house with a separate entrance from the street. The Café-restaurant and the theatre functions a meeting place not only for the residents, but also for the whole neighbourhood. The day-care centre and the sailing school deliver significant added value to the block, as well as to the whole neighbourhood (Gameren, et al., 2013, p. 133).
According to Hein de Haan, architect of Vrijburcht, the most important attributes and activities in a shared community are the washing machines, installations and everything that has to do with children. Especially sharing childcare offers enormous benefits. The most important places are the spaces that are private and at the same time collective/shared: in Vrijburcht the elevated street on the first floor for example. Everybody has his own private place to sit, but the neighbours walk continuously to their own front door, passing the ‘private’ places of the others (Haan, 2014).

The atmosphere in Vrijburcht is relaxed. It feels private in the inner courtyard and at the same time public, because it adjoins the public facilities. Although a lot of time is put in combining the private and public, in practice it does not work out as good as planned, said Hein de Haan. For example the greenhouse is only used as a private party place, you hire the room for one day and then it is yours. On the other hand the (social) rule of giving a party in the greenhouse is that you always have to invite your neighbours. It then becomes a social place, but it was designed for spontaneous meetings. The workplace on the other hand is used exactly as planned. Everybody is using it, you can make reservations, but also use it when it is free. The door is never locked. The day-care centre is also a big success. The parents alternate in taking care of the children. This saves a lot of money and you can learn from each others parenting way. The theatre and café-restaurant were designed for the whole neighbourhood and they function like that. Especially in the summer, when everybody is sitting at the water side enjoying a beer or soda in the sun.
The following scheme is showing how the activities in Vrijburcht are distributed over the three different domains. Only the activities from the experiment are used in this scheme. There are more activities, especially in the public area, but it is interesting to see how the border between private and collective is filled in. As mentioned before in the case of Vrijburcht the elevated street on the first floor is a big addition to the transition between the private and the collective spaces. For example the activity eating is therefore on the border of public and private. Relaxing and chatting is the most collective activity. This is because of the shared play and work areas and the inner courtyard where it is easy to meet somebody and relax or chat together.

Diagram of activities distributed over the domains in Vrijburcht (own illustration, 2015)
The second case study is located in a suburb of the town of Langley in the Canadian province of British Columbia. The name of the project is Windsong Cohousing.

Cohousing is short for collaborative housing. From the 1960’s onward hundreds of cohousing projects are launched, mostly in Europe and the United States. Cohousing projects all have a common ground; the projects are often organized and designed by a group of households to share common facilities and services, depending on the group’s wishes. Most cohousing projects have a shared kitchen, dining area, a laundry room, workshop room and guest room, facilitated in a common house or area that is central in the project. The focus lies on the common areas, although every household still has his own private dwelling. These private dwellings are mostly smaller in size than the average private dwelling (Haaren, 2014).

Residents of co-housing projects believe that in the residential environment more domestic activities can be organized than the average housing project offers.
Depending on the wishes of the future inhabitants, the housing projects are looking for a certain level of collectivity. The inhabitants share their ideas about living together according to their current housing situation. Co-housing projects therefore retain a strong emphasis on the private dwelling. The common facilities are foremost an extension of the dwelling (Haaren, 2014).

The project Windsong Cohousing will remind many people of communes from the 1970’s. The residents of Windsong collectively work in the vegetable garden, often cook together, are intensely occupied with personal growth and spend at least three hours a month doing chores, like picking up trash, cleaning and administrative paperwork.

About 100 people live at Windsong, including singles, senior citizens and families, teachers, doctors, architects, actors, musicians, carpenters, retail workers, vegetarians, outdoor enthusiasts, bookworms, coaches, computer specialists, gardeners, writers, electricians and many more (Smallbox software CMS, 1996). The initiative for the community began in the early 1990’s, from an ecologically inclined ideal of a community that would take decisions collectively about where to live and how to build and maintain its own homes. In 1994 about 20 like-minded people found a site of 2.5 hectares an hour outside Vancouver. Getting the project off the ground proved to be difficult. Regulations, permits, an information campaign to convince neighbouring residents and financing the principle of a residential commune formed obstacles. After all the obstacles were out of the way David Simpson of dys architecture in Vancouver designed the complex. He designed two covered residential streets that come together in a cluster containing collective functions such as a kitchen, laundry, children’s play area, guest room and a handicrafts space for creative activities (Gameren, et al., 2013, p. 109).
The community streets are double height spaces covered by a greenhouse-style glass roof enabling the residents to walk, talk and play outdoors without getting wet, a significant factor in the west coast rainforest climate (Smallbox software CMS, 1996). The streets serve as a meeting place for the residents and an internal play area for the children. Except for six dwellings, the 34 dwellings have their own living level and front door to the street. Windsong’s compact structure is also intended to leave its setting on the site as untouched as possible, about two-third of the woodland site is still in its original state. The building follows the vertical contours of the property and looks out onto the stream below. The underground, 47-space parking garage is partially dug into the hillside. Windsong is currently one of the 13 communities that have joined the Ecovillage Network of Canada, an organization that supports and promotes the ideal of ecological, spiritual and sustainable communities (Gameren, et al., 2013, p. 109).
The two case studies are very similar, but there is also a big difference. In the image below the difference is visible. The activities are again distributed over a scheme showing the three domains. The same activities are used as for Vrijburcht and the experiment. Windsong is almost totally focussing on the residents themselves. The collective interior street is the reason for a lot of activities to shift to the collective, more than to the private. Naturally there are still some activities that remain private. The collective spaces in the middle of the street contribute in the same way to the collective shared atmosphere in Windsong. Doors are always open and everybody knows each other as if they were literally living together. The biggest difference therefore is that Winsong is focussing more on the collective shared and her residents than Vrijburcht, whereas Vrijburcht has more public spaces.

Diagram of activities distributed over the domains in Windsong (own illustration, 2015)
‘A large share of man’s activities are social, but they ultimately, however practical and outgoing, have their source in privacy.’

Chermayeff & Alexander 1963, p. 16
4. Conclusion

4.1 Research conclusion

This research explores the possibilities within the domestic domains for sharing spaces and activities with multiple users. The relevance of this research lies in the individualisation of our social system. In contrast with this evolvement we are, on the internet for example, increasingly searching for more social contact. Furthermore recent developments seems to show we are open to share (temporary) more possessions with each other then we used to. Is it possible to contribute to a more social environment by sharing spaces? In seeking the answer to that question it is of interest to know where the possibilites (and limitations) for sharing spaces lie. The central research question for this thesis is:

‘Where are the possibilities (and limitations) within the domestic domains for sharing spaces and activities with multiple users.’

The answer to the question was found by exploring the changes in the domestic environment, the user of the residential area, the activities performed in the domestic environment and the domestic domains existing. Through articles in journals, literature research, an experiment and case studies valuable and relevant information was collected.

We are not aware of the fact that our house and living rituals have gone through so many changes. It although is true that the domestic environment has evolved over time. The outside world slowly invaded the inside private world. Physical structures, like clean water supply, but also non-physical structures, like the internet, connected the house to the outside world.
To understand the possibilities within the domestic domains better, two topics were researched into detail; the activities performed in and around residential areas and the different domains in a domestic environment. After the exploration of the different activities and the different domains, the activities were distributed over the domains. Using schemes this was visualised in the research. The insights from literature (the past and the present), the (future) users and the practical experience were translated into schemes. With these schemes the following question was answered: ‘Where do the different activities according to the literature, the users and the practice fit within the domestic domains?’ The following five schemes demonstrate the result.
Observing the schemes, different areas within the private and collective domain per activity are shown. These possible areas can shift when regarded from a different point of view. For example the activity eating started in the private domain, but over time moved slowly to the collective domain. The result of the research transposed into the five schemes that will act as input for the final result. The five schemes combined are showing the possibilities for the activities distributed over the domains. In the scheme below the outcome is shown. The darker the bar, the more it occurred in any of the schemes.

Analysing the scheme almost all the activities are becoming flexible, stretching all the way from private to collective. However following the darkest colors it is possible to simplify the diagram into fruitful input for the design and best answers the research question.
The result of the simplified diagram is shown below. This diagram shows where the most possibilities lie within the domestic domains per activity. For instance cooking is more suitable for the collective (shared) space than watching television. The activities with the long bars are the most flexible, suitable for the private and the collective domain.
4.2 Design goal

The design will be situated at the Noordplein in Rotterdam. Noordplein is a big square in the upcoming neighbourhood ‘het Oude Noorden’. The square is now used as an event area. Because Noordplein is at the corner of the neighbourhood, close to the city centre with good accessibility by public transport it is a square with a lot of potential for a social place. Also more and more young people are moving to Noord, which makes it an appealing place for the target group. With the outcome of the research translated in a diagram of possibilities bearing in mind the design goal is determined as:

‘Creating (collective) living spaces for groups of multiple users in combination with a (social) public space at Noordplein in Rotterdam. The spaces are designed from the performed activity, in and around the domestic sphere.’

The scheme below is showing the activities organized from private to public. This is a good starting point for the design. The border and transition from the private to the public spaces can now be explored during the design process.

The municipality of Rotterdam about Noordplein:

‘Noordplein should be more attractive as recreational area to for example sit on a terrace, visit an event or as a start or end point for shopping.’

(Bever, et al., 2014, p. 24)
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