7. Reflection & evaluation.

This chapter reflects on the graduation project 'The private house & the collective home: In search of privacy in dwelling'. It evaluates the research and design process and describes the main choices that were made in the research and in the design and argues their reasons. The first paragraph relates the project to the wider social context. It explains the motivation for the graduation project and shows the advantages of collective housing and the importance for widening the scope to collective living in housing. Also the design goal of the project is stated. The second paragraph describes the relation between design and research. It discusses the choice for focusing on the perspective of environmental psychology in the research. The first and second paragraphs are based on the introductory chapter and concluding chapter of this research. The third paragraph describes the research and design process. It shows the different steps that were taken and explains the arguments for these steps and the decisions that were made.

7.1   Relating project with wider context.

In 2009 a study of the Dutch 'Council for housing, Spatial planning and the Environment', named Living in space and time, defined new tendencies in residential living in the Netherlands. The study emphasized the need for a home environment that transcends to what the home environment currently has to offer (VROM 2009). In their report the council notes that people have a growing need to live with like-minded others. The reasons for this tendency are twofold. First, the council notes a strong decrease of the average household composition. Currently single households already inhabit 35 percent of Dutch housing (VROM 2009, p.29). In cities this number is even higher. Almost all Dutch housing is not set up for single households. As a result, many single

households live in transformed family dwellings. The second reason is the development of social networks that spread over long distances. Consequential people try to restore a residential community they feel more identifiable with by living with people with a similar lifestyle.

While the average household composition decreased, the average size of a dwelling increased. Dwellings became multi-functional. The house not only needs to facilitate in people's living, it also becomes a place to work and recreate. Both tendencies show a changing need from the current housing composition: Dwellings need to be highly multi-functional and house only one or two persons. With housing in the Netherlands mainly focusing on the private dwelling, the changing needs of housing cannot be afforded for.

A solution for the imbalance between supply and demand in housing can be found in (partially) organizing living with multiple people. Certain dwelling and daily activities are organized collectively. Multiple households share things together to afford the needs of each individual household. A collectively organized residential environment will create many advantages: 1) Sharing stuff, services and facilities makes the use of stuff, services and facilities much more efficient. 2) The space of each inhabitant increases, while at the same time the total amount of (costly) space is reduced. 3) By sharing stuff, space, services and facilities the cost of living can be enormously reduced. 4) Individual life is strongly improved through a high level of social cohesion and communal identity of the collective. 5) Living collectively enables numerous new divers and divergent possibilities for each individual. Together people can accomplish much more than by themselves.

While the need for housing for small or single households in cities increases, many cities do not know how to cope with a part of their current housing. Former social housing blocks that were built before WWII became too small, because of the need for bigger dwellings. Many cities, therefore, decide to demolish these social housing buildings to

make way for new buildings, without recognizing the potential of what already exists.

Both problems can be solved when existing residential buildings are transformed in more collectively organized residential buildings. A collectively organized residential building would minimize the need of the private dwelling, which makes it possible to transform the existing dwellings into new dwellings. The graduation project focused on this potential. It stated the following design goal: Designing a residential building wherein most of the domestic and daily activities of the inhabitants are facilitated in the collective space of the residential building, minimizing the activities facilitated by the private house.

7.2   Relating design and research.

In the project a residential building can be designed in where certain domestic and daily activities are organized collectively. The design goal of this graduation, however, tried to go a step beyond that approach. It intentionally questioned how far can be gone in collectivizing domestic activities, without diminishing the comfortable and controlled environment of every individual inhabitant. To succeed in this design goal it is most important to understand how individuals behave in the private and collectively shared spaces of the design. The research, therefore, focused on individual behavior in relation to the environment. The relation between people and environment is the field of study of environmental psychology. "The environment is here both the social environment (other people) and the physical environment (built environment and natural environment)" (Dorst 2005, p. 24).

Although communally shared facilities, space and services would create a higher level of communal identity of the residents than in an average residential environment, the inhabitants of the building still do not form one social network. Therefore, the research focused on the relation between the individual inhabitants. The field of environmental psychology emphasizes the relation between behavior and the (built) environment. Both

environment and behavior cannot be seen separately. The design of the built environment influences how people behave in the built environment. Similarly, the behavior of people influences the design of the built environment. The interaction between the environment and behavior shows that common behavior can define rules for the design of the built environment.

The most central process of people's individual and social behavior is people's privacy behavior. It defines the social interaction individuals have with others. When creating a collectively used space it is thus very important to understand the privacy needs of the individuals using that space and the way in which the individuals control their desired levels of social interaction with others. Therefore this research focused on people's privacy behavior. This defined the project goal: Designing a residential building wherein most of the domestic and daily activities of the inhabitants are facilitated in the collective space of the residential building, minimizing the activities facilitated by the private house, wherein the private and collective space and places of the residential building can afford control of the desired level of privacy of individuals to achieve their desired level of privacy.

The project goal implied a common understanding of the behavior of individuals in the environment. Part 1 of the research investigated privacy behavior based on literature in the field of environmental psychology. The literature research showed that control of the desired level of privacy of individuals has much to do with the boundaries that the built environment affords people. Therefore, part three investigates the physical and architectural elements that could be used in the design to afford the desired level of privacy of the inhabitants. The project goal also demanded to investigate the dwelling and daily activities that people perform in the residential environment. According to a research of Meesters (2009) the main dwelling and daily activities were distinguished and investigated in part two of the research.

To challenge the many design problems during the design process, the design was

decomposed into single problems. Every single problem was solved looking at the re-
lation between privacy behavior and the built environment in a particular context. The
solution was built up as an instruction and did not need to be followed one to one, but
served as an important guideline to solve the problems in the design. Every single prob-
lem-solution entry forms a design pattern. To compose the research framework in a
useful and organized way for the design, the outcomes of the second and third part of
the research are written in a pattern language.

The concluding chapter relates the research on privacy behavior to the design of the
residential building and shows how privacy behavior should be taken into account to
succeed in designing a residential building in where most of domestic living is collec-
tively organized. Three statements were formulated that define the design of the resi-
dential building from the perspective of privacy behavior. Summarized, the residential
building needs to have a multiplicity of spaces that are clearly demarcated by physical
and architectural boundaries and range from the most intimately private domain to the
most communally collective domain. During the design process the three statements
were translated to the physical context of the existing building by means of five design
steps. The five design steps were implemented in a non-chronological order. During
the design process all three guidelines were used multiple times to improve the spatial
layout, the structural layout and the organizational layout, in a continuous process of
adjustment and improvement.

7.3   Design process.

In this paragraph I explain the process of the research and the design of my graduation
project. It was a process of many struggles. I think it is very important to state these
struggles and show the different steps and difficulties I faced during the process.

The graduation project started in the first week of September 2014. Although I thought
my design goal was quite clear, it took the whole first period to frame the research and

the design. The choice for the building originated from flyers that were hanging behind windows in the neighborhood of a friend of mine, which were protesting against a proposed demolition of the building. The decision to do a transformation project was already earlier made. My first intention was to make a redesign of the former Noordsingel prison in Rotterdam, but after consultation I decided to move my focal point to existing social housing projects. With the contextual situation known, it was easier to define the boundaries of the research, although the goals of my research remained way to ambitious the first couple of weeks. I rewrote my proposal four times, which helped me a lot to pinpoint the research and design goal of the project. During the midst of the first period I was pointed to a lecture of Machiel van Dorst about environmental psychology that was part of a lecture series of Explorelab. This lecture series inspired me and made me enthusiastic about the field of environmental psychology. After reading multiple articles I was able to draw a more framed research that I proposed to Machiel van Dorst. He directed me to Egbert Stolk. After an interesting first meeting I decided to focus my research on privacy behavior in the built environment and would create a design in relation to privacy behavior, by creating a useful research framework for the design of the residential building. I read multiple books in the field of environmental psychology. Particular the books of Hall (1966), Sommer (1969) and Altman (1975) were of major help to the research.

Although a collectively organized residential building fascinated me for a long time, I found it difficult to state the design goal clearly. In a very helpful meeting Henny Coolen of OTB (Onderzoek voor de gebouwde omgeving) showed me the theory of affordances. He gave me the research of his former PhD, who had done research on the meaning of activities in the dwelling and residential environment. This research showed me the importance of the connection between behavior and built environment. Already early on in my studies it had bothered me that the design mainly originated from the program of requirements, which focused on the functions within the built environment, while ignoring how these functions would be used by people and would influence the behavior of people. For instance, the requirements of a common dwelling were a bed-

room, a living room, and a kitchen etcetera. These spaces had to have certain minimal physical requirements, but nothing was said about how people would use the particular spaces. The research on the meaning of activities and the theory of affordances gave me this link and broadened the fixed perspective on functions to a more informed perspective of affordances in dwelling. I decided to approach the design goal from out of the perspective of the domestic and daily activities that are performed in the dwelling and residential environment. To give the project a more experimental character I proposed to go as far as possible in collectivizing the activities performed in the dwelling, thus defining the design goal.

The domestic and daily activities could be drawn out of the research of Meesters (2009). I wanted to connect these activities with the research on privacy behavior. Egbert Stolk showed me that a very good way to do this was by the use of patterns. By creating a framework of patterns the research could give solutions for each design problem that would be faced in the design, which would strongly connect the research with the design. At the same time the use of patterns would structure the main parts of the research.

As previously mentioned, the theory of affordances showed me the strong connection between behavior and built environment. One part of the research would approach the design from the perspective of privacy behavior and dwelling and daily activities defining the built environment. But I also wanted to approach the design from the perspective of elements of the built environment that influence privacy behavior. During my studies the focal point of architecture had always been on the structural and esthetical properties and qualities of architectural elements. The research on privacy behavior, however, showed me the importance of people to be in control of their privacy through, among other things, controlling the use of physical and architectural elements in the built environment. For this research I thought it would be very interesting to look at physical and architectural elements from the perspective of privacy behavior. I draw up a list of elements that would probably be used in the design. This resulted in the

framework of patterns that defines part two of the research.

Until the P2-presentation I was mainly occupied with literature research on environ-
mental psychology, because I did not know anything about privacy behavior. I wrote
the main part of the patterns that would form part two and three of the research. This
was an enormous amount of work, because there were quite many patterns that needed
to be defined. Therefore, I had to compromise in validating the patterns scientifically.
Although the patterns are formulated around the research on privacy behavior they are
mainly based on assumptions. The choice for this approach was intentional. From the
start of the project I wanted the research to strengthen the final design of the building.
The research, therefore, needed to give as many solutions for the potential design prob-
lems as possible. Limiting to scientifically validating the patterns would mean that much
less patterns could be dealt with, so that a lot less solutions could be found.

For the P2-presentation I created the first guiding concept and defined ideas about the
design. It took me a long while to translate my ideas about the collectively organized
residential building to an actual design in an existing building. Besides that, the existing
building turned out to have many limitations in itself. Particularly the façades sur-
rounding the courtyards and the basements of the dwellings gave major problems and
technical difficulties. Besides, I wanted to create as many (private) dwellings as possible,
while still creating a nice collective environment. Off course, these goals contrasted
each other. For the P2-presentation I designed a concept that I was fairly pleased with.
It was, therefore, a bit of a disappointment to get the feedback of Robert Nottrot, my
design mentor, that the design did not feel right to him and lacked the ambitions that I
wanted to pursue. Two weeks after the P2-presentation I finally understood his critique
and created a different design concept, based on many studies I did on Japanese hous-
ing projects. I created a concept of blocks that would seemingly random fill the former
courtyards.

I was enthusiastic about the concept at first. It created interesting spaces and was more

related to the research on privacy behavior. However, without a clear structure the concept was difficult to grasp in a translation to the actual design. For weeks I remained moving the blocks around, without having a clear idea of how to solve the particular design problems that arose from the concept. With the weeks passing my enthusiasm for the concept diminished every day. Just before the P3-presentation I had lost my enthusiasm for the concept and for the project in general. I presented the concept, but it was unconvincing. After the P3-presentation I could not find much motivation for the project. I was totally not convinced of the design, but I did not know how to tackle the problem. I forced myself to continue working, having the idea that spending enough time on the project would eventually lead to a good design. This was a major miscalculation. At a certain point half way to the P4-presentation I was completely blocked and felt horrible. I didn't sleep well, avoided the architecture school, and couldn't motivate myself for anything; even relaxing became tiresome. I finally stepped back from the project, took some days of and talked a lot with my friends and my family. This helped a lot. Releasing the pressure of the project gave me new insights about the design again and I eventually made the decision to change the design concept completely. I started again with new ideas.

The first weeks after this period were difficult. Every idea I had I immediately rejected again. The whole situation had made me extremely insecure about my capabilities. I stayed at my sister's place for two weeks. She and my mother and father pushed me to continue working on the project and cope with my struggles. This helped me a lot and I am very grateful to them. I finally created a concept that I was pleased about and within a short period of time I designed the collective spaces of the building. Each part that I designed successfully gained me confidence and enthusiasm in the project. I managed to finish the main parts of the design before the summer holiday.

The whole situation taught me a lot. One of the main lessons for me was to relax more. I started to cycle a lot and consciously take brakes or stop working in the evenings. At least one day of the weekend I didn't work on the project at all. The second lesson was

the importance and usefulness of the help of other people. During the project I kept most of the project to myself, not discussing the design or research problems with others. After my P3-presentation I became a lot more receptive for critique from others and the threshold is much lower to ask others for help.

Because I changed my concept I was quite far behind on schedule. I worked on the design until the beginning of the summer holiday, but still much had to be done on the design and I hadn't finish the research. I decided to continue working during the whole summer holidays and retain a strict weekly schedule on when to work and when to be free of work. This turned out great. The first month I worked on the research. It still lacked a coherent storyline; I had only completed part 1 and part 2 and the main part of part 3. Early on in the project I had chosen to alternate between the research and the design, so to exchange between the design problems and solutions from the research. This didn't turn out to be very optimal. The design took up much of the time between the P2 and P4 period, so I was not able to do research on new patterns. At the same time, the unfinished research kept following me during the process, not finding the time to finish it. The conclusions of the research I eventually wrote in the summer holiday after finishing almost the whole design. These conclusions made clear what was lacking in the first and the second concept of the design. It is always difficult to reflect on the improvements of a process, but I think it would have been better if I had drawn up the conclusions of the research earlier. This would have made the translation from research to design a lot easier and probably would have given more guiding structure to the design process.

The last meeting before the summer holiday Egbert Stolk helped me a lot to frame the final parts of the research. He pointed me to the structure of the PhD research of Machiel van Dorst, which helped me a lot to write and organize the introductory and concluding chapters of the research. In a meeting in August Egbert Stolk convinced me to write a fourth part of the research that would connect the research with the design. Although the limited amount of time became a problem I am very glad to have written

that part.

Altogether, I can state that I had many struggles during the research and design process. However, I am very pleased with the outcomes of both the research and the design.

September, 2014.