
REFLECTION

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My graduation project is about renovation and splitting low quality walk-up flats into multiple and 'responsive' housing that allows one person households to live in smaller spaces that have a higher functionality, so we can respond to the population growth into the cities. A number of amenities in a home can be shared in the current forms of living. As a result, there is a smaller space requirement, which in turn benefits the affordability of the home. This graduation project is also about a sharing economy that can have an impact on our society in such a way that it can provide an answer to social developments and the effects in the field of housing.

The relationship between research and design

The research for this graduation project was aimed at transforming the walk-up flats into more compact dwellings that fit the contemporary way of life in the city. The resulting research question: What are the splitting potentials of a walk-up flat and how can these be applied through renovation? A study was done into architectural elements that enable compact living and increased the quality of living.

The thematic question was answered by examining the characteristics of the post-war walk-up flat based on literature research in order to gain a better understanding of the existing limitation of layout, construction and energy performance. A generic model has been developed based on archive research of thirty walk-up flats in the Randstad. This generic walk-up flat formed the basis for various alternatives. Four subjects at the building level were analysed: accessibility, vertical installation, outdoor space and infill. In the first instance, I only focused on the infill of the apartments, their functionality. But it gave insufficient support for the entire research. I tested these alternatives by applying them to the structure of the generic flat. This method was used as a tool to provide insight into the possibilities and limitations for splitting a walk-up flat. The broad ideas of the different possibilities were compared in a consistent way by means of criteria to support the decision-making process of the design. It created a total overview of the possibilities. During the P2 I selected the possibilities and as feedback this was seen as a risk. It is better to select and combine the most promising aspects of the possibilities into a desired concept proposals.

Several case studies of compact dwellings showed that efficient use of space is important, but above all showed that the social environment is even more important. Creating the opportunity to meet and enable social interaction is one of the most important conditions for maintaining the comfort of the small dwelling. For that I had to understand the lifestyle and needs of a single person household. There is a variety of different spatial and collective needs. With this diversity of needs, the key and strength lies in offering opportunities and different possibilities for the users.

Furthermore, research showed that people who live alone compensate the lonely dwelling by becoming more socially active and therefore a need for a community. By sharing facilities and services with fellow residents and / or the neighbourhood, it is possible to create a collective. It is important that the residents have the opportunity to decide for themselves to be in company or be alone. A transition zone offers them the possibility to regulate the desired level of privacy and ensures that the residents don't get excessive social interaction. The building must provide space for spontaneous

encounters between residents but not with too many residents, a group of 8 to max. 12 residents ensures stronger cohesion between the residents. If the group is larger, social interaction becomes less. The collection of architectural elements that promote social interaction has always been a recurring theme throughout the graduation process. I always tried to analyse these elements and (partial) solutions, and combine the strong qualities and strengthen and improve them.

The relationship between the graduation topic and the studio topic

My focus for this graduation project is on walk-up flats. In the large cities, the largest part consists of these type of dwellings. These are built in a social context from the past and no longer meet today's requirements. This is in line with my personal fascination and the goal of this Beyond the Current graduation studio, to renovate the existing building stock to the demands of today. Not only the energy-efficient issue but also the architectural and social issues.

The number of single-person households will continue to grow until 2040. Despite the enormous growth of this group in the housing market, little space has yet been created for single-person households. In addition, an important aspect is that cities are not willing to expand in size but are trying to create a so-called "compact city". An answer to this is therefore to deal with the built environment more effectively and efficiently.

By topping up existing dwellings, splitting them into smaller dwellings or transforming the plinth, a multitude of dwellings can be realized. This could be a solution to the shortage of affordable dwellings in the housing market. Research by Leo van Oorschot (2017) shows that many singles live in an apartment with three or four rooms. With the growing number of single-person households in the cities, it seems clear to split these apartments into a smaller house. This has consequences for the access, vertical installation, outdoor space and completion of the apartments. Through research I have tested several alternatives in the context of a generic porch home. The results of this research will generate (technical) starting points for the design and will be translated into architectural elements.

Elaboration on research method and approach in relation to the graduation studio methodical line of inquiry

The final goal of the graduation project is a design based on a thematic research. Case studies, literature research and research by design are methods that are often used in this studio. This year only one research method could be used, in order to create a short and powerful research paper. Together with Pieter Stoutjesdijk, my research tutor, we decided to apply a (for me new) research method, which was partly adapted from Product Development. During the research process, alternatives and criteria were found through literature research, case studies and own insight, experience and knowledge. I got more and more control over this method. At the beginning, the criteria were entirely based on intuition. This also applies to the consideration of the criteria. I had to make more use of literature studies or user surveys. I already made decisions that were actually context dependent. After this feedback I analysed the advantages and disadvantages of the alternatives on different aspects (criteria). So my research can be used for other projects in a different context. As mentioned earlier, it is better to select and combine the most promising aspects of the alternatives instead of fully using the alternatives. Models and sketches were used in this phase to test the theory against practical implementation. The approach to testing through sketches and models worked and really helped to develop the design and to continue to explore options. The results of these studies were further elaborated in 3D models.

Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results

The project meets the current requirements of the growing cities. The number of city dwellers is still increasing, with in particular the number of single-person households. These two trends ensure that the total number of households is growing even faster. House prices are rising and it is becoming increasingly difficult to find a house, especially when one is single. Many of these people fall between two stools: whether they have to wait for years for a social dwelling, or they earn too much for the social rental market and too little to rent in the private sector. Many of these singles experience sometimes loneliness. We, as a society, are too focused on the individual and our new way of life should focus more on the collective.

My research can also be used as a tool for social housing corporations to split apartment buildings and thereby offer a larger housing market for single-person households.

Ethical issues and dilemmas that have been encountered

When I look back on the entire process, I learned a lot. Especially in the way of working but also in argumentation. I did not accomplish my first Master 3 because I could not sufficiently substantiate my choices and had perhaps also a tunnel vision. I had chosen a monumental building but did not take this into account. As a Retake I had to recognize the monumental value, but because this was new to me, this was insufficient. Since then it has changed me a bit as a designer. I appreciated the monumental value of buildings more. Another reason why I did not complete my first Master 3 was because I did not show enough alternatives. I had to compare more options and analyse more the strengths and weaknesses. In the last Master 3, I may have done a bit of an exaggeration. I spent a lot of time on various studies. Maybe I was afraid that my argumentation would still be insufficient. During my P2 this was also my feedback. An informative P2 with a lot of attention for the research with an analytical scientific approach. I was a researcher and not yet an architect. In the later design process, I think I have caught up with this. With an analysis of material use, environment, story, etc. I have come to architectural starting points. The first Master 3 has helped with that. As I already described, I gained more respect for the history of the place and building. Because the post-war construction period was one of the most important developments for Dutch architectural history, I think it is important to recognize the existing qualities and take them as a starting point. The cultural heritage is very important for the identity of the municipality. We must regain, maintain or improve the original urban and architectural qualities, especially the parts that have been lost in previous renovations. Innovative procedures are of course allowed, but these must fit with the existing or the original qualities. This results in a design that in my opinion fits well in the context and which I am proud of.