

Situating the project within the TU Delft

The relation between my graduation project and the topic of the studio lies in the focus on researching the societal and environmental issues that have arisen in the housing market of today. With the new insight the research gives me, the design is used as a tool to show new and innovative praxis based solutions. Overall the master track Architecture also tries to teach this sentiment of creating innovative and creative buildings that use the design as a tool to deal with social and spatial issues in the built environment.

Relations between research and design

While doing the research a few things became clear about the adaptability I wanted to implement so badly. Firstly by reading and synthesizing different existing theories related to adaptability I came to the conclusion that it is important in my design to view the building not as a finished product, but view it more as an organism that will change over time after construction. The theory of Steward Brand of Shearing Layers of buildings helps to get this new perspective. I used this division into separate layers in my design to create not only an inclusive building, but also a building that can change easily over time. For example by adding adaptable solutions in the layer of Systems (the piping and plumbing are all refitable) in the shape of a raised floor. Also the separation of a shading layer, soundproofing layer, and thermal layer is an example of the theory bleeding into the final design.

Next to this the specific practical design solutions in my final design are all part of a scale of adaptability, from hard adaptability to soft adaptability. This scale is my interpretation of the theory of Schneider and Till. Where adaptability is divided into hard solutions, which are design solutions that are specifically designed for adaptable use. And soft solutions, that consist of solutions that are not designed, but rather parts that are kept empty or bare for the users to fill in. For the hard solutions think of the sun shading I provide that can be completely opened or closed, thereby gaining two distinct phases. The soft solutions are the layouts of the dwellings that in my design are completely designed by the users.

By separating adaptability in three different kinds I could gain a better view of adaptability in my design and research. In my research I used the three kinds as a structure to analyze three cases. In my design I could use the insights of my case studies to create design solutions that work in all three aspects of adaptability. The raised floor for example is a refitable solution. The use of the existing column structure with zero loadbearing walls in the dwellings gives my design an adaptability of space.

Some design solutions in my final design come straight from the case studies I did. The most obvious is the implementation of a raised computer floor. For this solution I used the case Patch22 as a reference. The added void in my design where users can place their staircase is an homage to the void in the Diagoonwoningen. This void gives the dwelling a orientation towards a central space that has a more fluid use. I use the idea of letting the residents build the walls themselves from La Mémé. In my design this is implemented in the exterior wall towards the wintergardens.

I feel like the case studies really functions as the glue that binds the relationship between the theory of my research and the design solutions in my final design. The other way around I think that my design gives the research more practical application. The design shows the implementation of the theories and solutions from the research.

Relation between research methods and research insights

The research methods I used in my report exist of an extensive literature review and three case studies. I started with the literature review. With the insights gained in that part I did a praxiological case study on three buildings, La Mémé, Diagoonwoningen, and Patch22. The merit of using the literary method first is that I could very early in the research position myself within the existing discourse on adaptability and user-inclusion. By creating a synthesis of the different existing perspectives I could gain further knowledge and make the literature my own. The disadvantage of starting with this and only after the literature review beginning the case analysis is that I pushed myself into a fixed perspective before looking at the praxiological side of the research. If I did the case studies more in unison with the literature review I think I could combine the two even more effectively. On the other hand the large theoretical foundation I had now did help a lot in doing the analysis. It made sure that my analysis of the cases was more streamlined and could work as a bridge between the theory and the design.

This combination of praxiological and literary research fitted the studio well in my opinion. The focus of the studio on sustainability (social and environmental) and the goal of creating a research based design asked for an approach that could link the two in a well structured way. I believe my structure that combines the two research methods did do that in my case.

The analysis structure I gained from the literature review and further research helped me analyze the cases in a specifically targeted way. The three different kinds of adaptability could be used to find and categorize the different design solutions the cases use. This way I also could find a practical hierarchy of these theoretical kinds of adaptability.

The theory of shearing layers by Steward Brand was on the other hand very helpful in the design itself. It gave me a different perspective on buildings and how they are used. This way I believe I could create a design that is not only changeable now, but stays that way during its lifetime.

Contemporary societal issues and challenges

During my research and design it became clear to me that the contemporary focus on monetary value in dwelling development is not sustainable. The method of adaptable design gives the users the control over their surroundings. I believe that this shift of control, from the professionals to the residents, can be a solution for the degradation of livability in contemporary housing, as well as make more long term housing solutions that are by longer lifespan more environmentally sustainable.

My method for the case studies can be used as a methodology for further research into adaptability in dwellings. Also the method can be used in practice by developers and architects to gain understanding of new and more sustainable housing that shift the focus from monetary value towards social ecological values.

Ethical issues and dilemmas

The ethical issues I encountered during my research first consisted of the consequences of giving away the designing to 'nonprofessionals'. The idea behind adaptability and user-inclusion is that the dwellings are not completely designed by an architect, but are partly designed by the users themselves. This raises an issue. The architects knowledge on a well-designed dwelling is far greater than of the users. Therefore the users, when they design their dwelling will end up with a worse dwelling than the architect could have made. This way it was important to think of ways to enable this user-inclusion, without losing values in the dwelling (rather gain value even).

The greater control the residents get when my adaptable method is used will lead to better dwellings in the long run. Because who knows the users needs and wants better than the users themselves? I know for a fact it is not the developer that is mainly focused on making a profit.