REFLECTION

EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

Dominik Philipp Bernatek

FOREWORD

As an ExploreLab student, I was allowed to work on my own topic of interest and assemble my very own team of tutors. Both aspects were very important for my process and satisfaction with this graduation project. It helped a lot, that I already had a clear idea about the main line for my topic “Expanding universes on shrinking footprints”, which I wanted to explore on the line public and private. I am convinced that working with form and merging of typologies can result in buildings that embody this topic. Because a dwelling represents the opposite pole to public space I chose to focus on dwellings in relation to public space.

MAIN TOPIC REASONING

While cities densify, and fill up with building mass, it is of great importance to pay high attention to good quality public space. People should feel at home not only inside, but also outside their private home - in the city itself. Architecture has to provide possibilities for people to establish social contacts and on the other hand offer shelter and intimacy.

RESEARCH PROJECT

The research project deals with transitions between public space and adjacent private space of dwelling. It is important for architects to know what tools they can make use of, when designing the transition between public and private. The main research question is: ‘What architectural tools create a transition between public and private space?’ I approached my research via a systematic framework, which I developed for this purpose. It is a combination of plan analysis and research through design. The research is presented in form of a toolbox, with a graphical conclusion, that represents the actual “tool-box”.

I opted to create a toolbox, so that I can use my designing skills during the research process and on the other hand have my research result as a possible source during the design phase. I can use the research result when explaining or reflecting on design choices. This is not limited to the graduation project. I can use it in my future practice as well. The aspect of having a self-sufficient source for future designs was very important for me. Naturally the toolbox has its limitations which are discussed in the conclusion of my book.

RESEARCH METHOD REFLECTION

It is interesting to compare my framework to ACRREx - a method used in mechanical design. It is very similar and the biggest difference seems to be the user’s training: in comparison to mechanical engineers, architects are trained to be creative and tend to be skeptical towards very systematic approaches.

The testing of my framework during my design process, indicated that a systematic framework could be very beneficial. The method proved to be very effective for keeping a good overview and systematic workflow. The highly structured and 'strict' framework enhanced creative thinking, while helping to keep a good order at all time. I also found, that this method could be applied to nearly all architectural tools.

It could be very interesting for architectural educators, as well as designers to do further research in this direction. For now, a possible conclusion could be, that mechanical engineers are trained to be systematic and a systematic framework can trigger their creative thinking. Architects – as designers – are trained to be creative and such a framework can help them organize their creativity to be more efficient.

RELATIONSHIP BETWEEN RESEARCH AND DESIGN

The relation of public and private space is always an important aspect in dwelling architecture. As I already mentioned, I used my research results as well as my method during the design process. Even though the research method might seem very strict, when working with my theme and form, it lead me to unexpected design outcomes.

The toolbox is not an end onto itself, but a tool to support architectural inquiry, which can serve as a design tool, as well as analytical tool for already created design. It is up to the user how to make use of the toolbox.

DESIGN

With highly constructive feedback from my tutors, I chose for a different design site than the one where I planned to design on in the beginning. The new site was chosen so that the design outcome could become a "strong stand" for my topic. The choice of my design site also determined one of my typologies that I used for my design. The site is the river Ij. I merged dwelling and other typologies with bridge typology. My tutors understood my goals very well and could provide very constructive feedback on achieving my design goals.

REFLECTION DESIGN

I am satisfied with the design outcome as well as the vast majority of my process. The result is a very large building and I focused on very characteristic aspects of my building, which I developed in detail. I used a modular method to deal with the scale of the project. This has proven to be very effective for me and might work well in practice too.

Unfortunately, I could not use BIM modeling to generate all the plans as I am used to. BIM programs are not (yet) able to display such projects fully functional without drastically increasing the file size. In the end I had to split up the BIM model and I had to draw a lot in CAD.

In total I can conclude, that I reached the various goals, that I set in different scales – such as urban, building, dwelling and detail scale. I can conclude that the design outcome is well informed by my research and became in fact a laboratory for its results. Last not least, it is a design which "expands the universe on a very small footprint" while creating an entirely new "park" and "living experience" in the inner city of Amsterdam.