



CITY > HOME
YOUNG PROFESSIONAL LIVING

P4 REFLECTION
STEFAN KLASBOER

Dutch Housing Graduation Studio
“Between Standard and Ideals”

P4 Reflection

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Young Professional Living

Stefan Klaseboer

Student-number: 4523792

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Tutors:

Theo Kupers

Pierijn van der Putt

Ferry Adema

Relationship between research and design

The architectural research is not the same as a researcher doing a formal research with the aim of producing a scientific research report. The aim in the architectural research is to design a physical solution for a specific problem. The design, in this case an apartment building with micro-units, is a result that is shaped by so many different factors that it is impossible to call the design a purely scientific design. The aim of scientific research is to come up with one conclusive answer. In architecture and many other design related professions the end results will always vary. With architectural competitions for example, not one design will be the same. This is because there is not one answer to the question. Yet this doesn't mean that an architect just randomly comes up with an idea, often there is a lot of research that have shaped the design which for an outsider may not be directly apparent, but the performance and quality of the building will largely depend on the accuracy of this research. This report provides a short reflection on the research carried out during the Graduation Track.

There is a strong relation between research and design. The act of research is to gather information and that information translates into design decisions. Some aspects require large amounts of research like the research on the main theme and the vision on the way we live in cities. All this research helped to scope the framework for the design of a building. Later on, there has been researches to understand the need of the target group and their needs, which led to a research in determining a suitable concept in which to house this target group. When that was determined, the research on how to implement these aspects into a building with the given environment, loca-

tion and plot. Most of the research thus far have been literature research, but afterwards the research is more going towards research that would be considered 'less scientific'. It is research in the massing of the building which is much more qualitative research where it is up to the eye of the designer to make a decision in which the various aspects are coming together best including the esthetical aspect in relation to the technical aspect.

One of the researches was a precedent study in which existing buildings are case studies. Bodies of knowledge that are gathered from which the designer can tap. In the case of this graduation track the right precedent couldn't be widely found, and the few that are around were not able to provide me with any floorplans. That is why the approach changed. Instead of tapping from one typology, I searched similar typologies, but also looked at different parts, like micro-apartments, separately. This way of doing research turned out to widen the scope of looking at possible solutions. Instead of only looking at dwelling projects, I discovered a great amount of information from analyzing hotels. Hotels are dealing with small, often one room hotel rooms in which they encounter the same issues with facades and daylight as I was facing. Looking back and having focused on only four precedents of this typology would have made me less creative I suppose, so sometimes widening the scope and experimenting works well to come up with more creative solutions.

One other very interesting research was the study into typologies and densification. It was the search on how to use the plot in the most optimal way. A question that is hardly answerable and can only be answered by a qualitative research. It was a research that evolved over time and became a tool. Ini-

tially I wanted to test different typologies and give them values to make for a good comparison. However, I quickly found out that the variable of location and surroundings was creating too large difference to make a logical comparison, so instead I placed the typologies on the project site. This solved the issues of high variables and made the research more specific towards the project itself. After doing this research there was another step in trying to become more specific and that was to do design studies. Because of the odd shape of the location, sometimes it would work to optimize the design slightly or to design designs to fit the location. This eliminated another variable of certain typologies not scoring well because they are more specific to fit on the location. Being in that place posed the next problem of how to interpret the figures. This was solved by adding a frame of reference from urban lay-outs. This made comparisons much easier, yet these were not one to one comparable, so I translated one scheme that was relevant to the plot too and noticed how far values like the GSI would jump down. Putting the urban schemes next to the values of the studies does help, but the relevance is a bit weak as urban contexts include roads and on the plot there would be paths, but little. Yet the studies on the plot were relevant and the urban schemes gave material to study and compare and come up with solutions. This led to another evolution in the process in which there were more tailored studies and those were design studies that could lead to an eventually concept for massing. An example was an exercise to design with a specific typology on your project location. Automatically this design became subject to assessment. In this stage there was another variable that had to be eliminated, which was that of fitting on the location in the right constrains in which it was not too intrusive to surroundings. The biggest danger

of all this study was also a trap. My building mass between the P2 and P3 was a very much optimized massing but touching on the limits to the surroundings. Eventually this turned out to be too much and needed to be downscaled. Also, this way of massing brings sharp conceptual designs and esthetical values in danger of being downscaled over mathematical values like the GSI and FSI. This turned out to be true and led to a huge set back after the P3. The conclusion is that it's been a very good research. There are too many variables and that is why it is important to in one stage draw a conclusion and then end the research. I will evaluate the final design, and apart from the highest value of GSI it does not have the highest FSI value and that doesn't matter, because what you cannot see from the graph is the value that the different designs hold. So the lessons live on. I am also happy to have tried the extreme and being able to realize over 400 dwellings on the location. However, going for quality and an overall good concept then that number goes down to about 240 dwellings.

Like the earlier example there are many other of these kinds of researches that sort of evolve and live on, while sometimes different researches merge together and others die out soon and fade to the background for not being relevant enough. Some researches like the extensive research on fire safety been one of problem solving. Instead others been there to search opportunities. So to come back to the beginning architectural research can be formal, but for the design on a building to me it is much more informal with a collection of larger and smaller researches being conducted. Yet architecture and research are inseparable for me and the research I did has a direct linkage to most of the parts of the design in which nothing is accidental.

Relationship between the research and the Architectural education

The research that is conducted connects in multiple levels of the MSc Architecture, Urbanism and Building Sciences. The master program comprises also Urbanism and Building Sciences. Although these tracks focus on different aspects more, the graduation project can't work without these fields as well. The research carried out about the compact city is very much a philosophy within the field of Urbanism. Yet some of the principles have been eventually integrated within the architectural design of one single building.

Within the master track of architecture, the research on how to densify and use plots of land as efficient as possible are interesting for all fields within the field of architecture. Building on infill areas and how to deal with these places is a field that exceeds just the field of dwelling. What I have experienced during the design process is that when you would design an office, which is far more flexible to design compared to a dwelling project, the methods will vary. However, for different dwelling projects dealing with the surroundings on an infill location will be similar.

Zooming in further to the studio topic the connection will be very clear. Those who watched the news can't have missed that The Netherlands is struggling with the housing market. There is a large shortage of dwellings, especially for groups with lower incomes and starters. Housing prices are booming making the topic of dwelling very relevant. The studio's main emphasis according to the Graduation Manual are flexibility, transformation, high density building schemes and sustainability. All these topics can be found back in the research conducted. The building is aiming at a target group for who it is now very hard to find afford-

able housing. It is a group that prefers to live near the city centre because of their lifestyle. The focus has been towards density and studies have been done to research in which way the site that is transformed can be used as efficiently as possible. Another important aspect is flexibility, as the main structure of a building often last longer than the rest of it. Look at the canal houses of Amsterdam. A lot of them have seen many transformations over the time and are even today highly attractive. Sustainability in every of my projects have been very important and the way the building works is very sustainable. The way the dwellings are shaped with minimal unit sizes means that the first step of the 'Trias Energetica' has been reduced. Not only in way of energy consumption, but also in building materials that are getting scarce. Through every stage within the wide profession of Architecture there are links to other specializations, however the primary focus clearly is towards the search of finding solutions for the housing needs of today and the cities of tomorrow

Scientific relevance and transferability of the research

The research is on many fields transferable. Many of the aspects researched are relevant to the current issues in the field of Dutch Dwelling. Amsterdam and many other cities are growing because many people choose to live in the city. Cities have expanded dramatically over the last hundred years and many cities like Amsterdam are getting short on space to expand. Amsterdam is touching the borders of the municipality and must grow through building on infill locations. Currently there are a lot of transformations of former harbor areas, but these are also limited. The future aim is therefore on intensification and densification of the city. Most of the denser cities are facing a lot of issues because of poorly

executed density strategies. Through the research I have learned that this field is very complex. Just like in architecture there are many factors involved in creating solutions that work and there is not enough research or good understanding on how to do this. The research done is a good step in creating better cities and deals with one of the main issue's cities will have to deal with in the coming decades.

Also, I have been doing research at alternative ways of living in dwellings. The last hundred years we have started to enjoy living in very large houses and enjoying the luxury of having specific rooms for specific purposes. This is however not very efficient. Especially when the square meter prices are getting high. I believe that in the future we will spend more attention to our interiors. What always wondered me is that the car industry manages to sell cars with very high standard interiors, but in our houses the level of integration of different things lacks. We collect separate furniture that can do only one thing and needs its own space. Living smaller allows to spend the saved money on smart interior spaces. Beds that can fold in and out from the wall for example or tables that can extend when there are guests. This kind of flexibility together with good integrated storage makes living in smaller spaces much more comfortably. The current demographic trends are that young adults will be living longer on their own or as a couple longer without children. The flexible interiors of micro-units have been shown a very effective way to live more compact. For families with children there are also good opportunities, but this group is much harder to house in micro-units as there are a lot of routines mixing together whereas in a one- or two-persons household this is much less. All this information that is gathered from researching micro-units, space saving solutions and flexible, multipurpose furniture is precious knowledge that can easily find its way into future projects.

The research done about density and using a plot in the most efficient way has taught a lot about how different typologies perform on a location. It has taught me a lot about how to use tools like the FSI, GSI and OSR to assess different solutions. This is a method that will be easily transferable to future projects as well. The knowledge gained for assessing different urban lay-outs within this study also taught me a lot. The older city centers are so dense because of the high GSI rates that they can achieve. This is often why the density can be so high, but without having to build high-rise buildings. Highrise is often not the best choice for creating high quality living environments. Within the research I have been looking too at the work of Jan Gehl and listening to his research made me understand a lot of the post-war architecture better and all these studies and research add a lot to building up a better base of knowledge that will be relevant in a lot of different situations in the future. So apart from the personal gains of the research there is a very relevant and important issue the research addresses that is affecting a large portion of humans around the world. Being specialized in creating good cities and being able to fill the gap in knowledge that has been identified in this research will be very valuable.

Ethical issues and dilemmas during the research

Architects have an important role designing buildings in which people spend a significant amount of time of their lives. The ethical issues that I have been facing has to do with the question if it is ethical to provide such small living units for people to live in. There is a housing shortage, so people will anyway live in these houses, even if they are small. Is it ethical? I have been doing research to the target group and that has helped me to determine if the minimal

space is an ethical decision and my conclusion is that it is ethical for this target group. Precedents show that these types of buildings are often specific for a target group and there is a selection process on for example age. This raises another ethical question; can you select on a specific group of people? Again, my own research has shown that it is not the perfect situation, but that it is ethical because of the specific kind of dwellings that are being built and just like in the case of elderly housing it makes sense to reserve them to a specific group. The other reason why a selection of dwellings is ethical in this situation is because this group can live so compact, it allows other groups to live in the larger dwellings in the city. Young Urban Professionals spend a lot of time outside of their dwellings and need a dwelling that is more of an extension of the city than that it is a separate unit. Young Urban Professionals need more contact with like-minded people so communal spaces matter more. For these spaces to work it is important to have like-minded people as well. All together it makes that the concept of YPL (Young Professional Living) with the micro-units is ethically justified. Leaving out the communal spaces and constructing the building in the middle of fields will not work. Then people feel trapped in small spaces, so there is a fine balance in the design and you should not judge the design-concept separate from the contexts in which it sits.

Conclusion

So, all these various researches have taught me a lot of things. It is hard to describe all the small things in a short reflection work. Architectural research is so multidimensional that you cannot compare it with a research that just has a few research questions, a methodology, etc. Architecture

is very multi-disciplinary and that means that researches from different fields come together and at certain times the architect is more like a composer. Trying to bring all the information together into something that works out the best. The research is addressing one of the more relevant issues right now, not just nationally, but towards a global scope. Compact Cities in the right essence of the meaning is the most sustainable way of living, so much even that a uninsulated dwelling in the city has a lower CO2 footprint than the best energy sustainable dwelling outside in the countryside. Which has to do with an overall proximity and efficiencies. This research linking on different levels with the education overall. It includes Urbanism as well as Building Technology questions. On the studio level it meets all the theme words provided. The design is ethical through a balance of compromises versus gains and the importance of various aspects towards the lifestyle of the target group. Which are very specific. But also leaving enough room for flexibility to deal with future changes. It is a research that can easily be expanded and transferred.

The last part of my graduation track will be about clarifying the design and making everything more presentable. It will be about making some small cosmetic changes and working on any potential feedback I may receive from the P4 presentation. Everything is ready, but the aim has been on the technically getting things ready and the next six weeks (my Christmas holidays will be in February) will be spend on making it presentable and clarifying the design as good as possible towards the tutors and any potential audience.