

TU DELFT
Faculty of Architecture & Build Environment
Master Architecture
Dwelling Graduation Studio
Dutch Housing Studio, New Amsterdam – between stan-
dard and ideals

Tutors: T.W. Kupers
P.S. van der Putt
F. Adema

Delegate of the
Board of Examiners: Ir. M.G.F. Overschie
Student: Karolis Dragūnas
Student number: 4345630

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wise

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There is no place like Home

When the cold hard rain was falling
And the streets chilled me to the bone
A voice in me kept calling
There is no place like home

It's simple and it may be humble
But it's a place that is my own
To recover when I stumble
There is no place like home

With neighbors and community
No longer just a rolling stone
A newfound sense of unity
There is no place like home

Nov 1, 2018

By. Dr Sam Tsemberis

(Poem adapted from original lyrics by John Payne, 1823)

PREFACE

This reflection report was written in the context of the Dutch Housing Graduation Studio called New Amsterdam - between standard and ideals. The central question of the Dutch Housing Graduation Studio is: How do we want to live in the future and what kind of buildings do we need to make that possible? In the successive chapters, I describe my research findings and design process. Here I describe the methods used and I reflect on how and why the approach did or did not work, and to what extent.

The reflection report is introduced with a poem that symbolizes my design assignment. My design assignment is not just about creating a place to live, but about a place to come home to, a community. The following paragraphs briefly introduce my design assignment.

In recent years, Dutch society has been in transition. The traditional welfare state is being transformed into a participation society, where citizens are self-reliant and less dependent on the government.

Citizens who are in a vulnerable position should be received as little as possible by authorities and be transferred as soon as possible to self-sufficient living. The municipalities are responsible for providing the accommodations. In order to live as independently as possible in the neighbourhood, professional care is kept to a minimum and support systems are developed, consisting of volunteers and local residents. (Davelaar, Gruppen, Knevel, 2018 p.14-15).

As an increasing number of vulnerable people come to live in the neighbourhood, there is a greater need for small, affordable, self-sufficient homes, and also for residential environments in which attention is paid to fellow residents.

POSITION – THE RELATIONSHIP BETWEEN RESEARCH AND DESIGN

In a sense, architectural research has been conducted throughout the history of architecture. The development of particular structural forms of building materials over the centuries is the outcome of trial-and-error experimentation, systematic observation, and application of such building principles to other building projects (Groat, Wang, 2002, p.6). However, the conduct of architectural research outside the confines of specific building projects is a much more recent phenomenon. The field of architectural research has grown considerably in recent years. Other topic areas – such as socio-behavioural issues, design methods, and energy conservation – have become part of the research field (Ibidem, p.7). This clearly shows that research plays an important role in the field of architecture.

Furthermore, Van der Voordt (1998, p.1) states that the Faculty of Architecture is an institution for scientific education and research. The structural engineer is expected to base his decisions in practice on the results of scientific research wherever possible. He must not rely solely on his own experiences, intuition, ideals and “trial and error” experimentation.

Van der Voordt clearly describes the discipline as a combination of scientific research and the use of personal experiences, intuition, and ideals. Breen (2014, p. 14) also makes a distinction between design and research:

“Although the design process itself may not be considered as being” scientific, “the designer does make use of many sources of knowledge and evidence-based information, which contribute to shaping the end product.”

Thus there is a lot of nuance regarding how a design comes about. In the following chapters, I will look back on my research process, describe the methods used and reflect on how and why the approach did or did not work, and to what extent. I will also describe which parts of the research are of a scientific nature. Before a description of the research process can be made, it is important to define scientific research.

Van der Voordt (1998, p.3) describes scientific research as follows:

“Scientific research is the methodical, verifiable, objective, valid and reliable collection, processing and analysis of data in order to better understand and explain reality and thereby make it more manageable.”

The writer describes five criteria that scientific research must meet. First of all, scientific research must be conducted in a methodical manner. The research must be efficient and effective. Objectivity is the second requirement for scientific research. The third requirement is verifiability. It is necessary to make explicit how the researcher came to his conclusions. The fourth criterion for scientific research is the validity and reliability of the measuring instruments. Reliability means that if the measurement is repeated in unaltered circumstances, the same measurement result is measured. Scientific relevance is mentioned as the last criterion. Scientific research must contribute to the development and deepening of the field.

LITERATURE STUDY

The first semester of the graduation process was dominated by the research report. A thorough analysis of the problem is described in the research report. Applied research was conducted in order to provide support for decisions in professional practice.

This involved research into the history of social work in the Netherlands, the target groups and the requirements for achieving the research objective, namely, a building in which members of the target group can live independently and be part of an inclusive society. These completed steps meet the five criteria described by van der Voordt.

Based on the findings, I was able to prepare a well-founded program of functional requirements for the building. Research has also been conducted into the spatial requirements, although this part was less explicitly mentioned in the research report.

Preceding this seemingly linear process was a lengthily search for a suitable research question with a theme that reflected my personality and values.

I therefore conducted a lot of initial research that cannot be described as scientific, as it was not organized or targeted. I read a lot about the changes taking place in today's society and the characteristics of the Amsterdam housing market. After a while, I came across a policy document from the Municipality of Amsterdam called *Programma Huisvesting Kwetsbare Groepen 2016-2018*. With this I found a relevant research theme.

To make a program of spatial requirements, I have extensively researched the literature of Jan Gehl and Herman Hertzberger in relation to the promotion of public encounters through architecture and the research methodology that the authors implemented. The literature has helped me to construct spatial instruments that facilitate public encounters.

Studying the literature of Gehl helped me to crystallized elements such as dimensions and spatial requirements that stimulate encounters and interpersonal relationships. Gehl very clearly describes his research method, which involves observation of the environment and a systematic approach to the data obtained. Direct observation helps the researcher understand why some spaces are used and others are not (Gehl, Svarre, 2013, p.3). After the information is collected in a quantitative way, the outcomes are interpreted according to the author's insight.

While Gehl focusses on public encounters, especially in public spaces and at eye level, Hertzberger links a third dimension to the social encounter. He builds on empirical design to create a set of conceptual tools that are designed to help the researcher think about designed space in both general terms and in the specific case of a particular building (Wood, 2017, p.70). This seems to correspond to the following part of the definition of qualitative research (Seamon, in Groat, Wang, 2002, p.228): "The researcher uses his own characteristics and qualities".

Thus, the spatial instruments developed are based on qualitative research, in which the interpretations of the author are present. It was very interesting to look at the research methodology of the two writers, in which the same subject is approached in such different ways.

Figure: shift in social care system

Current state



Future situation

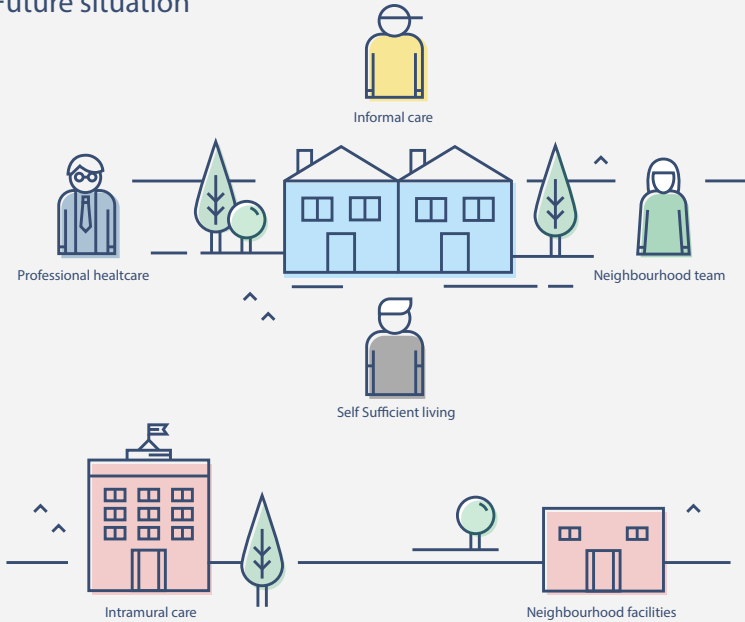


Figure: defining vulnerability



Homeless



No social network



Variety of problems



Mental problems

Figure: design objectives



Affordable housing



Inclusion

Figure: mixing target groups



Vulnerable



Non-vulnerable

Figure: combining living and working



Work



Education

Figure: creating a home



Community



Mutuality



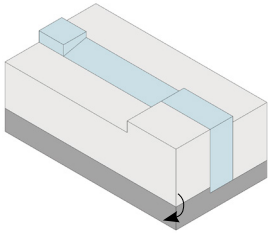
Meeting



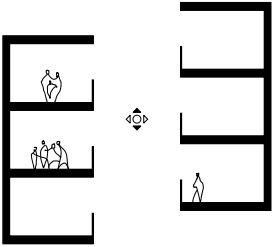
Support

Figure: spatial conceptualization

1 Combine living and working



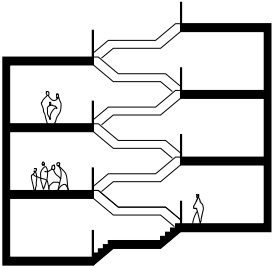
4 Increase transparency



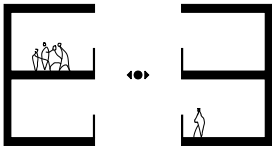
2 Implement social dimensions



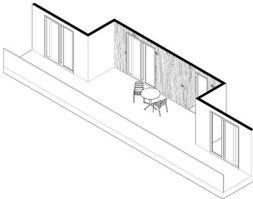
5 Activate the space by adding a route



3 Add a third dimension



6 Create space to rest and meet



PRECEDENT ANALYSIS

Precedent analysis is used extensively in architecture. An architectural precedent study can help the designer solve problems in a design process by finding how they have previously been solved in other designs.

The design location is the Minervahaven in Amsterdam. The Minervahaven is one of the 12 sub-areas, which include old port areas, that will be transformed into a living and working environment. A detailed master plan is not yet available for the project location; at a later stage of the study, a new master plan was developed in collaboration with two other students.

To assist in a later master plan design process, the Müllerpier in Rotterdam was analyzed. The precedent was provided by the tutors. The intention was to perform the analysis in a group context and then compare the analysis with that of other groups.

The analysis was carried out methodically and objectively, and the conclusions are clear and traceable. The measurement results can also be simulated by using the same research methodologies. However, it should be noted that the analysis is limited to one case. The other plans have been analyzed for the same aspects. However, as there is no clear conclusion from the comparison, the scientific relevance is doubtful.

Later in the process, I performed various precedent analyses for the purpose of my own design. It was not easy to find projects that share my objective because it is a newly emerging initiative. I therefore had to keep the criteria for choosing the projects abstract. The criteria were the presence of multiple target groups, the presence of collective facilities, and a care function.

I then methodically analyzed the projects with regard to the presence, dimensions, and position of care/facilities, the presence of collective spaces, dimensions of the apartments, access, and maintenance. This analysis meets the five criteria of scientific research.

I have applied data such as the dimensions of the apartment, clustering and the amount of available collective space. Unfortunately, however, I did not analyze the exterior qualities. That would have helped me later when I was designing the facade.

GENIUS LOCI – SITE ANALYSIS

During one of the first weeks of the graduation process, there was an excursion to the project location. The intention was not to prepare but to discover the spirit of the place in person.

When we arrived we found a mixed environment, with an abundance of contemporary architecture on the one hand and modest industrial buildings on the other. There were hip office workers and hotel customers and yet the traces and sounds of heavy industry in the background.

Because the project location is part of a large area that will be transformed, there is not much existing context. To create context, we have developed a master plan.

To develop the master plan, a study was carried out on the area. Historical research is the most important and the only part of the research that meets all five criteria for scientific research. In the context of historical research, historical development maps have been drawn and a historical literature study has been done.

The historical analysis has served as a tool for the development of the master plan and has also helped me discover the genius loci of the place for the purpose of my own design.



Figure: Stadsarchief Amsterdam. (1924). Luchtfoto van de Rigakade gezien in noordelijke richting naar de Nieuwe Houthaven [Photograph]. Retrieved from (17-04-2019), https://beeldbank.amsterdam.nl/beeldbank/weergave/record/layout/indeling/gallery/sortering/sk_sort_geografische_naam_ASC?sk_geografische_naam=Rigakade&id=A04139000185

RESEARCH BY DESIGN

The second semester of the graduation process was mainly characterized by research by design. Leupen (2007, p. 18) describes the design process as a creative process in which the designer devises, evaluates and rejects formal elaborations until a suitable solution is generated. To arrive at a design, different instruments (laboratory) can be used, each of which has advantages and disadvantages. In the following chapters, I therefore do not discuss the scientific nature of the research, but instead describe which instruments (laboratory) I have applied and my experiences in doing so.

Sketching

I began the design process by creating spatial concepts. Over time I developed a performance scheme for the building, through which I recorded the use and the spatial qualities of the building. As a guideline, I used the keywords from my research to assess my design steps.

To get to the current form, I have made countless sketches by hand. Sketching by hand is an important design tool for me. It is possible to create a line by hand fairly quickly and it can be straight or curved. I feel the computer software sometimes limits one's freedom.

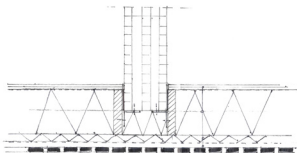
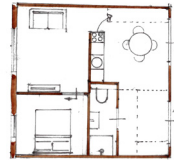
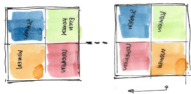
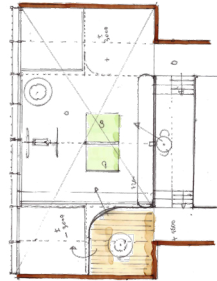
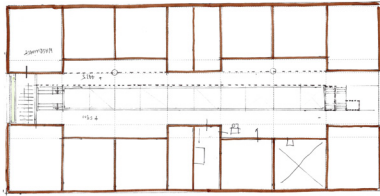
I use sketches for different purposes. Sometimes I want to investigate something quickly, so I make quick line drawings. With this, I can produce a lot in a short time. When I feel a lot of time pressure and I have to slow down, making neat drawings helps me find peace. A neat line drawing requires controlled thinking, as a line on paper is not easy to remove. There is a drawback of such sketches though. In the current architectural field, where image plays an important role, a hand-drawn sketch is not as impressive as a beautifully photoshoped image.

What is very typical of my design process, and can be seen in the sketches, is that the design has developed from inside out. The design of the facades was only started later in the process. Creating a functioning scheme of the building

(spatial concept) was a leading theme in the design of the inner space. In the future, it would be useful to include more the outside expression as well.

Figure: sketches collage





150 - 1000, Professoren Z. 20-19 m
 20. GARDENSTRAßE 2015/16
 STIL DE. HERRMANN, 2015/16
 1/A. HERRMANN/STIL DE.
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 2015/16



Model making

During the design process, I have made frequent use of models. In my design, I have implemented an atrium, a split level and a routing through the building.

I made a 1:100 model so that I could assess these facets on the desired criteria. In the model, I wanted to see if there is sufficient light in the interior, if a four-story atrium does not evoke the feeling of insecurity, if the routing through the building is clearly recognizable and if the split level in combination with the atrium size functions the way I imagined it.

Making a model on this scale helped me to answer these questions at an early stage. It eventually became a study model, and was the cause of many bruises and tears. I used cardboard but learned that this material is not easy to take apart and put back together.

In addition to a small scale model, I have made several models with a larger scale to test the mass of the building. Although the volume was already determined in the master plan, I experimented with various roof shapes, based on the historical context, to see which would fit best with the building.

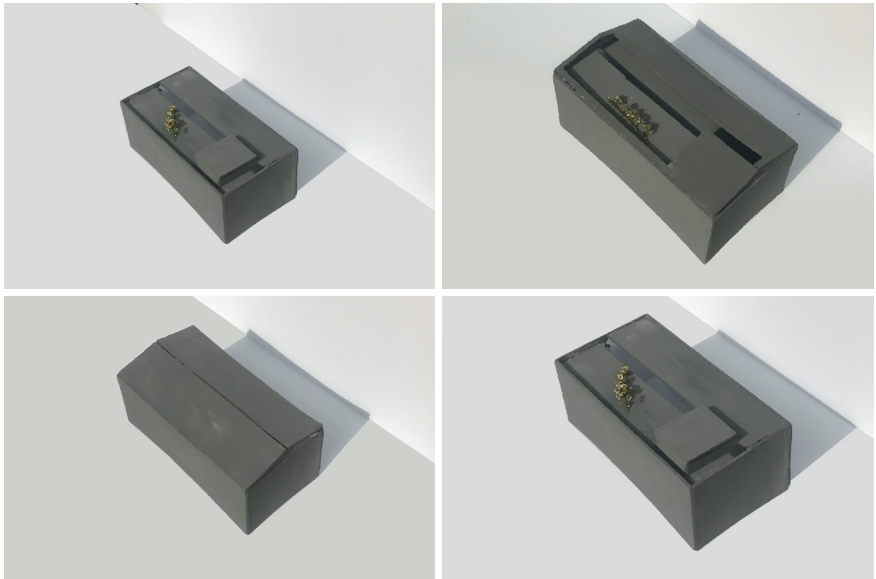
Figure: 1:100 model



Figure: 1:100 model



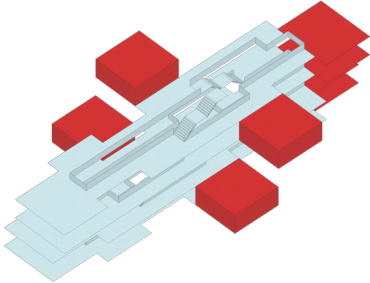
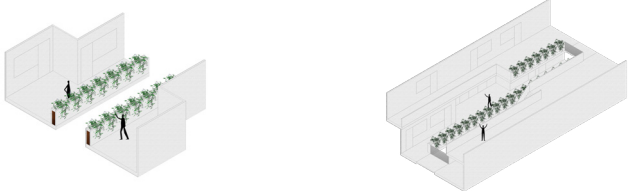
Figure: 1:200 models



Computer modelling

In addition to making sketches and models, I also used computer drawings. Because the design contains many elements that are spatially important, I have made 3D models to gain insight into spatial aspects. In the 3D models, I experimented with different facets of routing. I also experimented with the use of materials. The models have helped to determine spatial qualities, and the 3D models have helped to zoom in on detail.

Figure: from idea to ...



INTERVIEWS

During the design process, I got a lot of inspiration from the literature as well as from the target group. I contacted many people involved in the accommodation of vulnerable people. My motive for approaching them was to give the group a face. I conducted several interviews and visited a project where vulnerable target groups lived with regular tenants under one roof.

During the interviews, I asked questions about current policy and in particular the experiences of the interviewees in relation to my research topic. Because I entered the discussions with some knowledge and a large part of my research was already completed, the interviews did not provide many new insights but gave me confirmation that my results were correct/plausible. The results of the interviews were not documented directly in the research report. The research can therefore not be described as scientific.

However, the most important question I asked remained unanswered, namely: When we talk about vulnerable groups, what kind of people does this refer to? The answer was often followed with a smile: they are very different kinds of people. They are people who have/have had to deal with various problems. However, what they have in common is that they need daytime activities and a suitable home.

I conducted one of my interviews at the Parana Woonvereniging, a mixed housing project where regular tenants live together in one building with people in a vulnerable position. My interview took place at the kitchen table where I was allowed to eat with a group of residents of "the cooking club". There were all kinds of people at the table, so it was not an interview but a kitchen table conversation. Anyone who wanted to could talk about their experiences living in the building. These experiences were generally positive. The residents compared living in the Parana Woonvereniging to living in a student house, but with an independent dwelling; there is always something going on there. Although I did not ask whether there were so-called vulnerable people at the table, that evening made me question a lot of the stereotypes I had.

I genuinely had a nice evening with people I had never met before.

OTHER ASPECTS

Aspect 2

The relationship between your graduation topic, the studio topic, your mastertrack, and your master programme.

This reflection report was written in the context of the Dutch Housing Graduation Studio called New Amsterdam - between standard and ideals. The central question of the studio is: How do we want to live in the future and what kind of buildings do we need to make that possible?

For the future I envision an inclusive society, in which disadvantaged groups can participate on the basis of equal rights and obligations. It would be a society in which everyone who can do so would take responsibility for their own life and environment. I have translated this vision of the future into a mixed residential building in which vulnerable groups live amongst regular tenants under one roof. In this building all facilities are included for participation (work/day activities) and there is room to develop interpersonal relationships. These are the two factors needed for inclusion.

Aspect 3

Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

The composition of the studio is very structured. There is a clear guideline on which products are required and on which aspects the assessment takes place. As described in the reflection report, first a research report was conducted. The elements that need to be described in the research report have been noted by the studio. The discussions have also focused on these elements. I have found that to be very pleasant. Not only because it was clear what the assessment criteria were, but also because discussions could be held with fellow students about how they approach different components.

Aspect 4

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

In recent years, Dutch society has been in transition. The traditional welfare state is being transformed into a participation society, in which citizens are self-reliant and less dependent on the government. Citizens who are in a vulnerable position should be received as little as possible by authorities and be transferred to self-sufficient living. Municipalities are responsible for providing the accommodations. In order to live as independently as possible in the neighbourhood, professional care is kept to a minimum and support systems are developed, consisting of volunteers and local residents.

Rigid ideals such as 'the mixed district' (where supporting and vulnerable inhabitants of the district mean something to each other) and 'the participation society' (in which residents take on more responsibility for things in society, irrespective of institutions) appear to be difficult to implement in Netherlands.

In order ensure vulnerable people are fully integrated, the inclusion of these people is important. There is a need housing that enables these people to live self-sufficient lives. Research is needed to determine these components.

The topic described is not only relevant to Amsterdam. The other Dutch municipalities also have an obligation to provide housing for vulnerable groups. More and more research is being conducted on this subject.

Aspect 5

Discuss the ethical issues and dilemmas you have encountered in doing the research, elaborate the design and potential applications of the results in practice.

My design concerns a mixed housing project, in which vulnerable groups live amongst regular tenants in a building. During the graduation process, I conducted several interviews to find out more about the target group (especially the vulnerable groups) because the descriptions in the literature are very generic.

The interviews also show that these vulnerable groups are very diverse, both in age and gender, as well as in the issues they are dealing with. As a result, it is very difficult to generalize about their needs and preferences. The term vulnerable groups often has a stigmatized image. I hope that by sharing the experiences I had during the interviews and project visits, I can help others to overcome the stereotypes and thereby diminish the stigma.

I have designed a building that is an attractive living environment for both target groups. I did not make a distinction between the target groups when designing the building. The target groups are mixed together. In the building, there are residential units with different dimensions, in which a resident can be placed according to the composition of their household. All facilities are accessible to all residents.

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