The Architecture of the Interior
MSc3 Graduation Studio: Care for Cure (AR3AI045)

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Studio
Theme: Care for Cure (Healthcare Architecture)
Tutors: Eireen Schreurs, Mechthild Stuhlmacher, Jelke Fokkinga
Argumentation of choice of the studio: Interest in healthcare architecture and the principle of designing "inside-out"

Title
Title of the graduation Project: Elderly Care Home Marconoplein

P2 GRADUATION PLAN

//Product

Problem statement

In 2040, 4.6 million of the people living in the country are 65 years old or older. Housing suitable for elderly are in dire need. In The Netherlands, 256,000 people suffer from dementia, of whom 70% live at home, taken care of by relatives or friends. Symptoms of dementia patients include:

- Impairment of memory
- Impairment of learning
- Impairment of reasoning
- Increased stress levels
- Reduced capacity to deal with age-related changes
The dementia symptoms mean a drastic change in the way they live. As such, the design of the living environment of dementia patients require special attention. For instance, (mobile) dementia patients can wander around for hours, which mean it is not ideal to confine them in a small home, since that will cause anxiety and worsen their condition. As mentioned, 70% of them still live at home. However many of the homes are not adjusted adequately to the needs of someone who has dementia. Also, not everyone can stay at home due to various reasons (for instance no family or friends available as caretakers, severe physical condition etc.).

Moving to a nursing home is often experienced as a negative and radical event. Standard nursing homes are often regarded as a gloomy hospital-like environment. Long depressing corridors with limited views towards the outside and shared dorms with little attention for privacy are often associated with these healthcare facilities. A good balance of communal and private spaces and a comfortable domestic environment seem to be essential ingredients for elderly care home. Then, "how can we design a protected domestic living environment for dementia patients that also provide them as much freedom as possible?".

The essence of the design is to create a place where dementia patient will live comfortably until their death. Since there is no cure for dementia, treatment aimed to slow down the process of dementia should be considered. Therefore in addition to the previous question, "what kind of treatment is helpful for dementia patients and how can we implement those health facilities in the design of the elderly care home?"

**Goal**

The goal of the graduation project is to find out the possibilities of the design of a home for demented elderly, one that cater to the specific needs caused by the symptoms of the disease which changes their lifestyle greatly. In addition in the framework of sustainability, the idea is also to create a building that have the ability to adapt to change. For example, parts of the building could be separated from the elderly care home and function independently, or spaces can be rearranged to adjust to the needs of the users.

//Process

**Method description**

During the design phases, different methods will be used to explore design possibilities. For the urban plan, mass model studies are utilized throughout the design process to test and evaluate different possible solutions to the strengths and weaknesses of the existing urban context. The architectural character of the building itself will be determined through larger model studies as well as montage, sketch and sectional drawings. Various precedent projects will be analyzed as sources of inspiration.

Research methods used or will be used for this graduation project also include literature research on healthcare architecture, specifically on elderly healthcare and designing for dementia. In addition to the theoretical research, practical research is done in the form of
observations and interviews with dementia patients, their caretakers and staff of dementia nursing homes. The practical side of the research confirms several findings in the literature, but also suggest different solutions and offers different perspectives on dementia.

Literature and general practical preference

Aside from the Studio Handbook, literature used for the Research Seminar and the Research Methods Position Paper will be consulted. The literature used consists of books related to healthcare architecture (specifically elderly with dementia), and scientific articles. Below is shown a small selection of the literature used.

June Andrews, June & Molyneux, Peter. 2012. "Dementia Finding Housing Solutions": National Housing Federation
Grove, Kim. 2012. "Gardens for people with dementia: A guide to make them safe and suitable"

//Reflection

Relevance
The government intent to provide more suitable homes for elderly through new housing projects as well as renovation/transformation projects of existing houses. However, the cut in the healthcare budget results in less qualified care staff for not only hospitals and nursing homes, but it also affects the domiciliary care. The government are sending home the elderly that are still 'too good' to be living in the nursing home. Elderly who are forced to stay at home will have to rely on family and friends for most of the care that they need. However, not everyone are in the position to receive that kind of care. Some may not have family around anymore, or their family are for whatever reason not able to provide the necessary care for them. Also, at some point, care at home may not be a viable option anymore as their health condition become worse as time goes by, especially those that suffer from dementia.
**Time planning**

The time planning below suggests a planning based on the normal education periods. Due to the entry of "Wet op de Architectentitel" starting from next year, I'd like to graduate in December given the opportunity. The design phase as described in the Fall Semester section will then start from July instead of September (week 1.1).
P4 REFLECTION

//Project and Social Context

The quality of healthcare in the Netherlands is slowly declining as the financial crisis have a significant impact on the industry in multiple ways. Many nursing homes are forced to close down caused by the lack of adequate funding, which means elderly are 'bound' literally in their own homes. Sure, sometimes it is better to have the family to take up the responsibility to care for the elderly, but in more severe cases, for instance those contracted with dementia, will require significant professional support. Domestic care for dementia patients is only an acceptable solution when they have dedicated caretakers who are available to them throughout the day.

Recent reports on elderly care by the University Maastricht indicates domestic care for dementia patients often lead to compulsory treatment methods as the care in the sector is heavily understaffed. There are instances reported where the patients are trapped between table leafs, tied up in bed, or simply locked in their own room the whole day.

The project aims to provide a suitable living environment where the elderly with dementia live together in living groups. The residents are encouraged to help each other out, while professional care is provided where needed. The elderly care home, in the shape of a monastery courtyard building, serves as a safe and free living space and contributes to the changed lifestyles of the patients.

//Theme

The theme of the graduation project 'Care for Cure' is healthcare architecture. The idea of healing environments are often associated with green habitat like gardens and forest landscapes. In the cities, courtyards has always been important elements of healthcare buildings.

The 'Broederklooster', a monastery building in Rotterdam Marconiplein is chosen as the design location due to its characteristics that resembles older healthcare structures in the Netherlands that have a distinctive monumental expression and built around courtyards. In fact, history learns that monasteries were hospitals since the medieval period. The serene monastery building in itself already has the potential to be a suitable home for the elderly. The structure can be expanded around the garden area to strengthen the idea of the courtyard building as a healing environment.
//Methodology

As the name of the graduation studio already suggests, the interior, where we as users of space reside most of the time, matters most. Especially within the framework of healthcare architecture, considerations of the needs of the users are essential in order to create a suitable healing environment.

Designing by research from the perspective of the users often requires us to place ourselves in their situation and in the potential spaces they are essentially placed in. The interior is not to be confused as indoor space only, as especially in healthcare, gardens in the shape of courtyards are also part of the interior. And in a sense, the building itself is part of the interior of the neighborhood.

Different tools are utilized to analyze possible design solutions on various levels of the ‘interior’. Urban models are used to determine the potentials and threats of the building as a whole within urban context, including the landscape of the surroundings and the landscape of the building itself (courtyards). Larger physical and 3d models help determine spatial qualities within the building related to specific architectural qualities that are beneficial to the patient group based on conclusions and results determined from research on dementia patients.

Aside from literature research, interviews with family of dementia patients are conducted to receive more insight on the practical reality of the dementia patients as well as the family members, often acting as the caretakers, themselves.

//Research and Design

A clear understanding of the characteristics of the users are of high importance when designing healthcare buildings. The dementia symptoms mean a drastic change in the way they live. They will no longer be able to live by themselves and it will only get worse as time goes by. As such, the design of the living environment of dementia patients require special attention.

Analysis and research on different case studies indicates that various living types have a positive effect on the wellbeing of the dementia patient, although the trend is shifting towards a more communal and domestic approach. It is important that the dementia patient
feel safe and at home to avoid unnecessary complications. Stress reduction is one of the primary aims of the design.

For instance, dementia patients have the tendency to walk around aimlessly for hours, which is a common issue. Anxiety and stress occur when they don't have the ability to do so. Therefore, the design of the building is in essence a continuous loop around a courtyard with sequences of different unclosed spaces as part of the loop.