

P4 REFLECTION

Surrounding takes care of elderly

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Health@BK lab // Cross Health Domain

2017-2018

15.05.2018

The position of the graduation project within the Health@BK lab and the master of Architecture

After finishing high school, I have been doubting whether I was going to study Psychology or Architecture. I decided to study *Architecture and the Built Environment* at TU Delft and to keep my interest in psychology in the back of my mind. Soon I realized that I missed the link between the built environment and the well-being of people, because user-centered design is not part of the fixed curriculum at the TU Delft. Students unconsciously learn about the role of the user in the built environment during design projects, but students were never stimulated to actively take part in it. I am afraid that this results in architecture where the human is not centered and where the built environment does not fit the needs of the user.

Luckily, there were other ways to gain knowledge about designing for users outside the TU Delft, for example by doing courses in Environmental Psychology and an exchange semester Architecture for Health at the TU Berlin. Later on, the Health@BK platform got my attention. When I heard about the Health@BK graduation lab, I knew that this would be the perfect studio for me to finish my masters.

The attitude of the mentors and students in the Health@BK lab towards the well-being of users is very much appealing to me. Whereas mentors of earlier projects were sometimes confused and less supporting when I was using research from e.g. the field of Environmental Psychology, the people involved in the Health@BK lab also feel the importance of user-centered design and gave us the time to explore this field.

Which makes it even more interesting and realistic, is the involvement of students and mentors from *Management in the Built Environment* (MBE) and the involvement of the professional practice *Pieter van Foreest* (PvF). The interdisciplinary work with students from MBE gave me insights in the management, real estate and costs of health care facilities. Within health care architecture, the laws and changing regulations can have a big impact on the architecture of buildings and is therefore very applicable. The possible involvement of students from other tracks, such as Urbanism, Landscape architecture and Geomatics, would be perfect to exchange more knowledge about public health, walkability, health promotion, etc. The involvement of *Pieter van Foreest* made the graduation project not only feel much more realistic and useful, I also learned a lot from the information provided by people from PvF. We had close contact with the 'client' and via him we could easily arrange appointments with other employees and residents of the real estate of PvF. It was definitely an added value to my graduation project and to my master to work together with a professional client.

During my research phase, I additionally did a *Joint Master Project* (JMP) at the faculty of Industrial Design. Together with four Industrial Design student from two different tracks and one other Architecture student, we did a project in commission of a Dutch children's hospital. We have researched the current situation of the Holding and Recovery of the OR-centre and have designed a patient space for the future Holding-recovery harmonica model. It was great to be part of a team where so many disciplines worked together on a healthcare related project. Within the Industrial Design studies, students learn much more approaches to design for the users (interview techniques, serious gaming, testing prototypes, creative sessions, etc.). A part of JMP is further developed during my individual research phase.

The relationship between research and design

My research topic got my interest from the JMP at the children's hospital, where I experienced the importance of environments that stimulate informal care. Children are not only very much depending on the trusted informal care by their parents or caregivers, the formal care is also relying on the informal care given by the parents or caregivers to the children in the hospital. In the situation of elderly, the involvement of the social network and the informal care they provide, is also very important and will be even more important in the future.

During the making of the documentary for the Health@BK lab, I mainly focused on formal and informal caregivers ('mantelzorgers') of elderly people in need of care. I realized more and more how much is asked of the social network of elderly, while this is often minimally taken into account in the architecture. In my research thesis, I elaborated further on this topic.

The research question was: *Which architectural tools stimulate providing informal care to elderly in need of care?* To be able to answer this question, I did literature studies, interviews, observations and typological research. The research resulted in a list of psychosocial needs of the social network that are important to

provide good informal care (need for closeness, dignity, privacy, consults between formal and informal care, daily patterns and contact with thirds). These needs are also associated with certain architectural tools (guest room, welcoming area, feeling 'at home', levels of privacy and distraction, daylight, nature, mixed use, etc.). These tools were the starting point for my design and gave me a strong foundation on which I could base my decisions. Many of the architectural tools can be found in the design.

PvF is going to build a project for elderly in the Spoorzone in Delft. My graduation project was to make a design for this, which could possibly inspire the people working for PvF. PvF made a program of requirements, that the invited architectural firms have received as well. PvF wanted to provide mainly intramural apartments, which is the most profitable for them. However, with the results from my research and some lectures I had seen during my research phase, I decided to continue with extramural apartments and to include other target groups as well. This was quite a decision or turning-point in my process. By doing this, there will arise a community of residence and people from the neighborhood, that will provide informal care and will help each other. Where the informal care will not fulfill the required care, (future) technologies will assist and when really necessary, formal care can be involved. Public functions, such as the restaurant, hairdresser, kindergarden and swimming pool, will attract different generations and cultures and can lead to a lively environment. On the other hand, the vertical, green inner garden is a place where people can find rest, meet and recover. In this way, elderly in need of care will not only receive their basal care, they will also have the chance to enjoy the day.

The research method and the approach

The making of the documentary was a group project of all the students of the Health@BK lab. Nevertheless, everyone had his own fascination and focus point. I already knew after the JMP project that I wanted to focus on informal care, but the making of the documentary was still an explorative research. I did interviews with people providing and receiving informal care, with a district nurse and with an expert family participation. After the documentary, I knew more specific what I wanted to gain from the research.

I did literature research to gain more background knowledge from former research on informal care, family centered design, informal caregivers and changes in health care. After this, I did interviews with informal caregivers and used parts from the interviews of the documentary to find the psychosocial needs of the social network. These needs were the base in the case study in the children's hospital. There I did observations in different departments and public spaces of the hospital and I had interviews with patients, relatives and employees. The needs also functioned as a base in the typological research, where I looked into existing dwelling forms for elderly and informal caregivers.

In the design phase, I started with an analysis of the Spoorzone and its surroundings. I looked into the functions of the neighborhood, the building blocks that are going to be built and the park that has a prominent place in the location. I also read about the vision of the former architect of the masterplan, Joan Busquets, and the vision of the municipality of Delft.

I also looked into the aim of PvF to have the feeling of urban courtyards that were built in the 13-19th century, but to translate this in a modern building project. I was triggered by this aim, because the scale of the new project was much larger than the small scaled courtyards. I used an existing analysis of the courtyards in the Netherlands to gain information about the purpose and the life in these courtyards back in the days. With contemporary tools, I have tried to give residents the feeling of living in a small-scale building. It should be a place where they feel safe and sheltered and where they have individual spaces, but where they also live as a collective and have social control on one another. The green oasis in a crowded city is also an import factor of the old courtyards. In my graduation project, this is not only translated in the classical, horizontal way, but also by making vertical gardens that reach all the levels. I did mass studies to experiment with this. In the end I came up with a wooden 'modules' than can be used as inside and outside space. It is in these horizontal and vertical modules where the collective is, where people meet and where people can enjoy the calmness within the city.

I made a lot of sketches during my design project and experimented with different options in 2D and 3D visualizations. Decisions were mostly based on my research.

The relationship between the graduation project and the wider context

My graduation project contributes to some accurate topics. The increasing ageing population results in more elderly in need of care and a lower percentage of young people that provide formal care. The classical welfare state is changing into a 'participatiesamenleving', a society where people take the responsibility for their life and their surroundings. The aging, the 'participatiesamenleving' and the changes in care-related regulations, leads to extramuralisation. Elderly in need of care will receive most of the care at home and not in an institution. In many cases they will appeal their social network to cope with the problems they are facing. The participation of the social network is therefore important, not only to handle the shortage of formal care, but also to give people the possibility to live their own, trusted life.

During my design process, I have tried to respond to the changing situation in which informal care will be more and more important, and where at the same time technologies can give us a lot of opportunities. I also imagined how the future situation will look like. Because the future is mostly unforeseeable, I wanted to create a building that can respond to the changes and can adapt to the needs of the people, instead of making a static building. The modules are adaptable and can be changed into inside or outside space. The apartments can also be merged or split to create different apartments that matches the needs of different users.

Ethical issues and dilemmas

In my research, I have done mostly qualitative instead of quantitative research. In the interviews, I spoke about people's experiences and was able to ask more specific question about certain remarkable stories. My recommendation would be to interview more people, also people with different backgrounds and nationalities. Furthermore, it would be interesting to speak with the people that are likely to move to the Spoorzone to really have the user centered. Not only the elderly, but also the students and single households should be involved in the research and design phase.

I also think that designing for the future needs certain scenario's. New technologies are something that many elderly are not grown up with and still not used to. We cannot expect that people change from one day to another, but that they need a transition phase. The building should be able to adapt to these transitions.