

Reflection

A FESTIVE AMC

written by

Kedi Zhou

student no. 4573994

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aE AMC Graduation Studio Architectural Engineering Faculty of
Architecture

Delft University of Technology

Tutors

Anne Snijders

Marcel Bilow

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1. The Relationship Between Research and Design

When I visited the AMC shortly after the graduation studio started, I was fascinated about the size and organization of this institution. It was such a concrete monolith composed by a group of buildings and everything was running smoothly inside this complex. The most intriguing part of the hospital was the four huge inner squares capped by a series of arch-shaped translucent canopies, which have shaped a very bright and public atmosphere for the space underneath. Two of them accommodate the enclosed lecture halls supported by columns and the rest two are acting like real city squares with shops and cafe surrounding them and people can communicate freely inside whether choose to sit by the cafe table or just stand under the bright skylight. The first question came into my mind was: is everyone happy to stay in a square with such an open atmosphere in a hospital? Hospitals is a melting pot of all kinds of feelings. People encounter happiness and sadness in this space. The central squares should have different psychological quality for people in different mood, so as to make them feel better. While the current condition of the squares are monotonous with just bright skylight and public gesture which obviously is not enough to deal with complicated human psychology. So my research was mainly based on the relationship between skylight and human perception.

But before the study of light, I have focused my eyes onto the future identity of hospitals in the Netherlands. In the first part of my research, I have drawn a conclusion that a transformation program from hospital to a medical complex dominated by a nursing center is one of the solutions to the current situation of the aging society and the surplus medical equipment. On such basis, my research question was narrowed a bit as: How to evoke human emotions in the public space of future nursing environment by manipulating skylight performances. The outcome of the research was to install a multi-functioning louver system on top of the squares in the AMC to generate different skylight atmosphere for specific areas underneath so as to generate spaces with multi-atmosphere for catering to different psychological needs that the people have.

Based on the louver system, the gesture of the ground floor also need to have some changes in order to create space for different activities. So the design part mainly focused of the shaping of space under the louver system. By introducing a surface constructed by wooden slats, the space can be divided into bright side and dark side. Each side can provide space with different lighting quality. By the cooperation of light, space and color, specific lighting atmosphere can be created for different human psychological needs. With such an invention, the four squares can have their own identity with just one of them to be the most public

one to serve all groups of people in the hospital, and the other three have more specific position such as a greenery square for the elders, a reading square and a lecture square for the researchers.

2. Relationship between my graduation topic and my master track

My project is closely related to the theme of the architectural engineering. From the research to design the basis has never been changed as it insisted on using the skylight technology to influence the human perception and enrich the spacial experience with respect to the later design. Besides, the construction and making of the main structure in the later design phase have also reflected this theme by involving the robotic arm as the main constructive method and the wooden slats as the dominating material which can not only fasten the construction period but also reach the zero carbon emission. This is what the architectural engineering has always been trying to approach in the architectural design.

3. Relationship between the research method and the approach chosen by me and the graduation studio methodical line of inquiry.

The graduation studio need the students have the ability to draw their interesting point from the site and project and have a specific research question. During the research a scientific method is important. I have used the quantitative study and variable controlling method in studying the prototype of the unit for designing the louver system. By case studies I have gotten the result of how each shape of structure influence the quality of skylight and later by including those parameter into one piece of louver unit I got the result of the research, a controllable multi-skylight louver system. It has laid a solid foundation for the second phase of design.

4. Relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

Medical buildings and its environment is very important to human perceptions and it can have a good influence on the recovery of physical and mental health. This design point of my project is on the social realm of the public space inside a hospital and its hidden relation to human health. I think, in the future, the medical cures can not only exist in the traditional way that have been used for centuries but also can be on the aspect that shape the whole medical environment, like architecture and its atmosphere such as light; space and color, which are easily ignored.

4. Dilemmas I have encountered in doing the research and elaborating the design.

The most difficult part of the graduation project is the relation between research and the architectural design. Cause my research result is a multi-skylight louvre system which can be installed in the squares of the AMC. While in the design phase I have to transfer my focus from the technology to architectural space and atmosphere which involves more elements such as construction and material and the specific analysis on the original context and the futuristic position. So when I was going to put my research result into practice there are way more exploring work to do instead of a simple application. I have learned that architects should always have an architectural eye and see the overall situation instead of only focusing on one part of the design.