

Reflection paper P4

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Track: Heritage & Architecture Studio

Project: Future of Structuralism-Centraal Beheer

Title: Home Again

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1. Background

The graduation project aims to transform one of the most iconic Structuralism building in Netherlands, Centraal Beheer, designed by Herman Hertzberger. The building was designed in 1968. Since then there have been alterations and extensions. Now, the building was abandoned, truly isolated in the urban setting by the driveway and the railway on both sides. Centraal Beheer finds itself in the dilemma of being in the urban context and being a city itself.

The original concept for the Centraal Beheer building involves the consistent application of a single repeated spatial unit of 9 x 9 meters as a basic building block. The dimensions were chosen so as to be able to accommodate all components of the programme. These spatial units have a pronounced form yet are independent of specific duties and therefore interpretable and polyvalent. Thus, problems and potentials exist at the same time. The main purpose of the project is to explore new interventions by implementing a suitable programme.



Fig 1 Centraal Beheer

2. Reflection

Aspect 1 The relationship between research and design.

During this project, research and design evolved simultaneously and constantly enriched each other. Research is developed from the design in different phases, constantly refine my concept for the project.

In P1 research, my topic is about the materiality of structuralism through the building-

Centraal Beheer. From the research, we learn Hertzberger's logic of choosing the materials, which is focused on the human. He created polyvalent space to stimulate users' participation. This is a good point to preserve the identity of the building. In my design, my choice of material is based on the experience of users, respect for the heritage and technical problems. The first idea for façade renovation is to recycle the original materials when demolishing them. The first-period research is about analysis from aspects of color, texture, thermal insulation, and the feasibility of the recycling.



Fig 2 View of inner street (Produced by Yiyi Chen, 2017)

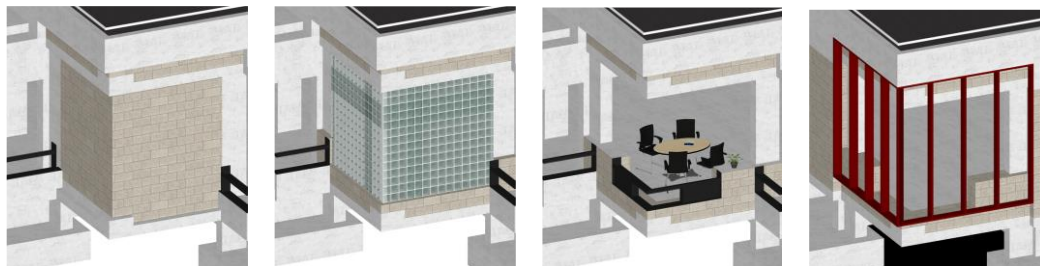


Fig 3 Different types of materials on the corner (Produced by Yiyi Chen, 2017)

In P2, research is about the basis for new programme and strategy of transformation. I transform this building into an asylum seeker center. Because of the new programme, there are some conflicts coming up. For example, conflicts between public and privacy, conflicts between the different size of space and existing structure. So I did research on space to find a strategy to erase the conflicts. One is about the traditional housing typology in Middle East country, which is the organization by the courtyard. I use courtyard as the main language in my design. It is the connection between public space and private area, and the solution of solving climate problem and light problem. In my research, the courtyard is the dominant space for people's daily life. After translating into Centraal Beheer, it becomes entrance, garden, patio or small squares which fit in this giant complex.

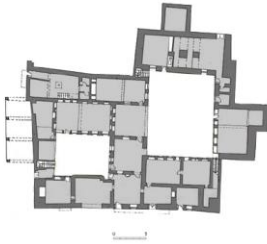


Fig 4 Traditional housing typology

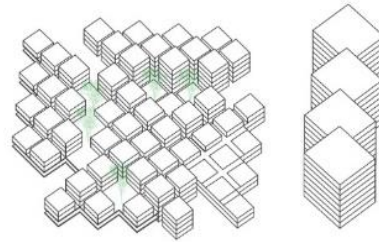


Fig 5 Demolition of the building for creating courtyards

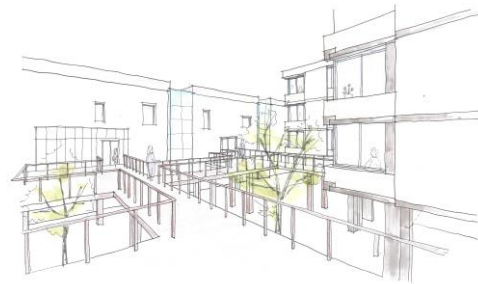
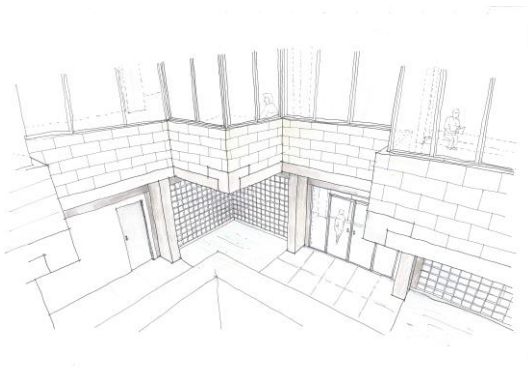


Fig 6/7 Concept of courtyard

In P3 and P4 phase, more details are considered. Research on materiality in P1 is recalled. Hertzberger used concrete blocks both interior and exterior to erase the borderline between inside and outside. However, the division between public and private becomes obvious (like market street and residential units) because of the new programme. It means more division on materials is required. Part of old facades is replaced by new materials. How to insulate the building, offer comfort and meanwhile preserve the character of the building become a big issue. From an office building to a multifunctional building, the atmosphere of the space will be different. My approach is using several precedents which combine concrete structure with different types of materials to find possibilities for new functions. It turned out to be an obvious comparison between these precedents. The final choices are considered from the spatial, technical and cultural aspect.

During the design, equal-sized spatial units are disturbed by the intervention of the courtyard. Meanwhile, same performance on surface and façade is transformed to create more types of space. Transformation is a topic that architect should balance the new and the old when working with an existing building. Based on all research on various topics, my design could be persuasive and logic.



(left to right) Fig 7 concrete and polycarbonate

Fig 8 concrete, timber and ceramic tiles

Fig 9 naked concrete



Fig 10 Stage product of experimenting of materials

Aspect 2 The relationship between graduation (project) topic, the studio topic (if applicable), master track, and master programme.

The future of architecture depends on its competence to be transformed. Transformation is the new condition for architecture. Abandoned buildings everywhere are asking for a new life, are challenging us and (in many cases) gradually decreasing the need to build new ones. (Hertzberger, 2016) The main theme of the studio topic is the future of Structuralism. My project is the transformation of the Centraal Beheer, one of the representative personages of Structuralism building, which is now abandoned and waiting for new inhabitants.

My starting point is about a social issue-refugee crisis. Since 2015, the whole Europe saw an increase in the number of international refugees. The ongoing war, diseases, natural disasters, repression and other harsh living and working conditions have forced many people to seek safety elsewhere. Usually, refugees are placed in camps or containers in the rural area. Residents encounter broad problems like security, privacy, sanitary conditions, and diseases. Besides, the tents built for refugees always become a waste which cannot be recycled. So why not solve this in a long-term way?

In the Netherlands, some vacant prisons and office building have been transformed into a temporary shelter for refugees. More and more vacant but valuable buildings require new life instead of death. My intention is to combine this programme with the transformation of Centraal Beheer. The challenge is to organize the space, function in a logic and respectful way instead of making it a giant camp for refugees. It is about the future of the Structuralism and also about the future life of asylum seekers, the homeless and displaced people. The final result could be a prototype which shows one of the solutions for transforming Structuralism building and changing refugees' life.

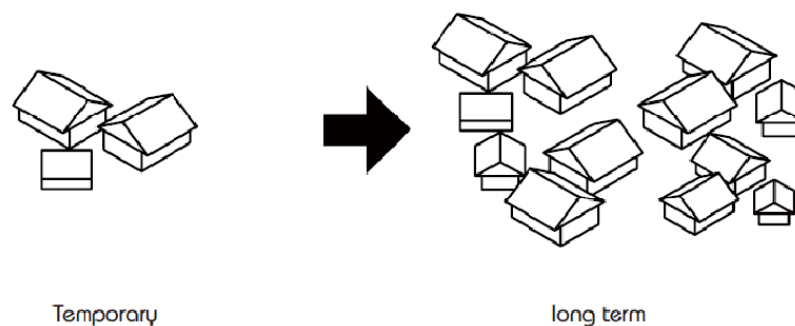


Fig 11 Concept diagram

Since the building will be transformed into an asylum seeker centre, it is facing the dilemma whether it could be fitted by multifunction within equal units everywhere. In fact for housing, you need an extended periphery whereas this building has a lot of internal space, though lit by means of skylights. Eliminating and thus sacrificing some 'towers' from the centre and thus creating inner courts, could be a considerable improvement. In this way, I tried to find the right balance between peripheral and internal space, between new interventions and existing monumental building.

[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.](#)

During the P1 research phase, the methods of research given by the studio were very useful. Students were divided into groups of three, focusing on various specific topics of Centraal Beheer. What is good for me is that I could look much deeper into a specific topic and research question instead of collecting information aimlessly. Nevertheless, filtering through the big amount of information and relevance within the research scope was a challenge. The research for the P1 built by all groups resulted in lots of useful insights which formed the basis for the program of requirements, practical tools / technical knowledge to begin the design process with a kick start were still missing.

My research subject started as one thing and through the process developed into something else that was more relevant and definable. Therefore making the switch from research to

design is a big stepping-stone. In the second period after the design parameters were defined, the specific research for new inputs that complemented my design concept went on. Research on both reference and theories stimulated the design process, including studying about climate design and energy control, collecting knowledge on ventilation systems/ heat exchanger modules for dwellings and integrating new types of façade system.

Aspect 4 Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

In my research, I tried to find all types of architecture by architects to solve the housing requirements because of the refugee crisis. There are lots of good prototypes, like Hex House, which is designed as a dignified solution to meet the basic housing needs of Syrian refugees at Zaatari camp in Jordan. The Hex House is ecologically responsible, off-grid, and low-cost home, designed to be shipped in pieces and easily assembled by its residents. It has sustainable features like solar panels, passive cooling, rainwater harvesting, and biogas toilets.



Fig 12 Hex house designed by Architects for Society

Different from build-from-zero, the transformation from a heritage building to an asylum seeker centre is much more complicated. Not only should this building meet the basic requirements of users, but also it offers other functions which will help the building run as a city. Moreover, how to make it sustainable is a crucial topic no matter who will use this building in the future. What I pursued is to find possibilities of doing this. Except making new building, making adaptive use of the existing building is more needed within a high-density world.

In my project, the building could be used by refugees also other target groups like the homeless, even it could be transformed into student housing someday. There is no one-size-fits-all of course. What this project contributes is to create a new way of living for refugees. Centraal Beheer has a good location in Apeldoorn city, which is good for integrating refugees into existing city. For my part, design for refugees is the similar idea of Hertzberger-design for humanity.

Aspect 5 Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.

During research, there are lots of data showing that the number of refugees reached a peak in 2015, then the number decreased. Thus, I was asked if it is necessary to do an asylum seeker in this monumental building. Besides, putting refugees into Dutch society and making them living so close to local people is causing panic or building new relations between different people. I was not sure it is a feasible plan at the beginning.

However, during the design process, I realized that programme is just a trigger to disturb and improve the building. As is mentioned above, putting refugees into Centraal Beheer is one of the hundreds of ways of transforming this building. It is a prototype instead of a real project. There are advantages and disadvantages. For instance, most Dutch people hold a positive and friendly attitude towards refugees. Refugees are just normal people like us, but they gain too many anxieties from the ongoing war, diseases, natural disasters, repression and other harsh living and working conditions. In Centraal Beheer, people can work and live with each other in a place where give them a sense of belonging. That is what Centraal Beheer could offer- building as a city.

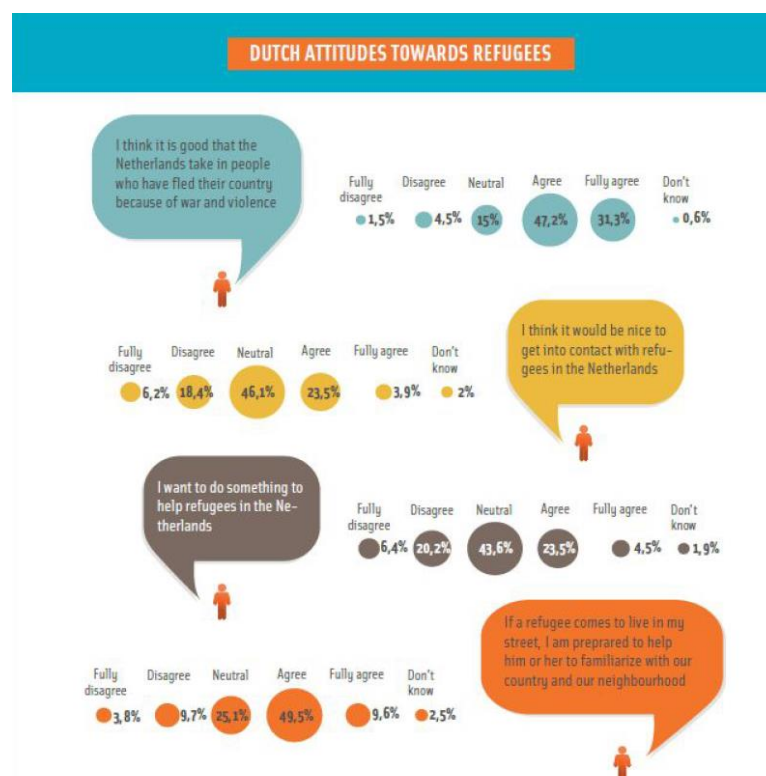


Fig 13 Dutch attitudes towards refugees (KIEN/Dutch Council for Refugees (2016) PR onderzoek juni 2016 VluchtelingenWerk Nederland.)

There are also several dilemmas during the design. Not only should the building have its own identity but also it needs new character by the new users. How to give the building new performance meanwhile keep the most valuable identities is one of the dilemmas. For

example, with the floors articulated as so many 'islands' interlinked by elements acting as bridges and surrounded by voids. Centraal Beheer is recognized and imaged. As is mentioned in aspect 1, I applied courtyard as a new language in this building. Hence, some courtyards are translated from the void space in the original plan.

3. Conclusions

Research is always existing during the whole design process. From general to specific, it helps me to define my argumentation and approach. The final design products can be seen as a result of my position. In addition, we can see the typical identities of the Structuralism building from the research. Also, we notice the limitations of the Structuralism building from the design. Centraal Beheer is one of the represented Structuralism buildings. Quite an amount of buildings are facing the same crisis. What really interests us is to discuss the inspirational possibilities of solving the crisis.

Sources

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