Introduction

This reflection paper is a short overview of my graduation master thesis within the track of Architecture, Urbanism & Building Sciences. In my graduation project, I experienced a process of "observing current situation - finding existing problems - coming up with general ideas - seeking theoretical support - guiding design". During this process, I tried to address the relationship between research and design in both theoretical and realistic levels. Besides, the selection of methods plays an important role in my whole process. In the coming paragraphs, I will answer these aspects according to my conclusion of the graduation project.

Nowadays, with the increasing awareness of culture heritage and sustainable construction, conservation, restoration and renovation became one main theme of architectural activities. In these topics, the most important issue is to balance the conflict between historical value and modern tasks. In the studio of Heritage & Architecture, tutors emphasize on the preliminary analysis based on previous literature and subsequent research, in order to make a rational next step for the restoration or intervention. Besides, sustainable design is an essential element at any time for each project from the perspective of building technology.

My graduation topic is called "Zutphen-sustainable city", it happens in a deteriorated city after deindustrialization in the northeastern Netherlands. There is an area called Nieuwstadt in the northern downtown of the city suffered by a series of problems such as vacant houses and population aging. So, in this case, the local government hopes to systematically transform this area in order to promote the development of a series of industries such as tourism to achieve urban recovery.

After learning some basic historical and geographical information, this studio started with a 5 days workshop at the local area. During these 5 days, we worked as five groups to analyze different areas of Zutphen, in terms of different scales, aspects and perspectives, etc. Although I can't say the work in that stage really contributed to my later design process, but it generated a very comprehensive information on the history of the local people and the status quo. After that, my attention began to focus on the area of Nieuwstadt, and more particularly on the eastern part of the district with a strong religious and historical background "Klein Vanticaan". Hence, my target is to **excavate** tangible and intangible values in this district.

After returning to school, we all the students communicated with others about what we found during the excursion and integrated these findings into a more detailed analysis from street noli map to the details of the pavement. Compared with the first analysis, this one went deeper and more specific. In the course of this analysis, the building I eventually chose which is called "St. Elisabeth complex nursing home" came into my vision.

The current situation of St. Elisabeth complex is complicated, no matter from the perspective of religious background, historical relics, geographical height difference and current usage. But what attracts me most is its location on the downtown border, connecting the dwellings to the public green and lake in the distance. So, from large scale it plays the most important

role in the urban fabric and morphological configuration. But functionally speaking, now it runs as a nursing home served for old people-who are the main group of people in this area. After knowing the detailed background information about this building complex, I wish that through my project, this building complex and its surrounding green space can be a perfect transition point from the downtown to the suburban area. And considering the current façade and volume of this building complex, I came up with my concept:

"Coexisting harmoniously"

In this context, coexisting objects do not only refer to objects such as newly-built buildings and the historical city wall, but also refer to different groups of people, the old people, young people and tourists, I hope all of them can enjoy this area. Closely following are my more detailed research questions:

"How to transform the existing building's volume and façade to make it blend into local medieval atmosphere?" -the building's envelope

"How to achieve a public space that can be enjoyed by different ages of people?" -the building's surroundings

"what are the old people's authentic needs as dwellers in a nursing home?" -the building's functions

The relationship between research and design

By coming up with the research questions I mentioned above, I had three questions corresponding to the building envelop, surroundings and functions. In the preliminary stage, I supposed to find answers of these three separately, so as not to interfere with each other. Based on the previous analysis of Zuthphen and Klein Vanticaan, I reduced the scope of the next step analysis into my target complex and its surroundings. So, it can be seen that with the gradual clarification of my own goal, the scope of analysis has gradually narrowed and become more and more clear and specific. Having these questions in mind, I went to the site again for a more precise investigation.

Contrast of local atmosphere and current building appearance.

Tourists on the boat tour of Berkel River

Interior of the nursing home

In the process of finding answers to the research questions, the starting points of my future gradually emerged. For example, through my personal experience, the current arrangement of the nursing home has big problems in terms of interior light environment and common space, which does not meet the needs and preferences of the elderly. Thus, in the design stage, these points directed what I am going to achieve in reality. So, in this case, research and its process provide the factual basis for the next design.

The relationship between the graduation project and the studio topic

For a studio that focuses on how to deal with the relationship between heritage and architecture, I think my graduation project perfectly reflects this trait. Inside my design site, there are several structures built in different ages with different aims:
Berkelpoort, city wall and the bottom part of the watch tower were built in the 15th century as a part of the city defense system;

The Chapel was built in the late 18th century as an extension work of a catholic asylum;
The current building was built in 1990s, but it inherited the name and history of the catholic asylum, although the function had changed into an elderly house for all local residents.

Therefore, how to coordinate the relationship between buildings of different eras so that they can achieve harmonious coexistence, the aim I want to achieve has the full correspondence with the topic of studio.

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

Each studio has its own unique methodology, that can influence student's personal idea about their research method and approach in their own design process. Because H&A studio focuses on the issue of heritage, how to assess heritage's value and build a principle of architectural treatment to problems with different values requires a very scientific methodology to guide your personal method on design, which is also known as culture value assessment. Although in that matrix everyone may draw different conclusions, because this is a scientific and systematic evaluation tool, you have sufficient rationality for the next step of design.
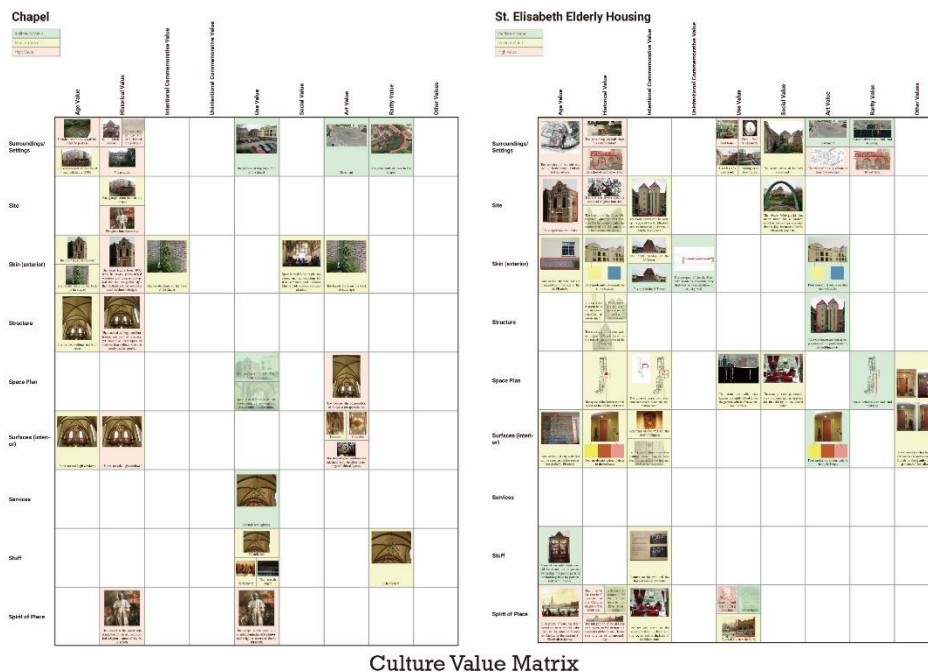
Culture Value Matrix

The relationship between the graduation project and the wider social, professional and

scientific framework, touching upon the transferability of the project results

At the very beginning, as we knew, this design topic was given by the local government, which means the problems in this area is the objective existence. Based on this, we can better understand local people's appeals and help them solve problems. Doing research upon a realistic circumstance has a wider social professional and scientific framework, because everything you have done cannot be separated from the basis of reality.

The ethical issues and dilemmas you may have encountered in doing the research, elaborating the design and potential applications of the results in practice

I think in every project challenges, dilemmas and opportunities coexist and they are mutually convertible with each other according to architect's intervention. In the site of St. Elisabeth complex there are several different storylines intertwined and based on the different storylines, different scenarios can be generated. Therefore, I think it's necessary to clarify the hierarchy of each element, and according to the priority of the elements to put forward corresponding solutions respectively. Each solution should be complying with the principles summarized in previous studies and surveys.

Different from my previous architecture education, which always proceeds from a clear task statement, initially my graduation project in heritage and architecture studio only had a very broad concept "sustainable city". Therefore, everything should start from the analysis of the city, district, block and target building. This kind of multi-level analysis may not only about architecture, but also anthropology and sociology. Finding a reasonable problem or several problems which can promote my next-step design is important, and not easy at all. During the design stage I followed the concept of "atmosphere" to guide my renovation work. And I also realized I've spent too much on the detailed programming and floor planning this kind of mechanized operations, which caused me didn't have time to consider other aspects such as spatial experience, detailed materiality, physical model making, etc. Another big problem comes from the difficulty of understanding vernacular Dutch house, no matter from the façade or using habit. Honestly speaking, although I wanted to achieve the individual Dutch house experience in a collective apartment building and make the massive building fit into local landscape, seeing from the result I don't think my work deals with it very well. I hope slight change can be done before P5 to realize the ultimate goal.

In conclusion, my research was built based on full observation and investigation, and the methodology given by the studio is a good tool to help clarify the relationship of different heritage in my site. Then during the process of finding answers to my questions, the principle was summarized to shape design scenarios. The work I am doing now is to integrate all these scenarios according to their priorities and release my target.