EVALUATING VALUES OF HERITAGE BUILDING
Historical research based on narration and layers method

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I INTRODUCTION

Research is a fundamental part of starting an architectural design. Everyone understands this importance and conducts research before entering a full-fledged design, which is the starting point for the architecture process. However, if research is conducted without establishing the purpose and method of research, no matter how faithfully the research is conducted, the result will be a vast list or inventory of information. This is not a desirable result because there is risk for important values to be buried in the vastness of the material, making the results difficult for the reader to understand. In order to avoid this, it is necessary to clearly set what I want to know, to determine the methodology of the research, and then to create a question.

The architecture is a very broad and interdisciplinary field of study, but at the same time very limited and realistic. The industry of architecture profession must adhere to time, quality and cost, and architects must strike a balance between them. Therefore, architects must act with clear intentions and take responsibility for their outcomes, which will have a permanent impact on society in the future. To achieve this, it is further emphasized to establish a methodology for specific research. This is because the detailed methodology is set as the starting point of the design as well as the effective research, which is the basic stage of architecture process, and controls the result.

Through the lecture series on the Research Method, I was able to learn about approaches and frameworks for various issues, with an overall understanding of research and theory. These lectures opened my eyes to my understanding of epistemology. As depicted in the diagram of Charles Jencks, numerous epistemes exist in wide spectrum, reflecting the perspectives of different architectural research. There is no hierarchy between them. They are complementary. Theoretical research, coexists with contextually led analysis.[1] Therefore, once again, the selection of the appropriate tool is emphasized.

As with selecting the appropriate research tool, I realized that diversification of the tool is also important through this lectures. Likewise, the role of the architect is not only focused on one thing, but also requires diversity to cover various fields. In doing so, complex architectural problems can be tackled holistically, as opposed to operating through single channels.[2] This ultimately produces a better design.

Based on this understanding, I will approach thesis research of H&A Studio. My thesis topic is to renovate the Fenix ll warehouse, a legacy of the industrial era. The building is located at Katendrecht in Rotterdam, which has a rich history and culture. Fenix ll and the peninsula-like Katendrecht are deeply connected to the surrounding elements and history, such as the Maas River, from the building itself to the formation process around it.

In dealing with these heritage renovations, investigating and preserving historical values is an important task. However, how would I approach the various value it has, and how can I assess the significance of that value? To achieve this, several methods must be used in combination.

[1] Charles Jencks, “Jencks's theory of evolution: an overview of twentieth-century architecture,” ARCHITECTURAL REVIEW - LONDON-(2000): 76-79

[2] Ray Lucas, Research Methods for Architecture (London: Laurence King Publishing, 2016)

II RESEARCH-METHODOLOGICAL DISCUSSION

When dealing with built heritage, architects face many challenges, but the most important is probably conservation discussions. Architects need to establish the balance of what parts of the building should be preserved, reused, or removed. Architects can also discover the inspiring synergy of old and new in the process of finding the balance.[3] The decision must be made more carefully when dealing with heritage, which itself has several historical values, both in its buildings and surroundings. Therefore, in order to grasp the various values, it is necessary to conduct extensive research, and it is necessary to determine the importance of it based on the values derived from it. The historical context is very important to the heritage, especially for Fenix ll, the topic of this thesis, and Katendrecht where it is located, reflecting the historical context from the building to the urban fabric. I hope that this heritage project would be able to gain people's empathy and connect with history, not just a repetition of the past. At the same time, I wanted to read it as a whole dynamic history, not a fragmented one.

To achieve this, it was necessary to use narrative methods in addition to historical research. The narrative methods covered in the lecture were mainly used as a method of reading a specific landscape or sequence of space based on human experience, but this could be applied to a historical research. Every genuine work of history displays features which strongly support the claim that history is a species of the genus Story.[4] Historical research, like the narrative method, is based on story, and based on this, narrative is formed.[5] And this can lead the reader to a coherent drama.[6] Narrative is suitable for drawing people's empathy. Narrative consists of stories which are vehicles for empathy,[7] and places become collections of stories where one is able to situate oneself within the dynamic whole.[8]

Collecting historically valuable stories from a heritage building is a very broad task. A new framework was needed to limit the scope of the investigation and to provide an efficient approach. For this, the Shearing layers method was used.[9] In this method, layers are set from the site to the building, and each layer has a specific range, so it provides a clear guideline. With this method, I can find the story, or value, associated with each layer and weave it into one narrative.

For this, decision making for each value was required. The H&A Studio's Value matrix was used for this, but I think this method is too subjective and diverse to do decision making. For the construction of the narrative, specific and penetrating criteria were needed. Therefore, new lenses, water and historical timeline, were added. Water was the most unchanged, most closely related factor on the project site, and through further investigation, a timeline was set based on the moment when Fenix ll experienced the most radical changes. Through this, I tried to weave past values researched through drawings, photos, and documents in the archives, and the traces researched through many field visits to make narrative.

[3] Marieke Kuipers and Wessel de Jonge, Designing from Heritage: Strategies for Conservation and Conversion (Delft: TU delft, 2017), 23
[4] W. B. Gallie, Philosophy and the Historical Understanding (New York: Schocken Books, 1964), 66
[5] Linda Groat and David Wang, Architectural Research Methods (New York: John Wiley and Sons, 2013), 175
[6] Ibid., 182
[7] Klaske Havik, “TerriStories. Literary Tools for Capturing Atmosphere in Architectural Pedagogy,” Ambiances (2019): 4
[8] Doreen Massey, For space (London: Sage Publications, 2005)
[9] Stewart Brand, How Buildings Learn: What Happens After They're Built (London: Penguin Publishing Group, 1995)

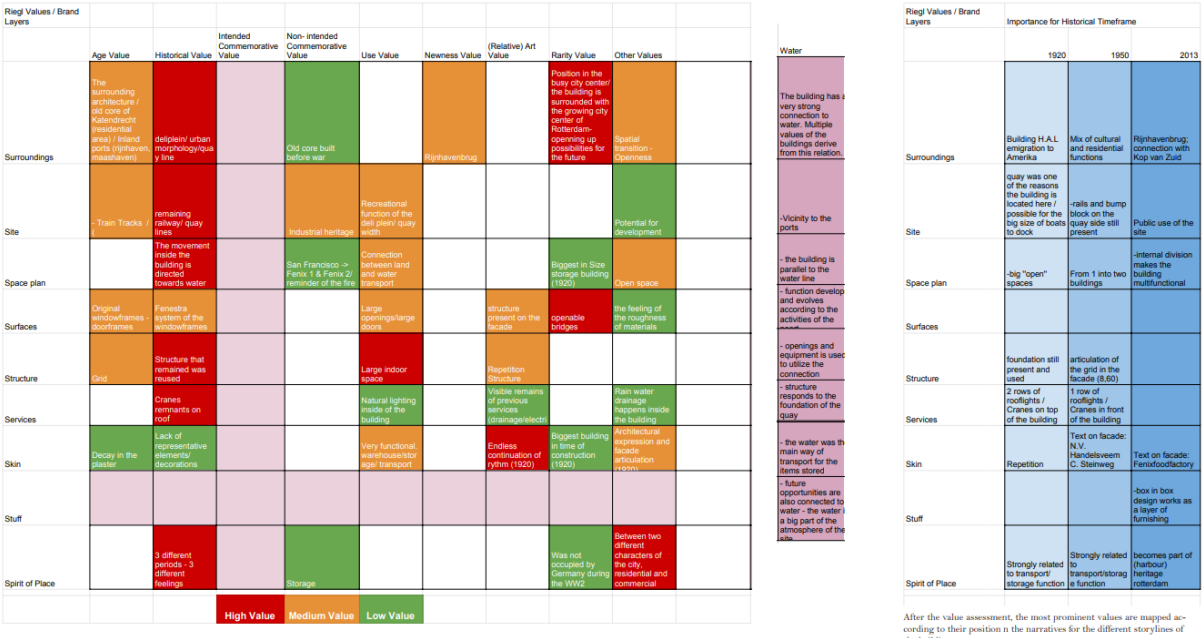

Figure 1. Value matrix with added lens, Water(pink) and Historical timeline(blue)

III RESEARCH-METHODOLOGICAL REFLECTION* (ca. 750 words)

In Heritage, investigating and evaluating values is a very important process. Value has always been the reason underlying heritage conservation. It is self-evident that no society makes an effort to conserve what it does not value.[10] The approach through layers I used for this has been widely used as an approach to heritage building from the past.

Steward Brand introduces the shearing layers method, which analyzes the tangible layers of buildings in his study 'how buildings learn'. Brand's framework allows observers to identify different rates of change as well as integral coherence of buildings through defined layers.[11] This Brand's method can be applied to any building by dividing it into six layers. Also, by understanding the integral coherence of the building, it helps to avoid inconsistencies when narrating historical values entangled in heritage. Each building is recognized as six layers: site, structure, skin, services, space plan, and stuff. He also estimates the life cycle for change each layer has. Each layer is also the order of rates of change. Rates of change increase from a stationary, immovable site to a short cycle, perhaps daily, to stuff (chairs, tables, and so on) inside the buildings.

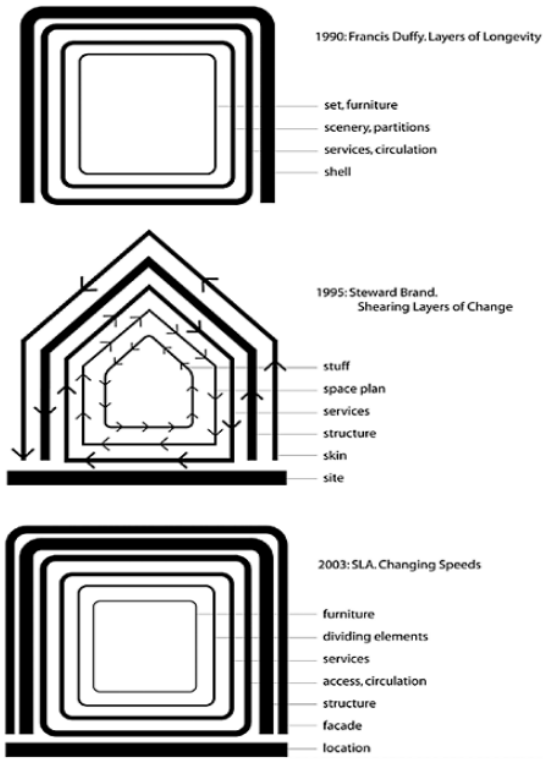

Figure 2. Changing speeds, after Duffy, Brand, and SLA from William W. Braham and Jonathan A. Hale, Rethinking Technology: A Reader in Architectural Theory (London: Taylor & Francis, 2006), 417

Attempts to differentiate buildings and surrounding layers based on change rates existed before the Brand. Brand's framework is an extension of Francis Duffy's study exploring the rates of change in office interiors for the RIBA.[12] Based on the study of organizational structure and office layout, Duffy created the concept of Shearing layers, the analysis of buildings and building components in terms of layers of longevity to facilitate the accommodation of technological and organizational change. Duffy 's four layers of longevity of built components consists of four layers: shell, service, scenery and set.[13] This concept was an attempt to understand and explain the change when dealing with buildings that continue to change over time.

Since then, Brand's work is once again applied to the framework of other architect groups. The following excerpt was taken from Smart Architecture, a publication prepared by SLA. The seven system-based layers described by SLA further expand on those originally described by Brand, who was expanding on earlier observations by Frank Duffy. Their observations can be summarized as follows: "be careful when mixing systems together".[14] They noted the dynamics between these layers when dealing with complex and flexible buildings. So it consists of seven more detailed layers: location, façade, structure, access, services, dividing elements, furniture.

[10] Marta De la Torre, *Assessing the Values of Cultural Heritage: Research Report* (Los Angeles: Getty Conservation Institute, 2002), 3
[11] Marieke Kuipers and Wessel de Jonge, Designing from Heritage: Strategies for Conservation and Conversion (Delft: TU delft, 2017), 33
[12] Stewart Brand, How Buildings Learn: What Happens After They're Built (London: Penguin Publishing Group, 1995)
[13] William W. Braham and Jonathan A. Hale, Rethinking Technology: A Reader in Architectural Theory (London: Taylor & Francis, 2006), 417
[14] Ibid., 416

I think this layer-based method is suitable for systematically exploring buildings, but not for evaluating and reinterpretation of various values in a building or context. Therefore, the shearing layers method needs to be combined with another method. H&A Studio provides a framework called Value Matrix designed by Clarke, N & Kuipers, M for this value evaluation. This is the process of categorizing values specifically to help understand the values. The Value matrix also has layers, which are based on Riegl's layers,[15] an analytical framework used to measure the value of monuments. The value matrix consists of: age, historical, commemorative, use, newness, art, rarity, and other value. Through this analysis, I understood the values of the building, but I thought that these values were scattered like historical fragments. I hoped that this could be combined into one story so that it could more empathize with people and applied the narrative method.

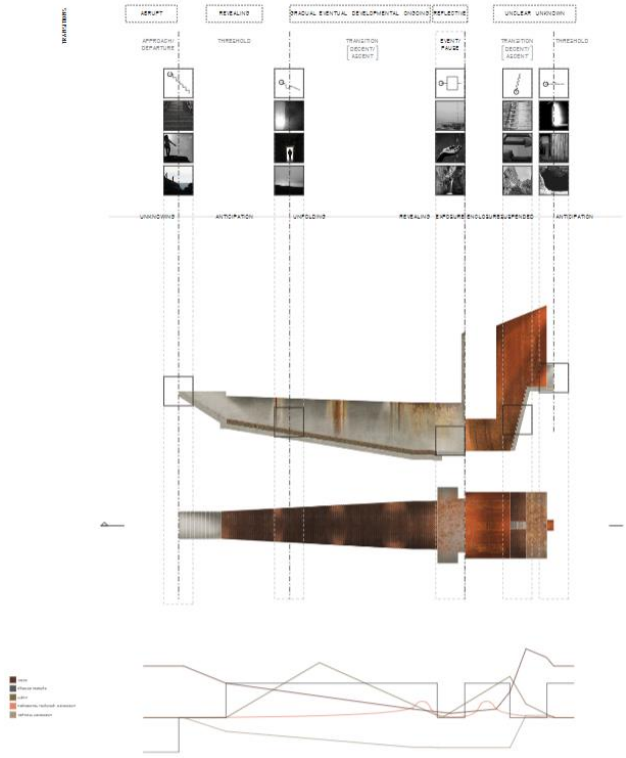

Figure 3. Sectional narrative mapping. Courtesy of Kristen Van Haeren 2015.

The narrative, which has recently been applied to various fields, is considered as a means of organizing human thinking or understanding history.[16] In architecture, the narrative method is also used as a method of examining the sequence of space. In this method places are considered as collections of stories of spaces that are lived in and experienced.[17] Havik shows several examples of narrative formation through stories in her literature. In that space, a narrative is formed through various materials and non-materials, and through this story, space draws people's empathy. I think this concept can also be applied to a value matrix, and based on this, I can make a strong historical narrative by decision making.

[15] Alois Riegl, *Der moderne Denkmalkultus: seine Wesen und seine Entstehung* (Vienna: W. Braumüller, 1903), 21–51

[16] Park Mingeong, “A theoretical investigation on the concept of narrative: Storytelling, meaning-making, and communication,” Asian Journal of Education 7, no. 4 (2006), 27-41

[17] Havik Klaske & Kristen Van Haeren, "A story of three: a narrative approach to reading atmosphere and making place," SPOOL [Online], 3.2 (2016), 5-24

IV POSITIONING

The value matrix composed of the results investigated through the shearing layers method provides a clear understanding of the various values of the building. Each value is categorized by value category based on Riegl's concept according to the position of layers. However, these categorized values depend on categories in the matrix and exist as fragmented historical values. In order to make people sympathize with this, it is necessary to form a narrative based on the story encompassing the whole. To do this, architects must determine the significance of each value, whether it is high or low. However, I think that the criteria are fairly subjective in order to evaluate based on the existing value matrix. For instance, the value was evaluated through discussions with others, but everyone gave a different valuation. Also, when the story was composed based on these results, it was not connected to the whole, and I felt biased to one side. Therefore, a new standard for weaving the entire matrix is needed.

To set new standards, values need to be analyzed once again, focusing on unchanging and changing. As a result, two story lines were formed. One criterion is water that has had a very close relationship with this peninsula from the past when looking at Katendrecht with a wide lens. The other is a timeline focused on the heritage building itself through a narrow lens. Fenix ll, an industrial heritage, has undergone three major changes in structural, functional, and relations with the surroundings (1920, 1950, 2013). A timeline based on this historical significance can be an evaluation criterion encompassing architecture and context. Based on this new lens, the values previously found are readjusted to form a coherent story. The historical narrative is formed by adding new layers to the existing value layers in the matrix. If I perform a value assessment on a value based on the elements of this narrative, a clearer criterion is created, so it is more specific about what is more important and relatively less important than the conventional method, or whether to leave or remove it. This will produce more objective results.

However, in order for these narratives formed on the matrix to be conveyed to people and draw empathy, this must be expressed in spatial narratives in real space. Therefore, it is necessary to investigate various materials that can form a narrative. In the case of this project, this element will be a material for historical significance, a newly added layer. To this end, historical significance mapping was performed for building components to examine the traces remaining in the architecture and context associated with each timeline. Based on the aforementioned shearing layers, several factors related to three distinct timelines were investigated from building structure to smaller technique like Fenestra joint used in certain timeline for window frame. In some cases, it was not possible to obtain sufficient material for all time zones in some shearing layers. Therefore, I think it is necessary to flexibly adjust each layer. The spatial materials that make up the selected story through this process have important value in historical narrative, and will play a significant role in determining the future design through valuation, the ultimate goal of heritage architecture.

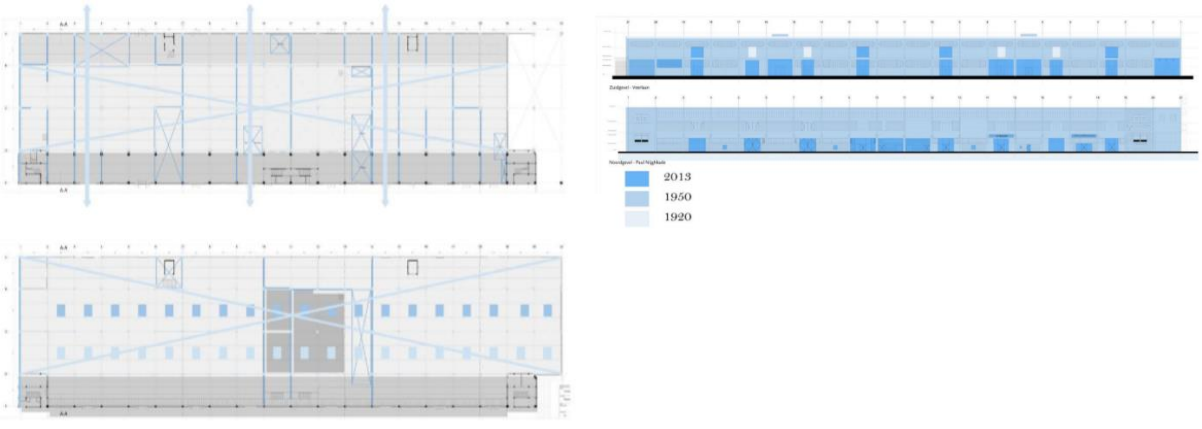

Figure 4. Parts of historical significance mapping on Fenix ll storage

Dealing with heritage is, after all, a series of questions and decision making. Architects must keep thinking about what to preserve, which results in evaluation of each value. For this evaluation, a specific method suitable for the purpose must be used. This is because the expected result depends on which method is used for evaluation. Multiple lenses may be used simultaneously to achieve more specific results in this process. Each method can inform us about a certain context in different ways. In addition, values existing in architecture and context must not be isolated in the past but must coexist properly with the present. For this coexistence, empathy with people living in the present is essential, and various story telling techniques should be applied from the research stage which determines the direction of further spatial design.

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