

From the past to the present

The results of applying heritage methodology to a design process.

"*Maxima quaeque aedificatio vix nunquam dabitur per eundem absolvi possit, qui posuerit.*" – Alberti

"*A great building can seldom be completed by the one who erected it.*" - Alberti

All throughout history, men have been transforming their built environment in order to meet the needs of modern times. In the chair of Heritage & Architecture, there is a common belief that taking the past with us into the future is of vital importance for people to stay emotionally connected with the built environment, as they bear the historical and cultural values of society. With this point of view in mind, the practice of heritage takes an interest in the way that should be dealt with the existing built environment in case of transformation. It is concerned with the act of balancing the old and the new and ultimately aims for preservation of existing qualities while making the building fit for contemporary needs, in other words, preservation through development.

Because the practice of heritage has to do with an existing situation, research and analysis forms an important and integral part of the design process. Apart from the architectural analysis, that is part of the design process in all fields of architecture, heritage research also involves assessing the cultural value and the technical state of the existing situation. The chair of Heritage and Architecture therefore looks upon its practice as a synthesis of the fields of design, technology and cultural value.

When graduating in the direction of Heritage & Architecture, understanding its distinct methodology and being able to put it into practice in the design process can be regarded as the main goals to achieve in order to successfully complete the programme. Therefore, it is important to reflect upon the design process to see to what extent the heritage way of doing has been incorporated in the design process. In order to do so, a theoretical overview will be given to gain more understanding of heritage methodology. Thereafter, the method used in the design process will be explained. Based on this information can be reflected on how the design project is related to the field of heritage and architecture, how the research method is related to heritage methodology and how research and design are related to each other throughout the design process.

Thinking Heritage

In order to determine how the design project is related to the field of heritage and architecture, it is important to sketch a brief theoretical overview of the essence and aims of heritage practice. Hereafter, an outline of the development of the personal definition of the design assignment will be given, explaining the choice of research question, themes and programme. The determined personal design strategy can then be compared to those of the heritage practice, to discover the extent of the relation between the personal design strategy and the practice of heritage.

As already mentioned in the introduction, the practice of cultural value is considered one of the cornerstones of the practice of heritage. The awareness of the importance to develop a method for the assessment of the rather subjective notion of cultural value stretches back to the beginning of the twentieth century, when culture-historian Alois Riegl wrote *Der Moderne Denkmalkultus* (1903), in which he presented his view on assessing the existing situation as part of a transformation strategy. Riegl celebrated this level of subjectivity in his theory, advocating the importance of the personal and emotional aspects of cultural value, since the value of heritage can not only be found in the fabric of the existing but even more in the shared feeling of the community. (Halbertsma & Kuipers, 2014)

In *The Architectural Memory* (2010) Kuipers underpins the importance of the intangible side of cultural value. In her model for the analysis of heritage and assessment of its cultural value, Kuipers makes a division between the 'hardware' and 'software' of the object, in order to cover both the material and immaterial aspects of the existing in the value assessment. In order to cover all the fields of research, a thorough analysis of the situation is needed. In *Battlefield of Histories* (2014), Egberts not only stresses the importance to analyse, but also to prioritise the values found. In her work, she stresses the importance to uncover the traces of different time layers in the existing, in order to uncover all stories of the place. With a set of case studies, she strikingly illustrates how large the impact of the local community on the valuation of these different time layers actually is. The importance of profound analysis and the

importance incorporation of the influence of locals on the outcome of the analysis is also acknowledged by Meurs. In *Building in the stubborn city; design with history* (2015) Meurs states: "The made-to-measure solution that the historical context requires can be found by examining the existing qualities and describing the essential characteristics of the site, and then creating the design on the basis of these qualities." (Meurs, 2015, p.256) Meurs here advocates the importance of a context driven approach in designing with heritage. From this attitude, he distinguishes different ways of dealing with the existing, in which incorporation of the local community in the transformation plays a large role.

Since we now have a more clear vision on the nature of the practice of heritage, it is secondly important to give a brief explanation of the chosen research question, the themes that are to be elaborated on in the design and the chosen programme for the buildings that are to be transformed. At the beginning of the design project, a research question was formulated based on a personal fascination. The objective of this research question for the project is to perform research on a topic of interest and ultimately answer the question through the design. Because of the poor conditions of the public space in the surroundings of the complex, the lack of social cohesion in the neighbourhood this brought about and the large number of possibilities to improve the quality of the public space and thereby the local social situation, the theme 'public interior' was chosen for the project. Based upon this theme, the research question formulated is: "How can the design of public interiors empower the transformation of industrial sites within an existing urban structure?"

Since we are dealing with a heritage project, addition of the notion 'existing urban structure' to the research question is of great importance to the project, because it demands a context-conscious approach from the student. Because the research question asks for the design of public interiors, the programme was to be of public nature. Since analysis showed that the lack of public space in the surroundings of the complex has led to the lack of social connection in the neighbourhood, with the choice of programme, the aim was to restore the social cohesion in the neighbourhood by the design of public interiors. The choice of programme should thus facilitate this social connection.

For the choice of the programme, the history of the place was used as a source of inspiration for the choice of programme. As is the practice of heritage, different time layers of the complex were analysed. In doing so was discovered that in the past, the social cohesion in the neighbourhood had always been facilitated by the MMC. Prior to the period of MMC, the place had been occupied by religious instances, that shared the same responsibility towards the local community. Being now aware of the level of importance of these past time layers, it was decided to reintroduce the function in the neighbourhood, thinking of a modern take on a monastery, a spiritual centre.

When regarding the chosen research question, themes and programme, the aims of the project are to some extent similar to the aims of the practice of heritage. The socio-cultural background of the place was used as starting point for the design, namely the aim to reinstall the social cohesion in the neighbourhood. The local community thus plays an important role in the transformation of the complex. Furthermore, the project has a contextual approach, combining different layers from the past. Having analysed all different time layers, apart from the history of the MMC, also the monasterial history of the place is incorporated in the new design.

On heritage methodology

In order to gain more understanding of the practice of heritage and design, it is useful to sketch a brief theoretical overview of the various methods for the assessment and design of heritage projects. Secondly, the personal working method will be reviewed, after which the personal method can be compared to the established heritage methodology, in order to conclude to what extent heritage methodology has been a part of the personal design process.

In *Discovering the assignment* (2007) Roos explains his personal method for the redevelopment of heritage. Here, Roos introduces the notion of a transformation framework, in which all elements of importance from the existing are documented, that can be used as a starting point for the redesign of heritage. According to Roos the transformation framework should consist of the most important aspects from the value assessment, the design potentials found in the architectural analysis and the research question in which a subject of personal fascination is embedded. Making different sets of combinations of elements from these three categories help the designer to show the potentials and dilemmas of the design assignment. Carefully balancing the elements of importance from the three categories and the testing of these different design scenarios and by the transformation framework should then ultimately lead to a heritage-based design.

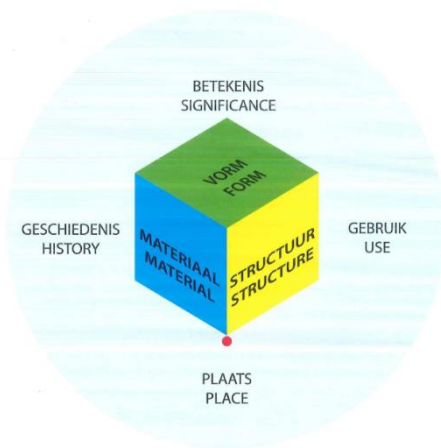


Fig. 1: Visual representation of the model for the assessment of heritage of Kuipers, conceptually showing the different aspects of the hardware in the cube and the different aspect of the software in the sphere. Image source: *The Architectural Memory*.(Kuipers, 2010)

In order to be able follow the method of Roos, it is first important to be aware of what to analyse in the value assessment and what parameters to use while prioritising different values. As already briefly mentioned in the previous paragraph, Kuipers (2010), presents an overview of what aspects of the existing should be assessed in the value assessment in her literature, where she advocates that not only the tangible context (hardware), but also intangible aspects (software) should be taken into account. Elements of the hardware that are to be assessed are related to physical context, such as form, structure and material. Aspects that belong to the software can be regarded as the intangible context of the existing and are defined by its place, history and meaning. Where Kuipers defines what should be assessed in the analysis of the existing, Riegl (1903) and Halbertsma (2014) describe in their theory a set of different values to classify all aspects of the existing. They separate the notion of value in commemorative values and present-day values. To the first category belong the values that an object had developed in the course of time. To this category belong the age value, the historical value and the deliberate commemorative value. The present-day values indicate the value of the object as it is at the moment. To this category belong the use value, the newness value and the relative aesthetic value. To these sets of values, two more values were added later, being the nostalgic value and the conflict value.

Commemorative Values	Present-day Values
1. Age value	1. Use Value
2. Historical Value	2. Aesthetic Value
3. Deliberate Commemorative Value	2a. Newness Value 2b. Relative Aesthetic Value

Fig. 2: Own representation of the values incorporated in the value assessment method of Riegl, based on *Het Erfgoeduniversum. Een inleiding in de theorie en praktijk van cultureel erfgoed*. (Halbertsma & Kuipers, 2014)

On the basis of this brief overview of theory on heritage methodology can be concluded what aspects of the existing should be assessed before starting the design process, how this should be done and how the findings should be incorporated in the starting phase of the design process. In short, both the physical and intangible of the existing should be assessed, using the set of values from Riegl to classify and prioritize the different values of the existing. The most important aspects of the existing should then be integrated in the transformation framework, which forms the basis for the design.

When regarding the research method used in the personal design process, a similar method of approach can be distinguished. In the design method, as shown in the image below, the conclusions of the architectural analysis are used to define the problems and potentials for the surroundings, site and buildings. The design problem can be defined as the need for reconnection and differentiation of the MMC and its surroundings on a variety of levels, being a physical, visual, social and economic level. The

conclusions of the value assessment are used to define the essential qualities of the surroundings, site and buildings. The essential qualities of the MMC can be defined as the aesthetic character of the current physical state, the social character the complex has had in the past and the functional character that has driven its development in the past. The conclusions of the architectural analysis and the value assessment together formed the design assignment of the graduation project, that can be defined as the reconnection and differentiation of the MMC and its surroundings on a variety of levels, while restoring, enhancing or adding value to the industrial, social and functional character of the site. The conclusions of the architectural analysis and value assessment combined with additional theoretical research on the research topic, both literature and comparative case studies, will lead to a transformation strategy for the complex.

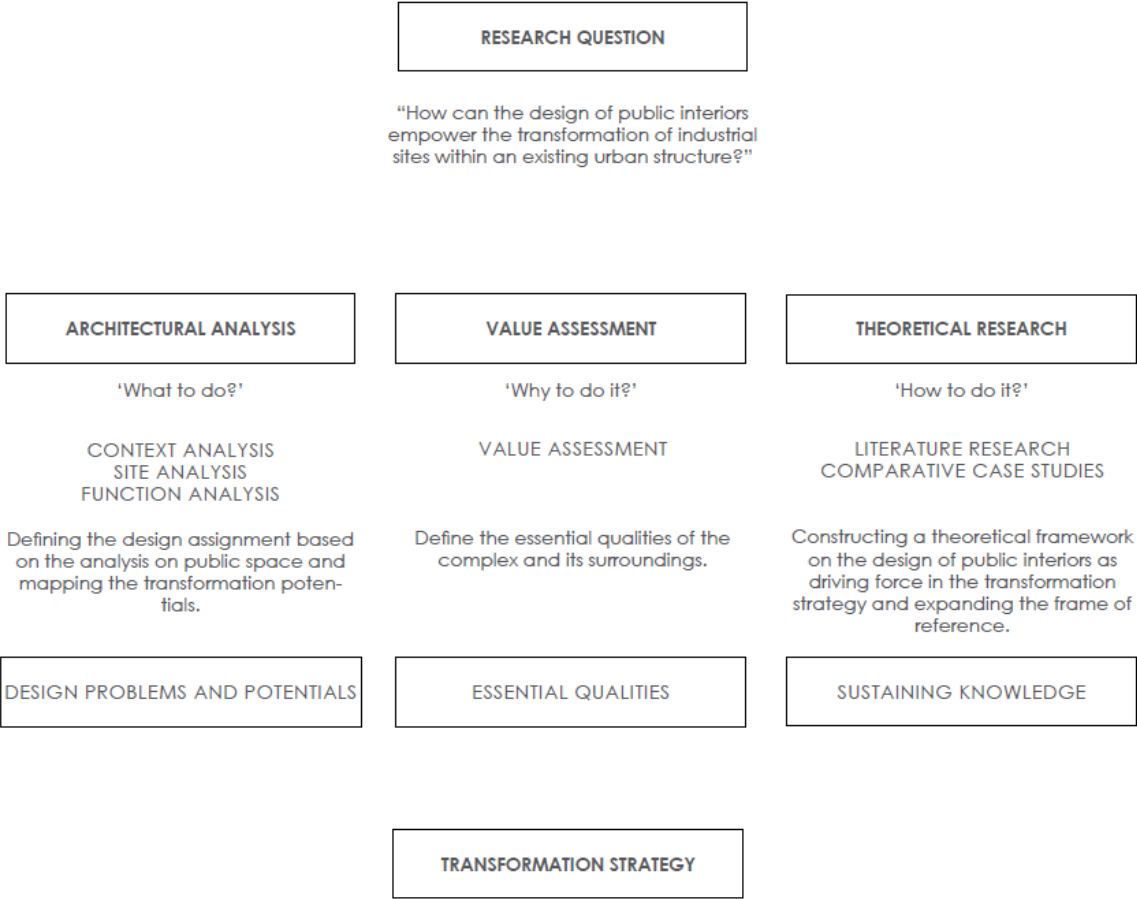


Fig. 3: Own representation of the personal research method

Apart from comparing the personal research method to established heritage methods, it is also important to compare the method used for the value assessment, as it forms a large part of the transformation framework. Here, as explained in the theoretical outline, it is important to look at what is analysed in the value assessment and how the assessment has been made. In the personal research method, the value assessment is performed using a matrix that connects the different values of Riegl to a variety of layers and aspects of the existing situation. These layers are based on the shearing layers of Stuart Brand, which are the site, structure, skin, services, space plan and stuff. Now, these layers are all physical aspects that should be assessed, but since also the intangible aspects of the existing should have a place in the value assessment, three aspects have been added to the layers of Brand, being the story, the social and the surroundings. The value assessment matrix is used as a tool for the inventory of all present values. Having created this overview, the values are prioritised in a next step of the analysis, leading to a set of essential qualities that are to be included in the transformation framework.

	AGE VALUE	HISTORICAL VALUE	ARTISTIC VALUE	COMMEMORATIVE VALUE	USE VALUE	NEWNESS VALUE	CONFLICT VALUE	HOSTALGIC VALUE
SURROUNDINGS	All corner side	construction line drawing	architecture of corners and poles		indicate the possible signs through the site			talking of birds: the oldest birds in the city of the neighborhood
STORY		development MAC: presence of different time layers due to the development of urban structure with the urban history						
STUFF		industrial machinery from different time periods shows the development of MAC	industrial character in machinery	photos				
SERVICES		production in various stages in production and finishing part						
SPACE PLAN		progression (signatures in design and use of built fabric and natural spaces)	difference in character of the public interior		signifier: spaces, shading			
STRUCTURE		interconnection in construction through the process of the production process, without use of machines in part of the production process	industrial character: structure, repetition of construction, construction, compartmental structure, to determine character in comparison with the nature of the building		public interior: high density, high quality, building height, construction use value			
SOON	various building materials	various material functions appear in the particular structure of the building	difference in character: to create a sense in progress, industrial character, industrial character					
SITE		connection in all 3 dimensions: different parts of the MAC	building pattern: difference of the pattern, to create and production MAC and its surroundings		summarizes: large objects, building pattern, in context of the built environment			
SOCIAL		should use MAC: each use of MAC in the neighborhood in relation to the architecture and the support of function of other workplaces					contrast vs MAC: history, incorporation of religious heritage, heritage vs religious preparation, relation of MAC: link to the historical period in religious history	productivity: MAC: contribution of the historical character of building to the functionality of MAC

Fig. 4: Own image of the value assessment matrix, showing the layers of Brand with the additional layers on the vertical axis and the values of Riegl with the additional values on the horizontal axis.

The next aspect that is important to assess is the synthesis of research conclusions in the transformation framework. In the personal research method, the transformation framework is replaced with the so called design assignment, in which the conclusions from the architectural analysis and the cultural value assessment are incorporated. The conclusions from the value assessment, the essential qualities, also serve as the starting points for the design. Thus, the transformation framework can be seen as a combination of the design goals and the essential qualities.

When comparing the established heritage methodology with the personal research method it becomes apparent that in both methods, the architectural analysis and cultural value assessment form the basis of the design. The transformation framework, as it is called by Roos, is in the used method replaced by the so called design assignment, that like the transformation framework is composed of the important aspects from the architectural analysis and the cultural value assessment. Unlike the method of Roos, the personal fascination, or the research question, is in the used method hardly part of the transformation framework. Reason for this is the formulation of the research question in a very early stage of the process, with insufficient knowledge on the existing situation. Upon completion of the architectural analysis and cultural value report, the research question appeared to be of lesser significance than expected upfront. Research question was based upon the believe that the design of public spaces would restore social cohesion and that that would empower the transformation of the complex, but in the end it proved to be that the choice of a social function leads to the transformation of the public space, but that the function itself should empower the transformation of the complex, not the design of the public space.

Designing with Heritage

After comparison of the personal design process to heritage methodology, it is next important to assess the relationship between research and design in the personal design process, in order to be able to conclude to what extent the final design answers to the aims and essence of the heritage studio.

Therefore it is firstly important to create a brief overview of the various relationships that exist between research and design. Thereafter can be analysed in what way these relationships have come into existing in the personal design process and what influence they have had on the final design product. On the basis of this information can then be concluded how heritage-based the design really has become in the end.

In *Research in Art and Design* (1993) Frayling distinguishes three different relationships between research and design: research into design, research through design and research for design. With research into design, Frayling refers to theoretical research on the topic of design, of which historical research is a part. With research through design, the act of designing in order to generate knowledge is meant, which Frayling calls action-research. With research for design Frayling refers to research that is executed with the objective to aid the design process in for instance solving design problems.

When regarding the personal design process can be seen that all three relationships between research and design have come into existence during the process. Firstly, research into design has been important in the design process. Literature on heritage methodology was studied during the beginning of the process to be able to adapt to the heritage way of thinking in the design process. Furthermore, historical research, which is also considered a kind of research into design, formed a large part of the architectural analysis. Apart from heritage-related research into design, literature studies into the chosen design theme, public space, have been performed to gain more knowledge about the theme and put this knowledge into practice in the design process. Research into design was mostly performed in the first phase of the design process since the gained knowledge had to function as basis knowledge needed for the design process.

Secondly, research for design was performed during the whole design process. In the beginning of the design process, the architectural analysis, which can be considered as a form of research for design, formed the most important kind of research and formed the base for the design. Further down the design process, case studies were performed to gain knowledge about specific themes of functions, in order to solve specific design problems that manifested during the design process. Also, reference studies were used to explore possibilities for the design.

Lastly, research through design has been performed during the entire design process, mostly in the form of schemes, diagrams, sketches and variant-studies used to explore possibilities. This kind of research has often been used during the design process in combination with research for design. In this part of the design process, both research for design and research through design have been methods that are not specific to the practice of heritage, but are generic for any other design process. However, throughout the design process has always been returned to the conclusions from the research into design, what makes the project largely heritage-based.

Conclusion

Based on the theoretical overview of the practice of heritage and research in design and the assessment of the personal design process can now be concluded how the design project is related to the field of heritage and architecture, how the personal research method is related to heritage methodology and how research and design are related to each other throughout the design process. From this paper has become clear that the context-based approach of the project, together with the strong emphasis on the social context and the exploitation of the different time layering of the existing, fits within the aims and essence of the practice of heritage. Furthermore, heritage methodology has been incorporated in the design method by using the essential qualities derived from the architectural analysis as basis for the design, incorporating the value assessment in the personal research method and using those two elements in what can be considered a variation on the transformation framework as starting point for the design. Furthermore, the assessment of the personal design process has shown that throughout the design process, a combination of the various relationships between research and design, both related and unrelated to the practice of heritage, has been used. Overall can thus be concluded that the design project fits within the framework of the design studio.

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