

STORYLINES AS AN ANALYTICAL TOOL IN THE VALUE ASSESSMENT OF HERITAGE
ARCHITECTURE
An approach towards capturing intangible values

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Thesis "Storylines as an analytical tool in the value assessment"

I INTRODUCTION – The relevance of understanding research methodologies

The architectural profession is based on an extensive interdisciplinary system of knowledge, which has been developing and evolving over an expanded period of time. The form which architecture takes depends on various factors, and is influenced by f.e. the historical, political, sociological and geographical context. In the process of formulating a decision concerning a suitable design for a building, the architect not only draws from an extensive knowledge base, but also conducts his own research in various ways and through the application of different perspectives. It is therefore of paramount importance for architects to be aware of the various research methods available within the field of architecture, to understand and to combine them adeptly, in order to attain new forms of knowledge that can be used in one's own design, as well as to expand one's architectural "toolbox" and contribute to the knowledge base for future research by other architects or designers.

This course focuses on exploring and understanding the research methods available within the field of architecture and creating awareness on the influence of those methods on the selection of information, and therefore on the knowledge that is gathered. It is a reflection on the methodology within the field of architecture. At the same time, it is an opportunity to critically reflect on one's own research methods and compare these to similar and other research forms available. A critical reflection can result in the alteration of the research method and in the further development or improvement thereof, which the architect can apply in future projects.

The heuristic techniques and design practices presented in this course have led to valuable new insights. The lecture on spatial narratives by Klaske Havik (2020) was particularly interesting, because of the similarities that can be observed between the presented 'narrative method' (in which subjective data is gathered and presented) and the value assessment tools within the chair of Heritage and Architecture used in order to assess intangible building aspects like the spirit of place. This observation has been the inspiration for the topic of this thesis.

This thesis is centered around the following research question:

To what extent is the mapping of storylines an adequate analyzing tool to capture the value of intangible building aspects in the value assessment of heritage architecture?

Within the field of heritage architecture, several research methods have been introduced in order to 'map' (mapping in the metaphorical sense rather than graphic) and thereby to understand the value of the many building aspects. Understanding the value of these aspects enables the architect to make informed choices when considering the appropriate design approach for a renovation or adaptive reuse of a building. The focus of the research methods is mostly to 'map' and compare the values still present on a specific site. However, most of these research methods are centered around the tangible aspects of a building. Intangible aspects, being experienced more subjectively, are more difficult to map. This aspect of the value assessment is still in need of an adequate or proven research method, which underlines the relevance of the question posed in this thesis.

The importance of properly understanding and interpreting the intangible building aspects is readily apparent when considering the challenges of modern architecture and societal conflicts regarding the use of space. Nowadays, as the societal awareness of the importance of sustainability rises, the conflicting interests of preservation and innovation come forward with doubled force; for example, in the debate on heritage object restoration following the 2019 fire in the Notre-Dame Cathedral in Paris, which caused significant polarization between the adherents of a more creative and modern re-interpretation and adherents of a conservative, value-oriented approach towards the restoration of the heritage object.

The aim of this study is on the one hand to discuss the research methodology (section II), and on the other hand to critically reflect on it by comparing it to other similar research methods as introduced and used by other researchers/architects (section III). In the final section (IV) of this thesis the research will be positioned within the current architectural discourse.

II DISCUSSION - Mapping of storylines as an analytical tool within a value assessment

In my graduation project within the chair of Heritage & Architecture, our group analyzed an harbour heritage building, called Katoenveem, built in 1920 specifically for the storage of cotton. In order to understand the specificities and the values of the building and of the site our group conducted a value assessment.

At the TU Delft, a common approach to value assessment is the ordering of the knowledge within a value matrix. The value matrix is a tabular system introduced by Kuipers and De Jonge (2017) in the book 'Designing from heritage: Strategies for Conservation and Conversion' and is used in order to 'map' values. In the table several constituent values are set out against the physical elements of the building, which are ordered per 'Shearing Layer' (S-layers, a concept introduced by Stewart Brand, the S-layers refer to a set of building components that evolve in different timescales).

BRAND +	RIEGL +	AGE value	HISTORICAL value	INTENTINAL COMMEMORATIVE value	NON INTENDED COMMEMORATIVE value	USE value	NEW-NESS value	(relative) ART value	RARITY value [+]	OTHER relevant values [+]
SURROUNDINGS / SETTING [+]										
SITE										
SKIN (exterior)										
STRUCTURE										
SPACE PLAN										
SURFACES (interior) [+]										
SERVICES										
STUFF										
SPIRIT of PLACE [+]										

Figure 1 The value matrix, as presented in Kuipers & De Jonge (2017), p. 87

The value matrix is consistent, in the sense that it covers all physical aspects of the building. Intangible aspects, since they are being experienced subjectively, are presented as elements of 'the spirit of place'. Aspects to be valued here are not specifically mentioned, and the interpretation thereof is left to the researcher.

One of the potential approaches towards mapping more intangible values, which can be expressed through multiple building aspects at once, is to map storylines. Mapping storylines can be seen as an analytical tool that is complementary and contributive towards the research method used to complete the value matrix.

Our analysis of the storylines represented by the Katoenveem building was inspired by a similar study conducted by Groeneveld and Hemmes (2020). During their lecture at the TU Delft on March 2nd, 2020, they elaborated on the building archaeological research they conducted on the Municipal Dockyard in the city of Antwerp. They explained how their analysis of the history of the site and the identification of various elements in the docks has resulted in a value plan for the site. They presented the results of their analysis in a table where all objects within the site are listed and contrasted with constituent values (similar to the value matrix) as well as themes and storylines (see figure 2).

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Objects, cultural-historical values and the theme's of the Municipal Dockyard of Antwerp

Buildings and objecten		Constituent values							Theme's and storylines							
		1	2	3	4	5			1	2	3	4	5	6	7	8
Code on the map		General historical values	Ensemble values	Architectural-historical values	Building archaeological values	Values on the basis of the history of use	Rarity	Integrity (authenticity)	The historical development of the site	The dockyard as a rational man-made landscape	The technological development of the dry docks	The history of the Municipal Harbor Company	How to dock a ship / Emptying and filling a dry dock	Dock workers and office man	Ship repair techniques, machines and tools	Antwerp during the Cold War
	Ensemble of 9 dry docks from 3 periods						yes	yes								
DD1-3	Dry dock 1-3						yes, very	yes								
DD4-6	Dry dock 4-6						yes	yes								
DD8-10	Dry dock 8-10						rather	yes								
	Ondergrondse kanalen en afsluiters			n/a			yes	yes								
P1	Pumping station 1						yes	rather								
P2	Pumping station 2						yes	rather								
WH	Woonhuizen															
	- voorgevel						no	rather								
	- zijgevels						no	rather								
	- achtergevel						no	no								
	- interieur						no	no								
W1	AWN-gebouw						rather	rather								
W2	Ketelmakerij						no	rather								
W3	Propellorwerkplaats						no	rather								
K	Havenkantoor															
	- voorgevel (en noordelijk deel r. zijgevel)						no	yes								
	- achtergevel (en zuidelijk deel r. zijgevel)						no	no								
	- interieur						rather	yes								
G1	Moderne loods						no	yes								
G2	Garagebox						no	rather								
G3	Opslagplaats acetyleen						no	no								
G4	Onderhoudsbaan baggerketting			n/a	n/a		rather	yes								
G5	Blikken loods						rather	rather								
G6	Bergplaats schoorsteenen						yes	yes								
G7	Toiletgebouw						yes	yes								
T1-T7	Transformatorhuisje						yes	rather								
B1-B9	Aloomschuilkeiders															
	- rechthoekige schuilkeider						rather	yes / unknown								
	- ronde schuilkeider						yes	yes / unknown								
	Kasseienbestrating			n/a			no	rather								
	Opslagterrein tussen DD6 en DD8			n/a	n/a		no	no								
	Bolders			n/a			no	rather								
	Lieren						yes	rather								
	Kiepblokken (opgesteld in dok)			n/a			rather	rather								
	Loopbruggen		n/a	n/a			no	rather								
	Houten vloeren bij DD1		n/a	n/a			no	rather								
	Hekwerken op de site															
	- hekjes ten noorden van DD1						no	rather								
	- ronde hekwerken DD 4-6						rather	rather								
	- paalfjes / kettingen trapopengingen						no	rather								
	- hek, zuidzijde dokhoofd DD8						no	rather								
	- hek, noordzijde dokhoofd DD8						no	rather								
	Terreinscheiding															
	- type 1 (met gas)						no	rather								
	- type 2 (gesloten muur)						no	rather								

Legenda
n/a = not applicable

High value
Positive value
Indifferent value

Of crucial importance
Of interest
Of any interest

: 2 maart 2020

Figure 2 The objects, cultural-historical values and themes, as presented in Groeneveld & Hemmes (2020), p. 34

The identification of the storylines was helpful in deciding what elements of the site carry the intangible values the site represents. The results of this part of their research had major influence on their 'value plan' of the site.

The first stage of the mapping of storylines is the definition of the storylines represented by the site. Storylines can be formulated after conducting initial research into the heritage site, based on the analysis of information available through historical and cultural analysis, and may involve archival research. Storylines are formulated as short sentences here, but often encompass interdisciplinary aspects of the (history of) the building. A storyline combines major events within the 'lifetime' of the building or significant aspects of its architectural setup with noteworthy developments in different fields. In the case of Katoenveem, examples of storylines include: the uniqueness of the building and of its position in the global cotton trade of the 19th Century; the innovation expressed by the advanced building technology of that time; or the functionality-driven setup making the whole building into a machine.

The value matrix is meant to provide a thorough and organized way of analyzing physical aspects of the building in a multidimensional way, thereby reducing the amount of data and identifying and sorting correlations. It is a system based predominantly on objective or quantifiable data, starting from physical/tangible aspects and consequently evaluating them.

In comparison, the analysis of a storyline re-interprets the information and marks/pinpoints the aspects (attributes) of the building which are representative for (several of) the intangible values, and is based on mostly qualitative or subjective data. In analyzing a storyline or narrative, one takes

on a more linear approach, as the information is pinpointed rather than spread out. The analysis starts from an intangible aspect.

The value assessment as conducted by our group resulted in an extended version, or alteration, of the value matrix as introduced by Kuiper & De Jonge (see figure 3). Findings from the value assessment are represented in graphical form where a multicolored system of references is applied, in order to visually represent the 'ranking' of recognized values, supplemented with an explanatory text demonstrating the divergence in the assessment / estimation.

Because the findings from the analysis of the storylines are represented by physical aspects of the building, our group decided to express the storyline in a graphical manner as well as by summarizing our findings in several collages, each representing a storyline of the building (see figure 4).

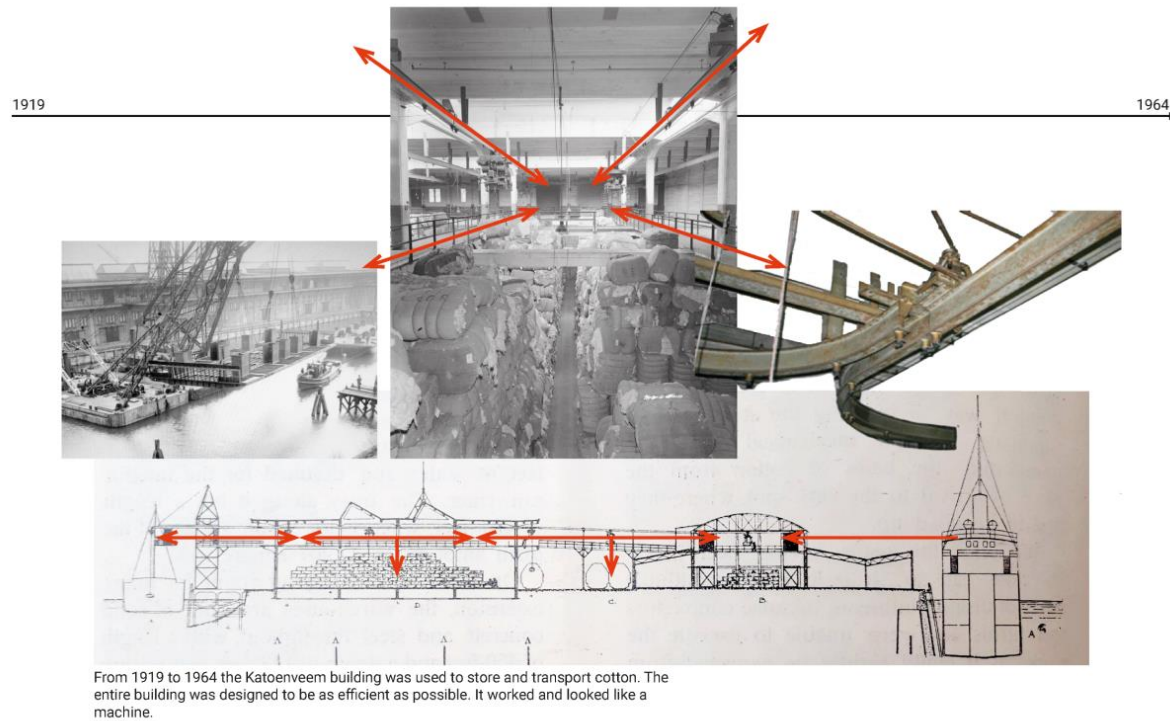
40 // 162

Figure 3 Value Matrix for the analysis of cultural values of the Katoenveem building in Rotterdam, MSc3 Graduation Studio Harbour Heritage, TU Delft

STORYLINE

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KATOENVEEM AS A MACHINE



Stoffels, E. (2020). Collage 'Katoenveem as a machine'. [Illustration]

Figure 4 Storyline: Katoenveem as a machine, by E. Stoffels (2020), MSc3 Graduation Studio Harbour Heritage, TU Delft

III REFLECTION - Capturing intangible values in the value assessment

According to Groeneveld & Hemmes *"it is more important to keep the various meanings of a site than to keep its 'façade'"* (2020, March 2nd, personal communication). This statement is a reflection of their position in the broader debate within the field of Heritage & Architecture, between conservation, restoration, adaptation and the consideration of non-tangible values therein.

Alois Riegl invented a system of heritage values, in which he predominantly considered the psychological or socio-cultural aspect of buildings. Rather than only considering their physical status (Kuipers & De Jonge, 2017), he also looked at both commemorative values as well as present-day values (Clarke, Kuipers & Stroux, 2019). It can be said that Riegl initiated the consideration of intangible values in the field of architectural heritage. His approach is still widely used today and, as mentioned before, his value system is integrated within the value matrix described in the previous section of this paper.

An approach towards capturing non-tangible building aspects was also introduced by Van Balen (2008) in the Nara Grid (see Fig.5). The Nara Grid *"has been conceived of as a "playground" for identifying values, a way of investigating the opportunities to actualize the meaning of the site."* (Van Balen, 2008, p.44). Non-tangible dimensions like the artistic, historic, social and scientific dimensions are compared with a list of building aspects.

Table 1. The Nara Grid based on the Nara Document on Authenticity

Aspects ↓	Dimensions →	Artistic	Historic	Social	Scientific
	Form and design				
	Materials and substance				
	Use and function				
	Tradition, techniques, and workmanship				
	Location and setting				
	Spirit and feeling				

Figure 5 The Nara Grid, as developed by Van Balen, 2008

Another, more objective approach towards capturing intangible values is the ABCD-method introduced by Zijlstra (2009), see Fig.6.. In this matrix, contextual aspects like brief, site, architect, typology and design process (which can be considered non-tangible) are considered, as well as building-specific aspects like space, structure, materials and services. Consequently, these aspects are also considered from three time levels. In her book, Zijlstra (2009, p.62) explains that it *“is almost impossible to assess aesthetics on the basis of objective criteria”*. Her ABCD-method is therefore focused on assessing the ‘objective qualities’ of a building.

ABCD matrix

	☹ meant to be	☹ has been	☹ to be or not to be
Brief			
Site			
Architect			
Typology			
Design process			
Space			
Structure			
Materials			
Services			

Figure 6 The ABCD-method as introduced by Hielkje Zijlstra, 2009. p.74

The Value Matrix approach that is used at the TU Delft was inspired by both the Nara Grid and the ABCD method. While developing the value matrix, the exclusive application of the Rieglan value set was questioned, but no alternative was found that would be suitable and commonly accepted by the H&A section (Clarke, Kuipers & Stroux, 2019, p.13). The students therefore have the opportunity to *“question its application, alter or extend it, or reject it”* (Clarke, Kuipers & Stroux, 2019, p.13).

In considering the Value Matrix in its current form, our group noticed a gap that is not filled within any of the preceding analyzing methods: the fact that several building aspects together with their value can be part of a narrative. Understanding not only the values represented by each dissected building aspect, but also the narrative(s) of the building, provides valuable insights and links values that could possibly be overlooked. Similarly to the value maps presented as the conclusion of the value assessment on a physical scale, the storylines present a more elaborate conclusion on an immaterial level. This is why we extended the existing analyzing tool with the ‘storyline approach’.

However, the way in which the storylines are assessed is not entirely flawless. Groeneveld & Hemmes (2020), whose cultural-historical research and use of storylines inspired us to introduce the storylines into our own value assessment, stress that the information used in the research should be completely objective, whereby only the valuation itself is subjective. Considering that Groeneveld & Hemmes are architectural historians, they naturally follow the (widely accepted) guidelines for Building Archaeological Research as presented by Hendriks, L., & Van der Hoeve (2009). As mentioned before, the analysis of the storylines in our research was mostly based on subjective data. At the same time, however, the guidelines followed by Groeneveld & Hemmes are meant for indicating the physical elements of the buildings that are worthy of conservation, and generally do not consider non-tangible building aspects (Clarke, Kuipers & Stroux, 2019, p.14).

Clarke, Kuipers & Stroux notice a similar problem with the objectivity of data used in the value matrix. According to them, the valuation is a *“subjective process that requires objective verification [...] While fully acknowledging the subjectivity of values in general, the designer must develop an objective position with regards to those values of a building they have been entrusted with”* (Clarke,

Kuipers & Stroux, 2019, p.14). In the case of storylines, it is more challenging to verify them objectively or develop an objective position towards them. Nevertheless, they enabled us to make an informed choice of the narratives we wanted to enhance in the adaptive reuse of the building, and relate them to a (system of) specific building attributes.

Another remark that should be made considering the applicability of the storylines as an analyzing tool is that the depth of our research can influence the type and amount of storylines that our group has considered within the analysis, and whether or not these storylines are interrelated. Still, while acknowledging that our research is most probably incomplete as we were limited by the time and information available, our prospective goal of obtaining a deeper understanding of the building was achieved. Now, in the following stages of the design process, I find myself frequently referring to and reflecting on the importance of certain building attributes when explaining my own design choices.

IV POSITION

In the discussion and reflection on the methodology described in this paper, I aim to present a comprehensive and structured exploration of applicable approaches towards heritage in architecture. Nevertheless, the perspective and approach I maintain throughout my research remains critical and mindful of the many obstacles hindering the heritage-oriented architects' discernment. In order to make a balanced judgement and implement a justifiable course of action towards heritage, the architect needs to consider the object(s) of his design/study from an integrative point of view; this is possible in theory, but challenging in its application, wherein the architect needs to connect distinct values to the context of the building, incorporate them in his conceptual structure, and eventually 'translate' these values by expressing them through various aspects of his unique design.

Usually, there are multiple interconnected and overlapping spheres of meaning, intertwined and brought into expression by the original heritage object. In order to sufficiently respect and preserve these intricate expressions of historical value, the architect must apply a multidimensional approach, while remaining aware of his own cultural and historical context and the projection of both value and meaning derived from his personal cultural context. In taking this position, the architect needs to be aware that it is impossible to take a strictly objective or calculating approach towards a heritage object, but he must re-interpret both the heritage object and himself during this process of understanding and assessment. This normative evaluation is challenging to translate in objective or strictly scientific terminology, and remains, to some extent, a mystery of the architect himself and a hidden manner of establishing dialogue with the past, while remaining oriented towards the future. Although the subjectivity of this evaluation process might take away from its universality and credibility, at least when considered through the critical lense of a purely factual and economizing standpoint, it nevertheless remains a necessary and beneficial and highly significant aspect of the architect's deliberation process.

At the same time, the process of assigning abstract values on physical objects, there is always a reciprocity of interpretative 'projection' onto both the physical object and the historical values which are being re-assessed in light of contemporary events and societal progress. In a way, physical form and abstract meaning are inseparable aspects of the same reality. Therefore, a mindful but simultaneously non-dogmatic approach towards heritage objects in architecture requires not only a high degree of cultural self-awareness, but also the use of universally applicable protocols, as well as an in-depth understanding of various normative theories, different schools of thought and traditional modes of artistic and architectural design. Additionally, these modes of understanding need to be applied within the new context of contemporary society, along with the added dimension of the architect's self-expression.

Nowadays, in a late capitalist, efficiency- and profit-oriented society with a strong tendency towards the absolute economization of object, as well as the reduction of values to their marketable worth, it is highly challenging to formulate a contribution in the sphere of architectural heritage, without succumbing to seemingly absolute criterion of profitability and productivity. Instead, the heritage object should be evaluated and handled with care, without simultaneously abandoning the importance of

efficiency and durability. The achievement of this balance between the preservation of heritage on one hand, and an orientation towards sustainable design on the other hand, results in a renewed and vigorous dialogue between the physical and immaterial realms of reality, with the heritage-oriented architect fulfilling his role as a mediator between the two.

References

- Clarke, N., Kuipers, M., & Stroux, S. (2019). Embedding built heritage values in architectural design education. *International Journal of Technology and Design Education*. doi:10.1007/s10798-019-09534-4
- Groeneveld, R., & Hemmes, A. (2020). The role of themes and stories in value assessment research [Lecture slides]. TU Delft.
- Havik, K. (2020, March 5th). Talk 4: Investigating Spatial Narratives [Lecture].
- Hendriks, L., & Van der Hoeve, J. (2009). *Guidelines for Building Archeological Research: The interpretation and analysis of cultural-historical heritage*: Cultural Heritage Agency.
- Kuipers, M., & De Jonge, W. (2017). *Designing from Heritage: Strategies for Conservation and Conversion*: TU Delft.
- Lucas, R. (2016). *Research Methods for Architecture*: Laurence King Publishing.
- Mason, R. (2005). Assessing values in conservation planning: Methodological issues and choices. In M. De la Torre (Ed.), *Heritage values in site management: Four case studies* (pp. 5–30). Los Angeles: Getty Conservation Institute.
- Stenvert, R., & Van Tussenbroek, G. (2007). *Inleiding in de bouwhistorie: opmeten en onderzoeken van oude gebouwen*: Matrijs.
- Van Balen, K. (2008). The Nara grid: An Evaluation Scheme Based on the Nara Document on Authenticity. *APT Bulletin*, 39(2–3), 39–45.
- Zijlstra, H. (2009). *Analysing Buildings From Context to Detail in Time : ABCD Research Method*. IOS Press.