

Reflection Paper

Heritage and Architecture,
Faculty of Architecture and the Built environment,
Delft University of Technology

Name:
Student No:
Email:
Telephone No:

Studio: AR3AR111 Heritage and Architecture Graduation Studio (2017/18)
Theme: Future of Structuralism
Location: Faculty of Humanities, Leiden University, Leiden, the Netherlands
Project Title: Leiden Humanities Campus & Boutique Residences

Contents:

- Aspect 1**
The relationship between research and design.
- Aspect 2**
The relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS).
- 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.
- 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.
- 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.

Aspect 1: *The relationship between research and design.*

In this paper, the relationship between research and design will be illustrated through the following two significant physical and conceptual aspects of this Dutch postwar architectural movement. By using Leiden Humanity Faculty as a case study, the researches were conducted through various perspectives which range from architectural/urban design strategies, techniques, and limitations. Those studies were aimed to provide an essences transformation frameworks and intervention strategies for the future alteration of this university campus. The results of these researches help formulate the design principle for the later stages.

1.1 Universal design languages

In structuralism movement, we could see that majority of the structuralist architects tended to design their building which composed of several universal units. One of the significant illustrations is the design of Centraal Beheer by Herman Hertzberger. This repetition design language offers a harmony appearance to the complex. The typical details and dimensions helped improve workability in the construction processes.

In contrast, the clusters of universal units have caused complications in a wayfinding issue. The visitors will find a difficulty in the self-orientation in the pattern language of structuralism architecture. Leiden Humanity Faculty is one of the examples of those confusing buildings. It is a complex of eleven universal blocks with three inner courtyards (including north and south clusters). Each of the buildings has similar façade compositions and materials palette which confuse all the new visitors.

In the new design, an improvement of this particular issue is required. Any alteration to this extant built fabric should offer a clear sense of directions to the users. This could be done in several method and technique. One alternative is to take a reference from a signage design in a complex building like an airport. Colorization, in a large car-parking space, could also be another precedent. Even during the structuralism era itself, we can see that there were some attempts to resolve this wayfinding issue as well. De Flint by Onno Greiner is the clear illustration of thoes tries. He claimed that 'clear-cut circulation routing' offers a safe and secure feeling for the buildings users. However, there is a limitation to apply method on the renovation projects, especially in Leiden Humanity Faculty.

Therefore, it is viable to look for further solutions from external sources. An urban planning could be a good reference since structuralist architects frequently realize their design as a city in a city. New York and Barcelona were widely used as the design precedents. Although these two cities seem to be composed by grid patterns, there are also some highlighted spaces in these repetition languages. The city's landmarks such as the Sagrada Familia and the Empire State Tower help people to orient themselves in the complex environments. In short, a creation of specific identities for each courtyard/universal unit could be another tool that helps improve this wayfinding problem.



dezeen.com



telegraph.co.uk

1.2 Social Interaction Strategies

This research traced back the implementation of “Social interaction Strategies” translation Faculty of Humanities by Joop van Stigt. The aesthetic life, humanity, and identity were the shares design philosophy of this Dutch architectural society during the 50s-80. Several structuralist architects looked at an architecture as a language. It’s a language that represents an emotional impact and a social-cultural scope which human society expresses and reveals itself. These basic philosophies resulted in architectural design, building materials, construction techniques and social interaction space planning. The extent and degree of these ‘Anti-Rationalism’ core ideas had been implemented differently in each project.

In Leiden Humanity Faculty, series of free access inner courtyards are the significant illustrations of Joop van Stigt’s intentions on social interactions. In the original design, he designed these large communal areas as shared spaces that allow for all the users in this complex to use and meet each other. In addition, Van Stigt introduced several techniques which helped soften the hardness of the massive masonry clusters and encourage people to spend more time in these communal spaces. However, due to several reasons, the original social interaction spaces did not fully function as it intended to be. In the current situation, the abandoned courtyards and inner streets have major influenced on the atmosphere and appearance of the buildings.

In the new design of this humanity complex, it is important to restore the original structuralism design concepts in these central communal areas. In order to achieve this goal, it is crucial to improve the poor ground floor experiences in the current situation. Enclosing these courtyards is considered as one of the alternatives. The social interaction strategies will be developed and reinterpreted in another perspective. These ground floor alterations will transform this complex into a ‘living room’ of the inner city campus. It could house several activities, performance, and exhibitions in these areas which were not realized in the existing plans.

Aspect 2: *The relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS).*

On this graduation project, the redevelopment of Leiden Humanity Faculty, I am studying possibilities in the future alteration to the existing structuralism building. The project topics could be divided into two main aspects. One is the adaptive reuse of the young monuments. The other is the role of an academic/intuition architecture in the changing society. The project was aimed to find an appropriate balance between the existing value of Van Stigt’s structuralism architecture and the modern educational facilities. These have strongly related to the studio topic, Future of Structuralism Architecture 2017-2018.

Aside to those studio topics, master students are enhanced to conduct their studies through both theoretical and practical approaches. The student could make proposed an idealistic scheme or the ones formulated by reality criteria. I, personally, find that this freedom help develop student's project to the higher levels. The variety of design proposals, from the fellow students, will influence one another during the design development. The 'redevelopment of the Humanity Faculty' will not just be a young monument conservation project, but it also try to offer (an ideal) future educational environment to Leiden University.

In the view of the Architecture master track, heritage architecture adaptive reused has now been one of the main emergent themes, in the world of the architectural profession. Since the 1960s, the heritage reuse attention has been widened. This field of architecture is not only limited to the high edge-value civic buildings. It now includes more modest heritage buildings towards the legacy of the post-war monumental buildings. The redevelopment of the young architectural monument has also been a new challenge of the architectural field in the coming future.

On the master program level, the studies on the redevelopment of structuralism architecture also have a strong relationship to the urban transformation as well. In Leiden Humanity Campus, the site is located in the historic center of Leiden that consisted of several high heritage value buildings. Any major alteration to the Faculty building will affect the characteristic of the inner city campus and the atmosphere of the city. In other words, the studies of Leiden Humanity Faculty are related to both field of architecture and urban planning in the past, present, and future perspectives.

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.*

In general, my research methods were mainly based on Chair Heritage & Architecture (H&A) methodical line of inquiry. The studies consist of three main fundamentals including architectural design, cultural value, and technology aspect. The sets of scientific information help identified and highlight the significant cultural values of the original design that should be protected. At the same time, these general studies help indicate the technical constraints and challenges of these heritage buildings that need to be addressed in the future alterations and additions.

However, I would argue that mentioned research approach above could not provide enough information for the preservation of structuralism architectures values. The scope of a young heritage research should not be only limited to the conservation of the tangible authenticity value of the buildings. In fact, a further elaboration on the intangible aspects analysis is very crucial for this graduation studio. Since the structuralism movement was originated by the humanity ambitions, critical assessments on the design philosophies will eventually help identify what were these architecture meant to be / used to be / should be in the future. Another additional approach was the research on the timeline of the original architects. By doing so, we will understand the development in style, influences, design methods and relationship between each building during the structuralism movement.

Aside to those, there is an additional approach that helps complete the goals of this graduation studio, I believe that an investigation on structuralism architecture must contain both historical and contemporary perspectives. When dealing with the future structuralism architecture, it is important to study some relevance precedents both within and outside the field of Structuralism. In the case of Leiden Humanity Faculty, there should be a research on how the future educational space/facilities should be. These Emic studies were not the only response to program or problem solving, it also suggests how academic building could contribute to the study procedure in the coming future. Small details like an interior space division, whether the open plans layout or individual cubical, will certainly affect the working environment and interaction between people in these buildings.

Throughout the past eight months, there are several research methods have been experimented in my graduation project. I find that working only in the 2dimension drawings were not sufficient for this complex project. There are a lot of hidden corners that needed to be taken into account. I claim that digital 3d modeling is appropriate tools to assess the structuralism architecture. Additional to that, a few rounds of site visit are also very helpful. In these complicated buildings, we could not gather all the useful information in one time site inspection.

In conclusion, all the mentioned research approaches above have challenged preconceptions about heritage architecture adaptive reuse. There are various solutions for the future transformation of this post-war heritage architectures. Of course, the high-value tangible aspect of these building should definitely be preserved as a remanence of the original designs. However, if we base on the original intentions of the structuralist architects, the redevelopment of structuralism architectures may not result in usual conservation approaches as we have seen in the pre-war monuments.

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 addition to the architectural adaptive reuse, this redevelopment project is also aimed to be a prototype for the later development of the study procedure at Leiden University. Throughout the four centuries, this university has mainly relied on the text-based research methodologies. Literature and written document investigations have been introduced as the preliminary devices of the study here. This method has always been a reliable information for some specific field of researches. In contrast, this authentic methodological approach may not be fully applicable in the fast-changing society in the current situations, especially in the art and cultural studies. Besides the normal curriculum in the classrooms, the student should have more opportunities to have direct interactions with colleagues and visiting professors from the various cultural backgrounds. Taking these thoughts into consideration, the new approaches to the study procedure at Leiden University will be set as another ambition of my graduation project. In addition to the architectural adaptive reuse, I hope that the redevelopment of Joop van Stigt's faculty buildings will be a prototype to any later developments in the inner city campus.

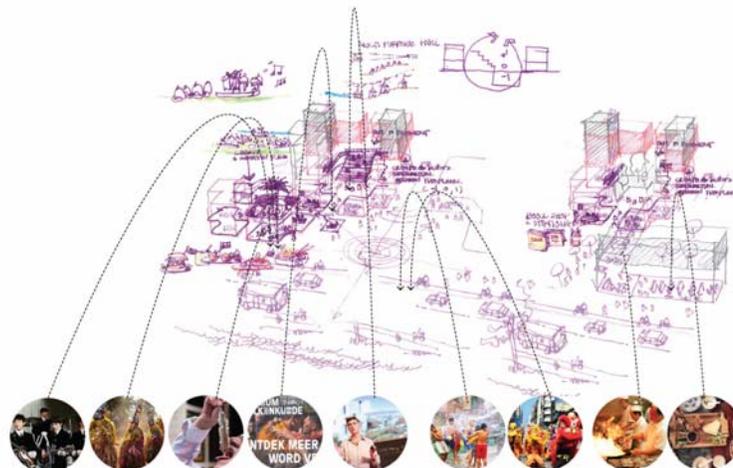
Aspect 5: *Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.*

In the redevelopment of Leiden Humanity campus, there are numbers of issues and dilemmas occurred during the research and design stages. These were range from the urban planning issues, technical complications, and future development of the site.

In the research parts, one of the main urban redevelopment issues was the accessibility to the development policies on the eviction of the existing public housing facility. Although the result of this development may affect several different parties, there were no official publication on the approved planning nor the consequences of this change. Until P3 Presentation, the external guest, a real-estate project manager of Leiden University, stated that one of the criteria for the university's future development is to incorporate residential functions on the Witte Singel-Doelencomplex. If this information was published since the beginning of the research stage, it may have a strong influence on the program proposal and functional arrangement of Van Stigt's humanity buildings.

During the design stage, I have encountered with the conflicts between the original design concept and the actually built conditions. Van stigt claimed that the basic structure of his buildings was designed for the easy future expansions. He provided an extra strength in the structural system and also introduces removable framing as a roof structure. However, I would argue that these basic structures were only suitable for the vertical extensions. The shape of Van Stigt's 'mushroom column' seems to be a great challenge for any new intervention around it. It's difficult to make a termination between this original structures and the new elements. Another dilemma occurred in the roof level, the original roof cantilevers create several limitations for the new structure over the inner courtyards.

Another dilemma is related to the provision for social interaction space. In the original design, Van stight made the inner courtyards as large communal spaces for the north and south clusters. These inner courtyards are connected to the network of the public spaces of the Witte Singel-Doelencomplex. There is the presence of the system of central social space in the interior design of each universal unit. Although that space was shaped by a good ambition, it has also created a few consequences in term of usages, building efficiency and interior space qualities. These issues will be the main challenges for the future alteration of this young monument.



1.2 Heritage architectural Approach and Positions

In this graduation studio, students are encouraged to illustrate their own architectural positions on the adaptive reuse of a built fabric. While transforming the heritage buildings to meet the contemporary needs, this studio requires set of parallel scientific strategies that represent specific approaches and direction of a redevelopment scheme.

Focusing on this graduation project, the Leiden Humanity campus, various heritage positions, and approaches have experimented throughout the processes. The set of strategies were integrated with the design in every scales. These were ranged from the urban scale to the finest detail design. However, I would claim that the selected positions were not absolute. Similar approaches were, sometimes, interpreted differently in some particular areas. These will be illustrated in the following chapters of this graduation report.

Although there were several positions embedded in the final design of this project, there are some common ambitions among these thoughts. The transformation approach and heritage architect position in this graduation project is laid toward the merging between the existing characteristics and the new interventions. The Indonesian rice-terrace image is an illustration of my architectural ambition in this graduation project. The scenery of hand-carved cascading steps is the result of critical demand on agricultural space in a high constraint condition, original steep terrains. This UNESCO World Heritage's Cultural Landscape Site is a great integration of human needs and natural landscape.

In conclusion, I would consider this redevelopment proposal as a collaboration between the original and the new architects. In other words, this alteration scheme is not aimed to overcome nor colonize the extant built heritage of Joop van Stigt. In addition, the alterations to these 70's structuralism buildings will be done in a reversible approach. The original significant design compositions and technique will be retained and made good. At the same time, the intervention will also mark the changes in time through the appearance of old and the new designs. Lastly, this redevelopment will not only responding to the contemporary/new requirements, in fact, this proposal will be positioned as a device to enlarge the humanities field of studies in the coming future.

Reflection

During the tutoring and presentations from research stage onwards, it seems important to state an architectural position in this H&A graduation studio. The clear statement helps indicate the research and design directions in the later stages. In addition, the selected positions will also help verify the options and alternative, occurred during the development stages, if those are viable and based on the same principle.

Due to the long duration, it is difficult to explain every step made during the design process. The clear architectural approached will be another tool for external audiences to address the graduation project. It helps to identify the logical reasons behind each final decision.

However, having an absolute position or too specific approaches are also considered as a risk. Since the heritage architect is dealing with the transformation of cities and buildings, an appropriate balance between the old and the new is a fundamental design for this architectural field. For this reason, I would make a statement that each preservation and renewal of existing architecture required different approaches. In short, the architect shall not set up specific positions before having an investigation in details. Aside from that, I believe that the architectural positions should also be flexible and adjustable in the processes. Sometimes, there is a need to combine several approaches together. This integration particularly occurs in the mixed-function buildings. The Leiden Humanity Faculty is one of those buildings.

After all, the mentioned reflection above illustrated that stating a clear and relevance architectural position is crucial and useful in this graduation studio. In contrast, I would argue that the heritage architect should be open to the merging and integration between the specific approaches to optimize heritage value of the built fabric.



Tegallalang Rice Terraces, Bali, Indonesia - SUITCASE Magazine



Acropolis and the city center of Athens - www.visitgreece.gr

6.2 Graduation Projects: Leiden Humanity Campus

In the redevelopment of Leiden Humanity campus, there are numbers of issues and dilemmas occurred during the research and design stages. These were range from the urban planning issues, technical complications, and future development of the site.

During the design stage, I have encountered with the conflicts between the original design concept and the actually built conditions. Van Stigt claimed that the basic structure of his buildings was designed for the easy future expansions. He provided an extra strength in the structural system and also introduces removable framing as a roof structure. However, I would argue that these basic structures were only suitable for the vertical extensions. The shape of Van Stigt's 'mushroom column' seems to be a great challenge for any new intervention around it. It's difficult to make a termination between this original structures and the new elements. Another dilemma occurred in the roof level, the original roof cantilevers create several limitations for the new structure over the inner courtyards.

Another dilemma is related to the provision for social interaction space. In the original design, Van stigt made the inner courtyards as large communal spaces for the north and south clusters. These inner courtyards are connected to the network of the public spaces of the Witte Singel-Doelencomplex. There is the presence of the system of central social space in the interior design of each universal unit. Although that space was shaped by a good ambition, it has also created a few consequences in term of usages, building efficiency and interior space qualities. These issues will be the main challenges for the future alteration of this young monument.

Looking through the physical alteration/upgrade perspectives, I personally believe that the new design should help improve these particular issues. Any alteration to this extant built fabric should offer a clear sense of directions to the users. At the same time, the intervention shall also improve the poor ground floor experiences in the current situation.

In addition, if we look at these structuralism buildings through the lens of theoretical approach, it is important to restore the original "Social interaction Strategies" in the courtyard areas.

After exploring the various options throughout that past eight months, I noticed that significant different intern of building appearances between mine and Yiannos Mexis's design. The only two MSc4 students, dealing with Leiden project, stand on different architectural positions in this adaptive reuse development.

In contrast, I realized a strong relationship interm of scientific frameworks between mine and my colleague's proposals. In fact, we more and less have a similar strategy on the planning level. This resulted in the functional arrangement and the zoning of these buildings. We both give priority to the Witte Singel side. We tried to improve the connection between the faculty building to the other facilities of this Inner City Campus.

This similarity illustrates that there should be some common logic for the adaptive reuse of Leiden faculty buildings. These transformation frameworks and intervention strategies are proven and could be implemented as a set of design fundamentals and recommendation for the restoration architects dealing with this university buildings additions and alterations. I hope that our studies of Joop van Stigt's faculty buildings would contribute to academic building redevelopments in the future.

Ground Floor Plan
- Y. Mexis



Ground Floor Plan
- W. Taemeyachat



View of the South Clusters
- Y. Mexis



View of the South Clusters
- W. Taemeyachat

