

# Reflection

## : keeping the rule while breaking the rule

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### 1. Reflection on Heritage & Architecture and the graduation studio *The Future of Structuralism*

#### The position on Heritage and Architecture (H&A)

Since they are embedding their own timeness in themselves, it is evident that existing buildings have their own value and we should conserve them. However, social environment and people's needs are rapidly changing nowadays. Therefore, it is unavoidable for existing built environments to modify themselves to catch up with current social needs. Only a mere preservation without this consideration could let existing buildings being remained as fossil fuel that lost their liveliness. In this regards, the main position of this project toward Heritage design is not inclined to preservation, but more open to the modification of the existing situation. With this viewpoint, balancing between preserving and changing is essential in Heritage Architecture (H&A). In other words, based on considerate value assessment toward the existing building, it is necessary to clarify what is the core value, which is should be kept for maintaining its fundamental identity, while to investigate what could be modified for the improvement of the existing building.

This position on Heritage design is strongly related to the current situation of my country, South Korea. Nowadays, Seoul is currently 'ill', from the thoughtless development during the industrial era. Not like the Europe where the concept of Heritage design is advanced, Seoul only had broken down the existing buildings and then had built again-rush of redevelopment all around the city, which is not only causing economic and environmental burden but also diminishing the identity of the city. Related to this situation, I strongly believe that the Modern-Ko-

rean architecture also must be preserved and respected as a part of the city. However, it is also true that those built environments are negatively affecting to the urbanscape of the city and disconnected from their surroundings. Therefore, in Korea, it is necessary to think of the design methodology that is balancing between keeping the physical condition and their value of existing buildings while make them meet with the requirements of nowadays through modification.



Figure 1. Seun Sangga  
: one of the most representative Modern Architecture in Korea,  
which is negatively effecting on urban scape

This social requirements in Korea are sharing similar aspects with the new trend of heritage design approach. In the past, the concept of conservation had been more concerned with historic building such as churches, castles. However, after Modernism Architecture began to be regarded as heritage architectures, the field of reuse design has become widening nowadays. Indeed, the methodologies for redesigning old buildings and the buildings built after Modernism should be different. For example, in the past, mostly tangible aspects such as style, form, ornaments were the main elements for assessing the value of historic

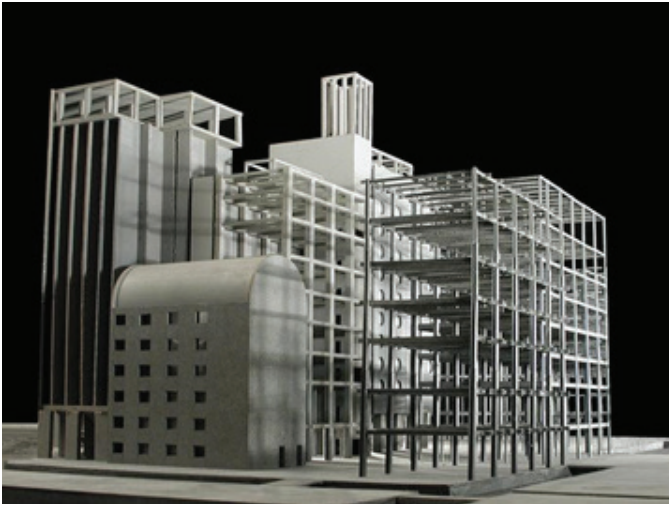


Figure 2. Peter Zumthor's De Meelfabriek is presenting the new approach in re-use design, which is totally different with the previous heritage architecture

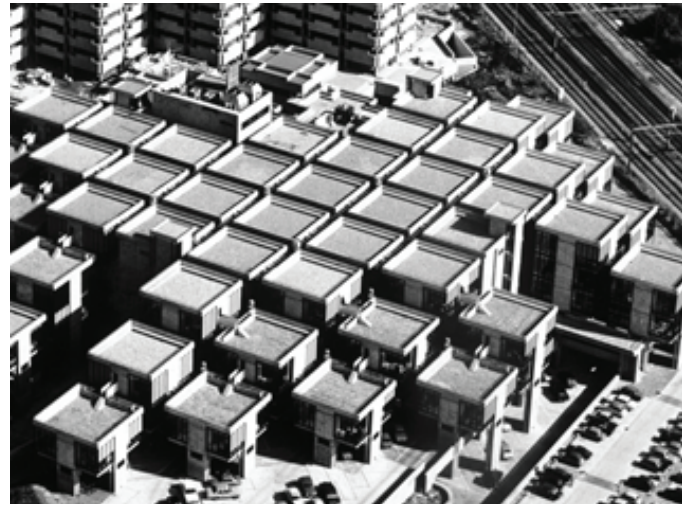


Figure 3. Centraal Beheer Office, designed by Herman Hertzberger, the subject of the graduation project

buildings. On the other hand, the buildings after Modernism should be evaluated not only by their physical aspects but also their design intention and concept, etc.<sup>1</sup> Therefore, instead of mere preservation, various types of heritage design methodologies are appearing, and it has become more and more important to think of one's position between maintaining and changing.

### The position on Centraal Beheer Office

The topic of the graduation project, 'The Future of Structuralism,' is in the same context with my position on H&A, mentioned above. The graduation studio is dealing with Centraal Beheer Office, designed by Herman Hertzberger, one of the most representative Structuralism Architects. What is notable in Structuralism architecture, including Centraal Beheer Office, is that they pursued architecture that could flexibly respond to the individual's way of life and could transform itself based on the changing needs of users.

It means, their buildings already inherit the possibility of modification in themselves with the response of changing future requirements. Therefore, the re-design process toward the building should be based on the different approach with other heritages, such as old churches or castles, which is more focused on preservation. Also at the same time, despite its architectural meanings and values, the building is now disconnected with its surroundings and possess various problems such as sustainability. For

these reasons, redesigning this building could be considered as the perfect chance to make a design experiment of balancing between preservation and modification in heritage design. Furthermore, it would be able to apply design methodology, used in this project to the existing urban circumstance of Seoul, Korea.

With these perspectives, at first, this project defined that the essential value of Centraal Beheer Office is not on the tangible factors such as materiality or ornaments, but in the fundamental principle of the building, such as spatial structure. For this reason, under the motto of '*Returning to the Origin*,' this project considered the initial idea of Herman Hertzberger as the starting point of every re-design process. Through this methodology, the project aimed to retain the identity of Centraal Beheer Office despite the alteration of its existing situations.

In this regard, the primary position in this project toward re-designing Centraal Beheer Office is 'keeping the rule while breaking the rule'; more precisely, modifying the existing situations while reusing the underlying principle of the building. In other words, instead of conservation nor mere transformation, the project is aiming to become 'the reinterpretation' of Centraal Beheer Office. Through these process, the project aimed to be a new meaningful step that is corresponding with the current social issues in Korea and the contemporary trend of H&A.

1. Marieke Kuipers, Wessel de Jonge (2017) Designing from Heritage, Delft: TU Delft Heritage & Architecture, 15-17

## 2. Reflection of the Process: the relationship between research and design

In the graduation studio in TU Delft, one of the most essential things was to harmonize the process of research and design. The whole methodical line of the graduation studio could be distinguished into two processes; the phase from P1 to P2 was more focused on the research, and from P3 to P4 was on design work.

### P1 – P2: research for design

P1 was the process that is laying the foundation for the whole research & design process. In this phase, one should analyze the building objectively without any of prejudice based on one's design intention. Also at the same time, it is essential to examine which aspect of the building is intriguing to oneself. It is because this interest could directly affect the direction and concept of the individual project. Another essential part of this process was to set one's position toward the building and its cultural value. In other words, one should make their own conclusion based on objective analysis of the building. For example, I was more interested in the configurative organization and spatial possibility of the building. This interests directly influenced on thinking of architectural themes and concept of individual design during the P2 process. Also, the position of this project toward Centraal Beheer Office, 'keeping the rule while breaking the rule,' had set during this analysis process.

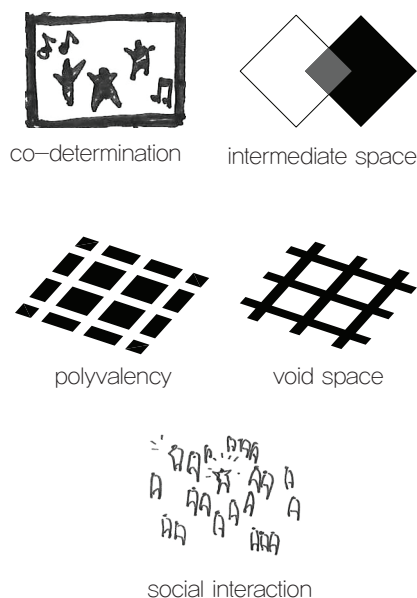


Figure 4: the five core value of Centraal Beheer Office

P2 was the process that establishes one's own direction for the individual research and design, based on the position that is set during the P1 process. It is crucial to make a evaluated result in this research process so that it could become a firm foundation of the project. Only through this foundation, it would be able to maintain consistency of the project even though when difficult challenges come during the later design phase. The project was focused on the specific architectural themes, 'In-between space' and 'Interaction.' They were derived from the spatial experience in Centraal Beheer Office during the excursion and the analysis of the architectural idea of Herman Hertzberger. Setting this main keyword of the project was helpful in deciding the direction of later. As the further process, I investigated Aldo van Eyck and Jan Gehl's theory as foundation research to support my architectural themes.

See	Walking	Standing	Sitting	
				Passive Contact
				Chance Contact
				Close Contact

Figure 5: Spatial elements for interaction

### P3–P4: Design from research

P3 was the design process that is applying the studies to the actual design products. What is essential in this phase is to reflect on previous research result continuously. Through this means, it will be able to supervise whether one's design is still following the right direction, set in P1 and P2 process, or not. Comparing to P3, P4 is more focused on practical design, such as construction, installation, materiality, from the technical perspective.

What should be considered in these design process is the fact that Centraal Beheer Office is the building that



is too massive and too complicated. Therefore, it is tough to make a creative design from the beginning if someone is too much considering every physical aspect of the building. For this reason, at the starting phase of design, it could be even better to freely draw one's spatial idea without profound consideration of the existing physical condition of the building. Refining the design based on the practical aspects could be achieved in a later process, but creative design and imagination are mostly possible during the early process.

In general, the relationship between research and design in this project was like the image below (Figure 5). The design process could maintain its direction and context only when concrete research process could function as

the firm foundation. Also at the same time, without one's individual architectural concept and actual design products, all of the previous research work could become no more than empty rhetoric. Therefore, this project continuously attempted to make research and design have a conversation through all of the processes, from the beginning to the end.

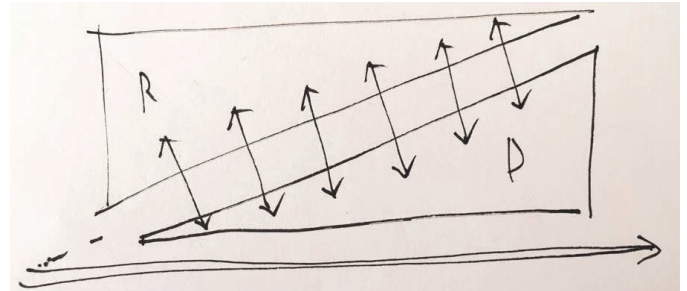


Figure 6. the relationship between research and design

### 3. Reflection on the design products: the dilemmas during the design process

Re-designing the existing building under the slogan of 'keeping the rule while breaking the rule' had been brought several dilemmas between improving the existing situations and maintaining Hertzberger's initial design. Concerning these dilemmas, my methodology was modifying the existing situation with reusing the principle of the architect.

The new program of the project: Art Academy

Nowadays, Centraal Beheer Office is currently disconnected from the city and its surrounding, so that it has been remained as a lonely island. Relate to these, the critical issue of the project was to make Centraal Beheer Office co-exist with the surrounding. Moreover, the project sought to make the building to become the starting point of the new urban context of Apeldoorn through revitalizing its spatial potential.

Choosing the new program of the building was based on this intention. In this project, Art Academy was selected as the new program of Centraal Beheer Office to provide a cultural/educational program to the public. Through this new program, the building could function not only as

educational institute but also as the place where people can meet and learn. By linking with existing cultural facilities in the city center, such as CODA, it would be able to form 'cultural backbone' of Apeldoorn. Moreover, through the spatial potential of Centraal Beheer Office, it would be able to create the coexistence of diverse functions, and furthermore, create the active interaction between the city and the building, between public and private, and mostly, among the people.

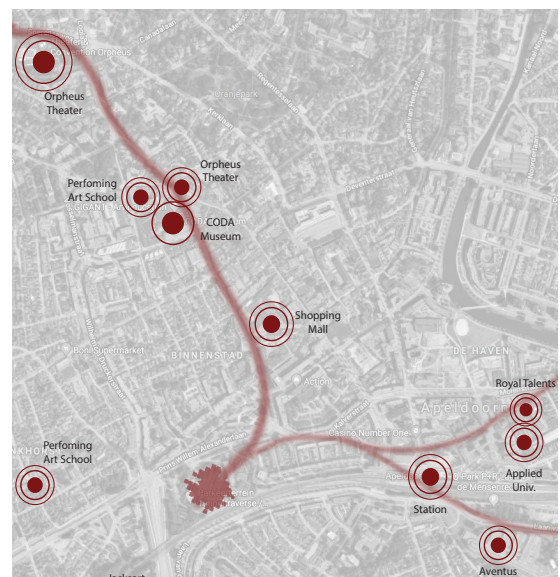


Figure 7. forming the cultural backbone of Apeldoorn

However, there are still risks of choosing this program. First of all, it was uncertain whether the exhibition of students' work is attractive enough to make people come or not. Therefore, it was required to apply other attractive functions such as café, retails, and workshop spaces. Moreover, it is still doubtful that is Art Academy function genuinely appropriate with the demographic and geographical condition of Apeldoorn. From the more practical viewpoint, it is difficult to deny that dwelling program is more suitable than educational or public functions.

Nevertheless, the primary purpose of the project was to study the heritage design methodology that is 1. balancing between keeping and changing and 2. Maximizing the spatial potential of the existing building. Therefore, instead of dwelling program that is more related to practical issues, I decided to apply Academy program since it was more appropriate for the intention of the project.

### Broadening Inner Street

In master plan and the design from the whole, the main intention of this project was to retrieve the publicness of Centraal Beheer Office. As part of the urban built environments, architecture has a responsibility to harmonize with its circumstances. However, it seems that Centraal Beheer Office is now far away from this ethical responsibility. To create the interaction between the building and its surroundings, broadening the inner street was taken into consideration. However, these modifications were strongly related to the previous design of the original architect. During the meeting with graduation studio students of TU Delft, Hertzberger mentioned that one of the essential values in his design was the inner street space. Therefore, it was a complicated challenge which is directly related to the dilemma between retrieving the relationship with the surroundings and respecting the intention of the original architect. Moreover, it was unavoidable to remove a considerable amount of existing structure, which could bring several burdens in construction process from economic and sustainable aspects.

To solve this dilemma, the project attempted to analyze what was the initial idea of Hertzberger when he designed the inner street. At the same time, the study on

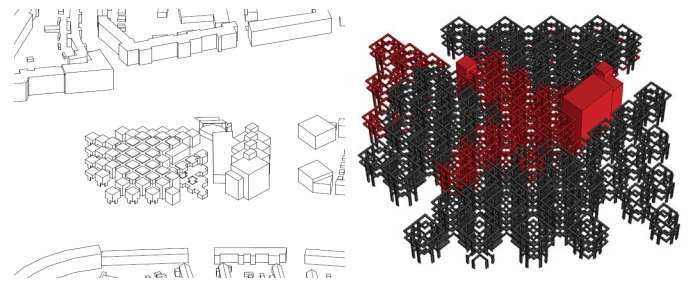


Figure 8. the lonely island (left) / removing the existing structure (right)

how Hertzberger designed public spaces in his other education projects was also examined. Through this studies, it was concluded that the essential aspect that should be kept was not the current form of the inner street, but creating the public place where people can meet and interact each other under the natural sunlight. Therefore, I finally decided to remove the parts of existing structure since it was the way that could interlink the building with the new required circumstances, while following the essential principle that the architect wanted to keep. With this scheme, the ground floor of the building became the public inner street where more people could easily come and enjoy the cultural activities with more improved spatial quality.

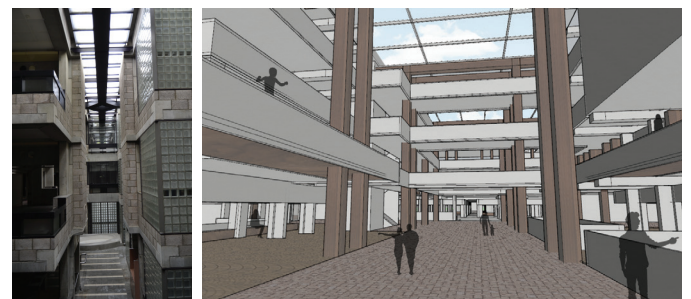


Figure 9. improving the spatial quality of the inner street

### Applying the new program to the building

To accomplish this goal, every required function of the academy was grouped with their characteristics based on their characteristics, such as the degree of the public to private. And, as the following step, they were placed in their appropriate positions. With this scheme, the center zone became more public space, while most of the private functions were located on the periphery. Along with this zoning plan, the project planned to rearrange squares, streets, and vertical void. It was 1. to provide users with more natural way finding in the building and 2. to create the building like a city. The architectural theme of 'in-between space' was com-

bined with this zoning plan; the semi-public and semi-private zone were considered as the grey zone where have the potential for unexpected interaction among the students. To activate this spatial potential, several spatial elements for the interaction, which is studied in the P2 process, were applied.

Though it seems different, the new spatial organization is in the same context with the previous one. The new intervention is still rooted in the original architectural idea of Hertzberger; it aimed to create not only considerate transition from public to private but also various types of interactions among people through grey zone space. In other words, it would be able to say that the new plan is actually the ‘reinterpretation’ of the spatial principle of Centraal Beheer Office.

However, compared to the achievements mentioned above, the investigation of polyvalent space and individual interpretation, which are also essential values of this building, were insufficient enough. Centraal Beheer Office is presenting a configurative form that is consists of many same sizes of spatial modules, which are implying anonymous characteristic of the idea of individual interpretation. But, when applying Art Academy functions, it was unavoidable to re-size those basic modules since every room were requiring a different size of spaces. This process has no choice but to bring specificity to the spatial system of the building, which is on the opposite side with the initial idea of Hertzberger’s polyvalent space. In this regard, insufficient consideration of polyvalency could be the limitation of this project so that it would be complemented in the later project.

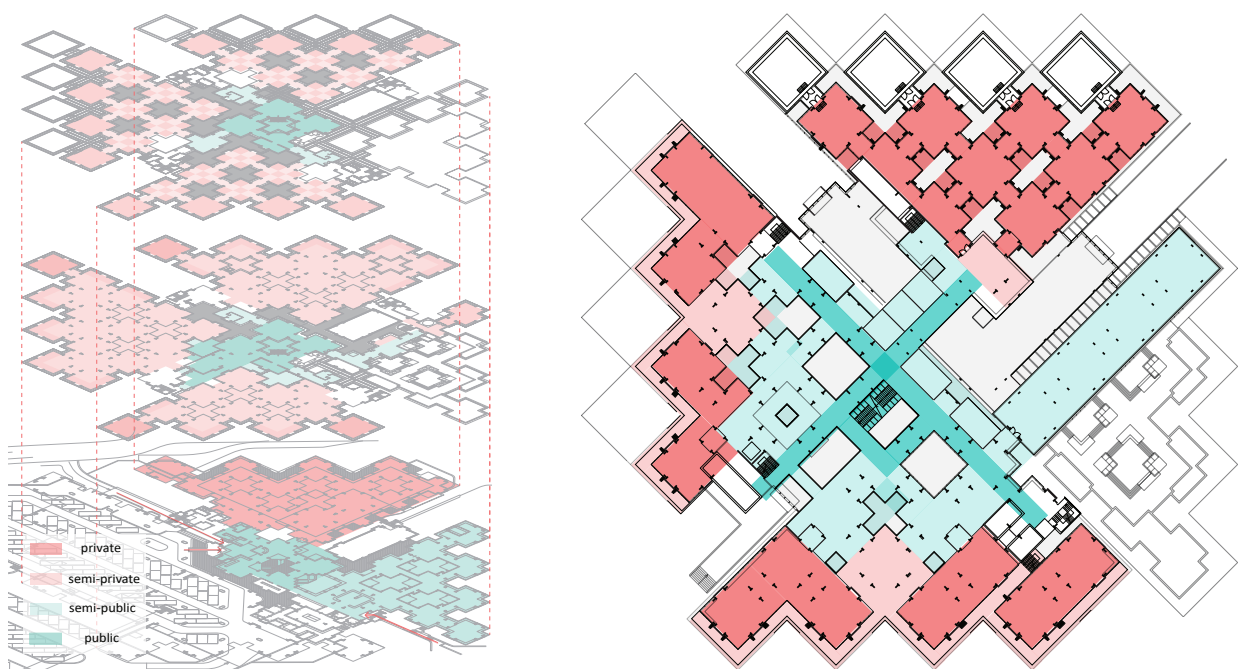


Figure 10. from public to private: the previous design of herman Hertzberger (left) / reorganization of the new intervention (right)

## Double facade scheme

Even though Centraal Beheer Office presents excellent achievement in its spatial design, but when it comes to the exterior design, that becomes another story. Not only with its poor quality of sustainability design, but Herman Hertzberger himself mentioned that the exterior design of the building is no more than an expression of internal spatial logic. Therefore, improving the quality of the façade design was required in the new intervention design.

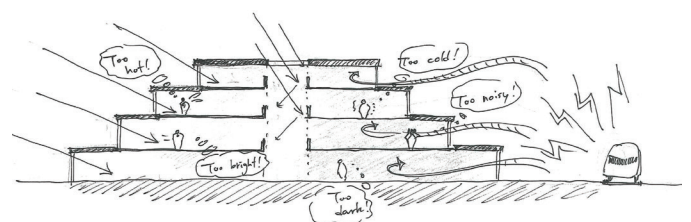
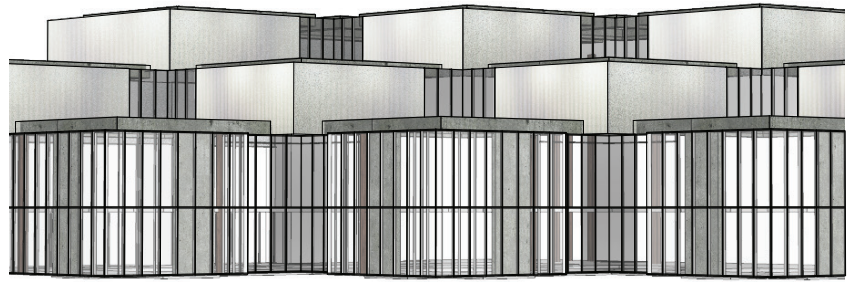


Figure 11. the current facade of Centraal Beheer Office is showing low sustainability





Figure 12, the transformation framework of existing facade and the new facade suggestion



Concerning this issue, my intention was 1. improving the sustainability of the building, 2. creating in-between space on the edge of the building, and 3. providing the new skin that could make the building more attractive to the surroundings. For these intentions, the project suggested double façade scheme, because this scheme could create the in-between space between floor and floor, between in and outside, while improving thermal insulation effect of the building. Moreover, by using transparent glass and polycarbonate as the material for the outer facade, it was freer to

apply the color scheme to the facade, which could correspond with the program of Art Academy. Most of all, this double facade could create the juxtaposition of the outer skin and the inner one, which can make people recognize the encounter of Old & New.

However, since Centraal Beheer Office is showing configured form, it was very tough to apply double facade scheme to the building. Considering the joint parts in every corner and different floors were extremely complicated so that it brought more workload than I expected. Also at the same time, because of this configurative form, the sustainability effect of this scheme was less than I thought. For example, the stack effect of double facade scheme, which is essential to bring natural ventilation, was diluted. Moreover, it even could cause the overheating problem in the summer situation. Therefore, to solve this problem, PV solar panel was applied to the rooftop window, which could reduce the overheating while generating extra energy for the building.

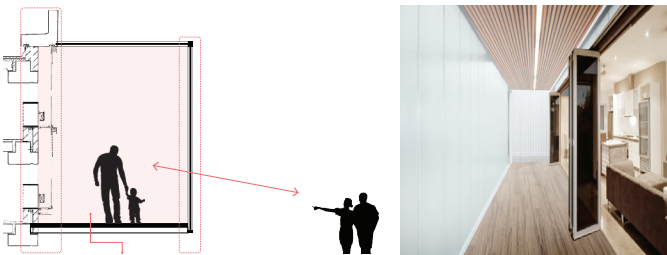


Figure 13, the idea of in-between space between in and out

## Reference

### Literature

1. Marieke Kuipers, Wessel de Jonge (2017) Designing from Heritage, Delft: TU Delft Heritage & Architecture

### Image

Figure 1: <http://www.artnet.com/artists/kim-swoo-geun-sewoon-sangga-seoul-ac-Y8VuvglvFNaeDYSim8tCKQ2>

Figure 2: <https://www.ahh.nl/index.php/nl/projecten/utiliteitsbouw>

Figure 3: [http://afasiaarchzine.com/2010/07/peter-zumthor\\_22-2/](http://afasiaarchzine.com/2010/07/peter-zumthor_22-2/)

Figure 4-13: worked by Jinhyuck Lim