

***FIELD* IN ADAPTIVE REUSE**

Discussion of the existence of the *field* and its influence



Yilun Shao
Thesis Book 2019

FIELD IN ADAPTIVE REUSE
Discussion of the existence of the *field* and its influence

A thesis submitted in partial fulfillment of the requirements for the degree Master of Design in Interior Studies [Adaptive Reuse] in the
Department of Interior Architecture of the Rhode Island School of Design

By
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2019

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Nick Heywood

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Donald Sansoucy, P.E.

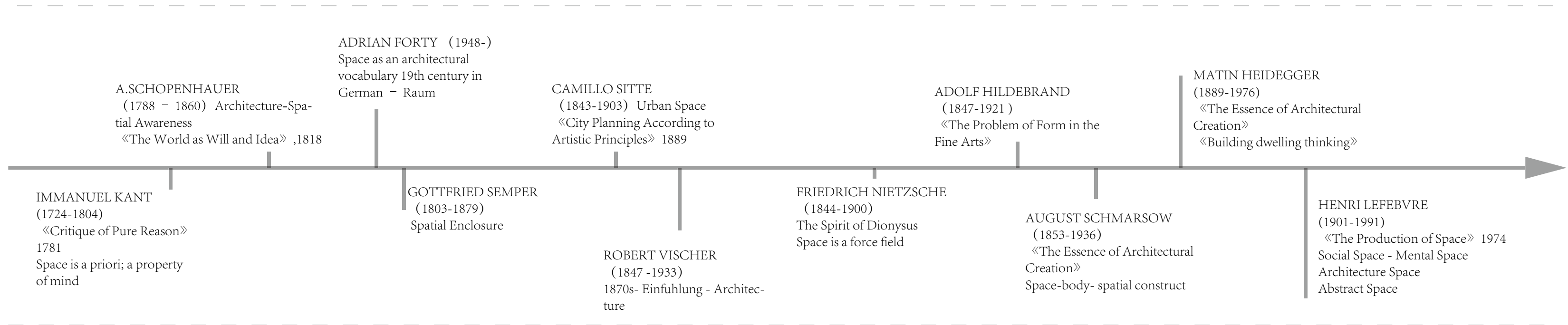
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Motivation

This year is the seventh year for me to study design. Over the years, my thinking on architectural design has influenced my direction of learning and progress. So I am very glad to have the opportunity of this thesis to try to explore some content in architecture that I am really interested in. In retrospect, the beginning and thinking process of every project was to fight for it and enjoy it. What makes us think about space? How is space built?

Through learning to find the word “space” into architectural vocabulary, it was found in German in the 19th century. Germans’ *raum* translates to English is space. The meaning of space comes from the philosophical theory of architect Gottfried Semper. Semper believes that the basic characteristic of architecture is the enclosure of space. Kant proposed that space is a priori and a property of mind. Then Schopenhauer and Robert Vischer proposed that architects exist through people's spatial perception. Then artist August Schmarsow proposed that space is the object of body perception, and our perception space forms the creation of space. Henri Lefebvre's *The Production of Space* elaborated various discussions on Space issues. Lefebvre notes that space is both conceptual and physical. So, based on the above summary. I think that thinking creates our space, but thinking happens in an environment. what is that environment?

I call *field*.

Thesis Statement

In a building like a pavilion, the walls are abstracted into pillars, and this hollowed -out design aesthetically reflects the concept of negative space in Asian aesthetics. The creation of the *field* is not by the enclosure of wall, but through the radiation of the pavilion's spirit to create a negative space with fuzzy boundaries. If the spirits which dwell in the pavilion cannot radiate outward but must be contained within, visitors will not see this buildings, but sculptures form.

What is fascinating about architecture is that it can divide the space so that people enter and feel the effects of this division. In contrast to what I propose the completely enclosed space creates a break from human society to nature. Hegel wrote that, *man is nature against nature itself*. For any container, the empty part is for human use, but only if it is surrounded by the container. Such as in the adaptive renovation of the building, the emptiness and desolation of the ruins, as well as the beauty brought by the huge volume represent the empty. The reintegration of the original architectural structure in nature reshapes the role of the physical *field*. The texture of a wall, the taste of wind, and the intensity of sunshine are all integrated elements that constitute the integrity of the *field*, and as such the connection with nature cannot be broken.

The sense of space in adaptive reuse can be extended into a sense of time and rhythm. It is in the process of processing and shaping architectural space that people identify their emotions and ideals. The way we look at things, the way we behave, and the way we think all depend on the depth of the *field* in which we live. The depth of the *field* affects people to have different conceptions of an original object or architectural space and its value reflects our consideration and respect for the space in architecture.

Precedents

1. Holocaust Memorial, Peter Eisenman

2. Kolumba Museum, Peter Zumthor

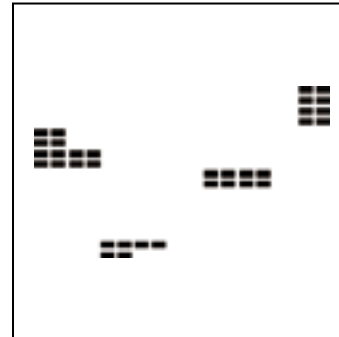
3. Nordic Pavilion, Sverre Fehn

4. The Danteum, Giuseppe Terragni

Precedent 1. Holocaust Memorial, Peter Eisenman

Year: 2003-2005 Location: Berlin, Germany

This is a large courtyard formed by cement blocks, as a cemetery, concentration camp, or maze impasse; between a dense fabric that visitors can walk in solitude. There is no plaque, inscription or statues to suggest to people who think or feel.

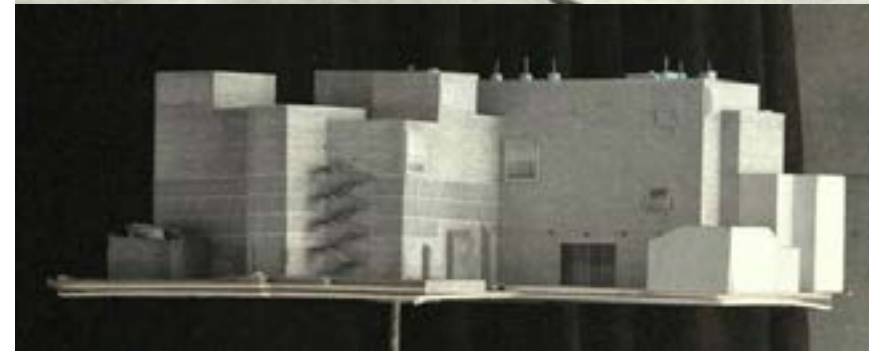
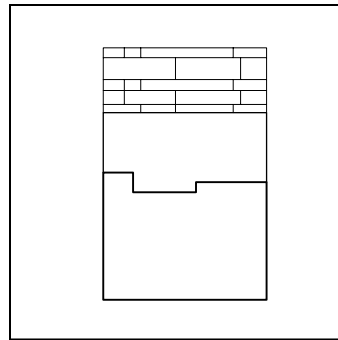


A monument is an architectural transformation with a more direct expression of thought. It is also one of the easiest fields to communicate with. Generally, the monument displays its sanctity and commemorative purpose through the architect's design language, and its field also gathers the energy levels of different spatial dimensions. The field can be indirectly transmitted to others, which can arouse the resonance of the public under the shaping of the space atmosphere. Participants entering the monument field can deeply experience the information transmission of the monument itself and the different atmosphere brought by the architectural field.

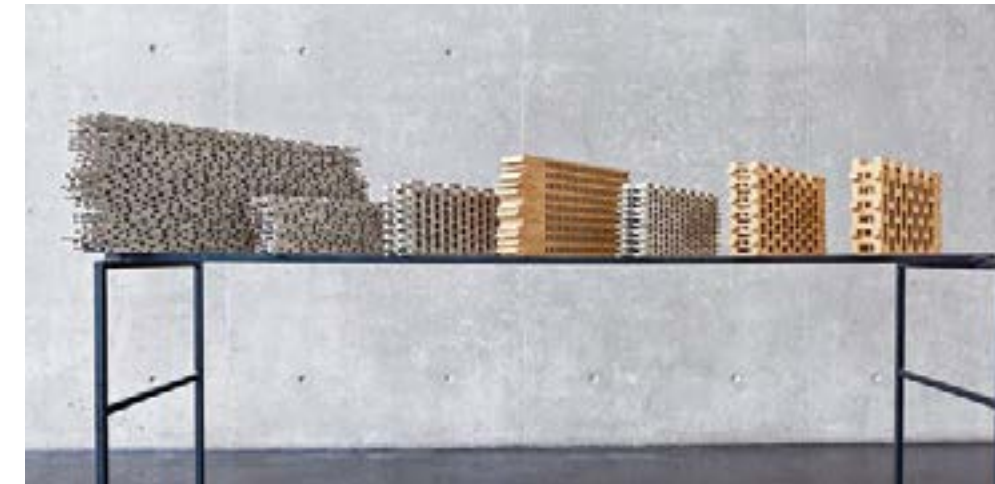
Precedent 2. Kolumba Museum, Peter Zumthor

Year: 2003-2007 Location: Cologne, Germany

Through the study of the second classic case, it helped me to rethink the ruins of the old buildings. How to consider transforming fields in ruins into new space forms. "an older -style architectural stance that would bring old and new together in a new whole geared toward harmony rather than contrast.", this sentence makes me firmly believe that the field is pursuing a kind of harmony rather than contrast



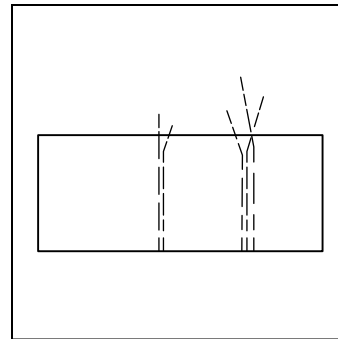
On the other hand, everything in the field is part of it. How to retain the original site content, reuse and improve building materials is one of the best ways to continue the field, just like Danish brick maker Christian Petersen designed new "Kolumba bricks" for Kolumba Museum combining with the original field.



To borrow a passage from the book, "gradually windows appear along the way, letting daylight warmly illuminate the clay-plaster coating the walls; we look out into the city, along with the quietly smiling seventeenth-century Madonna and Child at the end of the first ling stairway". I think that no matter how many traces the years of history have left, as long as you walk into its field, you will feel as if everything happened in front of your eyes. This case perfectly shows the effects of architects' consideration and respect for the field.

Precedent 3. Nordic Pavilion, Sverre Fehn

Year: 1962 Location: Venice, Italy



"Over five decades later the 'Nordic Pavilion' has come to reflect, consolidate and embody Nordic architectural traditions. Look a little deeper, however, and it becomes clear that Fehn actually sought to invert them entirely."

by James Taylor-Foster

In place of heavy timber beams Fehn chose slender concrete lamellae, pigmented to glow. Rather than create a closed space to shut the elements out—a typical vernacular in Norway—he completely removed two of the building's four boundary walls. In designing the roof to be essentially open to the skies, Fehn was able to specifically control how the rain would fall into the space. In this sense, it is a building in possession of its surroundings – accepting its direct context while tentatively suggesting another, distant world.

"You converse with material through the pores of your skin, your ears, and your eyes. The dialogue does not stop at the surface, as its scent fills the air. Through touch, you exchange heat and the material gives you an immediate response."

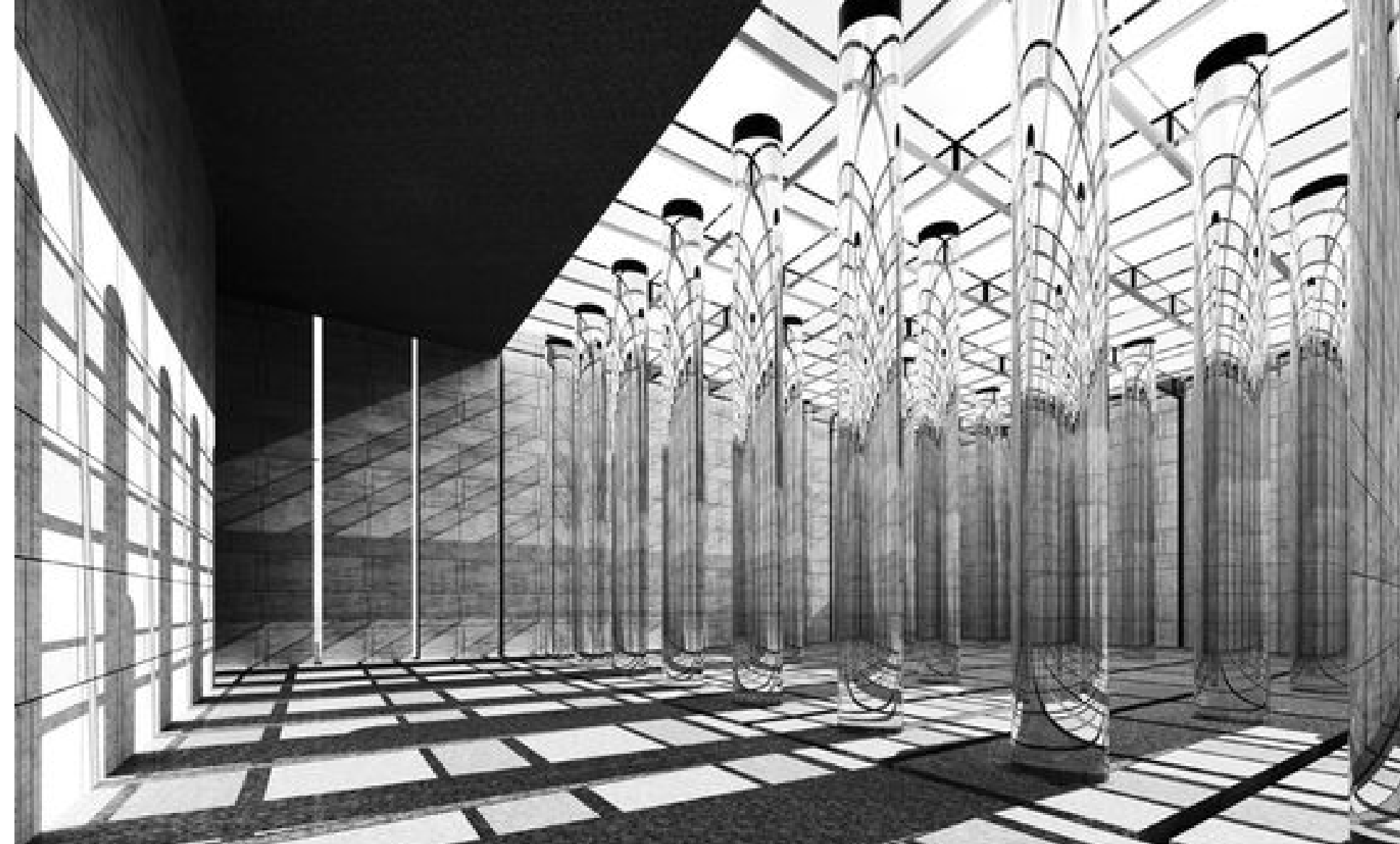
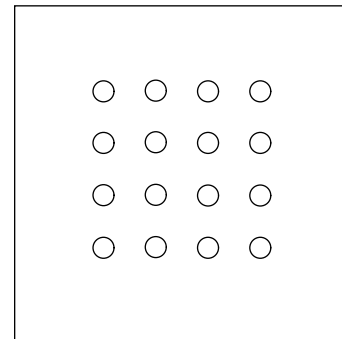
In this work, the architect interprets the characteristics of classic Nordic architecture - simple form, material saving, combination of daylight and natural environment. An elegant Nordic house creates an elegant field of its own. It awakens the space thinking of every exhibitor.



Precedent 4. The Danteum Giuseppe Terragni (Unimplemented), Giuseppe Terragni

Year: 1938 Location: Rome, Italy

The Danteum is an unbuilt monument proposed by Dante, approved by the Benito Mussolini's Fascist government, designed by the modernist architect Giuseppe Terragni. Nowadays, just some sketches on paper, scraps of an architectural model of the project and pieces of a project report, written by Terragni remain.



The entire space is balanced in proportion to the walls, columns, ceilings, and light to create an atmosphere detached from the real world. The spirit of space essence represents the whole architecture, it can be interpreted as the center of the whole universe. Although the form of the four courtyards is similar, the different light treatment makes the field of the audience vary with the tour.

Site: Existing Building

Documentation and Analysis

- 1. Site Overview
- 2. Historical Development
- 3. Mapping of Site

Site : NanKou Flate Glass Factory, Beijing, China

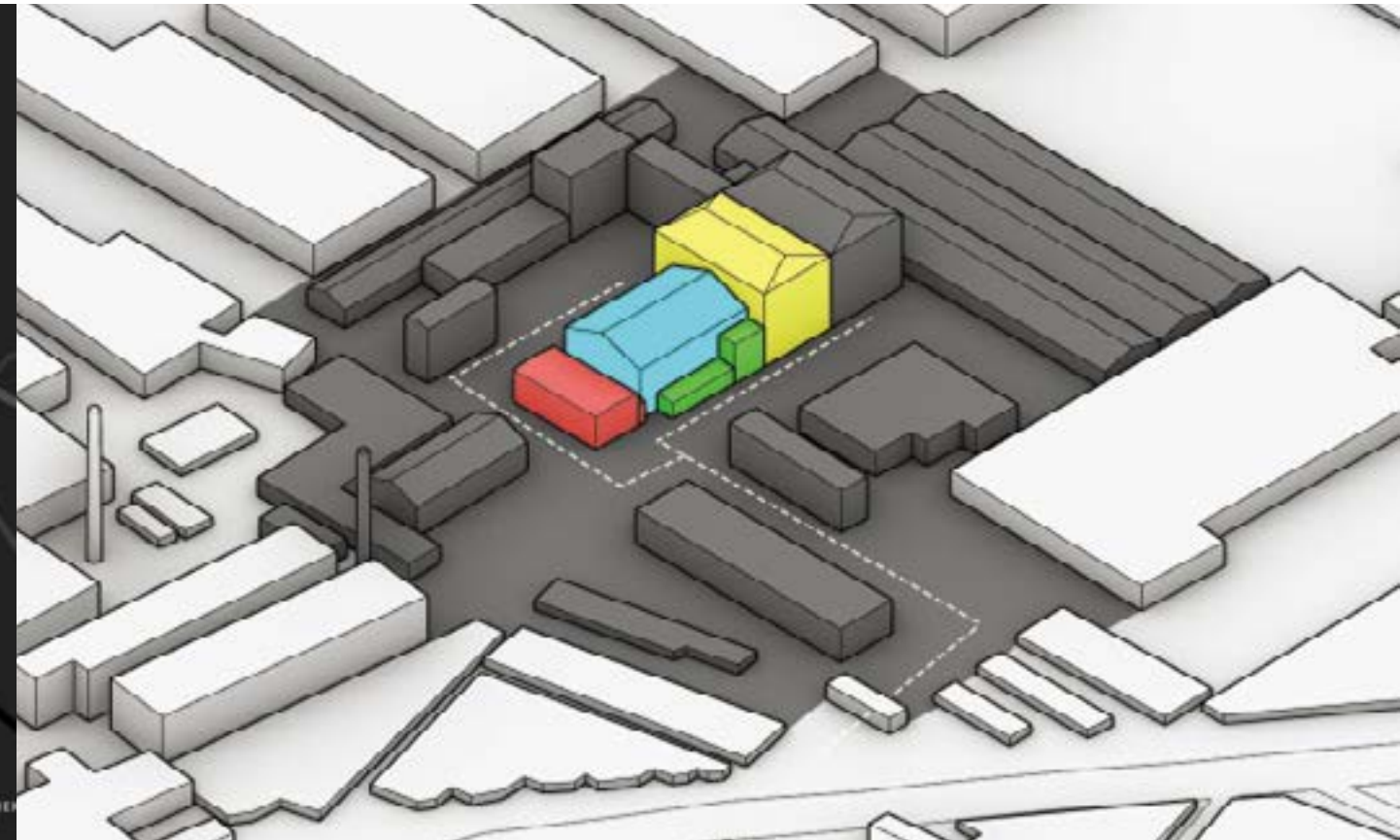


Site: Existing Building Documentation and Analysis

1. Site Overview

Nankou Town belongs to changping district of Beijing, located 7.5 kilometers northwest of ChangPing satellite city, behind the Yanshan Mountain. With a total area of 202.5 square kilometers, the town has a population of nearly 100,000 and a permanent population of 72000.

In 1912, Nankou Village was built into nankou town. Since the Nankou Railway station of Beijing-Zhangzhou railway was built here in the late Qing dynasty, the center of Nankou Town was moved to the vicinity of the railway station. Since 1906, with Nankou Railway Station and Jingzhang Railway factory as the center, a modern town integrating transportation hub, commodity distribution center and cultural residence center has grown rapidly.



Nankou Wown's economy is dominated by industry, characteristic agriculture and tourism. Industries include: Beijing locomotive Machinery Factory, Beijing Flat Glass Factory, Changping Preserved Fruit Factory, Beijing Thermos Flask Factory, Beijing Cement Machinery Factory, Nankou Flour Factory, Beijing Automobile Steel Ring Factory, Changping Chemical Fertilizer Factory, Nankou Clothing Factory.

Site: Existing Building Documentation and Analysis

2. Historical Development

Beijing plate glass group corporation, founded in 1953, is a building material enterprise mainly engaged in plate glass production and deep processing. Currently, Beijing plate glass group corporation has stopped production.

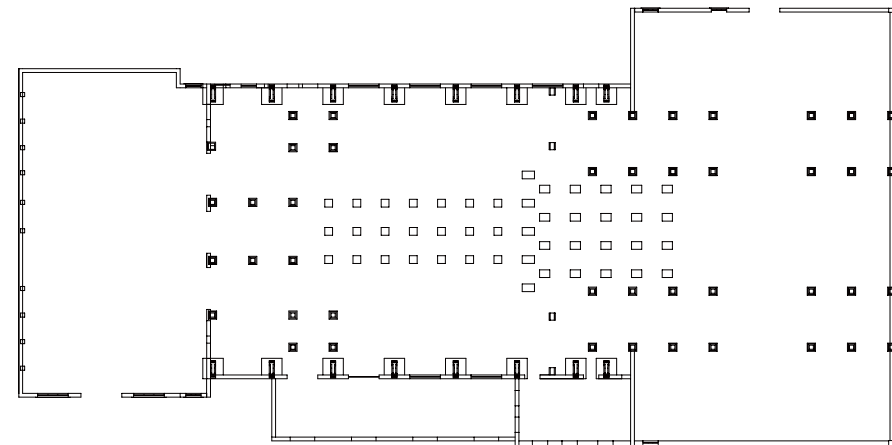
Flat glass group company predecessor is Beijing nankou named by 28 people jing production cooperatives, handicraft industry development in 1960 as the glass factory. In 1989 renamed the flat glass industry company in Beijing, into a large 2 kinds of enterprises, restructuring in 2002 to become flat glass group co., LTD., Beijing became the largest building materials is one of the top 500 enterprises



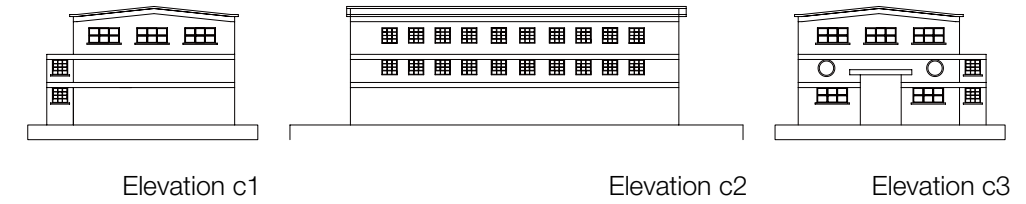
Site: Existing Building Documentation and Analysis

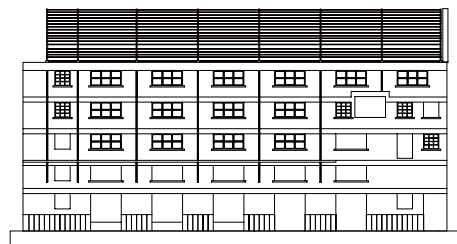
3. Mapping of Site

During the summer vacation of 2018, I went back and forth to the site for many times and completed surveying and mapping. From September to December, I completed the site modeling and got the drawings according to the surveying and mapping content.

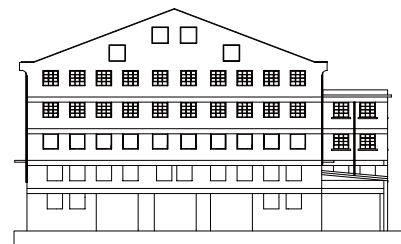


Floor Plan

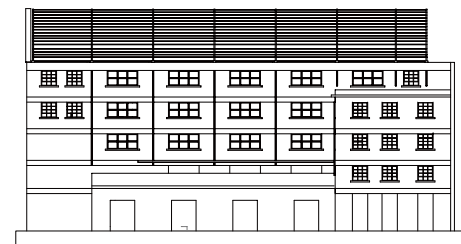




Elevation a2



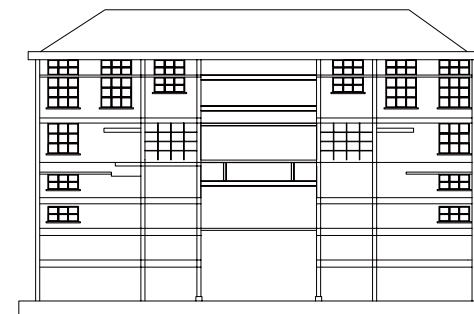
Elevation a1



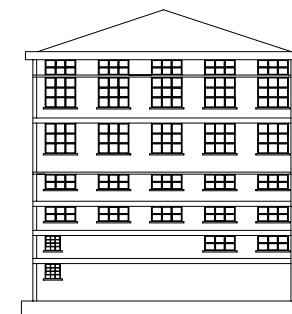
Elevation a3



Elevation b2



Elevation b1



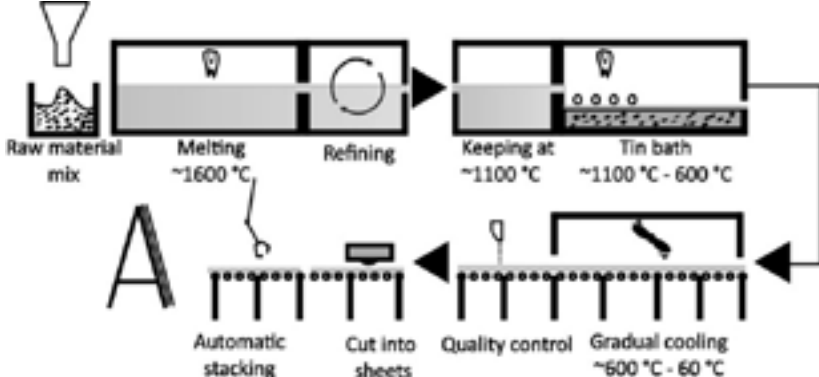
Elevation b3

Program

1. Existing Program A. Original Situation



Structure reference of furnace support pillar



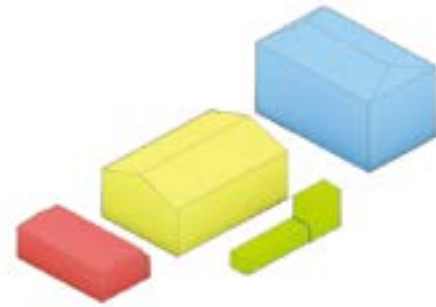
A schematic diagram of the production process of float glass

B. Current Situation

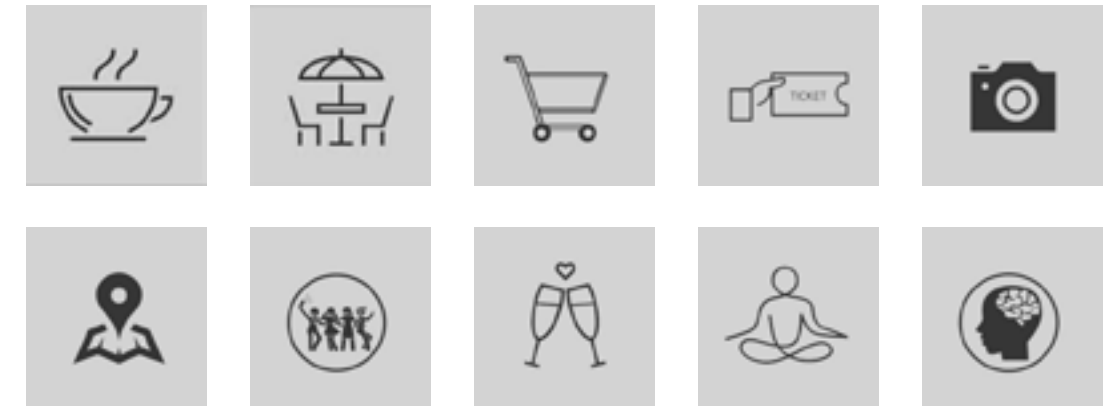


At present, Nankou Flat Glass Factory is located and closed down by Beijing as a polluting enterprise. Now the factory land is still owned by private enterprises and idle up to now. Since 2017, a few ruins explorers and photography enthusiasts have entered the site.

2. Proposed Program



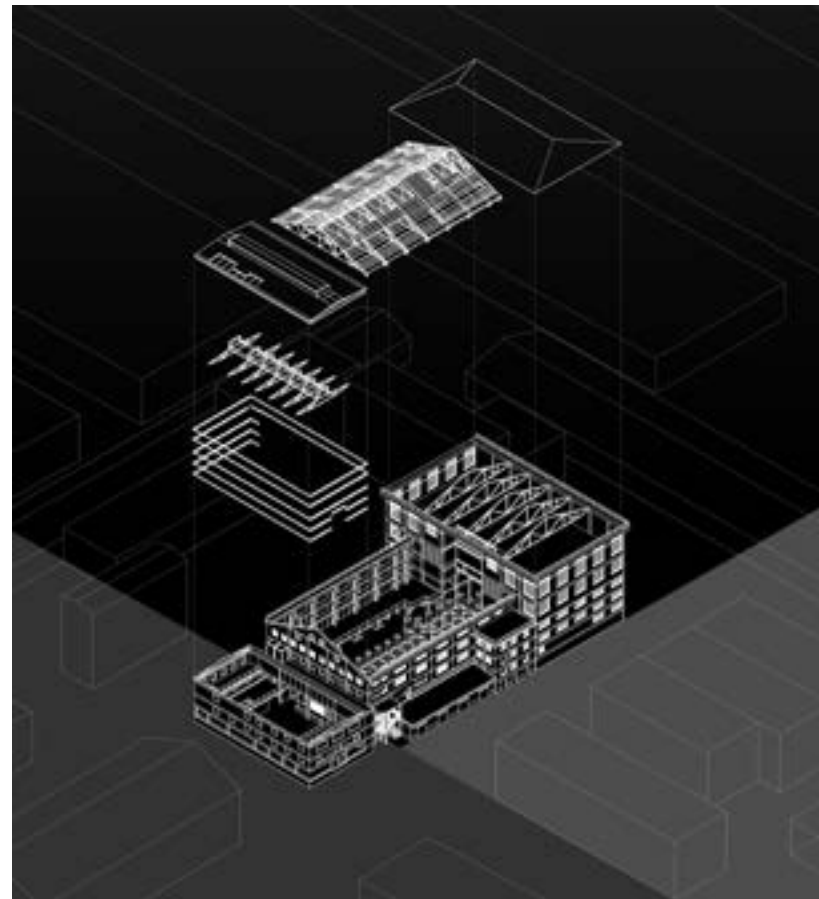
First, the yellow area is designed a ruin into a “ruin” which is legalization.
Second, the red area serves as the entrance to the ruins.
Third, the green area serves as the auxiliary space of yellow.
Fourth, the blue area is reserved space for the future.



The space project in the ruins is mainly “event-space”. “Architecture is not just about space and form but also the event happening inside”, Tschumi coined the term event - space in Architecture.

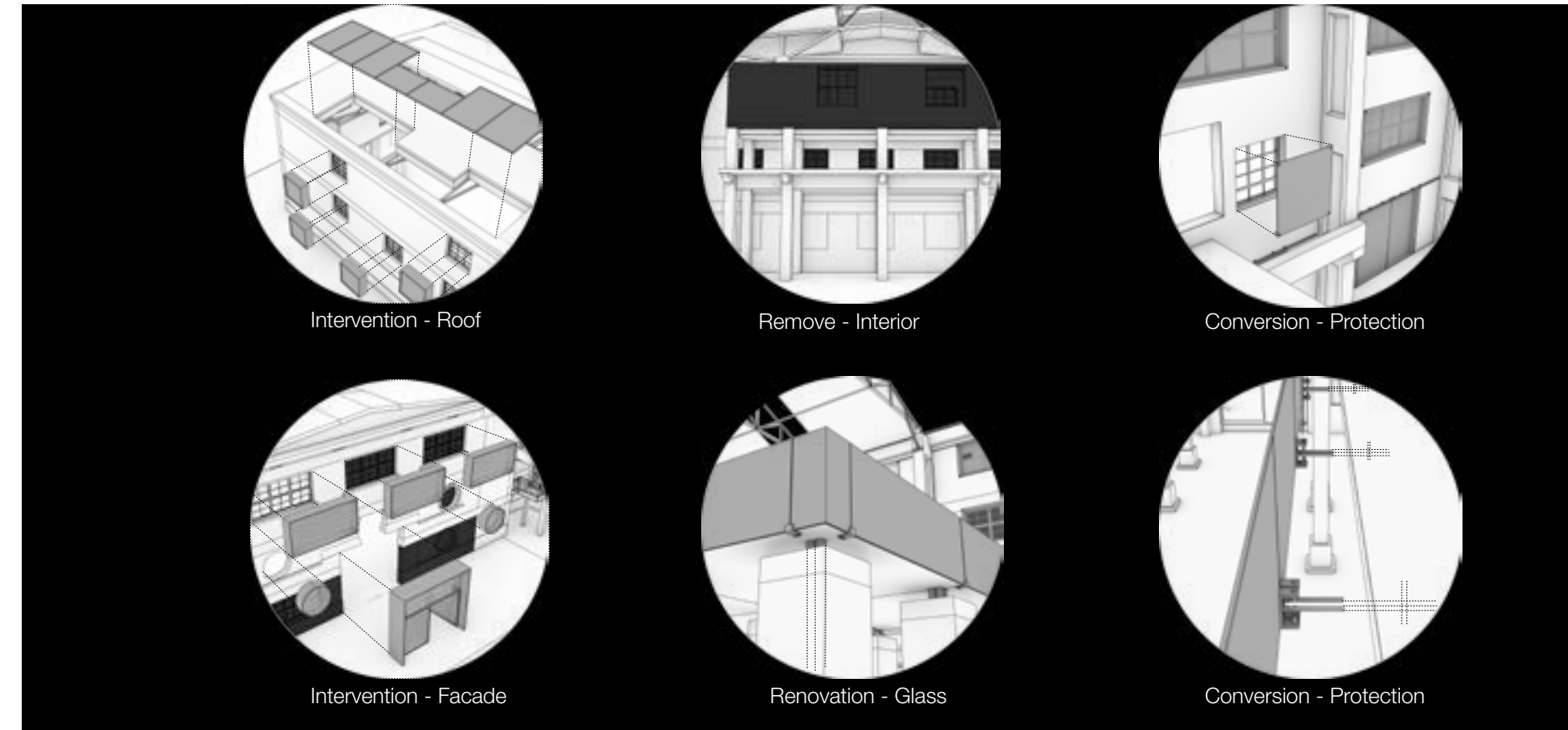
Proposed Design

1. Intervention Technique



The site covers three building Spaces. They are called the substitution space, the main space and the future space.

Three buildings choose three different design languages to interpret the field.



1. Intervention Technique Render

The first building serves as the entrance, preserving the visual effect of the broken facade of the original building while adding a new building metal skin for iterative contrast.



Concise - The view of interior facade

The new contemporary building materials present a new adaptive space on top of the existing one, containing different subsidiary functions.



Respite - The view of interior lounge

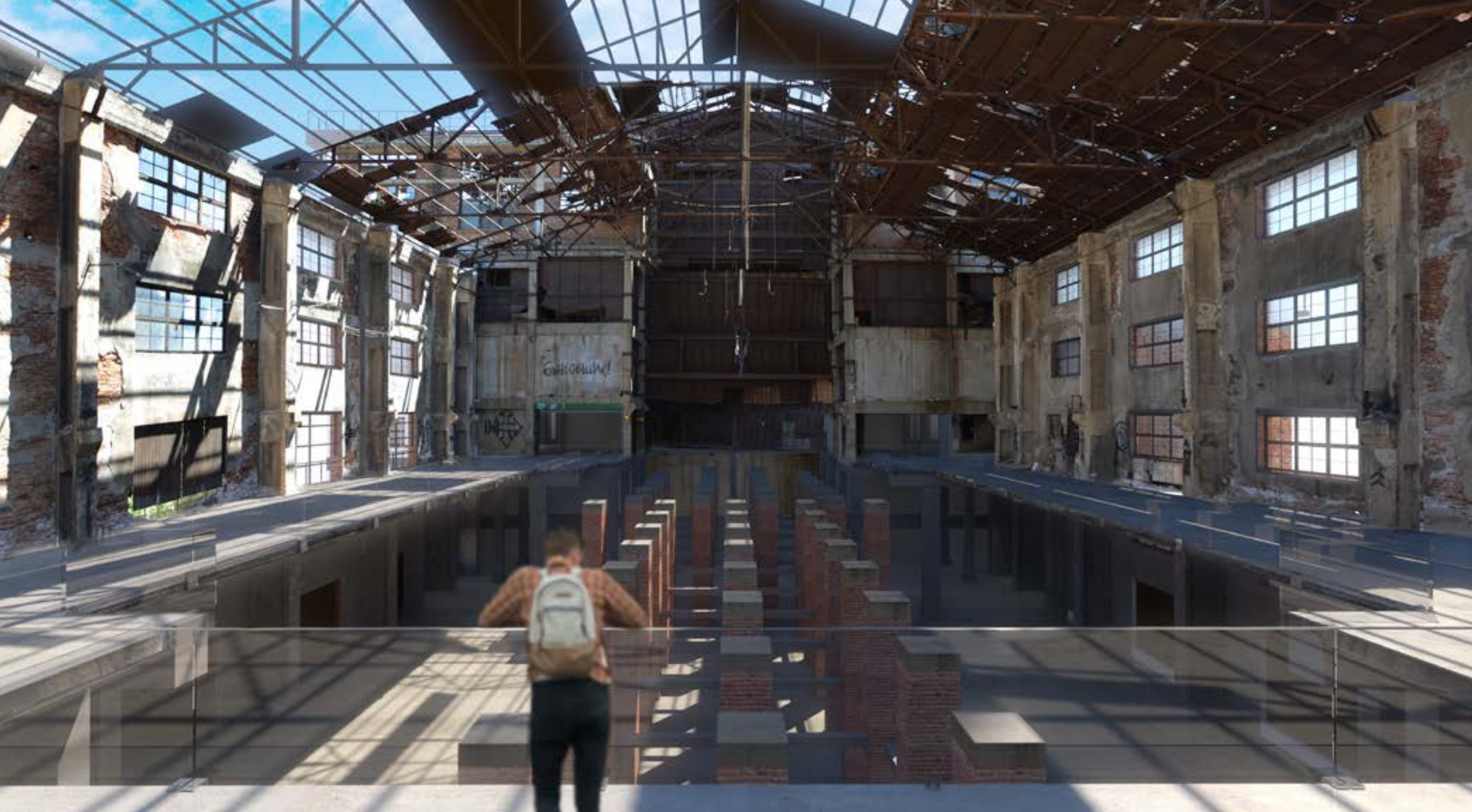
The original industrial load-bearing structure in the ruins was transformed into a new form of interior design.



Transition - The view of reception

The transition of architectural space as the node of the site entrance creates the effect of contrast through the packaging of new materials to create the conversion of time and space.





Peaceful - The view of main space

The extremely simplified intervention completes the basic protection measures, and the transparent glass restores its original color as much as possible.



Subside - The event of competition

Different events bring empathy into space. The fusion of emotion and memory produces thoughts about the future. Who are we?



Event - The view of wedding

A wedding? Holy? What is a field? It's right under your feet.



Immersion - The view of Tribute in Light

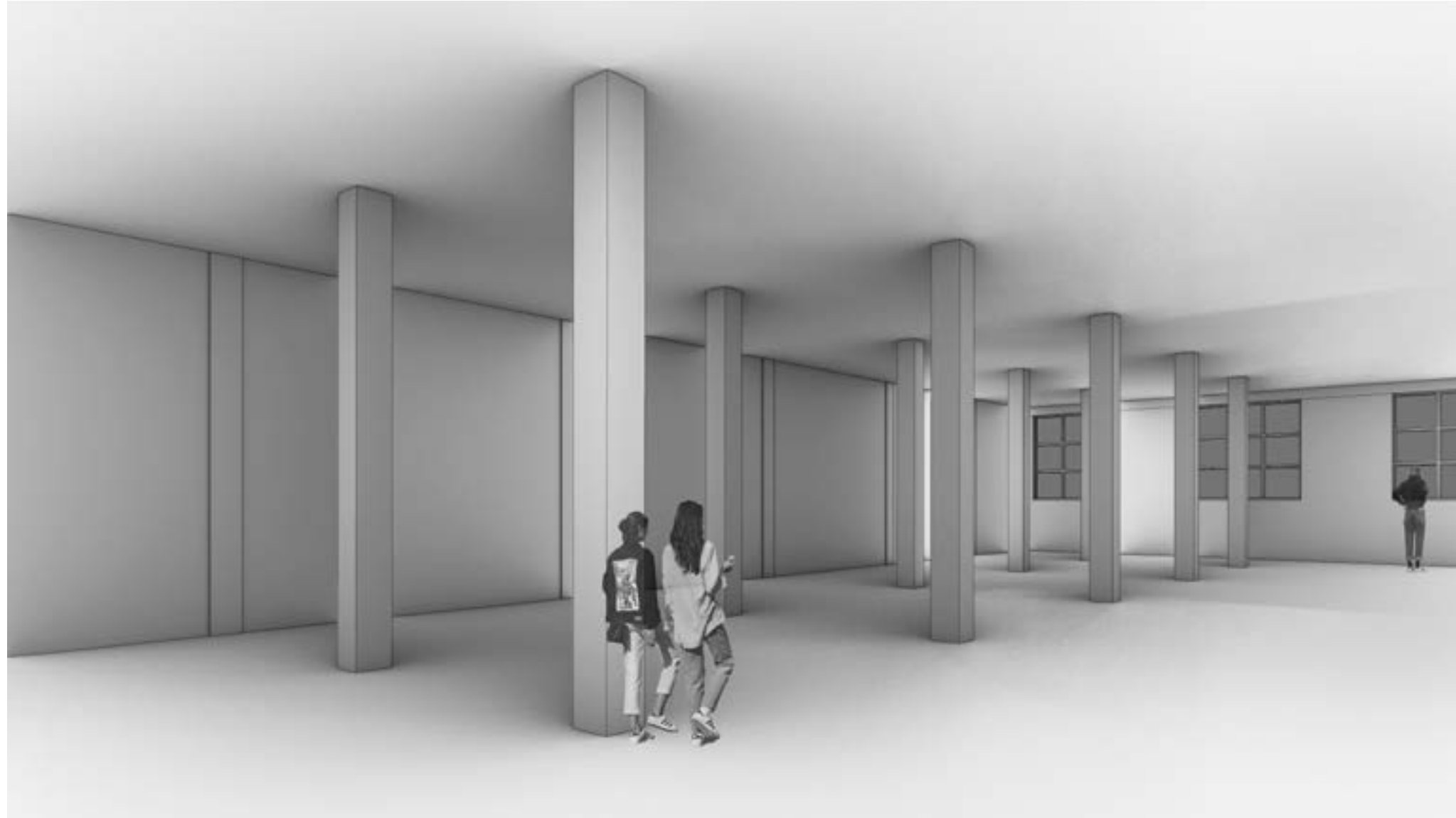
In order to forget the memory.

Margin - The view of top level

Leaving a white gap is not compromise,
but hope and vision.







Grid - The view of interior space



Beyond the plan and diagram, there should be poetry and the far afield.



As Ludwig Mies van der Rohe said : "Architecture starts when you carefully put two bricks together". I think my architecture from now on, the field is always there.

- Yilun, May 22, 2019. Providence



Annotated Bibliography

Adrian Forty. Words and Buildings a Vocabulary of Modern Architecture. 2000

I started reading this book five years ago and have been reading it off and on for a long time. It helps me to continuously sort out my attitude and cognition towards architecture. The word "space" has a profound impact on me, and I decided to start from it to think about the direction of my paper.

Arthur Schopenhauer. The World As Will And Idea. 1819.

The content of the book make a point: Architecture exists through people's perception.

Immanuel Kant. The Critique of Pure Reason. 1781

This book presents the view that space is transcendental, is a priori, and it's a property of mind. So we can believe the space not just physical dimensions of space.

Henri Lefebvre. The Production of Space. 1974.

This is a very outstanding work, as a classic work of space studies. However, it is difficult to understand the author's multi-dimensional thinking due to its coverage of social space, but it makes me believe that space is both conceptualized and physical.

Hays, K. Michael. Architectures Desire: Reading the Late Avant-garde. Cambridge, MA: MIT Press, 2010.

This book make me understand architecture as specific kind of socially symblic production whose primary task is the construction of concepts and subject postion rather than making things.

De Botton, A. (n.d.). The architecture of happiness. 2006

Architecture, like writing, is a record of what really matters to us.

Image Credits

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IMAGE

<https://www.archdaily.com/902853/es-devlin-to-design-the-uks-poem-pavilion-for-dubai-expo-2020>Float glass

<https://stewartengineers.com/en/float-glass-factory/>

Photo of Glass factory

<http://www.hansiji.com/thread/206567.html>

