DIPLOMARBEIT

RAHMENKONZEPT UND JUXTAPOSITION

FRAMEWORKS AND JUXTAPOSITION

Eine Erkundung und Implementierung von
Kazuo Shinoharas Stufe-Null-Maschine

An exploration and implementation of
Kazuo Shinohara's Zero-degree Machine

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ABSTRACT

RAHMENKONZEPT UND JUXTAPOSITION

Eine Erkundung und Implementierung von Kazuo Shinoharas Stufe-Null-Maschine

Der Schwerpunkt dieser Arbeit liegt auf der Erforschung des eigenständigen Ansatzes von Kazuo Shinoharas Entwicklung in der Architektur und die Untersuchung seiner Schritte von seinen Experimenten mit japanischen Räumen bis zu einer Architektur, die die chaotischen städtischen Elemente Tokios verkörpert. Indem ich seine Schritte nachverfolge, möchte ich seine beiden späteren Konzepte für Architektur, die „Stufe-Null-Maschine"[1], und die Stadt, „progressiver Anarchie"[2], verstehen.

Anhand eines konkret Projektes, das im Fokus dieser Auseinandersetzung steht, ist die (1987) Centennial Hall in Tokio, dadurch konnte diese ausdrucksstarke visuelle Kakophonie des Tokioter Chaos erreichen. Seine Architektur wird so zum Medium der Stadt und zu einer „urbanen Maschine", „nicht im Sinner der Moderne, sondern zu einem Architekturmechanismus, der sich auf die von Bedeutung von Räumen"[3] und deren städtischen Kontext konzentriert.

Shinoharas architektonischer Rahmenkonzept, die „Stufe-Null-Maschine", wird dann auf einem dreieckigen Grundstück in Wien umgesetzt, wo das Programm von Shopping und Non-Shopping Räumen gegenübergestellt wird. Das Grundstück, die dreieckig ist, wurde absichtlich aufgrund ihrer geometrischen Symbolik der dynamischen Spannung ausgewählt, bei der die Dualität von Stabilität und Instabilität inhärent ist.

1 Kazuo Shinohara, *Auf dem Weg zur Architektur*, in: *Baumeister* 11.1984, München, S.51

2 Kazuo Shinohara, *Auf dem Weg zur Architektur*, in: *Baumeister* 11.1984, München, S.49

3 Alberto Dell'Antonio and Tibor Joanelly, *Tradition Kubus Maschine Chaos*, in: *Werk, Bauen + Wohnen*, 12-2015, Zürich, S. 13

FRAMEWORKS AND JUXTAPOSITION

An exploration and implementation of Kazuo Shinohara's Zero-degree Machine

The core focus of this thesis is to explore the personal approach of Kazuo Shinohara's development in architecture, and to trace his steps from his experimentations with Japanese spaces to an architecture that embodies the chaotic urban elements of Tokyo. By tracing his steps, I want to understand his two later concepts for architecture, the "Zero-degree Machine"[1], and the city, "Progressive Anarchy"[2].

One of his project that sparked this interest is the (1987) Centennial Hall in Tokyo. He was able to achieve these expressive visual cacophony of chaos inherent of Tokyo. In a result, his architecture becomes the medium of the city and an "urban machine", "not in the Modernist sense of an obeisance to technology, but rather an architectural mechanism that focuses on the production of meaning in spaces"[3] and the city.

Shinohara's architectural framework, the "Zero-degree Machine", will be then implemented onto a triangular site in Vienna, where the program of shopping and non-shopping spaces will be juxtaposed. The triangular site was intentionally chosen due to its geometrical symbolism of dynamic tension, where the duality of stability and instability is inherent.

1 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, p.35

2 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, p.32

3 Alberto Dell'Antonio and Tibor Joanelly, *Tradition-Cube-Machine-Chaos: Productive Contradictions in the Working Methods of Kazuo Shinohara*, in: *Werk, Bauen + Wohnen*, 12-2015, https://www.wbw.ch/de/heft/artikel/originaltexte/2015-12-tradition-cube-machine-chaos.html (accessed 01.07.2018)

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Figure 1
My 3 Muji B5 Notepads

INTRODUCTION

My true intentions for this project stems from a few sources. One of these intentions was for me to conclude my architectural studies. I wanted to have this work to be a sum of personal interests, influences, methods, references, concepts, etc. that I have learned or tried to learn from the past few years. I wanted this piece of work to be a personal reminder of how I work and what I believe are essential to me in architecture. It is not to say what is being "tried to accomplish" here is the end of the road, but rather the beginning. I would like this project and theories to be a stepping stone to my own personal journey in architecture. I say "tried" because I know what I wanted to accomplish will fail to match up to my own "expectations" or the "ideal form" of what will encompass the theories behind it, but that's okay. I'm more than satisfied if my project has reached a certain level of potential for me to work on in the future through other projects.

In a sense, what you will find here, will be more of a journal. I believe more can be read through fragmented sketches, notes, lists, texts, and images, than just finished drawings. As I used this method to try to deduce Kazuo Shinohara. This diploma book will be essentially a book form of what lies within the three Muji notepads, *Figure 1*. These notepads act as a tool to gather my process, reflections, references, drawings, etc. that are relevant to this project. The book is structure into the following: research, the search for a triangular building site, the process of the design aspect of the project, and finally the finished form of the project.

I was inspired by Shinohara's Tanikawa House (1974), *Figure 04*, that acted as the main reference to my Kulturhaus, *Figure 03*, project, where the concept of critical regionalism was explored. The intentions were to utilise the traditional contours of a salt barn that previously stood, *Figure 02*, there to restore the "Stadtbild" without being pastiche or nostalgic, but rather using the form as a metaphor and embodiment of the context of Bodensee. It was also to return a sense of cohesion or balance back to the surrounding, while emphasising its renewed aspect of this traditional form through contemporary means of production, while emphasising a continuous history. This started an internal search into a sea of themes for a theme that truly resonates within me.

Initially, I wanted to further explore the concept of critical regionalism for my diploma. But as I kept reading about Kazuo Shinohara, the theme left me unimpressed and unchallenged. Not that the topic is unimpressive or unchallenging, but rather I believe it poses less questions for today and the future, where the city is becoming rather more relevant today (not that it was ever irrelevant). A theme inching closer to something in the line of critical urbanism, hence the interest to his later public projects.

Going through Shinohara's works, I have grown attached and fascinated by the term "machine", which he constantly used. A term that left me rather perplexed but extremely intrigued. It got me further fascinated by his public and private projects in his 3rd and 4th Style. A shift that seemed to come out of nowhere, but through careful inspection, the shift seemed inevitable. These projects became extremely extroverted and interacted heavily to the context of the city. It intrigued me how he was able to embody the city into a single object. A concept that still fascinates me to this day, where the theme/metaphor acts as a driving force of the building.

I rather have become obsessed with his works and how he thinks. I found out that one is able to read more into his mind by going through his sketches, interviews, and text or anything he shows, as he a very strict way of showing his ideas. Leaving very little room for much interpretations, as he famously puts it, "architecture is 50% building, 50% photography"[1]. For him, the images he strictly publishes and write, are where all the meanings are found.

This work will not be a history book or a biography of Kazuo Shinohara. I believe there are enough works out there that will do the job. It will not explore projects from the 1st and 2nd style, nor will it explore the domestic houses by him, with of courses, a few key exceptions. *Five Forms of Emotions: Kazuo Shinohara and the House as a Work of Art* by Enric Masip-Bosch does an extremely good job exploring the relation of the city and domesticity through an analysis of a selection of key projects that Shinohara has built, while at the same time, covering extensively of who Shinohara was as a person.

The main starting point of this practical aspect of the project came from a text that Shinohara wrote after his visit to Vienna in 1980, titled, "Wien und Tokio". The theme of the "machine" and its ties to the city stems from here. This work will focus on the theme of the "machine", which will be analysed through Shinohara's public projects, which I believe can be further explored. The practical aspect of this work will try to implement these themes, through the juxtaposition of two forms of public programs, retail and sport, while also including programs that will bring the community together. The aim is to create a building that will function simultaneously together and separately. A building that is accessible when it's closed and open. Essentially, a building that runs 24/7, as public space should do.

1 *L'Architecture d'Aujourd'hui* 04. 1983, English Summary

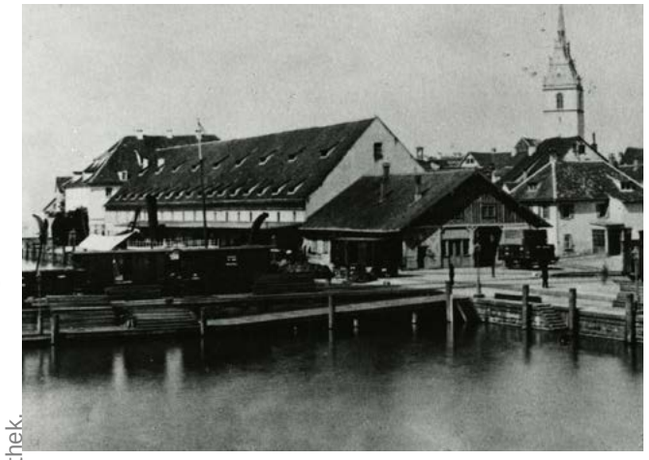
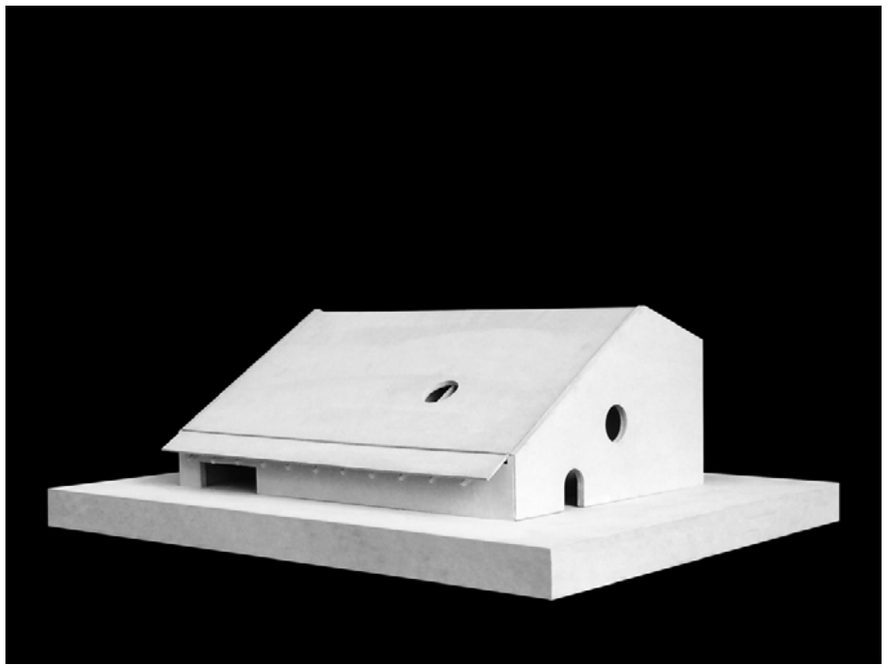


Figure 2
Saltbarn, Friedrichshafen, Germany, 1979

Figure 3
Kulturhaus, 2016



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RESEARCH

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Tsai Ming-liang

Figure 7
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Thomas Struth

PROGRESSIVE ANARCHY

We recognise Kazuo Shinohara as an architect who is known for his small built projects, that explore architecture through a selective interpretation of Japanese tradition, while utilising western and modern concepts. But for Shinohara, the city played a huge role in shaping his architecture, and, at the same time, further developing his view of architecture. This is especially visible in his built and unbuilt works of the 3rd and 4th Style.

Shinohara was invited to Vienna by Professor Gieselmann in 1980 and 1986. During a casual conversation between Professor Gieselmann, the principal, and himself, they considered Tokyo as a real city and Vienna as a village, but for Shinohara, this contradicts with the Japanese perception of these two cities. In Japan, they considered Vienna as a real city and their own capital as a large village[1]. Nonetheless, this casual conversation pin-pointed certain issues that has Shinohara intrigued.

Shinohara's impressions of Vienna was that of massivity, order, homogeneity, and stillness. The plasticity of the facade adds further weight to the structure. In Vienna, and Europe in general, there is a self-evidence between architects about city axis and urban symbolism, which further fuels this sense of unity and consistency. When there is an empty building slot, the architects fill it in and try to create a building that fits to surrounding image. One can say these characteristics of homogeny and stillness are those like a village.[2]

In contrast, due to the large bombings from World War II, a large part of Tokyo was destroyed. Through its reconstruction, the city was mixture of modern and one story wooden buildings that existed before the war. Shinohara mentions this modern element of the city as "Japanese Modernism" in order differentiate itself from its western counterparts.[3] His definition of "Japanese Modernism" lies within the usage of advertising signs through the entire city. The advertising signs are placed on whatever building that is within the city, either on the one story wooden buildings that houses a grocery store to concrete high-rises that house the offices. These signs gives the buildings a new makeshift facade. They evoke a sense of lightness through its materials, graphics, colours, and the usage of different languages. By seeing technology as an essential element to Modernism, Shinohara slowly implemented this aspect of Modernism into his later works, especially the usage of metal, glass, and the building's appearance of otherworldliness. An appearance close to a space ship that, at first, seem alien its context. We can perceive these makeshift facades as a form of "application of advanced mass-communication technologies, superimposing yet another layer to the physicality of its urban structure."[4] But I believe his term of "Japanese Modernism" does not necessarily have to be restricted to only Japan, as these makeshift facades that greatly define the Japanese urban landscape, can be used through out other Asian cities, like Hong Kong, Taiwan, Shanghai, Seoul, etc.

Other than these makeshift facades, we have other elements that exists within Tokyo, such as randomness, chance, and the unplanned. All these are able to coexist within the city. Shinohara finds "chaos" as a relevant term to describe this phenomenon for the city of Tokyo.[5]

But where does this coexistence comes from? Shinohara mentions that it comes from the "tolerance or the power of absorption in the Japanese form or definition that lends from the parent culture in a purely aesthetic way."[6] This lies heavily in their culture, even though many other cultures do the same. Japan is quite extreme in this area. It can be better understood through their usage of loan words and transliterations/transcriptions. The usage of loan words in their language are not a translation, but rather a transliteration of the loan word. They are written in Japanese, where the Japanese characters offer the phonetic allusion of the loan word, but the character itself does not hold any meaning.

On the advertising signs, the usage of these loan words and transliterations are common place. A sign would be a mixture of Western, Chinese, and Japanese writing all placed next together with bright graphics and lightings that are all there to uniquely stand out. These can be visible throughout Asia, especially in Hong Kong, through its usage of neon signs. "The imagery of the neon signs, or its symbolism, more often than not stands out as a hallmark of prosperity and resplendence, especially when set against the jet black sky. [...] The visual stimulus of the neon signs seem to reflect the prosperity that fuels the urbanites' desires, or, rather, the sign per se is the bait to desire."[7] A truly urban element.

These neon signs provide the city the visual language. A tool used to compete for attraction, or the chosen visual devices become new urban landmarks due to it being so memorable. Through this, a new tradition is created. The city of Hong Kong expresses itself through this play of juxtaposition between the decorous brittleness against the urban massivity of concrete and steel, where the decorous brittleness of the neon lights feel more monumental than the latter. "Bland streetscapes are often unified and made pleasurable by layers of superimposed signages, incidental detail and communication devices, rather than more orthodox architectural unification through formalistic repetition of building elements."[8]

Smith, like Shinohara, believes that randomness and the unplanned allow the space of continuous development and adaptation, where the existing structures could be

Figure 8
Shinju-ku (with Ben Johnson), Tokyo, 1987
Thomas Struth

continuously undermined. It allows the aspects of consumption and technology to become a key identifying factor in such makeshift facades, as relevant themes of a contemporary city. "The iconography of consumption is used both physically and metaphorically to construct a street language, asserting a symbolic identity through its confrontation dominance".[9]

Unlike the European counterpart, where the signs play a lesser role, these makeshift facades introduce new vocabulary, by attaching impermanent signs that end up becoming permanent. Through this, new meaning is established, where the medium becomes the message.

It is through these foreign importation and appropriation into the contemporary vocabulary of Japan, through its amplified forms, that reflect the cities ever-changing urban and architectural fabric.

During the 1960-1964, one of his hypothesis was the conception of chaos within the model of a city, that the expression of the city should be found within the "beauty of chaos".[10] As this conception comes from the aggregation of individuals within a city that develops further in an irrational and chaotic way. Where the control proves more difficult, and economic and technological progression harder to grasp. Shinohara believes the beauty lies within the unplanned.

"There is a certain beauty in districts never intended for (aesthetic) appreciation, while beauty does not exists in modern communities in which individual houses were designed to be beautiful."[11] Hence, "chaos" and the "beauty of chaos" become relevant terms to describe Tokyo, or Tokyo's preference to the "beauty of chaos". As the modern urban landscape should find its expression in the "beauty of chaos", rather than in harmony.[12] Shinohara believes one should embrace and perceive it as a possible tool, rather than trying to implement other cities as role models. Even if they were implemented, these urban model would in the end be susceptible to chaos.[13]

His earlier research, on the composition of feudal villages in Japan, acted as a point of comparison for contemporary Japanese city. It allowed him to see the differences, while not trying to impose those systems. Instead he observes and reflect on what is now there and why it is the way it is.

In 1980, the term, "progressive anarchy", was first brought up in a lecture held in Centre Pompidou. It stems from his own personal observation through his daily commute at the Shibuya Crossing in Tokyo. This area would become his foundation his new urban concept.[14] Shibuya Crossing was for Shinohara an urban model where its existence stem from chance and the unplanned, as it was not part of some masterplan. For it to become so, it needs the prerequisite of "progressive anarchy" as a form of urban development.[15] Therefore, the phenomenon of "progressive anarchy", is a necessary catalyst for the vitality and viability of a city, where a productive basic condition is represented through the mechanism of chaos.[16] This is due to the fact that the city is less about the urban system, but more of a human result, where the experience plays a larger role.[17]

As he perceives the city as an abstract system with infinite numbers of functions and sets, a "complexity of this kind can never tend towards a final and essentially self-contained solution"[18]; hence the trip to Vienna and Paris were important for him. It allowed him to find the underlying differences between the European culture and his own. They became important urban models for him to compare Tokyo, as it helped him understand his own city better. In a way, we could perceive Vienna, as the "antithesis" or the "polar opposite" of Tokyo.[19]

He coined the Viennese and Parisian urban models, for its control, as a "closed system", where the system is only maintained. The urban model of Tokyo, for its freedom, was an "open system". This system allows itself to absorb outside influence, and at the same time, allowing great tolerance for randomness and irrational elements to coexist.[20]

He sees these influences as "nutrients". A "closed system" would only lead itself to a form of atrophy when it lacks these "nutrients", while an "open system" would be kept alive with them.[21] It is not to say Tokyo is more beautiful or that the "open system" is better than the other. It should rather be seen as a tool or method that perhaps the European model can adopt in the future, if it ever confronts this form of chaos.

A clear quality of Shibuya Crossing, that caught Shinohara's attention, was its ability to stand on itself without having any images of the past, since it was "developed from the local circumstances of mobility and commerce".[22] His stance differs to those of the European understanding of Rossi, where architecture "represents a memory technology with the goal of historical continuity".[23] For Shinohara, it is his departure from traditional architecture and its cultural ties, which leads him away from historically determined architecture to a thematic one. He perceives this phenomenon of "progressive anarchy", from the Shibuya Crossing as a new form of city and architecture.[24]

"It should be possible for the abstract structure of the future city to include, by its very nature, varied partial spaces. Needless to say, technology will be an important characteristic of the future city, but the future city must also be a city of emotion. A scene I myself once saw must be able to appear in the future city. The city of which I cannot envision a vivid image is no future city for me."[25]

Figure 9
National Panasonic, Nathan Road, Jordan, Hong Kong 1970

Footnotes

1 Kazuo Shinohara, *Wien und Tokio*, in: Institut für Wohnbau und Tadao Ando (eds.): *Bewohnbare Architektur*, Vienna 1990, pg.89

2 Ibid., pg.92

3 Ibid., pg.93

4 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.125

5 Kazuo Shinohara, *Wien und Tokio*, in: Institut für Wohnbau und Tadao Ando (eds.): *Bewohnbare Architektur*, Vienna 1990, pg.92

6 Kazuo Shinohara, *Auf dem Weg zur Architektur*, in: *Baumeister* 11/1984, München, pg.48

7 Lawrence Pun, *The Urban and Cultural Imagery of Neon*, https://www.neonsigns.hk/neon-in-visual-culture/the-urban-and-cultural-imagery-of-neon/?lang=en (accessed 21.09.2019)

8 Peter Cookson Smith, *The Urban Architecture of Impermanence: Streets, Places and Spaces of Hong Kong*, Hong Kong, MCCM, 2006, pg.48

9 Ibid., pg. 73

10 Kazuo Shinohara, *Wien und Tokio*, in: Institut für Wohnbau und Tadao Ando (eds.): *Bewohnbare Architektur*, Vienna 1990, pg.92

11 Kazuo Shinohara, *Jutaku Kenchiku (Residential Architecture)*, Kinokuniya, Shinsho, Tokyo, 1964, pg.103

12 Ibid., pg. 103

13 Kazuo Shinohara, *Auf dem Weg zur Architektur*, in: *Baumeister* 11/1984, München, pg.49

14 Kazuo Shinohara, *Wien und Tokio*, in: Institut für Wohnbau und Tadao Ando (eds.): *Bewohnbare Architektur*, Vienna 1990, pg.90

15 Ibid., pg.92

16 Kazuo Shinohara, *Auf dem Weg zur Architektur*, in: *Baumeister* 11/1984, München, pg.49

17 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.153

18 Mathias Müller and Daniel Niggli, *The Beauty of Chaos*, in: *Werk, Bauen + Wohnen*, 12-2015, Zürich, pg.41

19 Kazuo Shinohara, *Wien und Tokio*, in: Institut für Wohnbau und Tadao Ando (eds.): *Bewohnbare Architektur*, Vienna 1990, pg.90

20 Ibid., pg.92

21 Ibid., pg.93

22 Mathias Müller and Daniel Niggli, *The Beauty of Chaos*, in: *Werk, Bauen + Wohnen*, 12-2015, Zürich, pg.43

23 Ibid., pg.43

24 Ibid., pg.43

25 Kazuo Shinohara, *Theory of Residential Architecture 1967*, in: *2G*, N.58/59: Kazuo Shinohara, pg.255

久我山の家
House in Kugayama, 1954

久我山の家　その２
House in Kugayama No.2, 1958

谷川さんの家
Tanikawa House, 1958

狛江の家
House in Komae, 1960

茅ヶ崎の家
House in Chigasaki, 1960

から傘の家
Umbrella House, 1961

大屋根の家
House with a Big Roof, 1961

土間の家
House with an Earthen Floor, 1963

花山北の家
North House in Hanayama, 1965

朝倉さんの家
Asakura House, 1966

白の家
House in White, 1966

土の家
House of Earth, 1966

花山南の家
South House in Hanayama, 1968

山城さんの家
Yamashiro House, 1967

鈴庄さんの家
Suzusho House, 1968

未完の家
The Uncompleted House, 1970

篠さんの家
Shino House, 1970

直方体の森
Cubic Forest, 1971

同相の谷
Repeating Crevice, 1971

海の階段
Sea Stairway, 1971

空の矩形
Sky Rectangle, 1971

久ヶ原の住宅
House in Kugahara, 1972

東玉川の住宅
House in Higashi-Tamagawa, 1973

成城の住宅
House in Seijo, 1973

直角３角柱
Prism House, 1974

谷川さんの住宅
Tanikawa House, 1974

軽井沢旧道の住宅
House in Karuizawa, 1975

糸島の住宅
House in Itoshima, 1976

上原通りの住宅
House in Uehara, 1976

花山第３の住宅
House in Hanayama No.3, 1977

愛鷹裾野の住宅
House in Ashitaka, 1977

上原曲り道の住宅
House on a Curved Road, 1978

花山第４の住宅
House in Hanayama No.4, 1980

高圧線下の住宅
House under High-Voltage Lines, 1981

東玉川コンプレックス
Higashi-Tamagawa Complex, 1982

ハウス イン ヨコハマ
House in Yokohama, 1985

ハネギ・コンプレックス
Hanegi Complex, 1988

テンメイ・ハウス
Tenmei House, 1988

後藤さんの住宅
Goto House Project, 1981

未完の家 増築計画
Uncompleted House Annex Project, 1992

同相の谷 増築計画
Repeating Crevice Annex Project, 1992

蓼科山地の初等幾何
House in Tateshina Project, 2006

0 1:400 10m

Figure 10
House Plans from all Styles in scale.

FRAMEWORKS

Before jumping into the topic of the Machine, I believe a brief introduction of the 4 Styles of Kazuo Shinohara should be briefly mentioned, in order to have a better overview of how the urban machine came to be. As a lot of the elements and themes that are being explored in his later projects have a deep connection to his early works. The term "machine"[1] has been used since the Third Style, and later developed into the "Zero-degree Machine"[2] that defines the Fourth Style. The machine's main function varies through its theme and elements, ie. the play between the structural elements, horizontal and vertical planes (wall and ceiling), the juxtaposing materiality, etc.. These elements and themes then shifts to the envelope, but they all have a common function of defining or generating meaning and emotions in the internal and external spaces with the need of the participation of the inhabitant to consciously live in the space. In a sense, we could say the machine was evident clearly from the First Style. The other reason, why I believe it is important to explore his previous Styles, is we can see also a cultural reflection of the Japanese culture[3] and development of the city of Tokyo in how Shinohara utilises external influences and references related and unrelated to architecture into his buildings and theories / rationalisation of his built projects.

Giving it a name for each style for me seems a bit difficult due to the amount of themes being explored in each Style, but I believe the titles written in the article, *Tradition Cube Machine Chaos: Productive Contradictions in the Working Methods of Kazuo Shinohara* by Alberto Dell'Antonio and Tibor Joanelly[4], offers a strong straightforward description of each Style.

First Style (1954-1969) - **Tradition**
Second Style (1970-1974) - **Cube**
Third Style (1975-1983) - **Machine**
Fourth Style (1984-2006) - **Chaos**

The term "Styles" doesn't necessary mean a group of projects done in succession that follow a chronological order, nor does it necessarily mean a group of projects that are visually the same. It is rather "characterized by a framing concept, and the change from one to another is due to a volition of finding new expressions".[5]

Shinohara, who was previously studied Mathematics, take influences and seek references from multiple fields of studies unrelated to architecture. It may be from the field of mathematics to philosophy. Here, he looks into the works of Pablo Picasso to understand his own working method. During the time he wrote this essay in 1977, which means his architecture has or was beginning to shift to the Third Style. By partially comparing Shinohara with Picasso, we can get a better idea of growth and developement as an architect.

I am beginning to feel empathy or the change in styles of expression as experienced by an artist like Pablo Picasso. [...] Just when a beautiful and distinctive style was established, he would embark on a new style that undermined it, and so on in sequence. I am now beginning to understand this mechanism. From the outset, I have understood style to be something you create for yourself, so the process of sustaining a style and gradually bringing it to realisation is familiar to me. This is why I was also readily able to follow the trajectory of another master, the architect Ludwig Mies van Der Rohe. I have enormous respect for this one-sided process of mastery, culminating in a perfected style. That respect persists, but I have recently gained a new sympathy with Picasso's mode of working, as characterised by his ever-changing styles."[6]

These styles and theories are Shinohara's method of rationalising his emotions or gut feelings that are implemented into the building, in which he explains his feelings as "illogical facts".[7] It is through these rationalisation of his own works in relation to his surrounding context, Tokyo, that makes him an extremely self-conscious architect. Without this awareness, he would not have been able to progress further to an architecture that he sub-consciously is seeking.

Enrich Massip-Bosch believes that there are three consistent themes throughout Shinohara's career. They are the following: tradition, domesticity, and the city. His projects in the beginning were only capable of containing one or two of these themes, while his later projects were capable of having all these three unified into one singular building.[8] I believe that's one way to look at it, but we could look at the same thing from another perspective. This perspective could be from his definition of the "machine". By doing so, will not negate these three characteristics, but rather point out another way of how these themes acts as essential parts of the "machine".

I titled this chapter and partially the book, Frameworks, because I believe the term would allow us to understand how each Style acted as a foundation for the next Style. Seeing it this way, we can understand Shinohara's design process. Even though, he undermines the previous his previous Style, these frameworks allow us to see clearly what are being undermined and what are not. We can perceive the a single Style composed of one main framework composed of multiple sub-frameworks. For every new Style, he takes either two or more sub-frameworks and combines them together. When these sub-frameworks are combined, they become the new framework for the next Style. In a sense, every project is always a form of departure.[9]

Within these Styles contain two qualities that Koji Taki refers as "variable" and "invariable"[10]. it is these "variables" that the Styles change, and the "invariable" as the underlying theme for Shinohara's overall work. The frameworks could then be seen as the "variable", while the themes of city, domesticity, and tradition can be seen as the "invariable".

In each following Styles, we have certain key projects that truly define the Style, ie. House in White (1967) for the First Style, Uncompleted House (1970) for the Second Style, Tanikawa House (1974), and House in Yokohama (1985) for the Fourth Style. These key projects contain a complete framework that stands on its own, while there are some other projects that don't. If we compare them his overall works, these projects contain only a sub-framework, ie. Ukiyo-e Museum (1982), Higashi-Tamagawa Complex (1982), Prism House (1974), etc.. It is not to say, that these projects lack any true identity, when compared to those key projects. But rather these projects can be seen as experimentations of different forms of sub-frameworks in search for new expressions. Shinohara considers these projects as "Intersection"[11]. While projects under "Interlude"[12], can be see as projects that harder to categorise, but still contain frameworks from the Style it is placed in.

Figure 11
Sketches of the facade of Ukiyo-e Museum, 1983

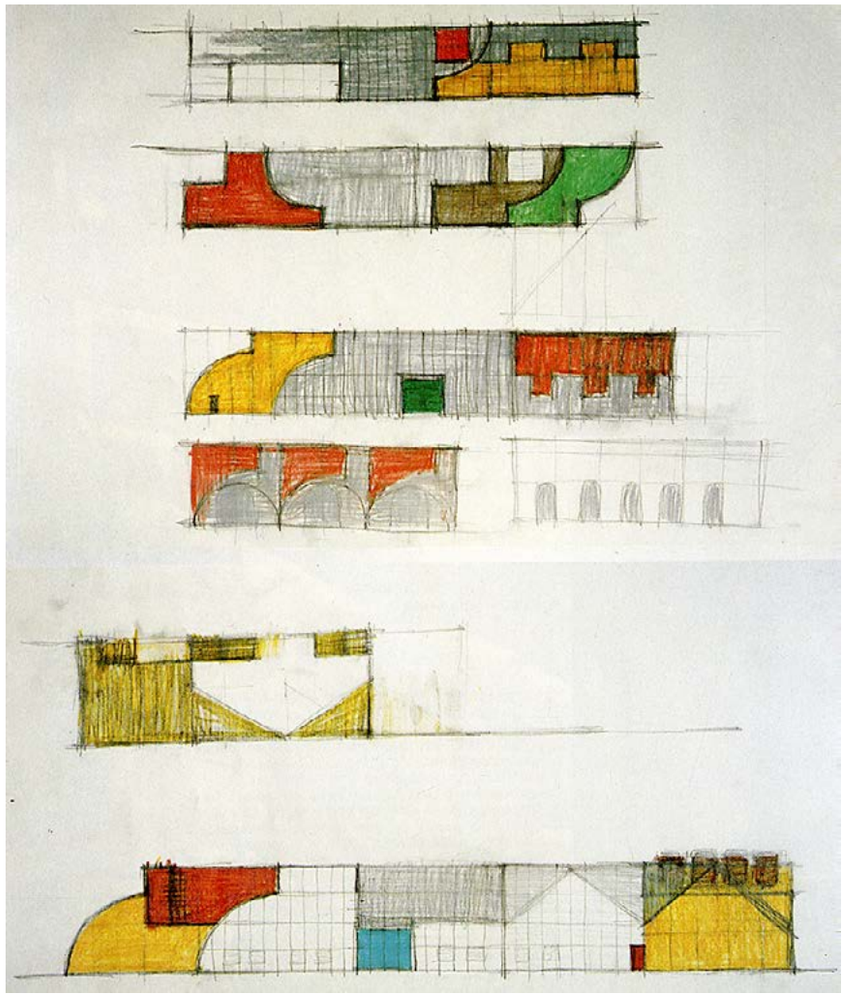


Figure 12
South House in Hanayama, Kobe, Hyogo, 1968

FIRST STYLE

The First Style generally seems to be a collection of Japanese traditional houses, but Shinohara questions tradition, by the using different frameworks through a careful extraction from Japanese tradition.[13] The many elements, to name a few, that Shinohara extracted from Tradition are the following: division, frontality, verticality, materiality, typology, opposition, and so on.[14] We can perceive each of these as a form of framework.

The "division-method" of planning, Figure 10[15], where the rooms are divided from the large whole with walls/vertical planes. The aim through these division is to achieve one primary space: "Functional Space, Ornamental Space, and Symbolic Space"[16]. Within the First Style, the Symbolic Space and briefly the Ornamental Space are explored. The Functional Space is explored in later projects, where the Machine stands as a central theme.[17]

The "frontality" is referred to the elevation, where the act of perceiving a given space from a still standpoint. It does not refer to the facade, but rather a direction to look at, Figure 14. This could also explain Shinohara's control on what images are allowed to be published, as he values these images just as highly as the plans, sections, and elevations of his project. This is due to the fact that his images convey the concept and themes that are being explored within that project. In a sense, offering an added layer of information to the complexity of the project. "Verticality"[18] is simply a framework about perceiving the given space from a higher position, where inhabitant can experience the space from another angle, Figure 12 and 14. Even though his First Style explored houses composed with Japanese Traditional elements or concepts, it was not purely "traditional", in the sense of traditional domestic houses.

"I saw Japanese tradition as a starting point, not as a destination. This view was the framework for my design method."[19]

As many of his houses utilised architectural vocabulary that were not related to domestic houses, but rather architectural vocabulary found in traditional non-domestic architectural typologies, ie. taking a roof construction only found in Japanese temples and placing them onto a house. Most importantly, he took elements that are "capable conveying emotions rooted in the past".[20] For him tradition is a "treasury of meaning" deeply rooted in its connection to history, and through this connection, the Symbolic Space is a form of "hot space" where all these connections, meanings, and symbolisms are distilled.[21] Through this act of questioning, he is capable of reaching abstraction, which allowed him make the house as a form of Art.[22] I believe this is one reason why his works are still looked into today.

Within this First Style, the framework of opposition is evident, but we could also think of it as a form of detachment. It became a deciding factor on how he approaches his design process for these houses. The first approach was the usage of traditionalism as his way of criticising the "optimistic Modernism of the 1960's in Japan".[23] The second can be the choice of the building's form in relation to its site, ie. the square plan of House in White (1967) placed onto an irregular site and the irregular plan of House of Earth (1966) placed onto a regular site. The third approach would be the house's introversion, where the focus is placed mainly on the interior. By creating an introverted house, an opposition is achieved against the city of Tokyo during its rapid development.

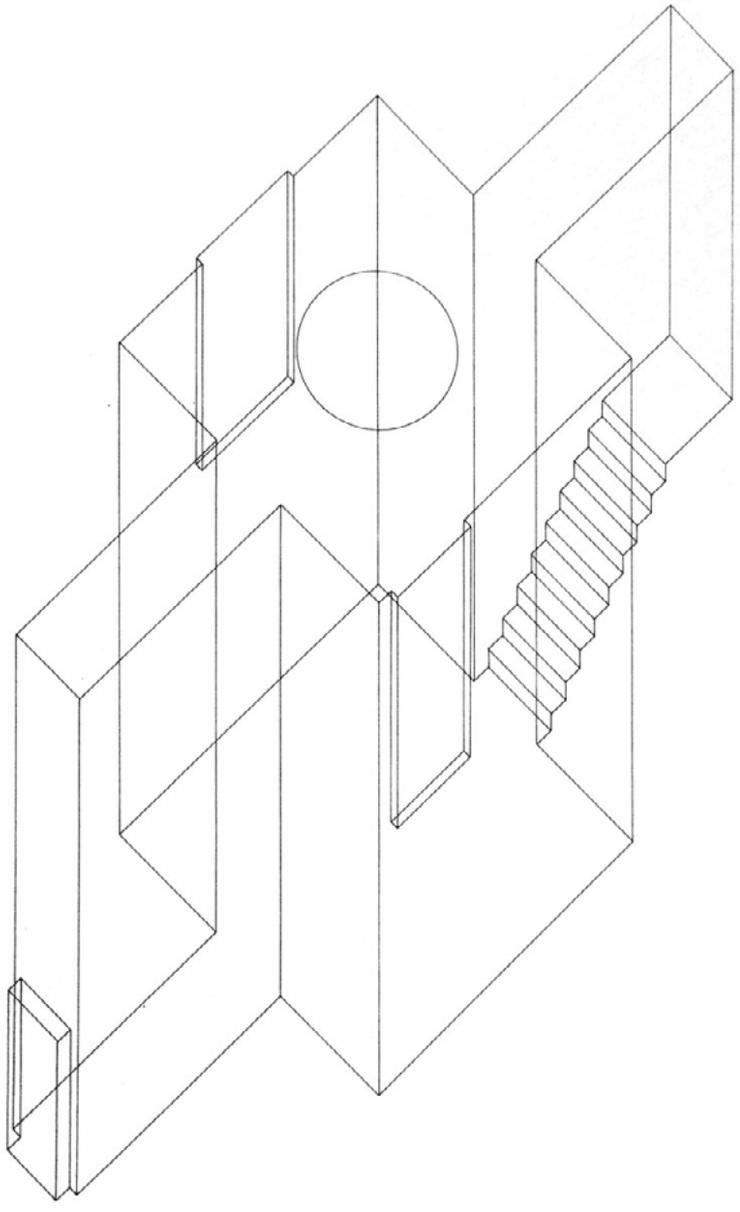
The House in White (1967) was a key project due to Shinohara achieving an abstract cube by combining the horizontal and vertical plane. These two planes divide and hide the construction of the roof, while leaving only the column in sight. The column, in constructions stands in the centre of the building, but as one perceives the column within the cube, the column stands off-centered. Through this cube, he was able to achieve a new sub-framework that will act as a foundation for the Second Style.

Figure 13
The Altarboy, 1896
Pablo Picasso

Through his initial exploration of conventional
way of painting, he quickyl moved out of it, and
ished to break free.

Figure 14
House in White, Suginami, Tokyo, 1966

Figure 15
Axonometry
The Uncompleted House, Suginami, Tokyo, 1970



The Second Style is considered to be Shinohara's shortest period, since the amount of houses being built and the themes being explored here are fewer in comparison to his three other Styles, Figure 9[24]. Within the First Style's framework, there are two sub-frameworks that later constitute the Second Style: the "cube" and "fissure space". Each can be found in different houses, but never both in one. The "cube" can be found in the main room of House in White (1967). The "cube" ended up composing the overall volume of the houses as a concrete block. The houses were built mainly with reinforced concrete, while some were mixed. The houses in the First Style were built with timber. He wanted to liberate himself from the First Style, in order to be diverge from tradition. Essentially, the Second Style acted as a form of opposition to his First Style. But it is important to point out that, his divergence from tradition through the usage of the cube, does not mean he is taking direct influences from Modernism. His approach was more through conditions set onto himself. But I believe there is still an underlying theme of reexamination of Modernism through all his projects, ever since his first built project, House in Kugayama (1954). The other main reason for this shift of Style is due to his realisation of the possibilities of creating new forms of spaces that did not contain elements that one associates with traditional Japanese architectural elements.[25] The reexamination is more evident only in later projects. Fundamentally, the Second Style can be seen as the anti-First Style or Anti-Japanese Style.

"Modernism had some basic relation to industrial production, but in my own concept of the cube, no such relation was intended. I chose the cube itself just as a very general geometric frame; thus the form essentially coincided with Modernism but the meanings did not overlap."[26]

The "fissure space" as a form of sub-framework in the First Style was a bit hard to find at first. Those spaces can be seen in a few ways, but they are generally the corridors of the houses. One can find these spaces in the following projects: House in Chigasaki (1960), House with a Big Roof (1961), House of Earth (1966), Yamashiro House (1967), North House in Hanayama (1965), and South House in Hanayama (1968), Figure 9. These corridors can be seen as spaces that remained after the dividing-method has been applied. In a few of those houses, Figure 12, the usage of "verticality" (with the windows) and different horizontal planes (volumes), allow him to create moments of urbanity within a very intimate scale.[27] Even though, the spaces of the First Style is introverted and acts an opposition to the city, these moments of urbanity foreshadows the stronger dialogue between the city in his later projects. The gesture of bringing urbanity into such an intimate scale reminds me of how Denise Scott Brown described the final iteration of the Vanna Venturi house and the role of the emotion within such spaces.

"Bob created a street that goes right through the house. It goes straight down to a doorway, and then you go inside and there you get that main street coming in and meeting an important cross street. That's where the main square of this little town-like house happened, at the meeting of two important streets – the one going upstairs and the one going inside. [...] "I say that every architect in every building puts a chapel somewhere of heightened emotion, something personally meaningful to them."[28]

The other way of perceiving the "fissure space", in relation to the First Style, is the line that divide is a space, Figure 15. In the previous Style, the act of division through the vertical plane are done by walls or shoji panels. In the Second Style, it is done through a crevice-like space. Theoretically the "dividing-method" persists, but it has evolved into a complete different form, while at the same time, becoming the protagonist of the Style.

On a stylistic perspective, the Second Style is the most clear from them all, since it is visually the most consistent. It is also one of the Style, where the images of the exterior of the building is shown less in comparison to the "fissure space". The First Style had spaces that were introverted. In the Second Style, the introversion is intensified.

Previously, Shinohara mentioned how the Symbolic Space is considered as the "hot space". In the Second Style, his aim was to achieve "cool space"[29], opposite of the "hot space". In a sense, he wants to create a space of no meaning, but this is only fully achieved in the Tanikawa House (1974) built in the Third Style.[30]

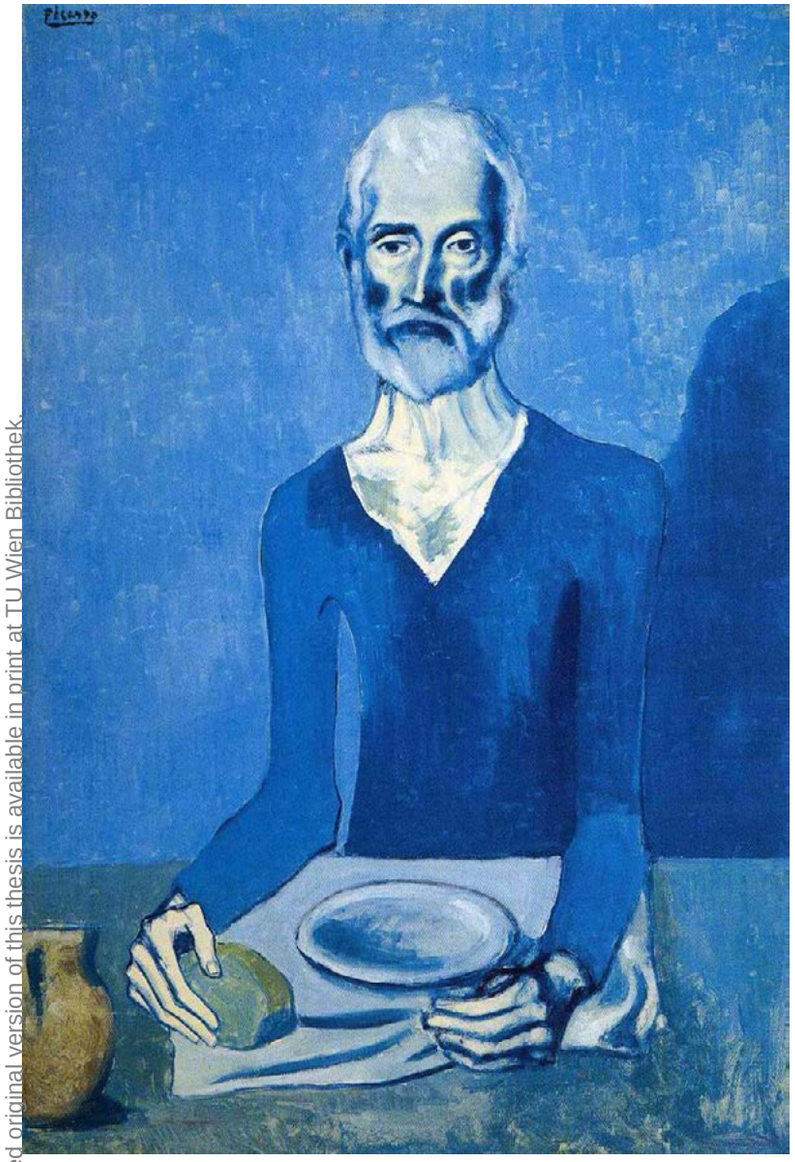


Figure 16
Ascet, 1903
Pablo Picasso

Picasso's Blue Period. Through the usage of the hlue color, Picasso used the painting as a form f catharsis.

Figure 17
The Uncompleted House, Suginami, Toyko, 1970

Figure 18
House in Seijo,Setagaya, Tokyo, 1973

Figure 19
Prism House, Minamitsuru, Yamanashi, 1974

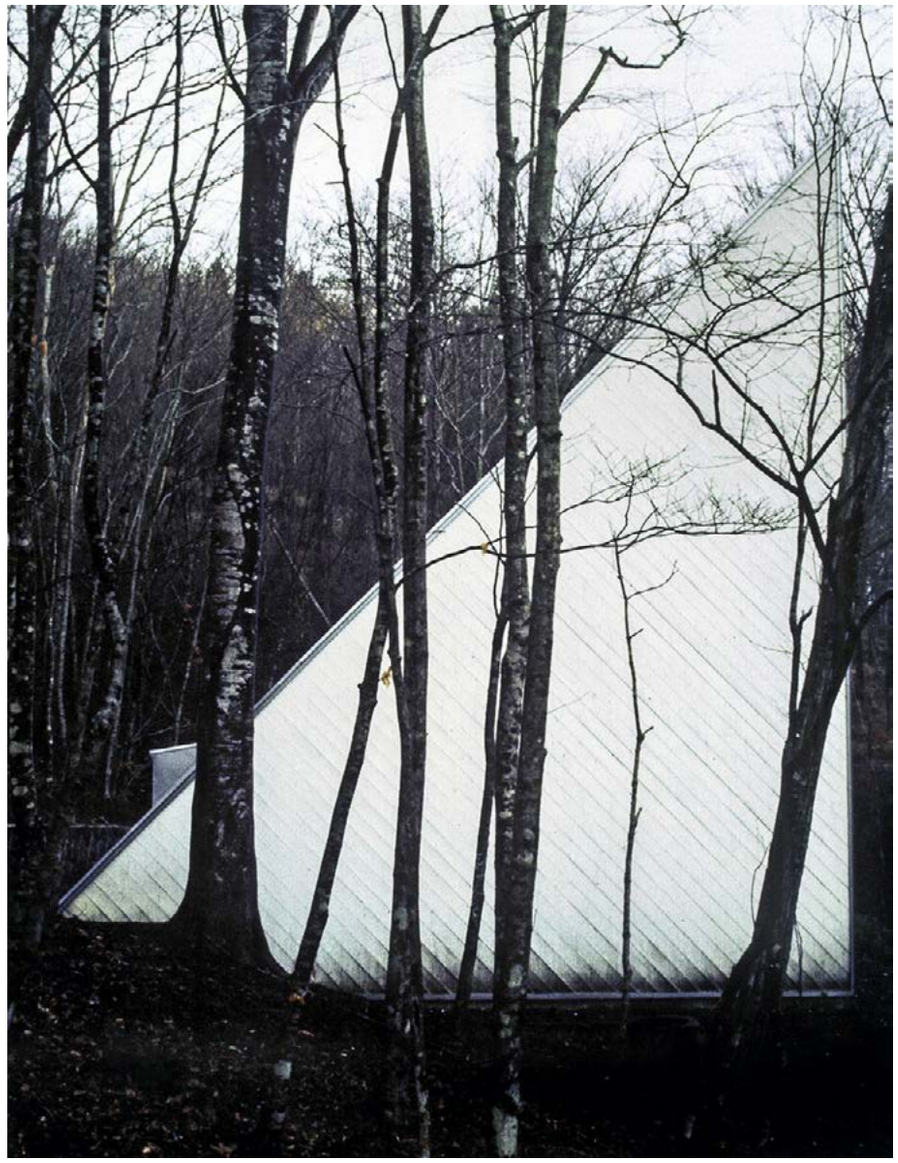


Figure 20
Tanikawa House, Naganohara, Gunma, 1974

THIRD STYLE

The Third Style[31], Figure 10, is, what I believe, one of Shinohara's key Style. It was a huge turning point, as it allowed him to break free further from the two previous Styles and pave way for his Fourth Style. The reason why the Second Style was short lived as Shinohara found the direction was, in a way, a dead end. This could be due to the fact that Shinohara wanted to start a new dialogue with the city. The dialogue between the city in the previous two Style were always a form of opposition, while at the same time, within the Second Style, the opposition has slightly shifted. The buildings were still introverted, but we could feel the city creeping into the interior. I believe the Second Style, as it ended with the House in Higashi-Tamagawa (1973)[32], was not able to create a stronger dialogue with the city, Tokyo, with the given frameworks within that Style. Instead, he wanted a new form of dialogue. A dialogue not of opposition, but of assertion.

Through the Third Style, he was capable of introducing new frameworks, while at the same time, further developing previous frameworks. This new Style also undermines the previous two Styles through these new sets of frameworks. With the introduction of the Tanikawa House (1974), the theme of the "machine" was first implemented.[33] I will go more in depth of the "machine" in the next chapter, but essentially, the "machine" allowed him to create a "space of non-meaning", in contrast to the "space of meaning" created through tradition. Interestingly, by creating "space of non-meaning", Shinohara creates new meaning.[34] It is through this research and experiment for the "space of non-meaning" that he spends his later life trying to pursue. In the Tanikawa House, Shinohara introduces the framework of "a naked space"[35], which is another way of describing the "space of non-meaning". It comes from the fact that the space is "naked" from meaning, through the usage of important "mechanical parts" or as "parts" that constitutes the "machine".

In this Style, we can find his iconic use of post-and-beam structure[36], as a form of "mechanical part", used in multiple ways and through different materials, depending on the project. In the Tanikawa House, the post-and-beam structure is used in timber, due to being a weekend house located in the woods. While in the Uehara House (1976), the structure is out of reinforced concrete. Both projects are categorised into the same Style. They both have the visual similarity only through the shape of the structure, while in Uehara House, the structure consists of two varied sizes. In both houses, they act as a vital framework; structurally, spatially, and thematically. Both also uses the framework of the "shell"[37] as another "mechanical part". When all these combination of "mechanical parts" are combined, they complete the "machine", where the function lies in generation emotions in the inhabitant.

One might think these two houses should be categorised into two different Styles, but another key framework of the Third Style is the concept of "non-uniformity of composition"[38]. This concept allows Shinohara to combine the other frameworks, such as "savagery", "gap", "naked space", and "fragmentation", found in each of the houses in the Third Style, but also the Style itself.[39] Through the framework of non-uniformity, Shinohara is capable of exploring further into the realm of Chaos[40], while breaking free from a fixed system of space-making that was used in the First and Second Style. It also allowed him to explore new possibilities and new qualities of spaces, while leaving himself an open-ended path of experimentation, that was not possible in the Second Style.

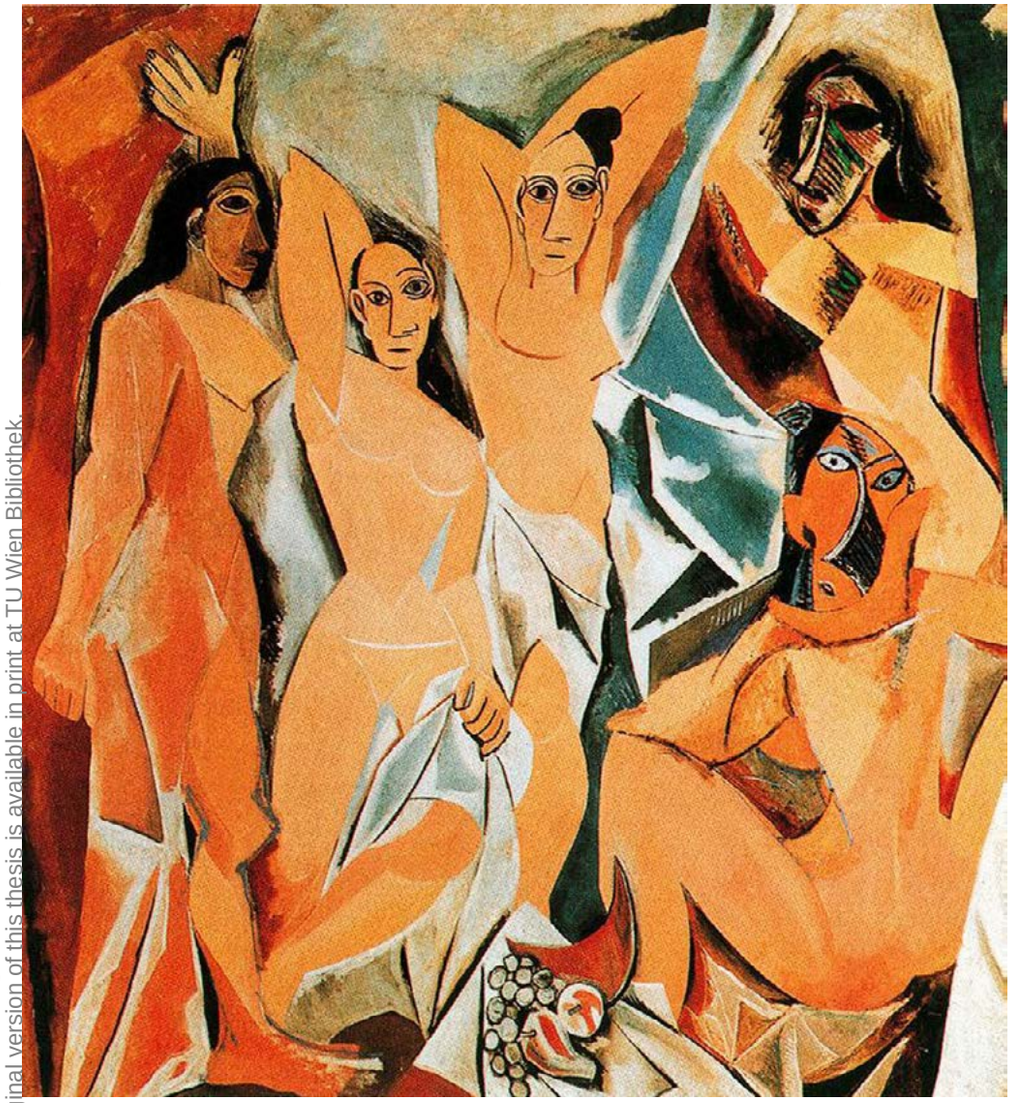


Figure 21
The Girls of Avignon, 1907
Pablo Picasso

Picasso's African Period. Inspired by African art. The portrayals of his subjects slowly starts to abstractify. The colors vivid and the energy raw.

Figure 22
House in Uehara, Shibuya, Tokyo, 1976

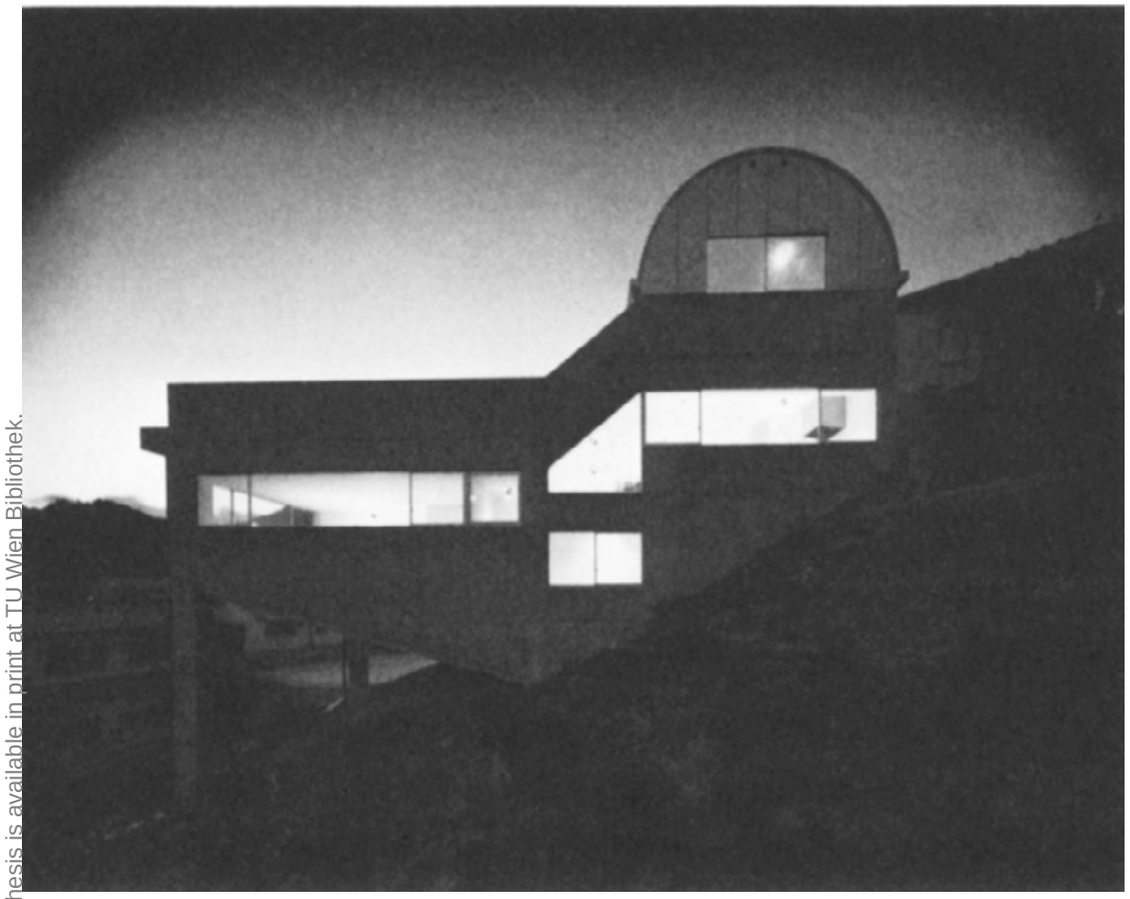
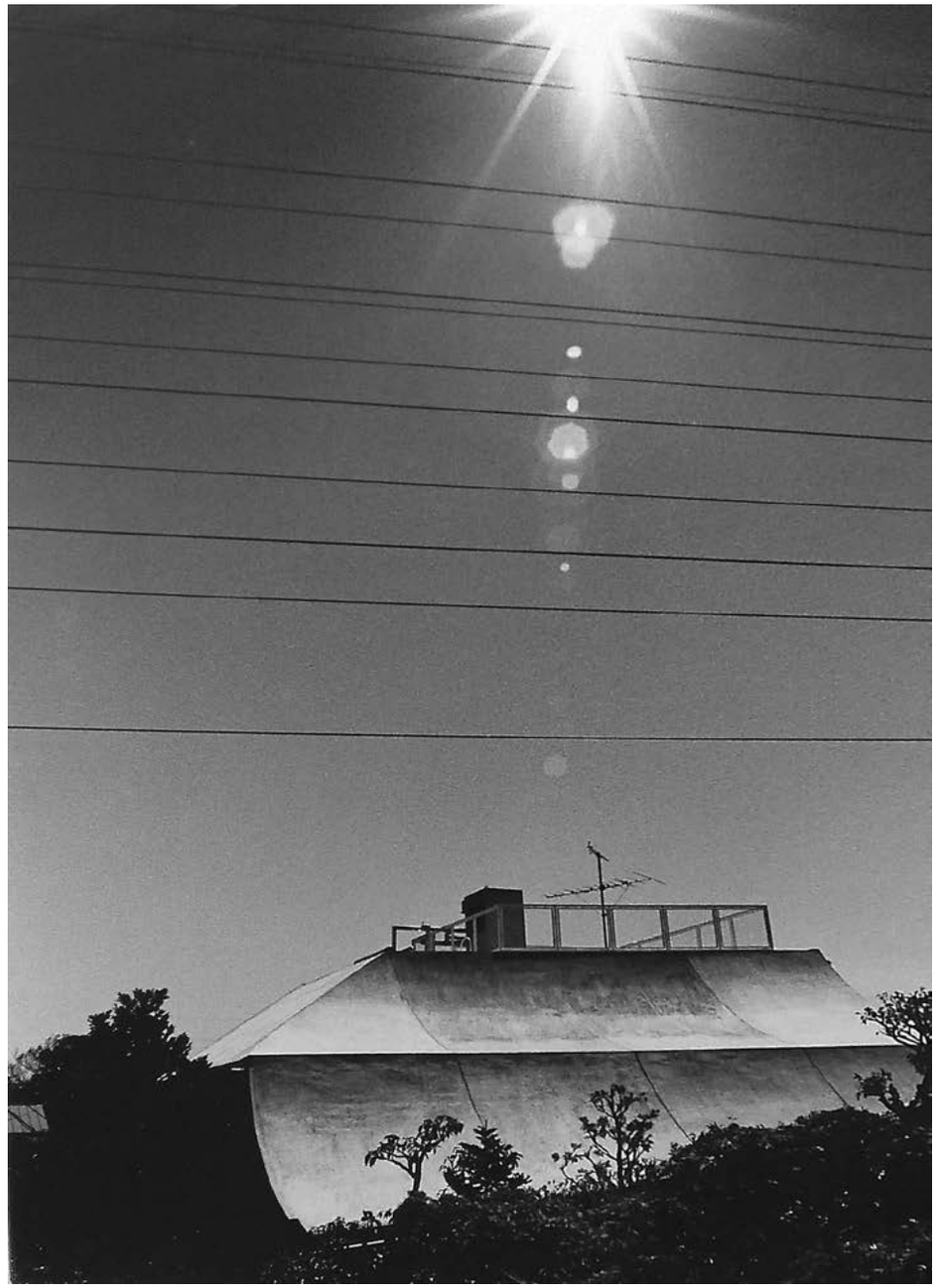


Figure 23
House in Hanayama No.4, Kobe, Hyogo, 1980

Figure 24
House Under High-Voltage Lines, Setagaya, Tokyo, 1981



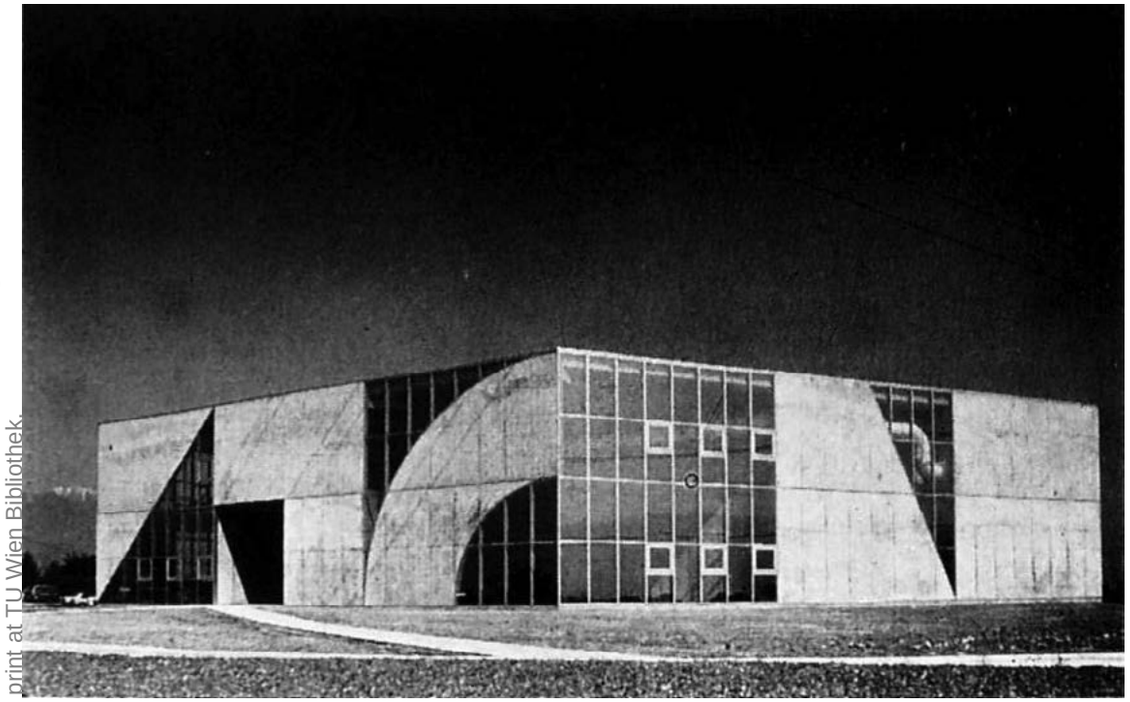
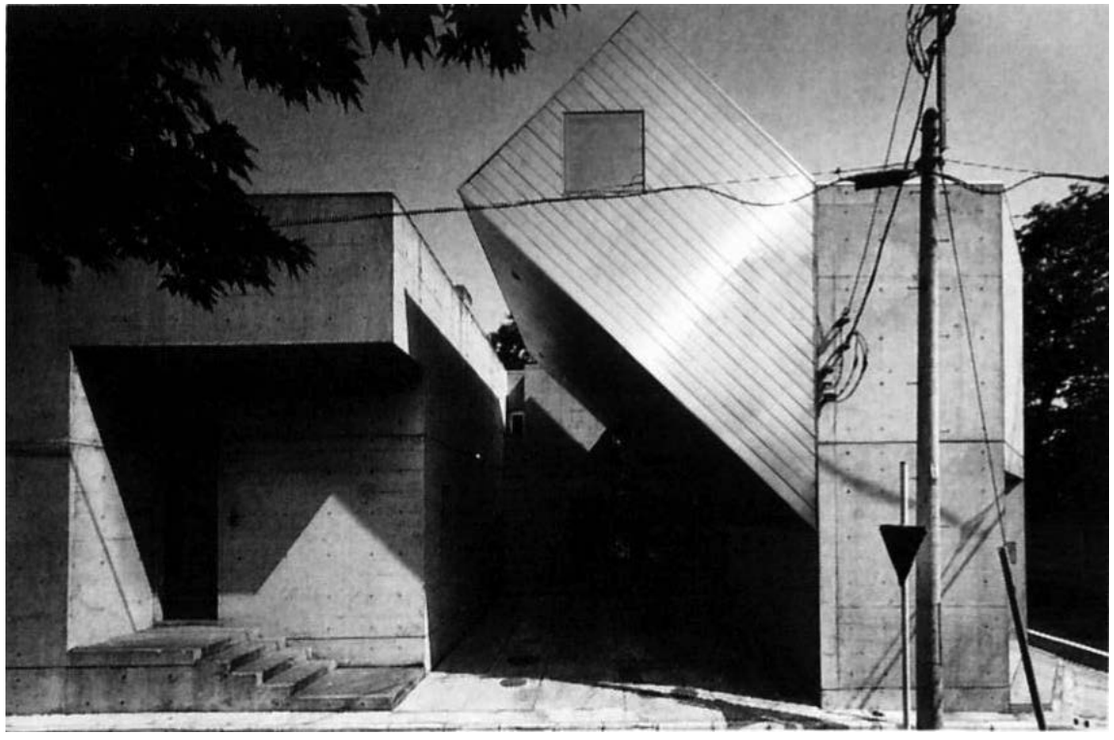


Figure 25
Ukiyo-e Museum, Matsumoto, Nagano, 1982

Figure 26
Higashi-Tamagawa Complex, Setagaya, Tokyo, 1982



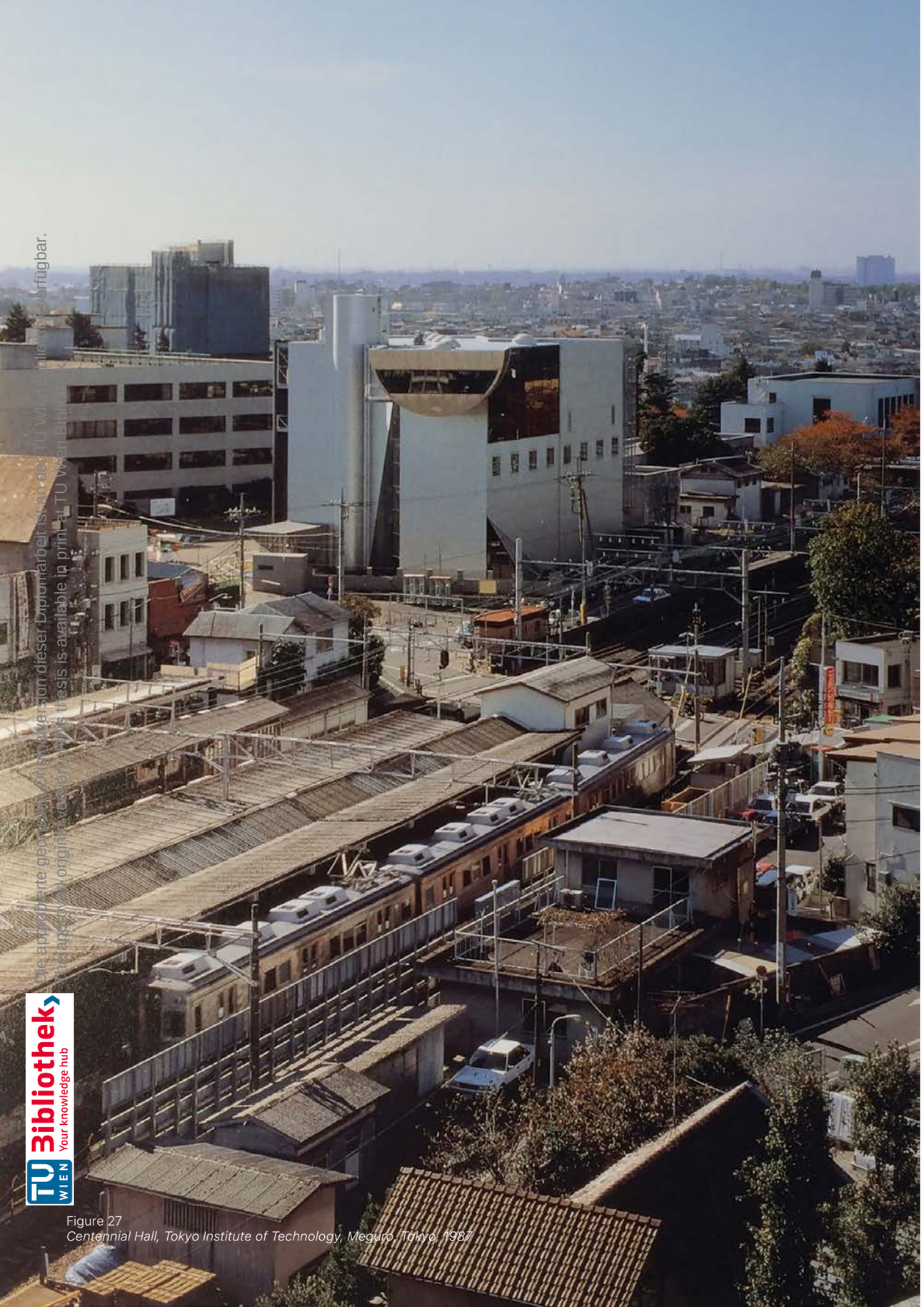


Figure 27
Centennial Hall, Tokyo Institute of Technology, Meguro, Tokyo, 1987

FOURTH STYLE

The Fourth Style, is the final Style of Shinohara. Within this Style the amount of houses designed were smaller in comparison to his other Styles, Figure 10[41], because he started to venture into the realm of public projects and competitions. This Style is mainly composed of these public projects, while also including unbuilt projects. In this Style, Shinohara introduced a new framework, "Random Elements" or "Noise"[42]. When it's combined with the framework of the "machine", the framework of "Zero-degree Machine" is born. With the Zero-degree Machine in his disposal, he is finally able to combine it with his urban theory of, "Progressive Anarchy".

House in Yokohama (1985), Figure 29, and Centennial Anniversary Hall (1986), Figure 27 and Figure 39, act as two key projects that defines the Fourth Style. Interestingly, these two projects were developed at the same time, while the House in Yokohama was his smallest project, and the Centennial Hall, his largest project of that time. Through these two projects we can see an interesting approach by using a framework onto two different scales and program. These two projects can be seen of a combination of two forms of sub-frameworks taken individually from two different projects, in which Shinohara labeled as an "Intersection". The first sub-framework was "Surface-ness" that belonged to the Ukiyo-e Museum, Figure 25. The second sub-framework, "Discreteness", belonged to the Higashi-Tamagawa Complex and Ukiyo-e Museum, Figure 26[43]. "Surface-ness" dealt purely on the facade, where concrete facade and the glass had equal value. They both are seen and placed on a single surface, but also seen equally in compositional weight.[44] The "Discreteness" in the Higashi-Tamagawa Complext dealt with volumes, while in the Ukiyo-e Museum dealt with the facade. It is his design method of either approaching the design process purely in 2-dimensional or the 3-dimensional method. The elements, used in both approaches, are done randomly with the framework of "Random Elements" or "Noise". House in Yokohama and the Centennial Hall were the result of the combination of "surface-ness" and "discreteness" on one single building.

In the three previous Styles, the internal structural element played a massive role as a "mechanical part" in the "machine". The structural element can only be experience from the interior, even though there are projects within the first three Styles where the internal structural could be seen from the exterior. But they could not be felt. While within this Style, the role of the structural element has been replaced with the envelope, the exterior skin of the building. Now the structure is visible from the exterior. Through this gesture, the "mechanical part" can now be experience from the exterior, an expression capable of "an exteriorisation of the interior"[45]. When he "exteriorises" the interior, he achieves a new form of dialogue with the city. It is a shift, where he is capable of finally unifying the themes he has touched upon separately in the previous Styles. I believe it is also through this shift that he is capable of embodying the city of Tokyo onto a single building, ie. Centennial Hall. In a sense, Shinohara's public buildings were capable of becoming one with the city.
The House in Tateshina Project (2006), Figure 30, was his very last project, where he was unable to finish due to his death. It is speculated that this could be a possible shift towards a Fifth Style, but there is no definitive answer. In this project, we can see Shinohara come full circle from his overall work, as he explored multiple iterations for this project, before settling with house with a steep gable roof. In this project, Shinohara used a lot of frameworks, used in his earlier Styles, ie. the Tanikawa House (1974), House in White (1966), and House in Yokohama (1985)[46]. In a sense, Shinohara started to refer back to himself, where he has turned full circle.

Figure 28
Seated Woman in Garden
Pablo Picasso

Picasso's Surrealist and Cubic phase. Through the usage of disorder as a framework, he is capable of creating distorted faces and bodies, while mixing in a wide variety of color palettes. The concept of abstraction allows him to portray the natural organic forms of the subject with strong unnatural geometric forms. Through his method, Picasso juxtaposes what we see in his painting with what we, in our mind, normally associate the subject with.

Figure 29
House in Yokohama, Yokohama, Kanagawa, 1984

Figure 30
House in Tateshina Project, Chino, Nagano, 2006

Footnotes

1 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.32

2 Ibid., pg.32

3 referring to chapter "Progressive Anarchy", on the concept of trans-literations of loan words from other cultures.

4 Alberto Dell'Antonio and Tibor Joanelly, *Tradition-Cube-Machine-Chaos: Productive Contradictions in the Working Methods of Kazuo Shinohara*, in: *Werk, Bauen + Wohnen*, 12-2015, https://www.wbw.ch/de/heft/artikel/originaltexte/2015-12-tradition-cube-machine-chaos.html (accessed 01.07.2018)

5 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.61

6 Kazuo Shinohara, *The Third Style 1977*, in: *2G*, N.58/59: Kazuo Shinohara, pg.267-577

7 Kazuo Shinohara, *When Naked Space is Traversed*, in: *The Japan Architect* 02.1976, Tokyo, pg.64

8 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.65

9 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.28-35

10 Koji Taki, *Oppositions: The Intrinsic Structure of Kazuo Shinohara's Work*, in: *Perspecta 20: The Yale Architectural Journal*, Cambridge, Massachusetts, The MIT Press, 1983, pg.46

11 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: The Japan Architect 09.1986, Tokyo, pg.29-32

12 Ibid.

13 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.91

14 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.31

15 The division is visible from House in Kugayama (1954) to Suzusho House (1968), and these houses encompass the First Style.

16 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.31

17 Ibid.

18 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.233

19 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.31

20 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.61

21 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.31

22 Ibid.

23 Ibid.

24 The Second Style starts off with The Uncompleted House (1970) to the House in Higashi-Tamagawa (1973).

25 Kazuo Shinohara, *After Modernism* in: *The Japan Architect* 11-12.1983, pg.11

26 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: The Japan Architect 09.1986, Tokyo, pg.32

27 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.159

28 Amy Frearson, Postmodern architecture: Vanna Venturi House, Philadelphia by Robert Venturi, https://www.dezeen.com/2015/08/12/postmodernism-architecture-vanna-venturi-house-philadelphia-robert-venturi-denise-scott-brown/ (accessed 24.09.2019)

29 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.31

30 Ibid., pg.33

31 The Third Style starts off with the Tanikawa House (1974) to the Higashi-Tamagawa Complex (1982).

32 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: The Japan Architect 09.1986, Tokyo, pg.32

33 Ibid.

34 Ibid., pg.28

35 Ibid., pg.33

36 That maybe true, but we can find similar structural systems in his First Style, but there, the columns are rounded and cylindrical.

37 Koji Taki, *Oppositions: The Intrinsic Structure of Kazuo Shinohara's Work*, in: *Perspecta 20: The Yale Architectural Journal*, Cambridge, Massachusetts, The MIT Press, 1983, pg.59

38 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: The Japan Architect 09.1986, Tokyo, pg.34

39 Ibid.

40 Referring to the chapter "Progressive Anarchy".

41 The Fourth Style starts off with House in Yokohama (1985) to House in Tateshina Project (2006).

42 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: The Japan Architect 09.1986, Tokyo, pg.34

43 Ibid.

44 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: The Japan Architect 09.1986, Tokyo, pg.30

45 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.45

46 Shin-ichi Okuyama, *Towards a Fifth Style: Interview with Shin-ichi Okuyama*, in: Christian Dehli and Andrea Grolimund, *Kazuo Shinohara: 3 Houses*, Luzern, Switzerland, Quart Verlag, 2019, pg.194

Figure 31
Tanikawa House, Naganohara, Gunma, 1974

Figure 32
Pantheon, Rome, 1990
Thomas Struth

Figure 33
National Panasonic, 1970
Nathan Road, Jordan, Hong Kong

MACHINE

"Not only with these houses but in all of my works - no matter how small the project may be - from the beginning until now I have continued to develop for each house a new structural form, with the assistance of my structural engineers. This development of new structural form is one of the most fundamental conditions which qualifies my use of the concept of 'Machine' in later years."[1]

By the end of the 1960s, Shinohara transitioned away from Japanese Traditionalism as his direct architectural theme. He wanted to re-examine Modernism, as he noticed he was able to create new spaces without the framework of Japanese Traditionalism. In 1983, he brought this up in a conversation with Kenzo Tange, where they discussed the current state of architecture and the future of architecture. Shinohara mentions, that even though he is reexamining Modernism 50 years after it was first introduced, he finds it "inappropriate" to pursue it. Instead, he wishes to avoid traditionalism, while not pursuing the usual form of Modernism. Postmodernism, where one quotes elements of past architectural vocabulary, would also not be for him, as Postmodernism does not necessarily lead one anywhere, which he and Tange agrees upon. But as much as Tange is strictly against Postmodernism, Shinohara is not. As he believe, it is an integral transition of the Interlude, an intervening period between the first act and the second act of Modernism.[2]

"I regard present reversions to tradition and history as being nothing more than interludes, and I suspect that soon the second act of Modern architecture will begin, and it will begin with a redefinition of function."[3]

Like how Shinohara perceived Postmodernism as a necessary form of Interlude between Modernism and what could come next, Le Corbusier perceived the "decorative arts" the same way.

"Let us remember of this adventure that decorative art at least provided a good opportunity to unload the past and to feel our way once more towards the spirit of architecture. The spirit of architecture can only result from a particular condition of material things and a particular condition of mind."[4]

By re-examining Modernism as another form of departure, like that of Japanese tradition, Shinohara seeks "to understand the driving force behind the development of Western contemporary architecture".[5] If we perceive all his works as a form of research, we could say his works are, in a way, a pursuit for the second act of Modernism. Or to put it another words, to discover the "Fourth Space".[6]

"In the 1920s, modernism used the machine to symbolise technology and proposed it as a key concept for architecture and the city, suggesting a new relationship between things and the world. [...] Although the nature and meaning of technology are different from what they were in the minds of modernists in the 1920s, technology remains a key concept. For that reason I do not abjure the term modernism. My goal today is the 'Modern-Next'."[7]

It would be "inappropriate" to pursue Modernism, because Modernism was built around a context that is now radically different to what it is now. But there are a three following elements of Modernism that Shinohara has taken and re-examined: the machine, the spirit of the 1920s, and form and function. It is through the re-examination of these three themes from Modernism, Japanese tradition, and Chaos that allowed him to depart from Modernism.

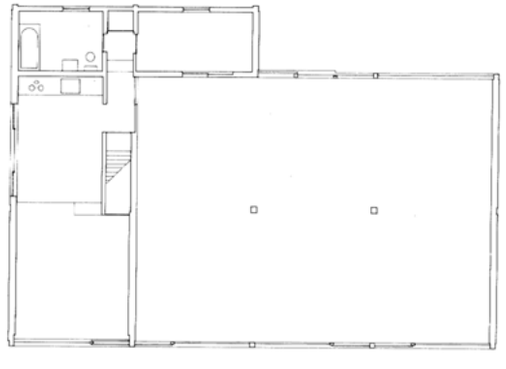
"In the early part of my career, I tried not to follow the way of Western Modern architecture via its Japanese counterpart. An emotional encounter with the Japanese architectural heritage encouraged me to give up my former speciality for architecture and helped me choose my architectural starting point. This led me to freeze temporarily the admiration I have then for the architecture of the twenties. Then following its own particular contextual course, my own architecture gradually approached the machine, that crystallisation of the spirit of the 1920s. I even now employ the same word. My passage through the spirit of the 1920s was essential."[8]

Shinohara's definition and approach to the "machine" is fundamentally different of that to Le Corbusier. The symbolism of the "machine" can be found in, "Toward an Architecture" by Le Corbusier. A book that Shinohara pays tribute to, by titling one of his last major essay, "Towards Architecture" (1981). This and another essay, "A Program for the 'Fourth Space'" (1986), echo a spirit akin to that of Le Corbusier's call for change.

In his book, Le Corbusier advocates Modernism. A new form of architecture not bounded to the past. An architecture based on function and pure form. An architecture, in tune with the Machine Age, taking influences from modern engineering, where the relationship between man and house should be reconsidered, like those of liners, airplanes, and automobiles. In order to progress further, like what the engineers done to those machines, it is necessary to abandon the notion of styles and "decorative arts", and progress towards an architecture based on function and pure form. Rather than a rebirth of decoration, "a new epoch is replacing a dying one. Machinery, a new factor in human affairs, has aroused a new spirit"[9]. As architecture is "stifled by custom"[10], he shifts his focus to the engineer, where the "engineer, inspired by the law of Economy and governed by mathematical calculation, puts us in accord

Figure 34
Tanikawa House, Naganohara, Gunma, 1974

Figure 35
Floor plan of Tanikawa House, Naganohara, Gunma, 1974



with universal law. He achieves harmony."[11] In order for architects to achieve harmony and logic, they have to adopt the principles of the engineer. The harmony exists not only within the object but also the relationship of the object's context. The Aesthetic of the Engineer is not just another style, but rather, the very substance of a new form of architecture.

"Our engineers produce architecture, for they employ a mathematical calculation which derives from natural law, and their works give us the feeling of harmony. The engineer therefore has his own aesthetic, for he must, in making his calculations, qualify some of the terms of his equation; and it is here that taste intervenes. Now, in handling a mathematical problem, a man is regarding it from a purely abstract point of view, and in such a state, his taste must follow a sure and certain path."[12]

By comparing houses to machines, he proposes an architecture, embodying a new way of life and a new artistic notion, that arouses both the rational and emotion aspect of the mind.

"A house is a machine for living in. Baths, sun, hot-water, cold-water, warmth at will, conservation of food, hygiene, beauty in the sense of good proportion. An armchair is a machine for sitting in and so on."[13]

The comparison lies more on how the house functions as a tool to live in, and how the form of the house is a consequence of the functions, while removing any form of decorations. But by envisions his concept of the house as "a machine for living in", in its literal meaning, would be misleading. Rather, the "machine" acts as metaphor for the house, as an apparatus. Instead, we should view Le Corbusier's "machine" as a single entity composed of multiple elements with their own mechanisms that act as a form of extension of the inhabitant. The "machine", when performed as a single entity, is meant to enrich one's life, rather than to suffocate it. The elements[14] within the "machine" or "fundamental axioms" can be found in the following:

- **furnitures**: "Chairs are made to sit in."
- **artificial lighting**: "Electricity gives light."
- **openings**: "Windows serve to admit light, 'a little, much, or not at all,' and to see outside."
- **art**: "Pictures are made to be looked at and mediated on."

Where Le Corbusier perceives the "machine", as "an obeisance to technology"[15], Shinohara's term of the "machine" lies closer to that of Gilles Deleuze and Felix Guatteri. But essentially both pursued an alternative way of living. Shinohara's "machines" are there to create meaning within the space through this form of architectural mechanism.

"In fact, the word 'machine' itself has a special meaning in my context of design. I began using the term 'space machine' as an analogy to the term 'Literature Machine', as defined by the French scholar Gilles Deleuze. I felt that my own architectural context was similar to this context, in which, for example, the mechanisms of a novel can produce meanings—and, as such, written works can be seen as machines."[16]

As Shinohara's "machine" generated meaning and emotions into a domestic space by bringing in elements that are non-domestic. By doing so, he abstractifies the domestic space. It is abstraction comes from the feeling of uncertainty and irrationality that arrises within the space when such elements are introduced into the space, and it is also the uncertainty and irrationality that Shinohara is drawn to.[17] Through abstraction, the house becomes a form of art. He is essentially creating what Le Corbusier calls "moving machines".[18]

"The basic error was to consider as a criterion for beauty the idea of pleasure, a final reaction totally personal and changeable. [...] Parthenon is not pleasant for anybody. Great art is not decorative; to have pleasure as basis for art is lowering it; art has as a sole goal to move; [...] Parthenon powerfully moves everyone, even those that don't like it; what it counts is the intensity of the emotion; we could go as far as saying that there is no true masterpiece that gives pleasure, because man's great emotions don't go by that word."[19]

Architecture that evokes emotions have the beauty that allow the building to last, not necessarily of how how long the building will physically stand, but rather the relevance of the building within architecture. As his interest in building an eternally lasting architecture[20], that still is capable of moving other people regardless of time. The Pantheon, where the building's generative power of awe onto the people from generations to generations, still works today. It is also one of the many reasons, why this building never loses its relevance.

Shinohara was motivated by these triggered emotions after seeing the huge roof of the Hall of the Toshodaiji Temple, Nara (749). The temple is one of the many traditional Japanese architecture that moved him. These triggers acted as a source of inspiration for him. Triggers that he was unable to explain the emotions (illogical or irrational facts) he felt through its beauty. Triggers that he wishes to recreate.[21]

"At any rate, the opposition Shinohara is establishing can be termed quite simply as the opposition between functionality and beauty. The preeminence of the former will seclude the latter. And conversely, only the preeminence of beauty, or emotion, can ensure the permanence of architecture and, in so doing, reinforce the role of the architect:

'I do not trust the type of planning that places function at the forefront. Regardless of whether what you build is fated to destruction, the incentive to build is quite another matter. When a space possesses superior beauty, its right to a longer life will be self-evident.'[22] [AE]"[23]

Like a complete machine, it requires its mechanical parts to function, but to also generate power for the its purpose. Like how a car needs its engine, wheels, etc. to move the passenger from point A to B. The differences lies between the driver to steer the machine, the inhabitants of Shinohara's spaces does not. The inhabitant must learn to live with the space, interact with it, and coexist with it.[24]

These “mechanical parts” are the structures. These structures intrude and interfere the domestic spaces of the inhabitant. It evolves the spatial emotions in different ways. Depending on the project, these structures are used differently and evoke different emotions, generating different meaning.

The “mechanical parts”, of the Tanikawa House, were the sloped bare earthen floor, the post and brace, the 45° sloped roof, the usage of the colour white in the interior, and how the program of the house was divided. The house is divided into two main spaces consisting of the domestic space and “art” space[25], where the emotional spatial generator is located. The project breaks free from tradition in a few methods, while at the same time, undermining previous Styles. Shinohara wanted to utilise elements that evoke any forms of meaning. Hence his usage of elements that are non-traditional or non-Japanese.

Firstly, the “division-method” is applied on the vertical plane. The “irrational” part of this project lies on the ration of the division, 1/4 living and 3/4 “art” space. The imbalanced division creates a sense of chaos (not in a negative way) in the domestic space, but it shows which space is the main protagonist. While the “division-method” helped the House in White to create an abstract white cube within the house, through two planes, here, the horizontal plane is removed. The removal removes the abstract white cube, but Shinohara still uses the colour white in his interior. The entire interior of the house is coloured white, even the “art” space. With an interior window looking into the “art” space, we see the white colour flow into the other space, emphasising on the singular roof that covers the entire house. If we place this white colour into consideration, we can perceive this, white underside of the roof, as the cube transformed or replaced by a shell. Here, Shinohara inches closer the concept of the envelope, but not entirely. Through usage of different flooring materials, the transition from space to space is fluid and more cohesive.

Secondly, the structure is now visible. By removing the vertical plane that hid the construction of the House in White, Shinohara exposes it, and again, makes it the protagonist of this space. By doing so, he emphasises its presence. By adding two structures, in combination with the sloped roof, he allows the inhabitant to freely move. Through the added introduction of the another structure, he creates more possibilities for the inhabitant to experience the space and context, while creating a level of unpredictability and uncertainty to what will happen inside. The framework of frontality, found in the First Style, has also evolved into something different, something more fluid.

Thirdly, Shinohara opens up his building. It is not fully extroverted, nor is it introverted like his houses in his previous Styles. Here, he introduces a slope bare earth into the interior. The emphasis lies on the continuation of the exterior, and the sloped landscape, where the house stands. Through this gesture, a dialogue between the exterior is created. When all these “mechanical parts” finally put together and initiated by the inhabitant, the machine comes alive.

The House in Uehara, like the Tanikawa House, creates a new dialogue with its context, where the framework of opposition is gone. These two projects are different visually and materially, but also the emotions generated from their own “mechanical parts” are different. Even through these differences, they are strongly related due to how they deal with its context. The Tanikawa House is built with a timber construction, while using a roof typology of a barn. Through these two gestures, Shinohara creates a relation with the context. Since the House in Uehara is located in Tokyo, he brought an urban element of Tokyo into the domestic space.

Structurally, the House in Uehara utilises a post and brace structure reminiscent of the Tanikawa House, but built in concrete. Here, the structure have two sets of different sizes post and brace structures, as the larger one allows Shinohara to have a cantilever above the carpark. The six post and brace structures hold a concrete shell that wraps the entire house. The concrete shell was formed through a single pour, emphasising the oneness of the house and a singular thought. This gesture coincides with the Tanikawa House, through the concept of the shell. But this time, the post and brace structure is not only visible on the inside, but also on the exterior, as it is part of the facade. The spaces between the structure act as openings for the triangular windows.

The “division-method” is also applied here, as a framework, but this time, it is applied through a vertical plane, a wooden floor, in order to achieve a two-storey building. This is only perceivable through the section. While the Tanikawa House utilised the vertical plane to divide two types of spaces (domestic and “art”), the horizontal plane does not. Instead, the domestic and “art” are seen as unified space, once the horizontal plane is applied. Resulting in a new framework called “fragmentation”. The framework of “fragmentation” is essentially perceiving only fragments of the whole in every different space, while neither of them are autonomous spaces. In the House in Uehara, the “whole” is the structure. After the horizontal division, the inhabitant on the ground floor can only see columns. While the inhabitant above can only see the post and brace. The way the horizontal plane is applied to this house reminds me of the space above the abstract white cube in the House in White. Here, Shinohara undermines his previous Style by making his inhabitant live in a space, once hidden.

For the inhabitant to perceive or visualise the structure, they must look at the facade. By being able to perceive the structure from the facade, Shinohara is slowly externalising the interior. The externalisation is only fully developed in the Fourth Style, and through this externalisation, a stronger dialogue with the city is created.

The post and brace is widely questioned for its dimensions. Shinohara states that it is dimensioned that way, so it can cantilever. But it is dimensioned that way for another sake. He wanted to bring a piece of Tokyo into the house. He does this by juxtaposing a structure, that is scaled for a public infrastructure, with the intimate domestic space.

Shinohara had to add an extra room into the house, due to the client wanted a room for their child. For him, the house was already complete. He added the a light-gauge steel-frame cylinder vault with corrugated sheet-metal roof onto the roof. This is the first time, he created a room through addition. This sudden gesture allowed him to “first time to come directly face-to-face with the urban situation in Japan today”.[26] It is through this key moment, that he was capable of advancing into a new set of framework that will create the “Zero-degree Machine”.

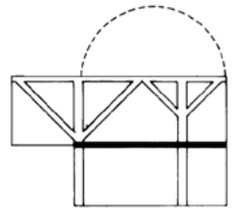


Figure 36
Schematic section of House in Uehara

Figure 37
House in Uehara, Shibuya, Tokyo, 1976

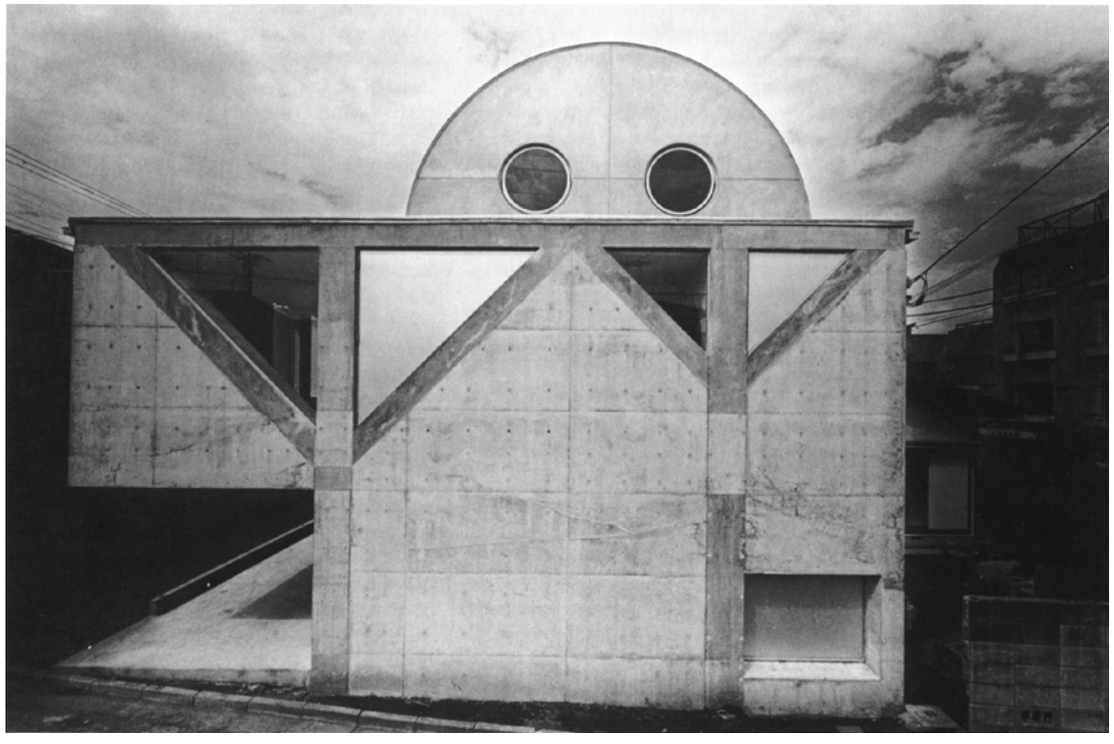
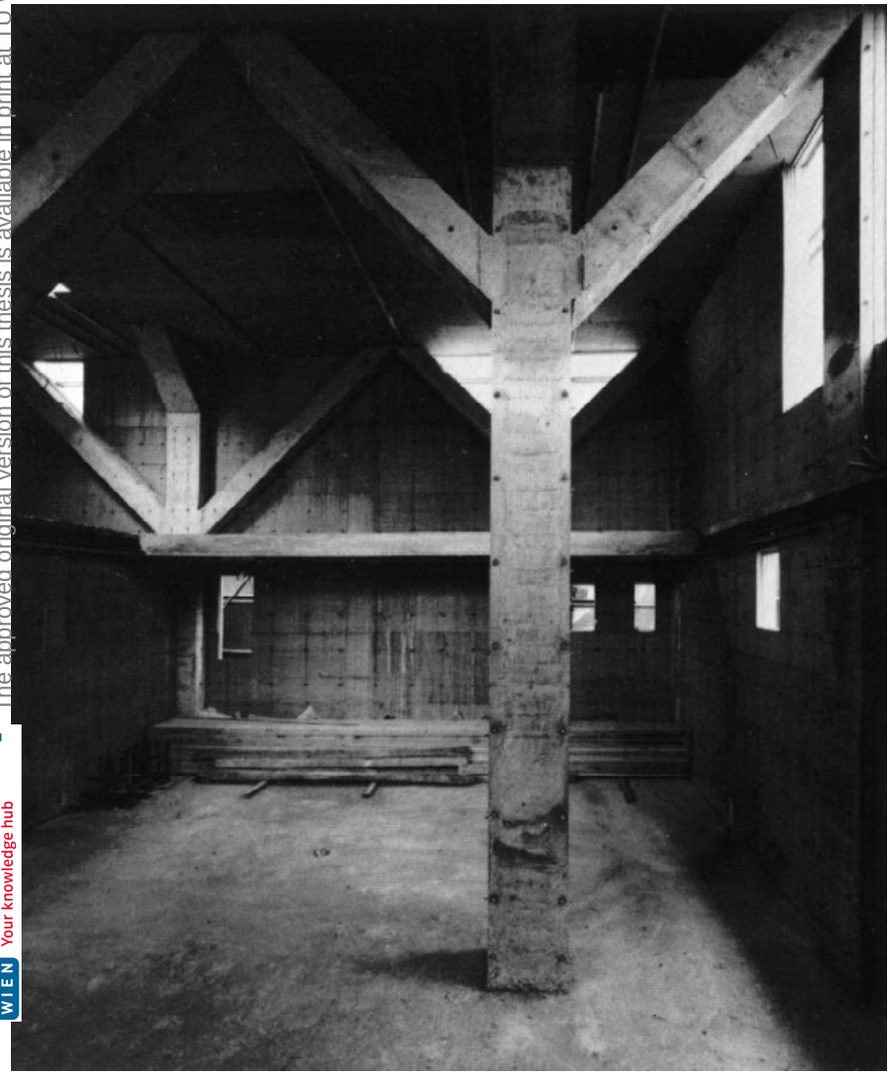


Figure 38
House in Uehara, Shibuya, Tokyo, 1976



Footnotes

1 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.31

2 Kazuo Shinohara, *After Modernism,* in: *The Japan Architect* 11-12.1983, pg.11

3 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, pg.33

4 Le Corbusier, *Toward an Architecture*, New York, Dover Publication, 1986, pg.90

5 Kazuo Shinohara, *The Japanese Conception of Space*, 1964, in: *2G* 58/59, Barcelona, 2011, pg.244

6 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.35

7 Kazuo Shinohara, *Chaos and Machine*, in: *The Japan Architect* 05.1988, Tokyo, pg.32

8 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, pg.35

9 Le Corbusier, *Toward an Architecture*, New York, Dover Publication, 1986, pg.90

10 Ibid., pg.92

11 Ibid., pg.11

12 Ibid., pg.15

13 Ibid., pg.95

14 not all, but rather the ones listed by Le Corbusier in Toward an Architecture under "fundamental axioms". I left out "A house is made for living.." from the list, as I view it as the single entity. Le Corbusier, *Toward an Architecture*, New York, Dover Publication, 1986, pg.117-120

15 Alberto Dell'Antonio and Tibor Joanelly, *Tradition-Cube-Machine-Chaos: Productive Contradictions in the Working Methods of Kazuo Shinohara*, in: *Werk, Bauen + Wohnen*, 12-2015, https://www.wbw.ch/de/heft/artikel/originaltexte/2015-12-tradition-cube-machine-chaos.html (accessed 01.07.2018)

16 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.29

17 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.101

18 Ibid., pg.37

19 Jeanneret et Ozenfant, "Idées", originally published in L'Esprit Nouveau 14, 1922

20 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.161

21 Ibid., pg.53

22 Kazuo Shinohara, *Beyond Symbol Spaces*, in: *The Japan Architect* 04.1971, pg.246

23 Abstract taken from: Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.141

24 Hiroyuki Suzuki, *The Aesthetics of Theoretical Structure. Kazuo Shinohara: Course of Development and Future*, in: *The Japan Architect* 03.1979, pg.7

25 Enric Massip-Bosch, *Five Forms of Emotion: Kazuo Shinohara and the Houses as a Work of Art*, Polytechnic University of Catalonia, Barcelona, 2016, pg.39

26 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.33

Figure 39
Centennial Hall, Tokyo Institute of Technology, Meguro, Tokyo, 1987

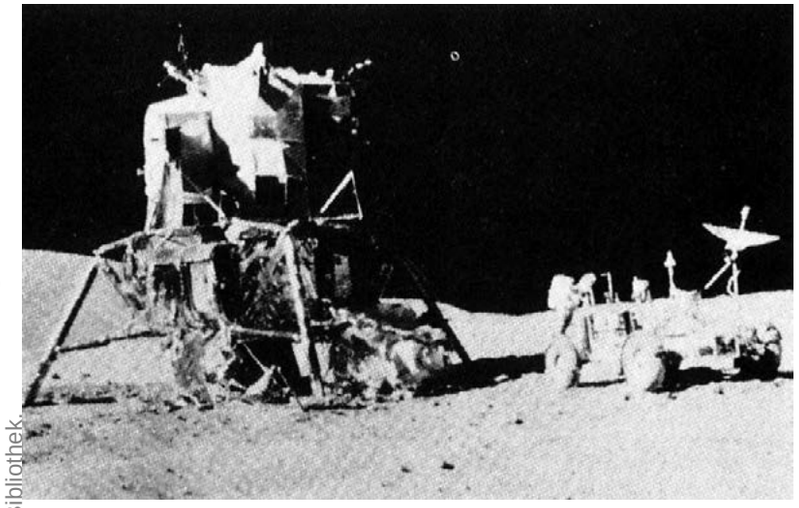


Figure 40
Apollo Lunar Landing Module LM Eagle, 1969

Figure 41
Grumman F-14 Tomcat, 1970

ZERO-DEGREE MACHINE

"When I wrote 20 years ago that 'The contemporary city may be expressed through the beauty of chaos', I could not find any direct correspondence between my design and my theory of 'city', even though these two themes were complementary to each other. But at the same time, my main residential theme at that moment for space composition was centered on the tranquility and completeness of Japanese traditional architecture. Thinking about this early manifest of mine, I can trace its development up until the present moment. Now my residential design is developing parallel to the concept of the metropolis of no-memory."[1]

Where Le Corbusier found inspiration through ocean liners, planes, and cars, Shinohara found two vehicles that allowed him to further develop his architectural concept of the "machine" to the "Zero-degree Machine. They were the Grumman F-14A Tomcat and the Apollo 11 Lunar Module Eagle. These two vehicles represented great technological achievement from that time. In either the articles or lectures that Shinohara has held, he kept showing the same images. This might seem trivial at first, but what intrigues him the most is how those vehicles are portrayed. Shinohara perceived these as "apparatuses created by assembling in a sachlich manner that are artless in form"[2]. The representation of "space of non-meaning"[3].

"The square jet intakes, the adjustable wings, and the fuselage seemed to have been clumsily connected together so that each could perform its functions with maximum efficiency. This startlingly powerful machine is capable of producing the image of an intrepid bird in flight. In contrast, the standard streamlined aircraft recalls an ornamental water fowl afloat on a pond."[4]

Through these two machines he believes he found new definition and solution to the theme of function and form of Modernism. These two vehicles were proof for him that the theme of form and function of Modernism can be revisited and adapted, and a new form of architecture is possible. Like Shibuya Crossing[5], he believes this kind of architecture "would not be one of associating forms with other definite points of reference but would instead cut the form free of all extraneous background."[6] In a sense, an architecture capable of standing on itself without referring to any images of the past. An architecture that is not historically determined, but rather thematically driven.

"New products resulting from novel technology have a freshness of shape that nourishes the theme of function and form. As I have said, whereas the architects of the 1920s used the machine as a whole in their analogies, I prefer to employ only a part and even then do not always make visual analogies."[7]

He often refers to a statement by a biologist that allows him to explain his theory of how "chaos" and "randomness" allow him to describe the city, but also as an essential design tool to revisit the concept of form of function. He believes it can act as a generative mechanism in his buildings. Essentially, a new mechanism to evolve his concept of the "machine".

"I once read a statement by a biologist that a system, be it a computer or an organism, that does not possess a mechanism for dealing with random phenomena is incapable of acquiring a higher capacity or having an animated life process."[8]

Two key projects acted an important intersection for Shinohara to step closer to the concept of "Randomness". Both projects approached the concept in two separate ways. In the projects of Ukiyo-e Museum and the Higashi-Tamagawa Complex the framework of "discreteness" is applied. What he means by "discreteness" is "a state in which multiple objects are unconnected"[9] are placed together within a frame. For him, he believes this is the "initial condition for chaos or randomness"[10] Through the usage of "discreteness", will result into a form of "visual cacophony" or what he calls "Random Noise".[11]

"Random Noise" can be seen as another definition of juxtaposition, which is essentially how he dealt with the facade of the Ukiyo-e Museum, where each single square on the facade are designed to be independent from one another. While in the Higashi-Tamagawa Complex, the framework is emphasised on the volume and how it interacts with the existing building. The goal was never to have give any sense of "overall unity"[12]. But he does not pursue pure chaos or randomness, rather its generative mechanism.

"I am not interested in unlimited chaos as an architectural theme. I am interested in the mechanism in chaos that generates a new type of energy. It is by that mechanism that a set of juxtaposed, primary geometrical forms assumes some of the qualities of an organism."[13]

I believe pure chaos doesn't exist nor would it work, even if we describe chaos as a basic characteristic of Tokyo. It is mainly due to the individual parts of the whole that act as deciding factors for the parts next to it. This could be seen through the way he approached the construction detailing of the House in Yokohama.

"However, the forms that the two-dimensional figures of the openings can take is limited by such practical considerations as the need to open and close windows and the waterproofing details for the corrugated aluminium sheets around window frames. Even so, chaos or randomness can be expressed because my concern is not in an unconditional chaos."[14]

igure 42
louse in Yokohama, Yokohama, Kanagawa, 1984

Figure 43
House in Yokohama, Yokohama, Kanagawa, 1984

Figure 44
Centennial Hall, Tokyo Institute of Technology, Meguro, Tokyo, 1987

I see it as a form of controlled chaos, if we see the city as a perimeter of a collection of colliding elements, that are unique on its own, coexisting together. Unpredictability would ensue. If we perceive his projects of the House in Yokohama and the Centennial Hall in this way, we can better understand his design decisions for each single elements. But also we can understand where the framework of the "Zero-degree Machine" came from.

He believes he is capable of creating a primary space, that is not a symbolic space, called a functional space, by reducing meaning in the elements to a "zero degree".[15] It is through his search for a "zero degree" space or "space of non-meaning, since the Third Style, that led him to the new framework , the "Zero-degree Machine". It is essentially the juxtaposition of primary geometrical elements, where each element houses a single function. These elements are then combined in an impromptu manner. What remains are multiple spatial fragments.

"The machine I am attempting to put together is a set of parts with zero meaning. Even I am not certain what rules I shall find most suitable for the joining of such parts. Anarchy and clumsiness are parts of both the city and technology that arrest my attention at the present. My zero-degree machine will be assembled under the same conditions as the machine used as an architectural analogy in the 1920s, since it will have 'function' as its keyword. But my machine will not be international. It will have a name and nationality clearly indicated."[16]

House in Yokohama acted actually as a 1:1 model, since it was never lived in.[17] It acted as a form of experiment for his new framework, "Random Noise". It was built as an extension of his house, where his studio is located.

The house is a "perception machine", as it is essentially a volume with multiple smaller volumes attached to it. Since it is constructed with a steel frame structure, the structure within his space is absent. Through this construction, he had greater freedom to play with the 2-dimensional and 3-dimensional aspect of the house separately. The "mechanical part" is now the envelope of the house.

The main volume a the quarter of the cylinder that also serve as a hypothetical axis. The discrete spatial elements, or the multiple smaller volumes, were juxtaposed along the axis. These smaller volumes, all unique on its own, act as a form of opening to the outside. Each opening frames a different area of its context. The inhabitant is now capable of having a new relationship with the outside by moving along the hypothetical axis of the house.

Shinohara approached the Centennial Hall with a single theme in mind. He wanted to make "a machine floating in the air"[18]. Through his initial model of the building, the message is clear. A straight half cylinder held by two prism volumes, that act as stilts. The reflective surface, placed on the model, emphasises the "surface-ness" of the building. But it is through this building, where he slowly shifted his choice of facade materials for his public buildings to glass and metal. Through the usage of glass and metal, he wanted to convey that his machine is "a radiant, metallic object floating in the air"[19].

In the final iteration of the project, the two prisms are then combined into a trapezoid. Now the half cylinder looks "as if an airship or spacecraft were poised in a takeoff and landing device"[20]. For me, it looks as if the half cylinder pierces through a complete trapezoid volume, because Shinohara emphasises on the two volumes individuality through their 2-dimensional composition. The trapezoid has a massive triangular opening that runs up to the roof, but we never see it end, because of the presence of the half cylinder.

The half cylinder was later bent to point towards the train station and the campus. This gesture was done to create a stronger dialogue with the city. The half cylinder can be seen as the "mechanical part" or the structure from previous projects. Interestingly, Shinohara was capable of placing a space within the "mechanical part", where previously this was non-existent. Through the juxtaposition of the trapezoid and cylinder, he was capable of creating spatial fragments that are felt and seen from both the outside and inside.

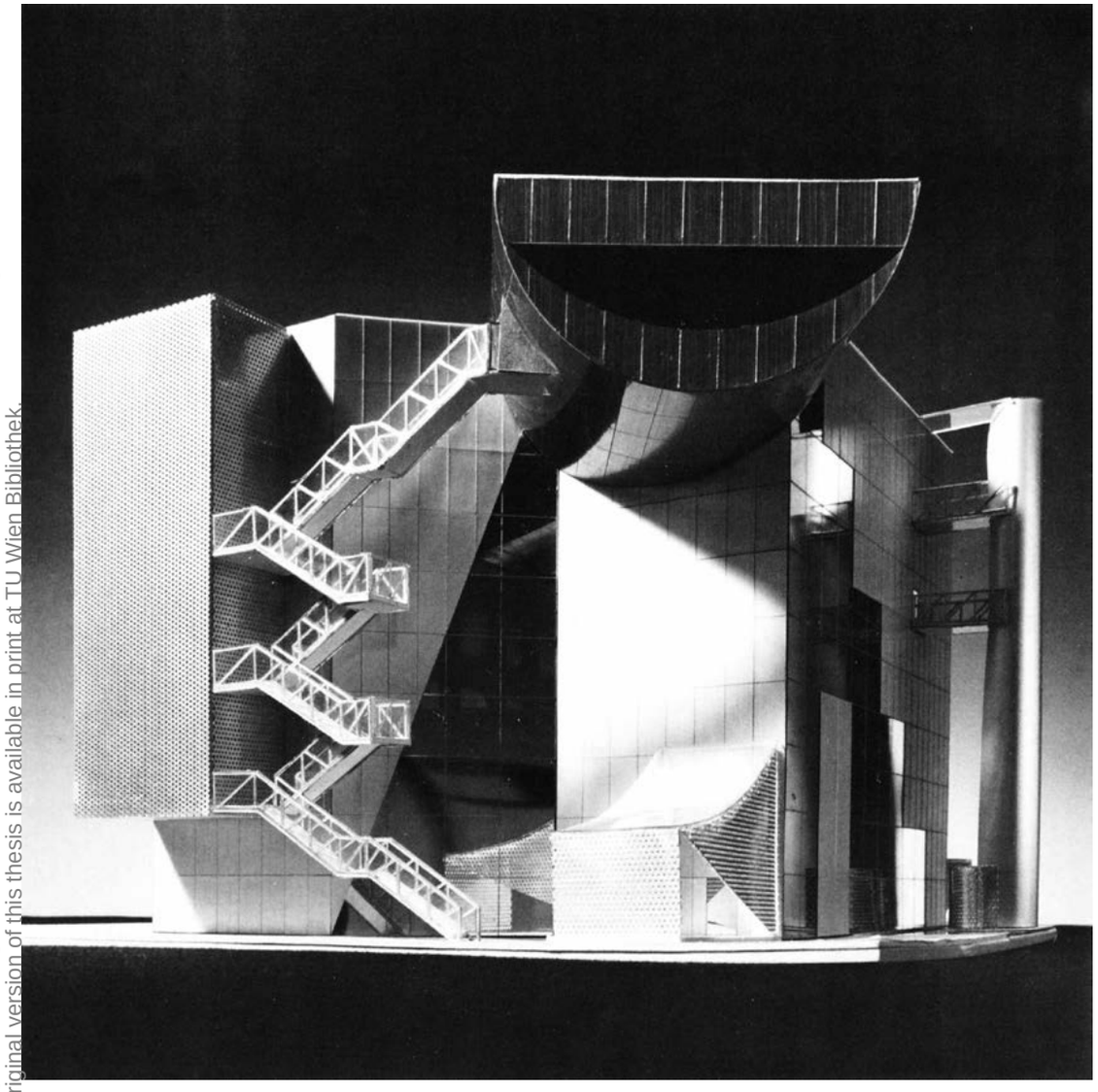


Figure 45
Centennial Hall Model, Tokyo Institute of Technology, Meguro, Tokyo, 1986

Figure 46
Centennial Hall Model, Tokyo Institute of Technology, Meguro, Tokyo, 1984

Figure 47
Inside the half-cylinder
Centennial Hall, Tokyo Institute of Technology, Meguro, Tokyo, 1987

Figure 48
Centennial Hall, Tokyo Institute of Technology, Meguro, Tokyo, 1987

Footnotes

1 Kazuo Shinohara, *"The Context of Pleasure",* JA 09.1986, pg.23.

2 Kazuo Shinohara, *Tokyo Institute of Technology Centennial Hall*, in: *Global Architecture Document* 19, A.D.A EDITA Tokyo 1988, pg.8

3 Kazuo Shinohara, *A Program for the 'Fourth Space'*, in: *The Japan Architect* 09.1986, Tokyo, pg.28

4 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, pg.30

5 referring to chapter Progressive Anarchy.

6 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, pg.30

7 Ibid., pg.31

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12 Kazuo Shinohara, *Chaos and Machine*, in: *The Japan Architect* 05.1988, Tokyo, pg.27

13 Ibid., pg.31

14 Ibid., pg.28

15 Kazuo Shinohara, *Towards Architecture*, in: *The Japan Architect* 09.1981, pg.35

16 Ibid.

17 Dehli, Christian / Grolimund, Andrea, *Kazuo Shinohara: 3 Houses*, Luzern, Switzerland, Quart Verlag, 2019, pg.193

18 Kazuo Shinohara, *Chaos and Machine*, in: *The Japan Architect* 05.1988, Tokyo, pg.25

19 Ibid.

20 Ibid.

02

PROCESS

THE TRIANGLE

Figure 49
Mathematische Modelle, 2010
Lena Amuat & Zoë Meyer

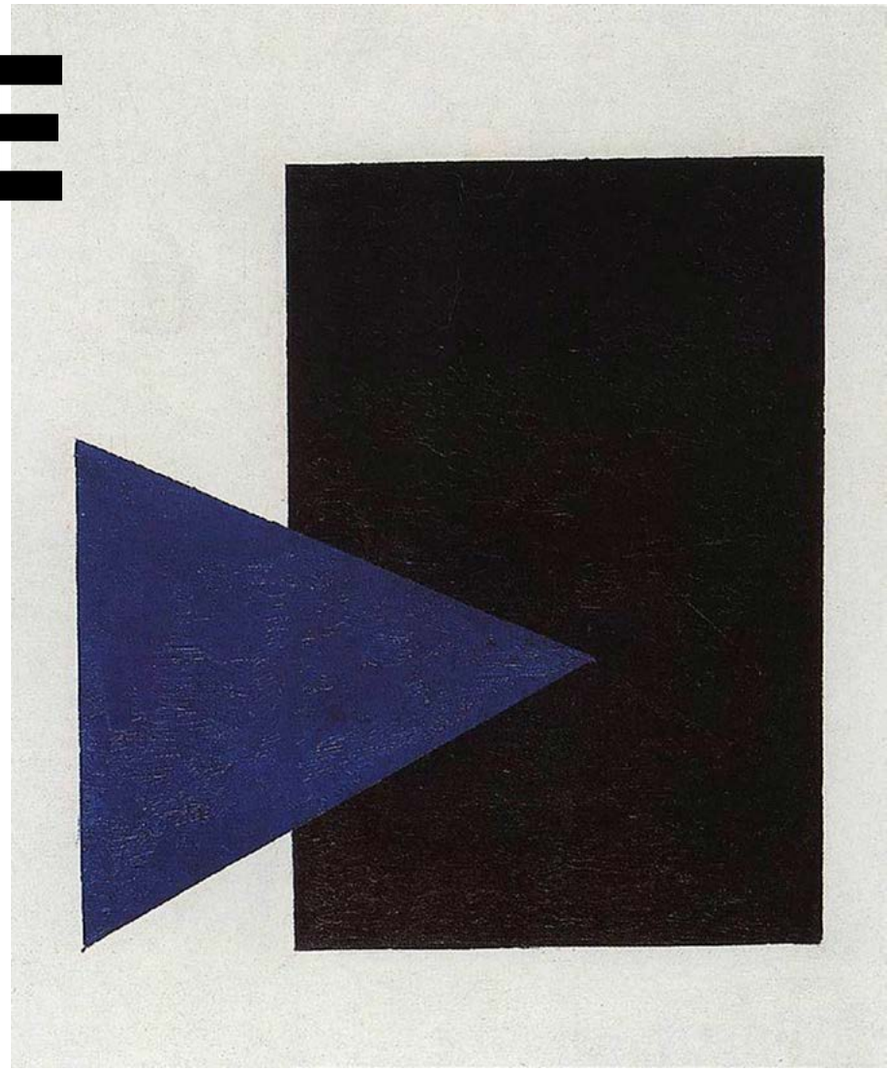


Figure 50
Suprematism with Blue Triangle and Black Square, 1915
Kazimir Malevich

The triangle, as a chosen perimeter, was chosen due to its geometrical symbolism of dynamic tension, where the duality of stability and instability is inherent.

THE HUNT FOR A TRIANGULAR BUILDING SITE

The hunt resulted with a map of 46 possible triangular buildings sites in Vienna.

Both, built and unbuilt.

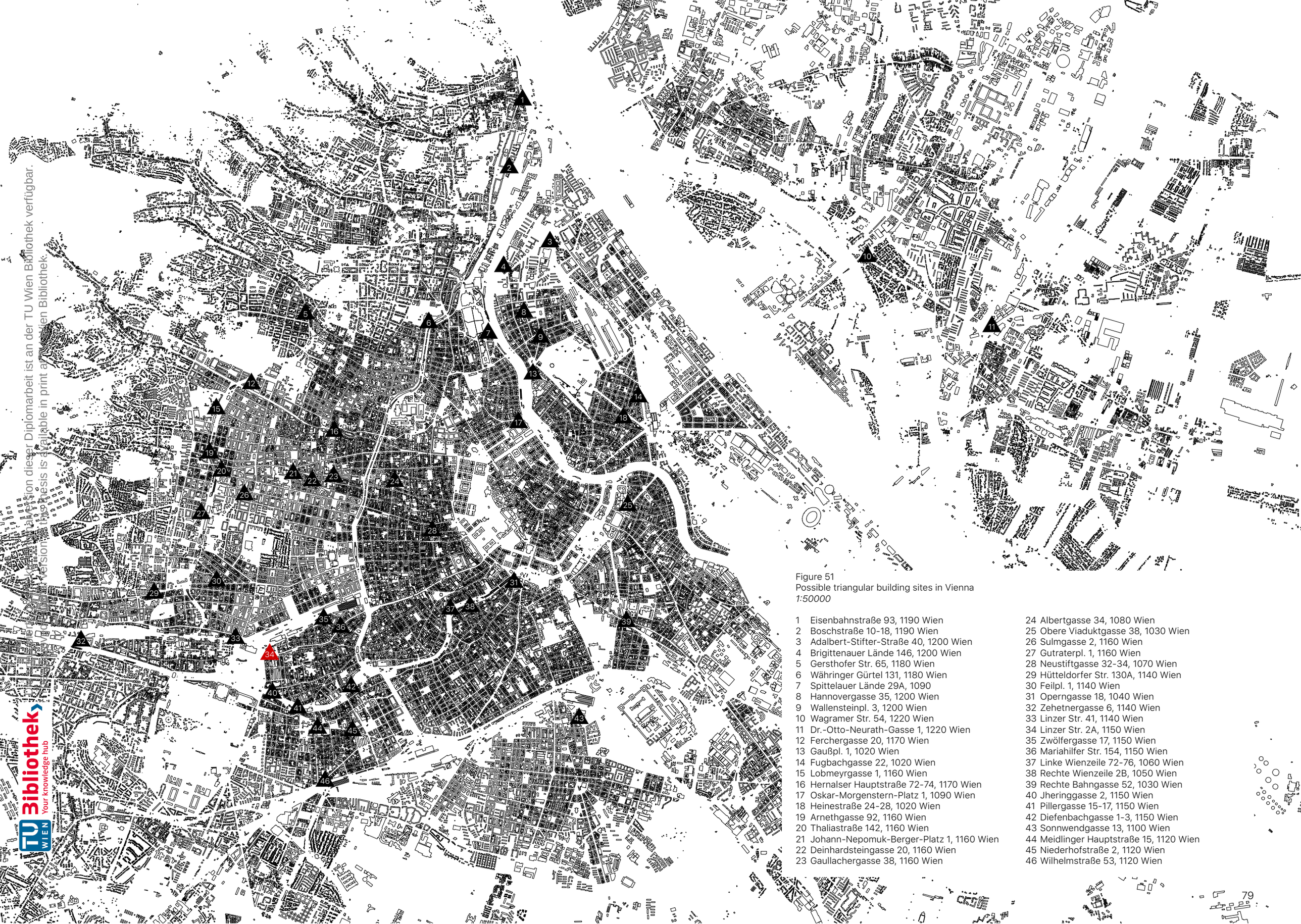


Figure 51
Possible triangular building sites in Vienna
1:50000

1 Eisenbahnstraße 93, 1190 Wien
2 Boschstraße 10-18, 1190 Wien
3 Adalbert-Stifter-Straße 40, 1200 Wien
4 Brigittenauer Lände 146, 1200 Wien
5 Gersthofer Str. 65, 1180 Wien
6 Währinger Gürtel 131, 1180 Wien
7 Spittelauer Lände 29A, 1090
8 Hannovergasse 35, 1200 Wien
9 Wallensteinpl. 3, 1200 Wien
10 Wagramer Str. 54, 1220 Wien
11 Dr.-Otto-Neurath-Gasse 1, 1220 Wien
12 Ferchergasse 20, 1170 Wien
13 Gaußpl. 1, 1020 Wien
14 Fugbachgasse 22, 1020 Wien
15 Lobmeyrgasse 1, 1160 Wien
16 Hernalser Hauptstraße 72-74, 1170 Wien
17 Oskar-Morgenstern-Platz 1, 1090 Wien
18 Heinestraße 24-28, 1020 Wien
19 Arnethgasse 92, 1160 Wien
20 Thaliastraße 142, 1160 Wien
21 Johann-Nepomuk-Berger-Platz 1, 1160 Wien
22 Deinhardsteingasse 20, 1160 Wien
23 Gaullachergasse 38, 1160 Wien
24 Albertgasse 34, 1080 Wien
25 Obere Viaduktgasse 38, 1030 Wien
26 Sulmgasse 2, 1160 Wien
27 Gutraterpl. 1, 1160 Wien
28 Neustiftgasse 32-34, 1070 Wien
29 Hütteldorfer Str. 130A, 1140 Wien
30 Feilpl. 1, 1140 Wien
31 Operngasse 18, 1040 Wien
32 Zehetnergasse 6, 1140 Wien
33 Linzer Str. 41, 1140 Wien
34 Linzer Str. 2A, 1150 Wien
35 Zwölfergasse 17, 1150 Wien
36 Mariahilfer Str. 154, 1150 Wien
37 Linke Wienzeile 72-76, 1060 Wien
38 Rechte Wienzeile 2B, 1050 Wien
39 Rechte Bahngasse 52, 1030 Wien
40 Jheringgasse 2, 1150 Wien
41 Pillergasse 15-17, 1150 Wien
42 Diefenbachgasse 1-3, 1150 Wien
43 Sonnwendgasse 13, 1100 Wien
44 Meidlinger Hauptstraße 15, 1120 Wien
45 Niederhofstraße 2, 1120 Wien
46 Wilhelmstraße 53, 1120 Wien

From the 46 possible building sites, I narrowed it down to these remaining eight.

Each with their own unique sets qualities, potentials, and conditions.

Each being a consequence of the city.

Figure 52
The tram garage north of the site.

1 Eisenbahnstrasse 93

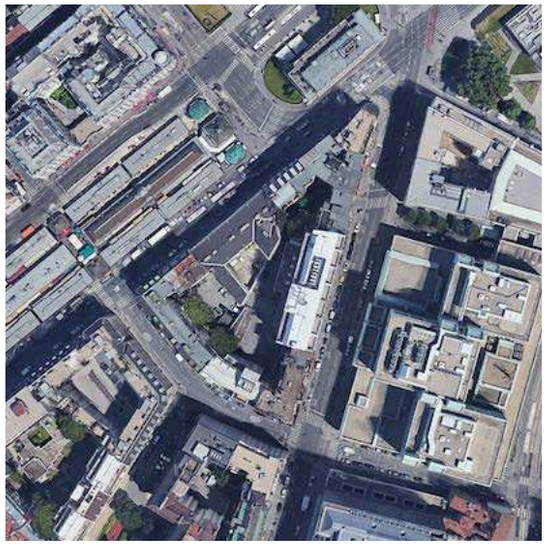
4 Brigittenauer Lände 146

11 Dr.-Otto-Neurath-Gasse 1

14 Fugbachgasse 22

20 Thaliastraße 142

18 Heinestraße 24-28



31 Operngasse 18

34 Linzer Str. 2A, 1150 Wien

The chosen site is extrememly dense and diverse. It ies at the beginning of Mariahilferstrasse. The site remained empty for many years, but later filled in with a tank station and dog park. I find the site extremely interesting, as it sits on a peculiar space. A space, where the public interjunction and the sudden shift of urbanity is apparent.

The site or the “island” can be described as a consequence of its urban surroundings, or it can be seen as a sharp knife piercing into the urban texture, dividing the the space into two.

Figure 53
The tram garage north of the site.

Figure 54

Figure 55

The “island” sits on a line of duality.

The duality of different spatial movements.

The duality of urban function.

A place of converging lines.

A place where people,cars, and public infrastructures converge.

1938

Figure 56
Arial View

Schönbrunn

1956

Figure 57
Arial View

2014

Figure 58
Arial View

2018

Figure 59
Arial View

map of movement diagram on the site of trams, buses, cars, people, bikes, etc.

Figure 60
Diagram of traffic movement
1:2000

Figure 61
View of the site from the Schönbrunner Schloss Park

Figure 62
View from West of site

Figure 63
The tram garage north of the site.

The site busy during the day, but quite at night.

The tank station stands in front of the dense grown trees.

It lights up brightly at night like a light house.

Figure 64
The Museum of Technology

On the map, the presence of the Museum is apparent. But on the site, it hides behind the densely grown trees. Only the roof is visible.

The site is sandwitched between two tram garages. Defining the contours through the tram tracks.

Figure 65
The tram garage north of the site.

Figure 66
The tram garage south of the site.

Figure 67
Muntplein, Amsterdam, 1962
Victor Meeussen

To the east, a busy intersection from all possible directions with all forms of vehicles.

I felt the place was chaotic and required a sense of awareness to move around. But for those who live around there, i

For me, it felt like pure chaos. Simply crossing the street required my utmost attention. But for those who lived around, it was second nature.

This area greatly reminds me of the photograph by Victor Meeussen of Muntplein, Amsterdam.

Figure 68
The urban situation west of the site.

THE MACHINE

The F-14 fighter jet and the Apollo 11 inspired Shinohara to create the Zero-degree Machine. By also looking into Hans Hollein's collage of the Aircraft Carrier City, I followed both their footsteps to find my solid fixed point of reference to further develop my project.

Essentially, I searched for an object that represents a single compact body capable of housing complex systems of program, while keeping the urban infrastrcture in the sky.

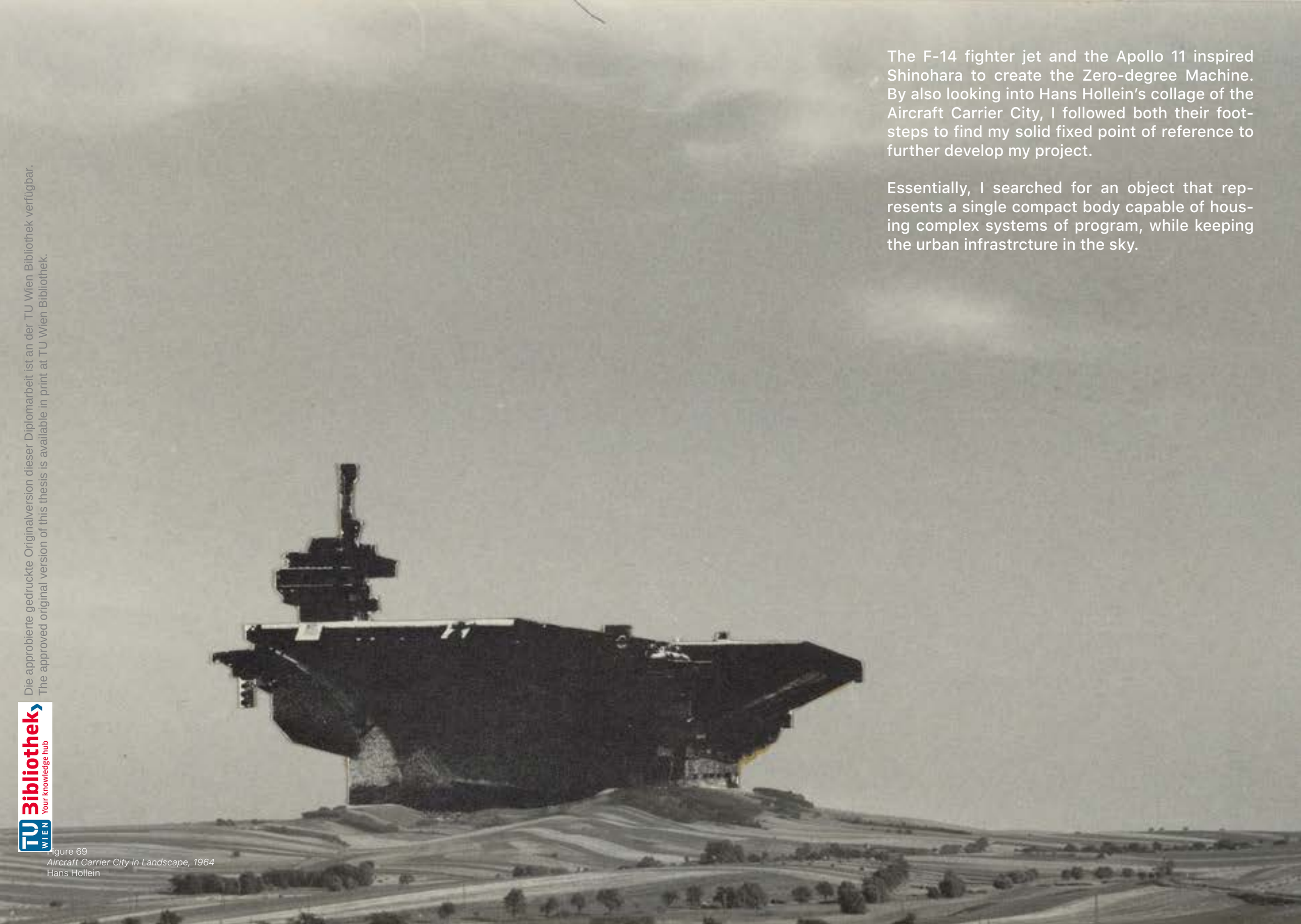


Figure 69
Aircraft Carrier City in Landscape, 1964
Hans Hollein

The metaphor is then placed onto my building site. The airstrip on the roof blends pleasantly well with the train and tram tracks.

Figure 70
Collage

By elevating the "island" away from the ground floor, one is capable of placing the required program to create an open and accessible public building.

Essentially, the ship floats in a sea of traffic. Floating from the sea of trees towards the ordered urban tissue of Vienna.

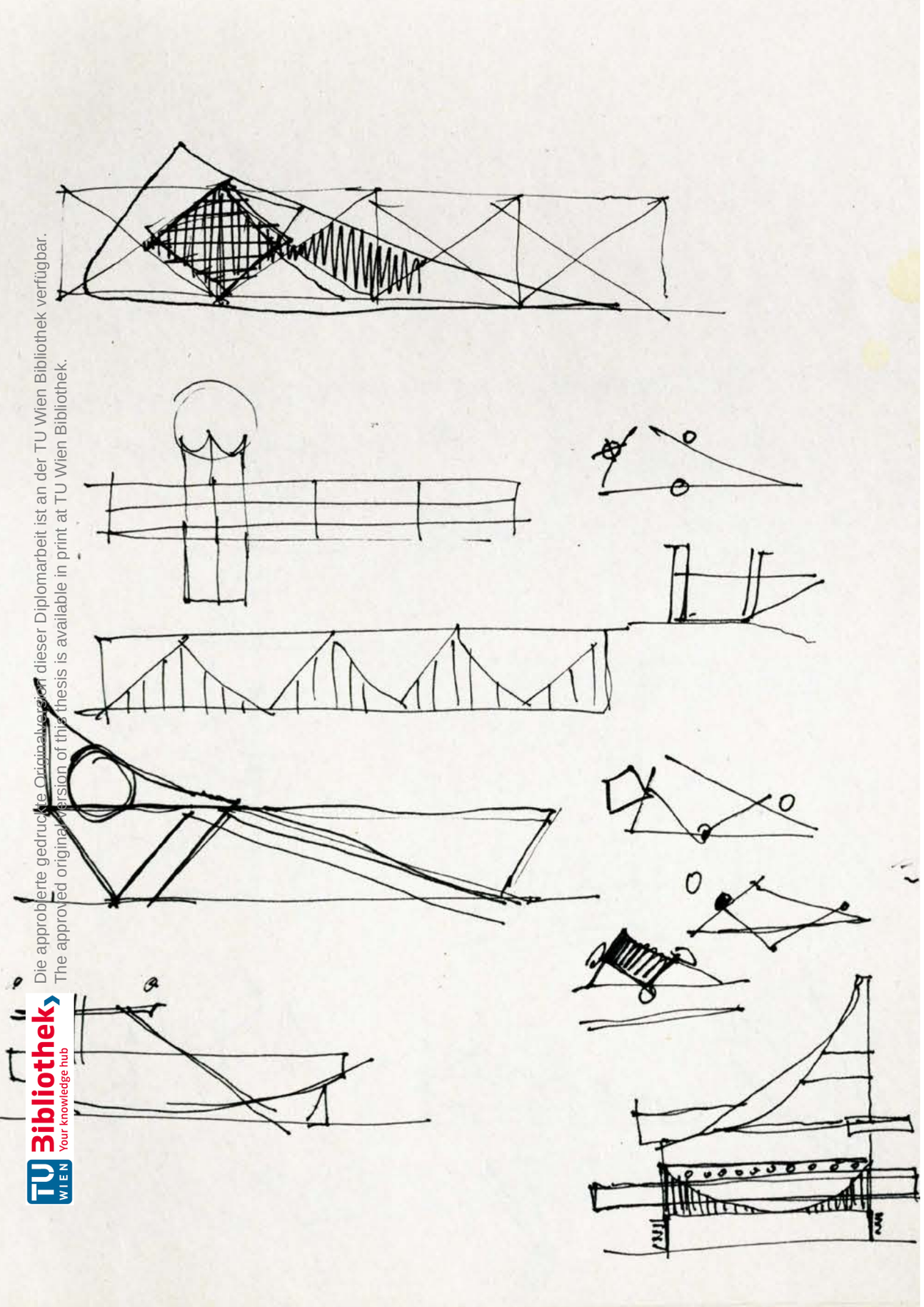
Figure 71
Collage

Acting as a new point of reference for the surrounding inhabitants to gather and experience a new form of space.

The building should be the embodiment of a city.

Figure 72
Collage

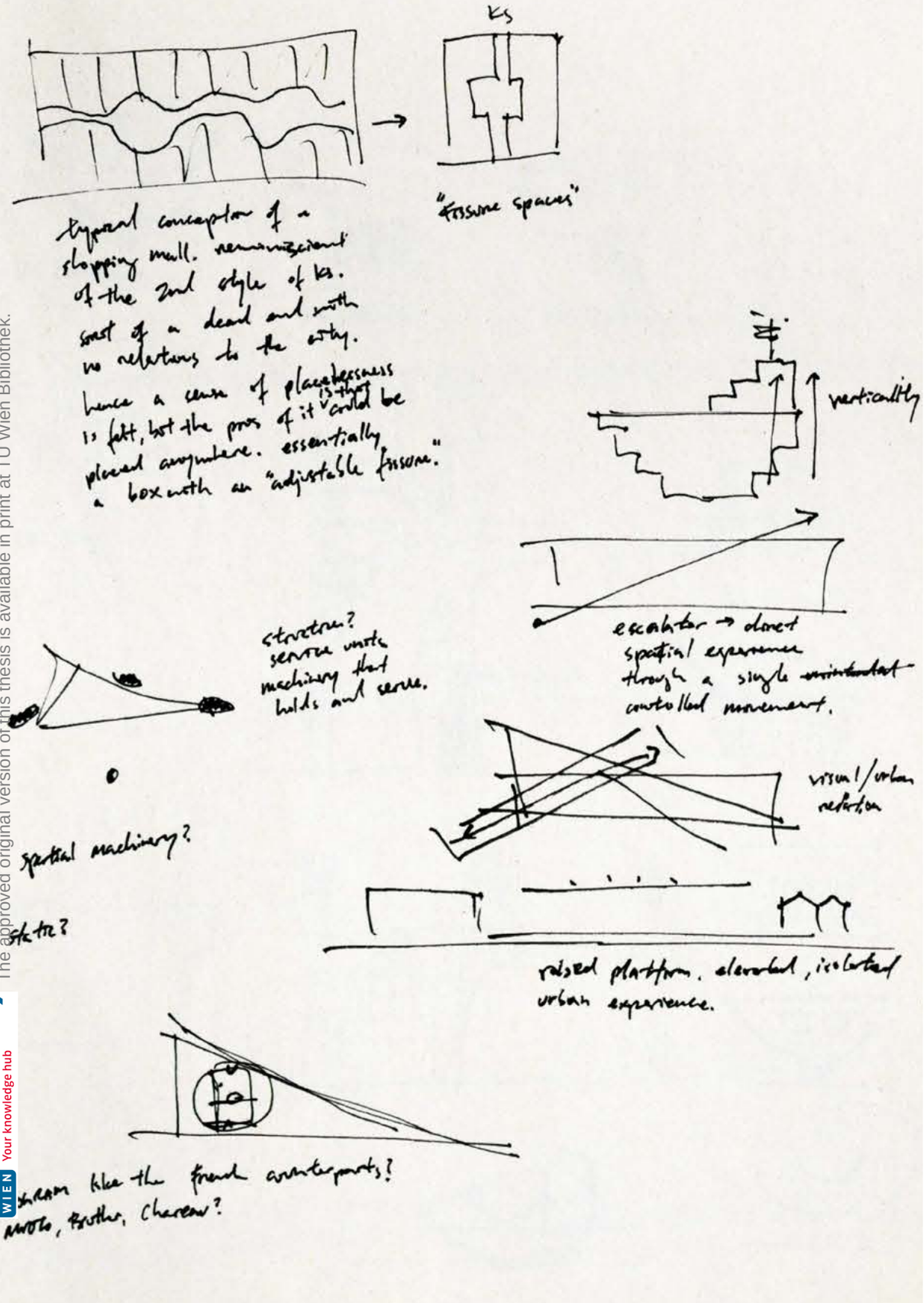
CREATING THE EXPERIENCING MACHINE



The initial contemplation was how to deal with the long but narrow site. I started off by figuring out by trying to figure out how the 100m long facade can look like. Here, I redrew some of Shinohara's sketches, while mixing it with my own. I conscioulsy avoided using any references from his built projects, but looked into the sketches that lead him to his built proejcts.

Within these sketches, I contemplated the points where the vertical circulations can be located on the triangular site.

Figure 73
Sketches



The idea was to create a hybrid building, where the function of shopping and non-shopping can coincide. I decided upon combining retail and sport together, while having a public roof accessible from all hours.

By looking at the works of Shinohara, I saw the retail space of a shopping mall similar to that of his Fissure Space, where the passage way or the space in between the shops as the main protagonist.

By thinking about the vertical circulation, I reflected upon how one can access the roof, where the option of avoiding the retail space is possible.

Figure 74
Sketches

Once I decided upon four outer vertical circulation systems that allows the people to enter from all sides, I looked into how a department store layout looked

I decided upon where to put the vertical circulation systems based upon how a department store is layouted. I looked into the work of Louis Sullivan's Sullivan Center and Togo Murano's Yomiuri Kaikan as a point of reference.

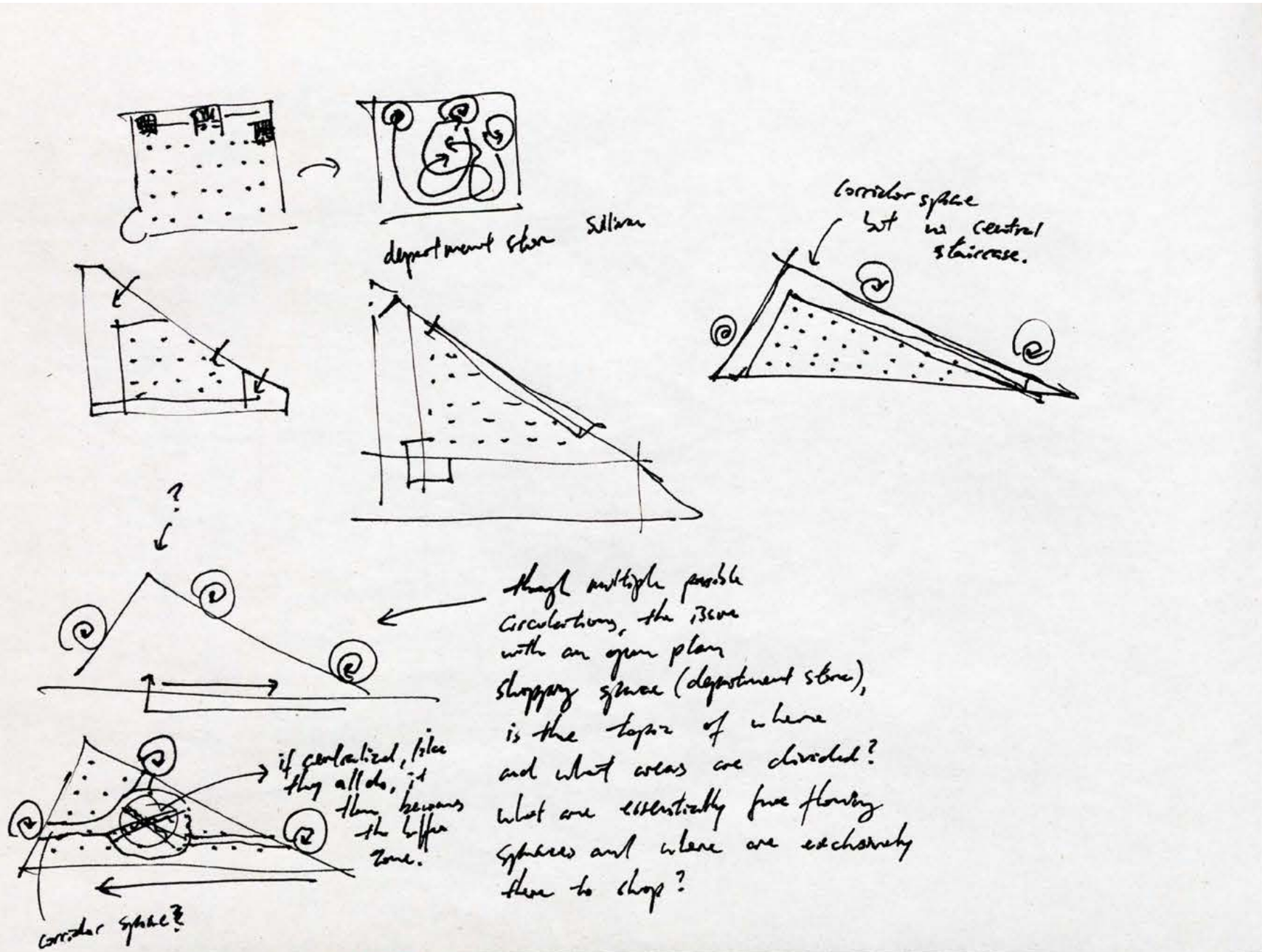


Figure 75
Sketches

By placing the vertical circulations on the edge of the site, or on the facade of the building, I am capable of achieve an open space on the triangular site.

I looked into the layout of Centre Pompidou, where the vertical circulations are placed outside of the facade, while also looking into the Sendai Mediatheque by Toyo Ito to see what happens if the circulations are placed inside the building.

Essentially, I see my building as the layout of Centre Pompidou, but with one side of the facade rotated downwards to create a triangle.

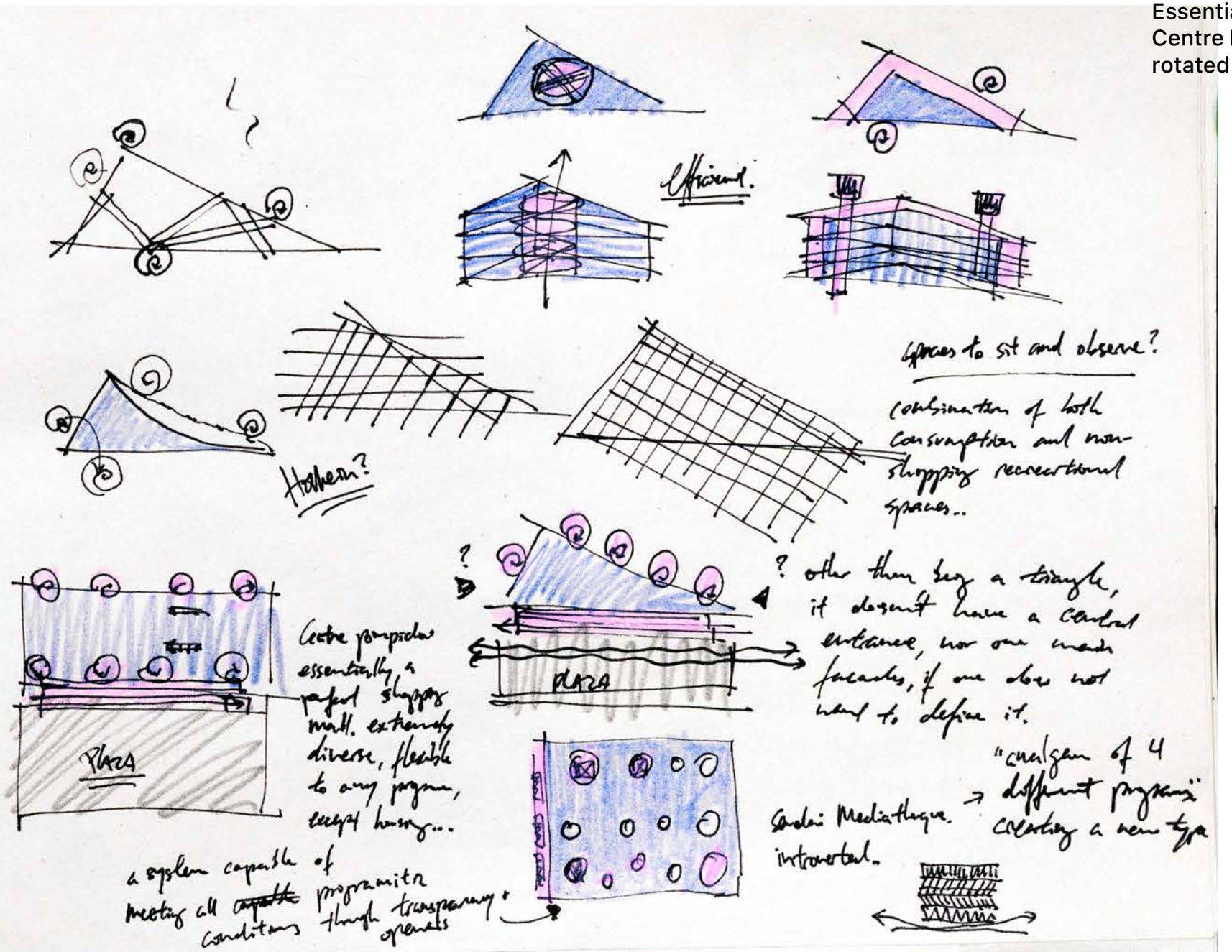


Figure 76
Sketches

I searched further for other references, where the servant spaces define the facade, while leaving the served spaces open.

The references of Bruther, Baukunst, Richard Rogers, and Kazuo Shinohara is explored.

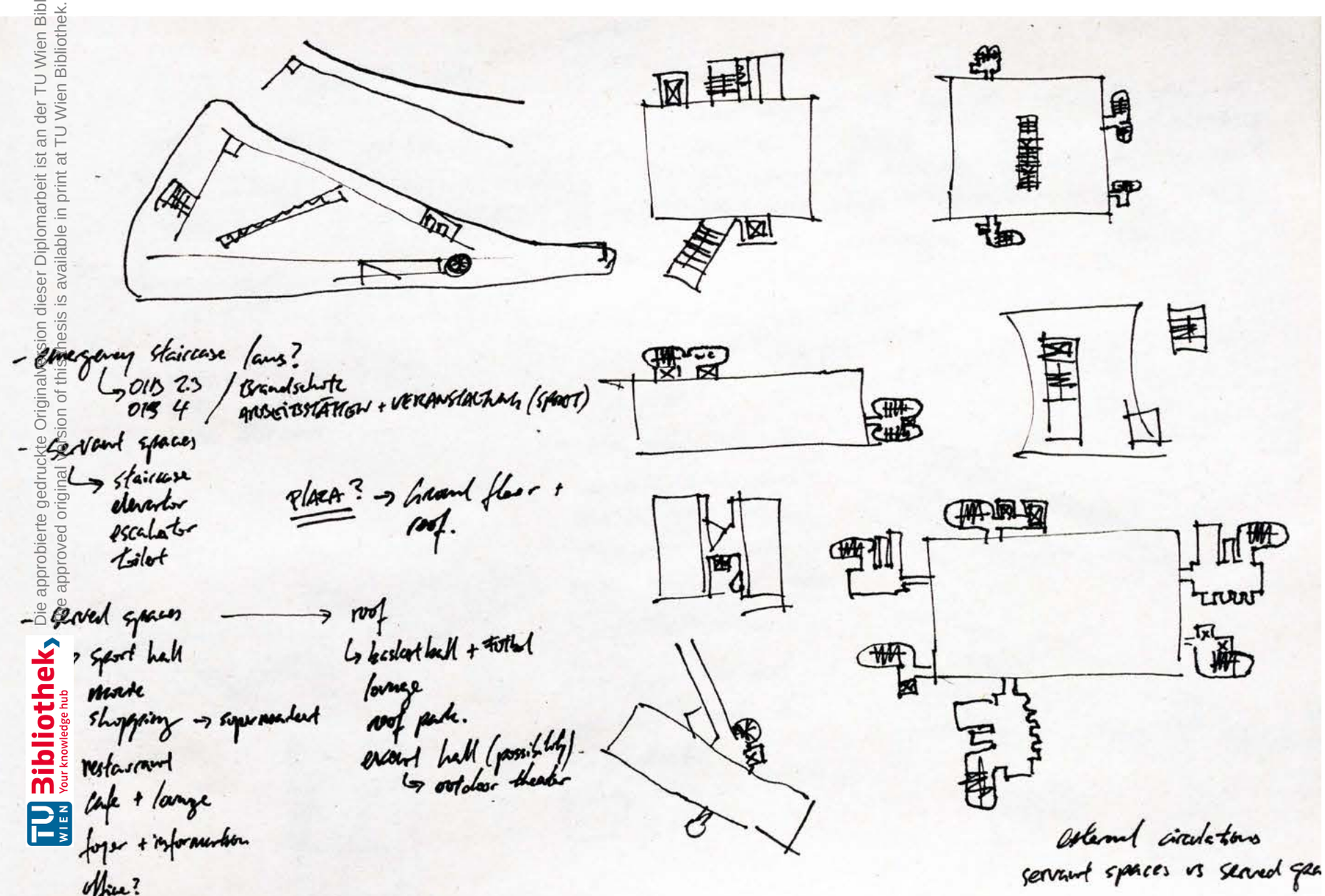


Figure 77
Sketches

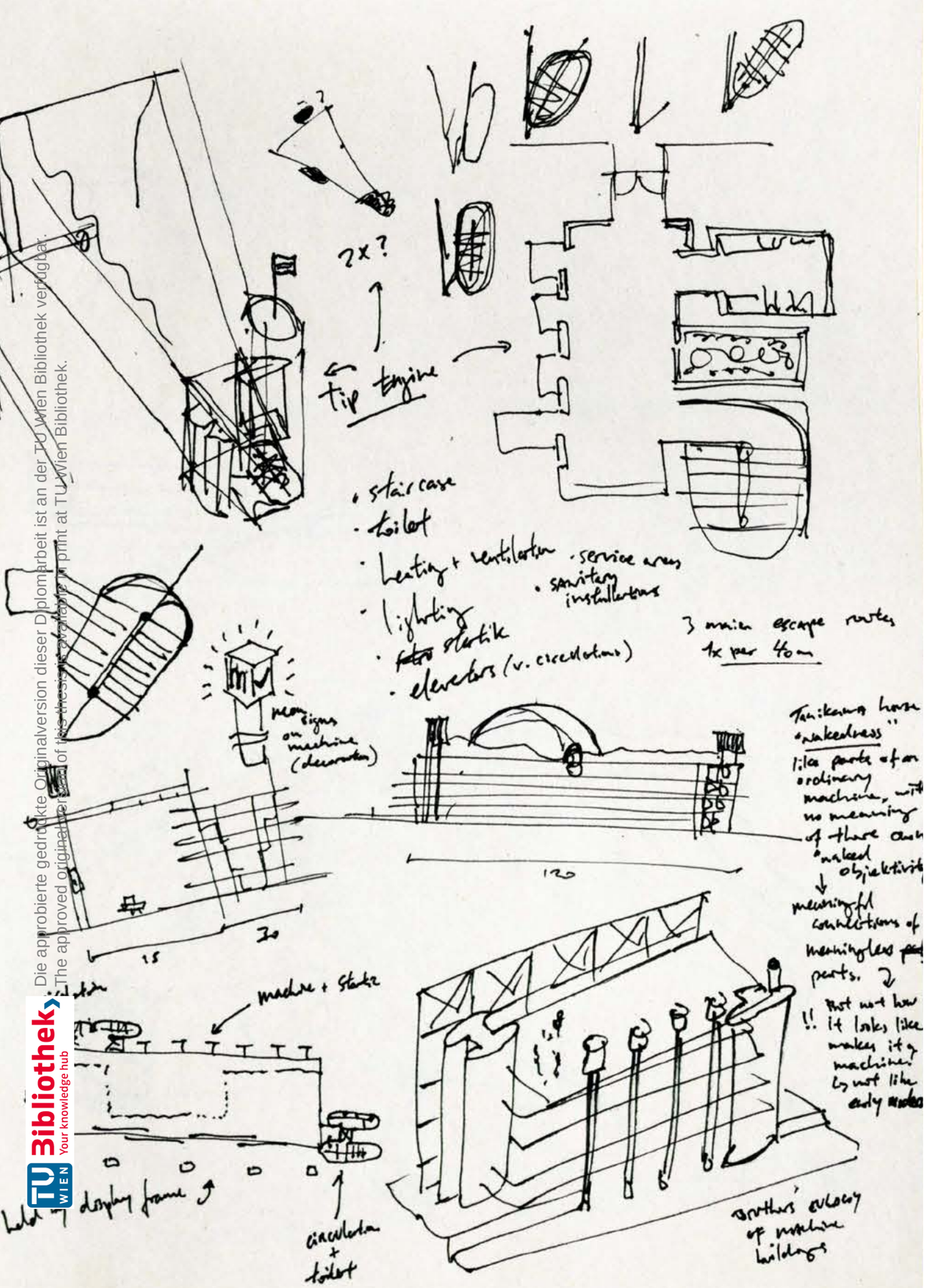


Figure 78
Sketches

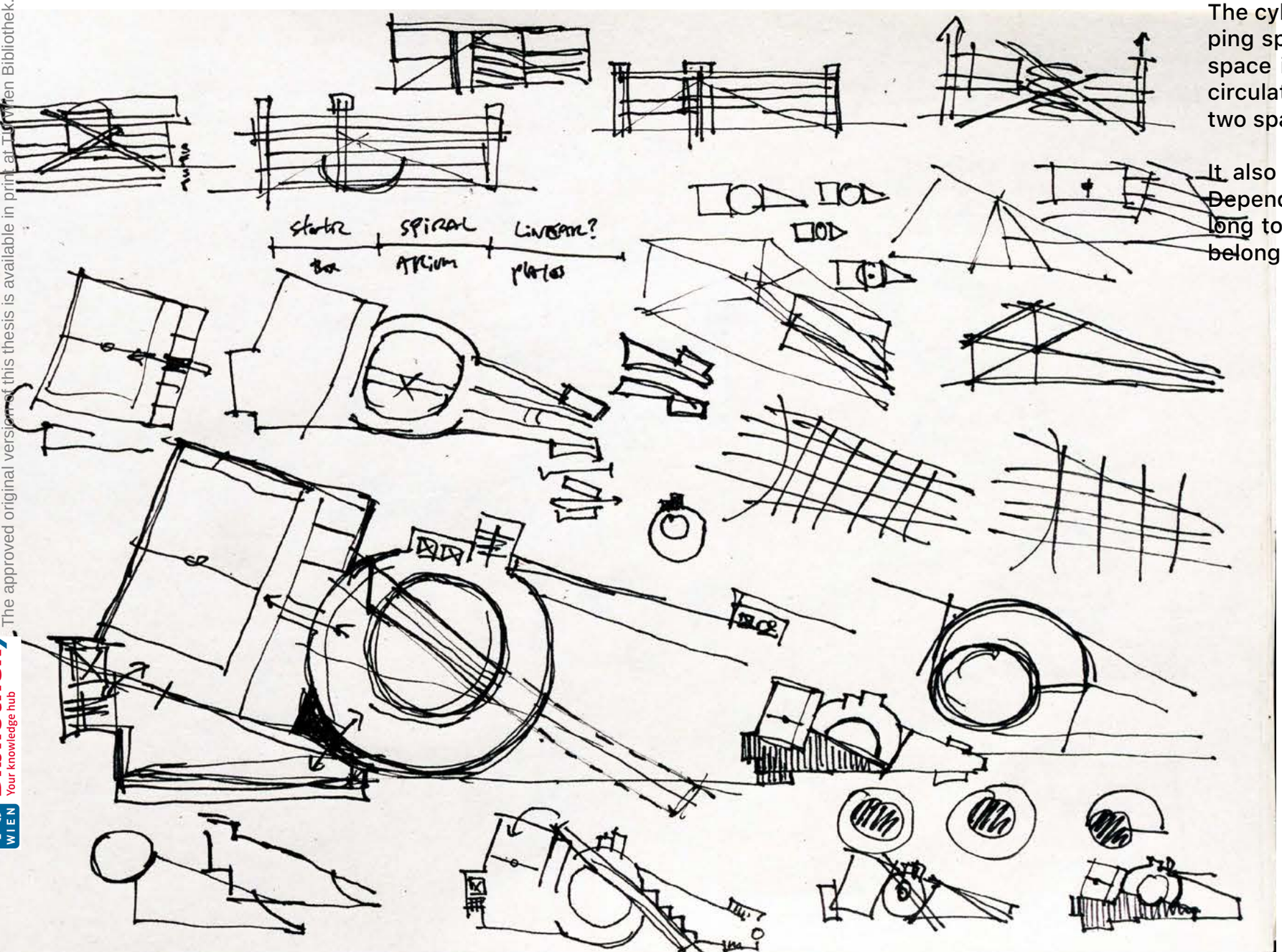
Once deciding upon having the circulations placed on the outside, I wonder if it was possible to shape the tip of the triangle with one of the vertical circulations.

I wanted to offer the possiblity for the visitor to always have more than one access option before entering the building.

I used Shinohara's half-cylinder as my own "mechanical part" that will act as a key spatial element to create spatial fragments. In this sketch, I tried to juxtapose four geometric forms to achieve those fragmented spaces, but also to utilise those shapes to decide, where the programs could be located.

4 Shapes:
half-cylinder: restaurant / cafe
rectangle: indoor sport hall
circle: atrium
triangle: cinema

Figure 79
Sketches



The four shapes deemed for me too complex, so I reduced to three shapes.

The sphere and half cylinder is now replaced with a vertical cylinder. I found the sphere difficult to manage and build, so I opted for the cylinder.

The cylinder will be a spatial generator, housing the atrium, multifunctional hall, cafe, retail, and circulation.

The cylinder acts as a divider between the shopping space in the triangle and the non-shopping space in the rectangle. It also acts as a central circulation system that binds and connects these two spaces.

It also acts as a share space for both shapes. Depending on certain floors, the cylinder will belong to the shopping space, while the other, will belong to the non-shopping spcae.

Figure 80
Sketches

The task is now how to utilise and design the spaces between each shape, as I want them to be visible from the outside. These spaces between will help break the large body into three parts, in order to emphasise the each individual shapes.

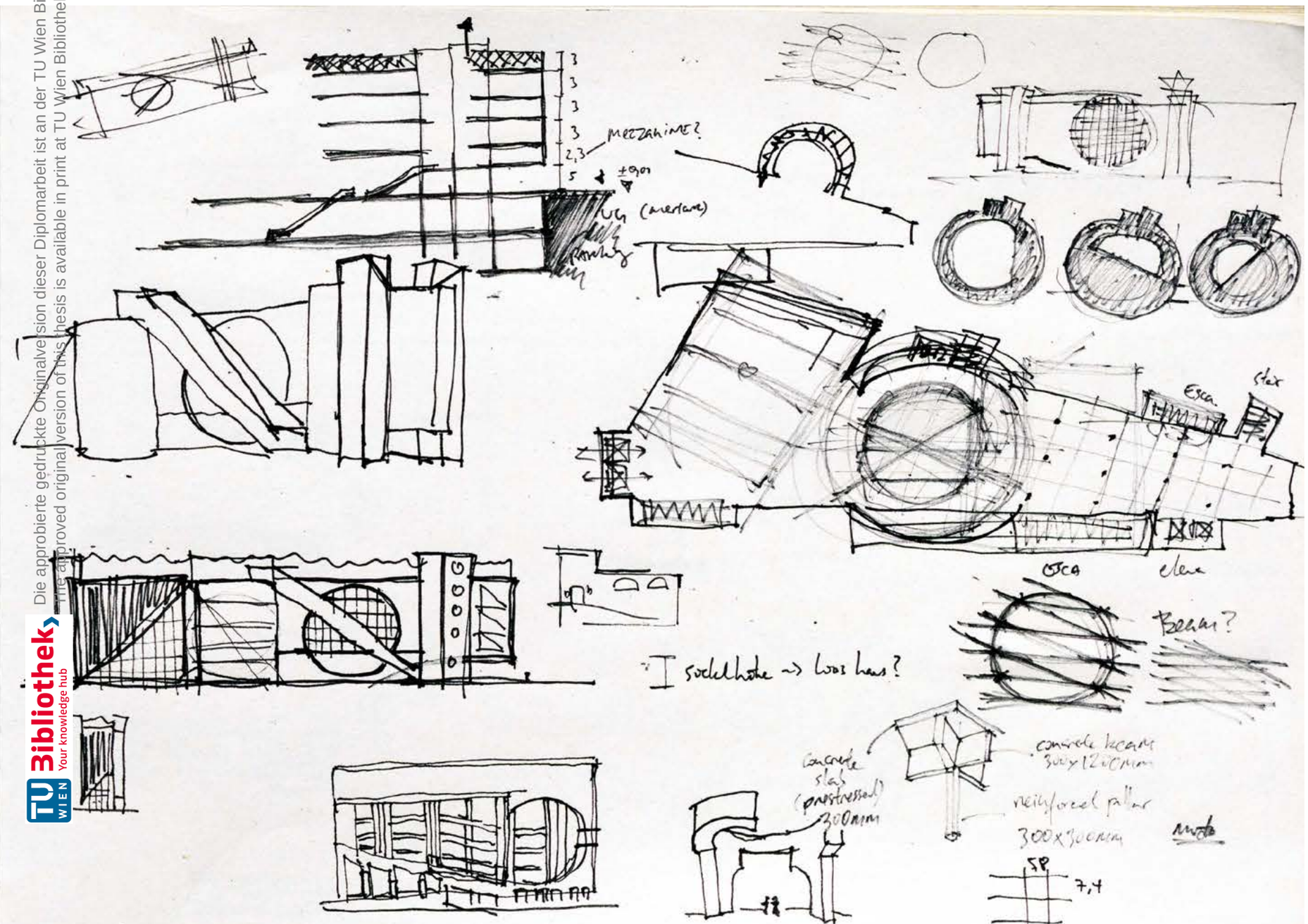


Figure 81
Sketches

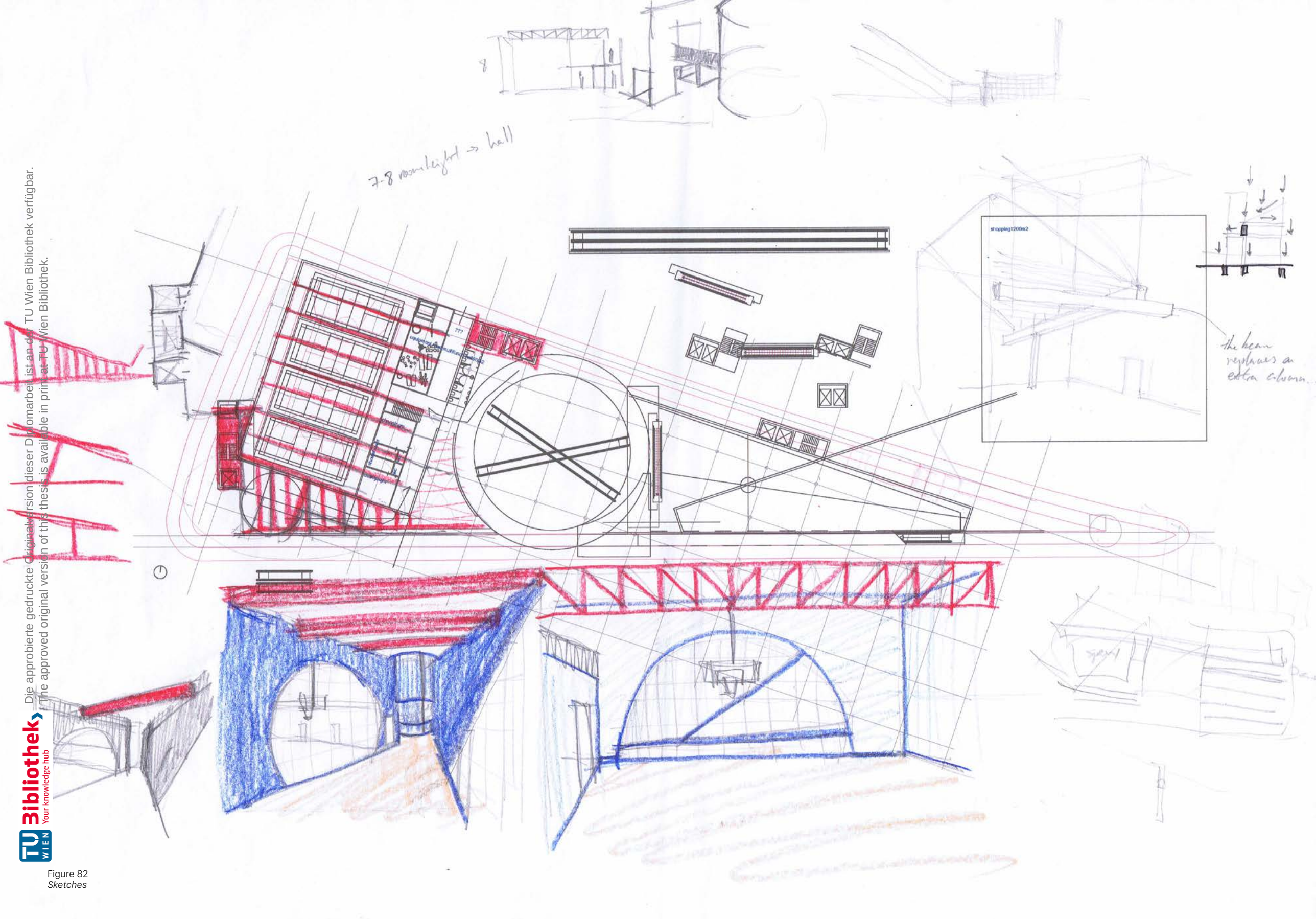


Figure 82
Sketches

One of the inital ideals of how the facade will look like. I wanted the building to express movement and vitality in its still state, while in the evening, the building will shine brightly, attracting the people around it.

I want to create an experiencing machine. A machine that can only be understood and experienced by exploring every corner of the building.

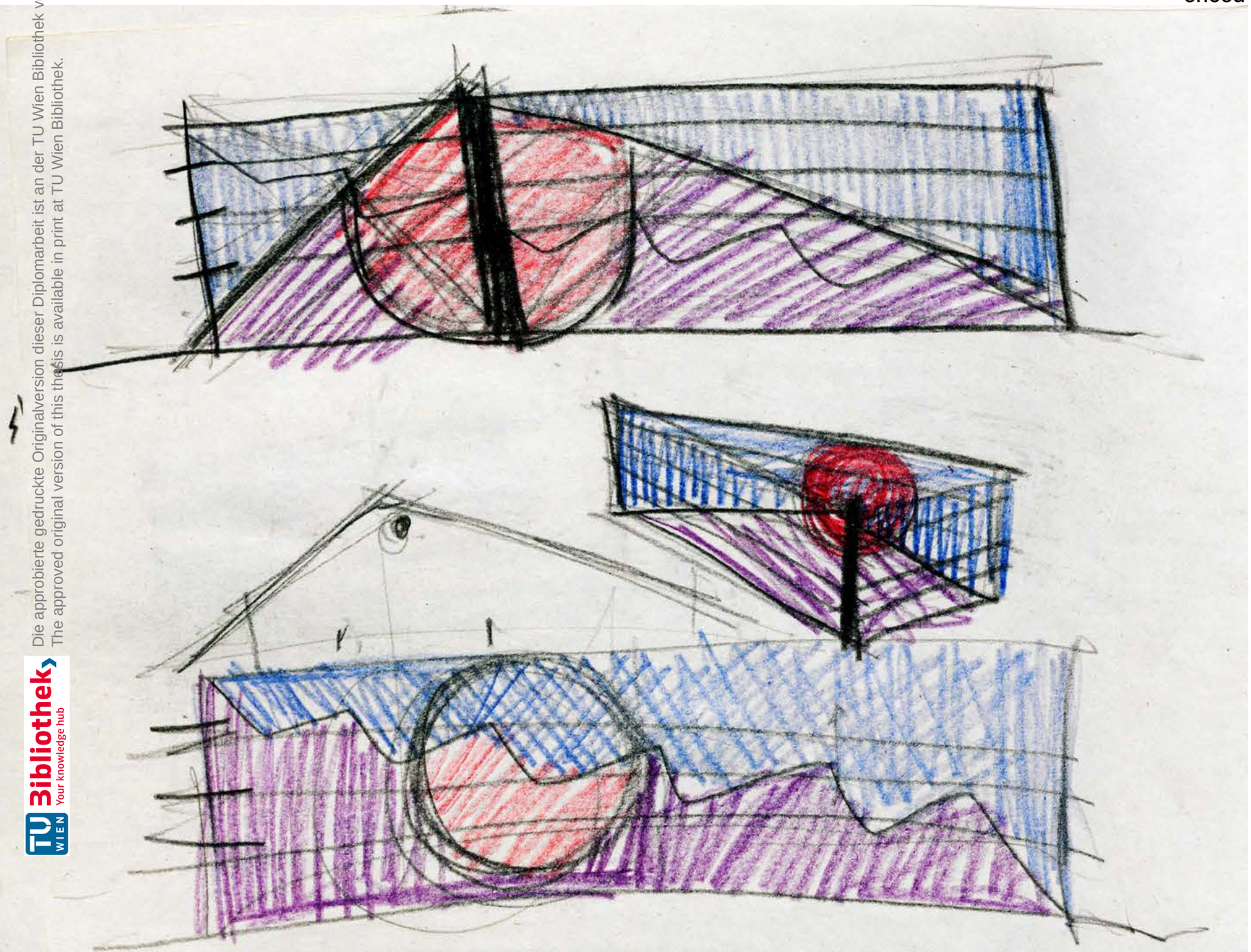


Figure 83
Sketches

I took the reference from Shinohara's Ukiyo-e Museums's "Surface-ness" and "Discreteness" as a reference, while also looking into the competition project from 6a. Both tried to create an abstract facade through simple geometries, while emphasising closed and open surfaces.

I approached this facade, by first dividing it into three to four parts. Within each part, I gave it a shape works on its own, as a form of opening but also as a load bearing element. When all shapes are combined, they form the outer envelope of the building, while at the same time, holding the roof / platform together in place.

A large concrete truss runs around the edge of the roof, it acts as protective layer for the sport field on the sport field on the roof, while holding the floor of the roof in place. Essentially the truss is the crown of the building, but also a crucial structural element that holds everything in place.

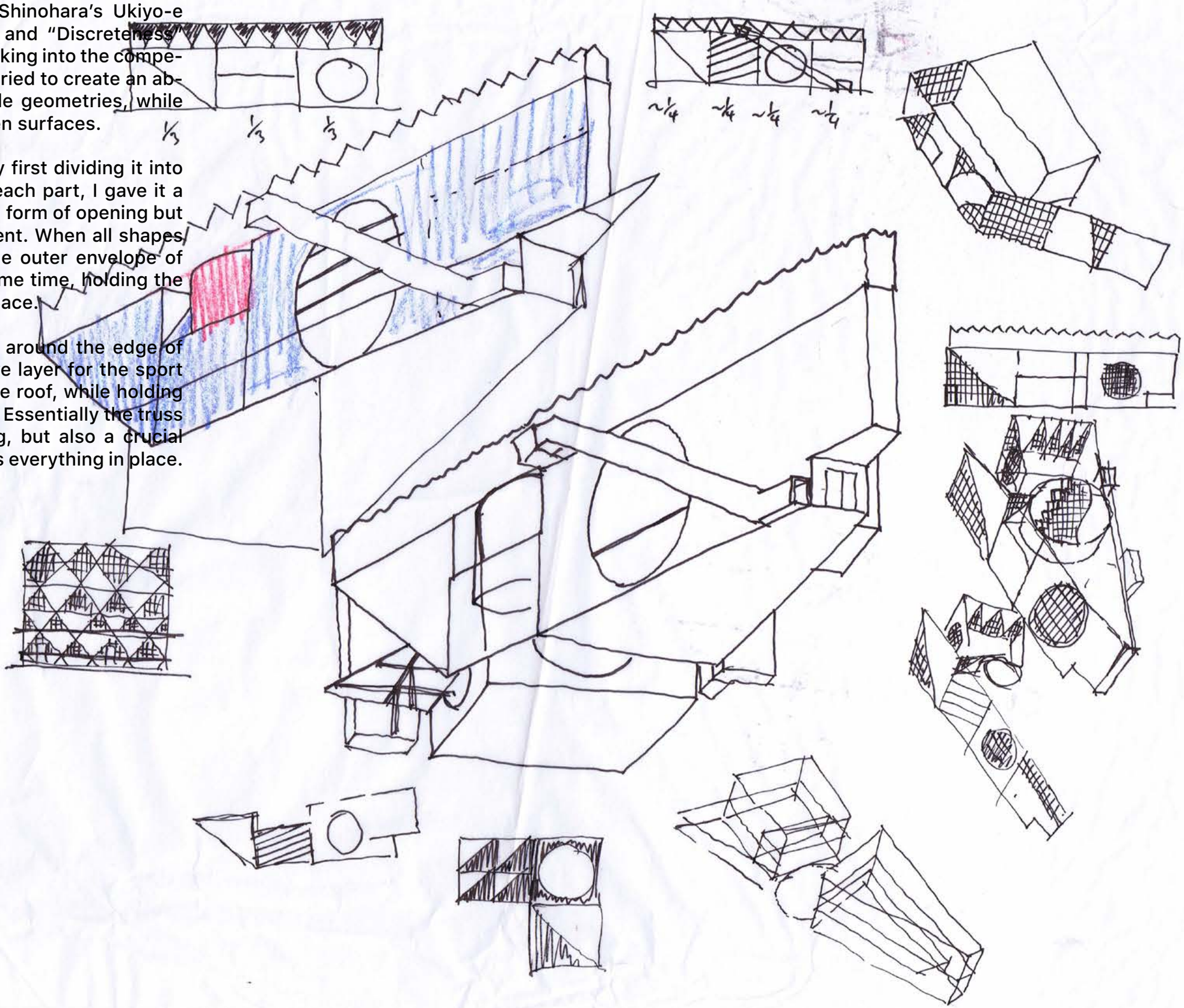


Figure 84
Studies of the facade.

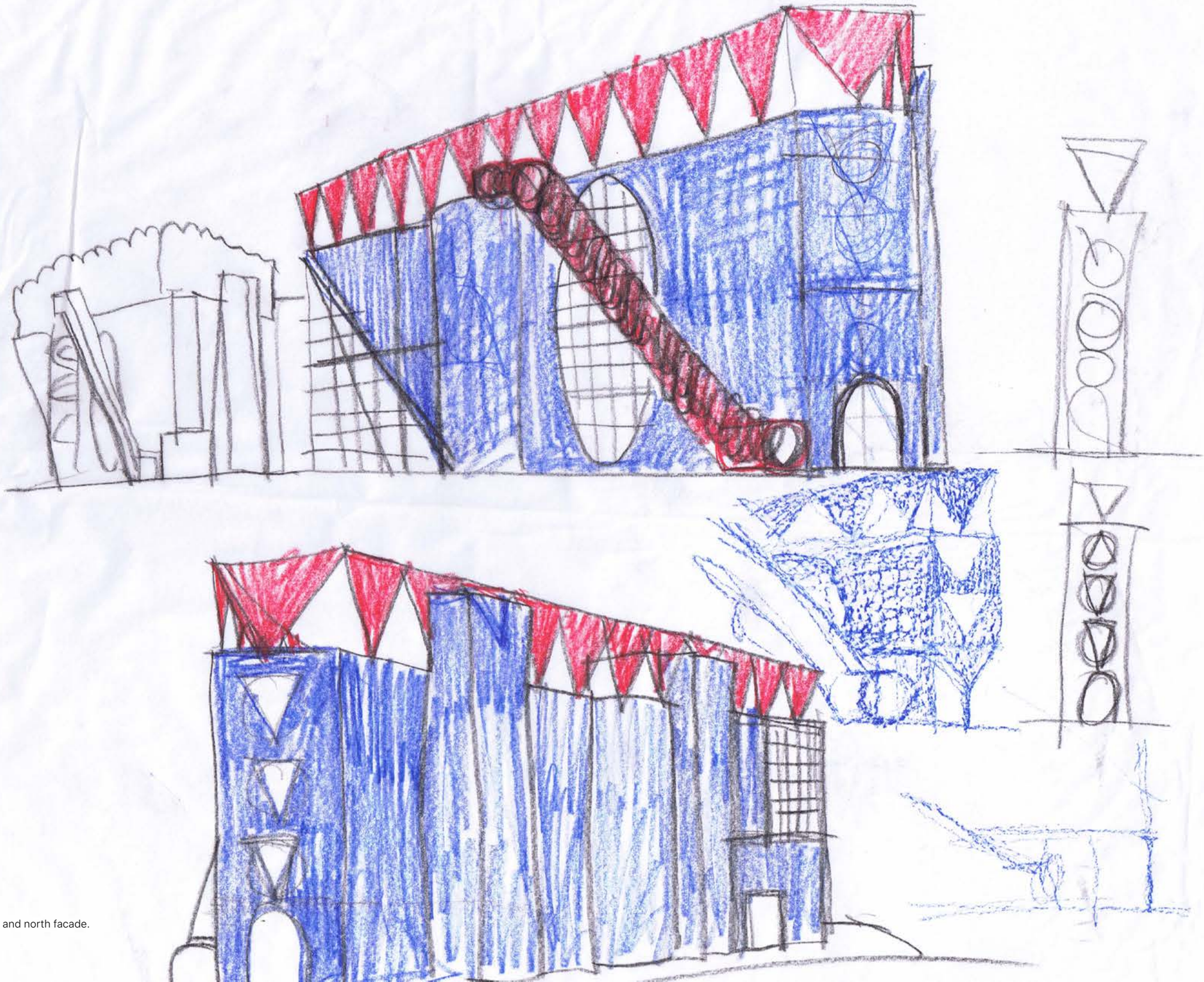


Figure 85
Studies of the possible the south, east, and north facade.

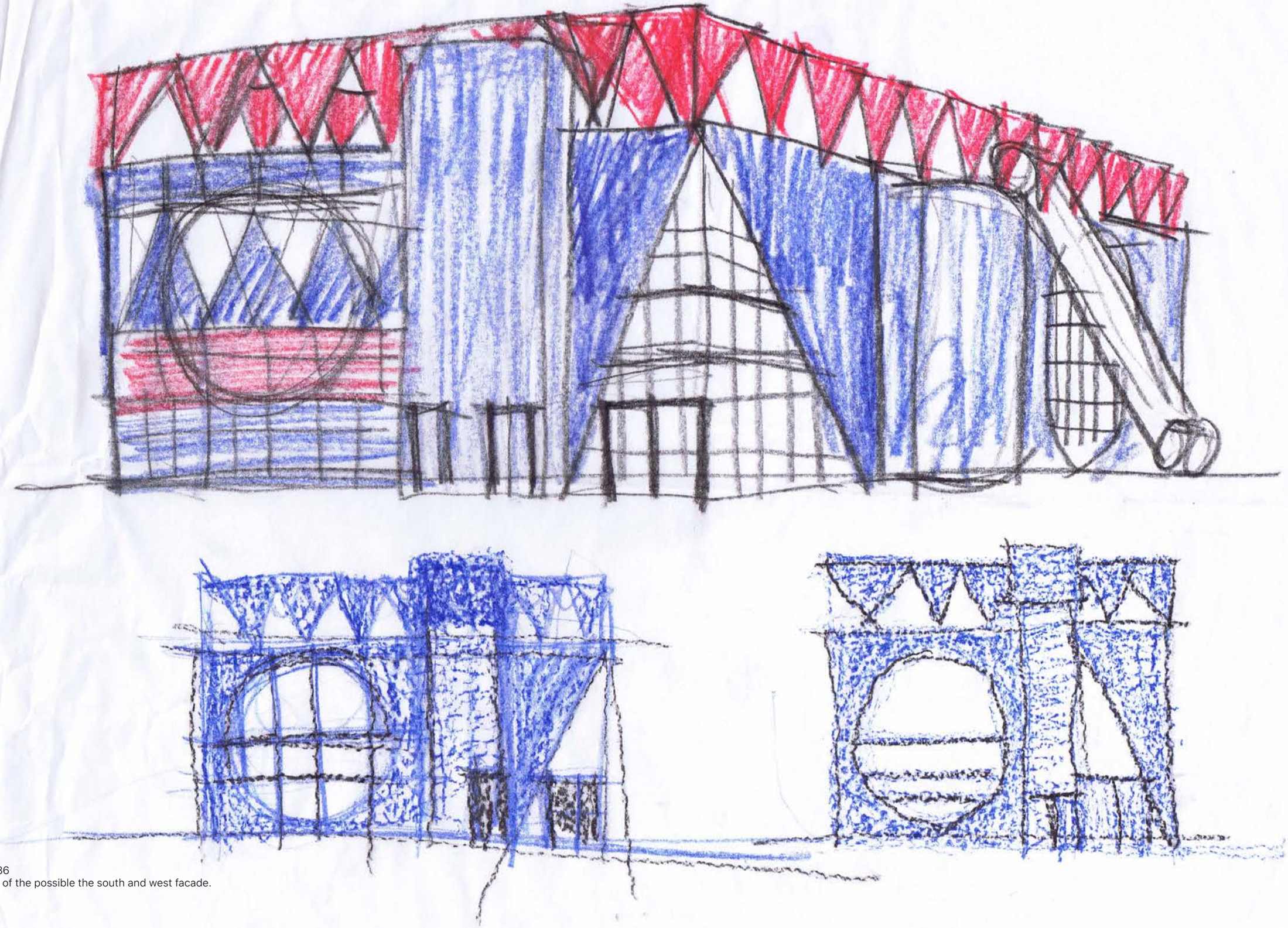


Figure 86
Studies of the possible the south and west facade.

03

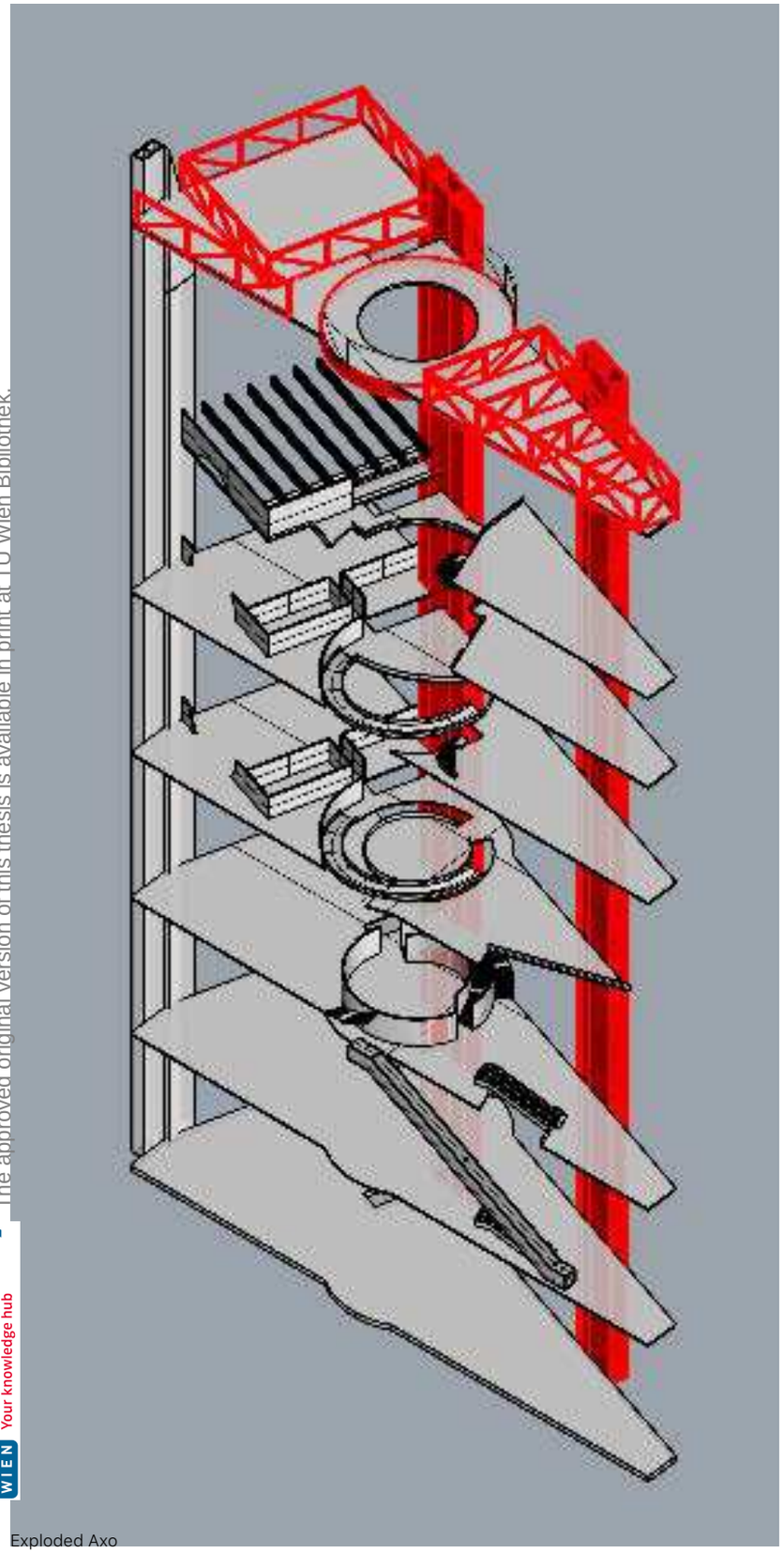
THE BUILDING

Figure-ground Diagram
1:10000

Site Plan
1:2000

148

149



Exploded Axo

diagram of circulation and room program

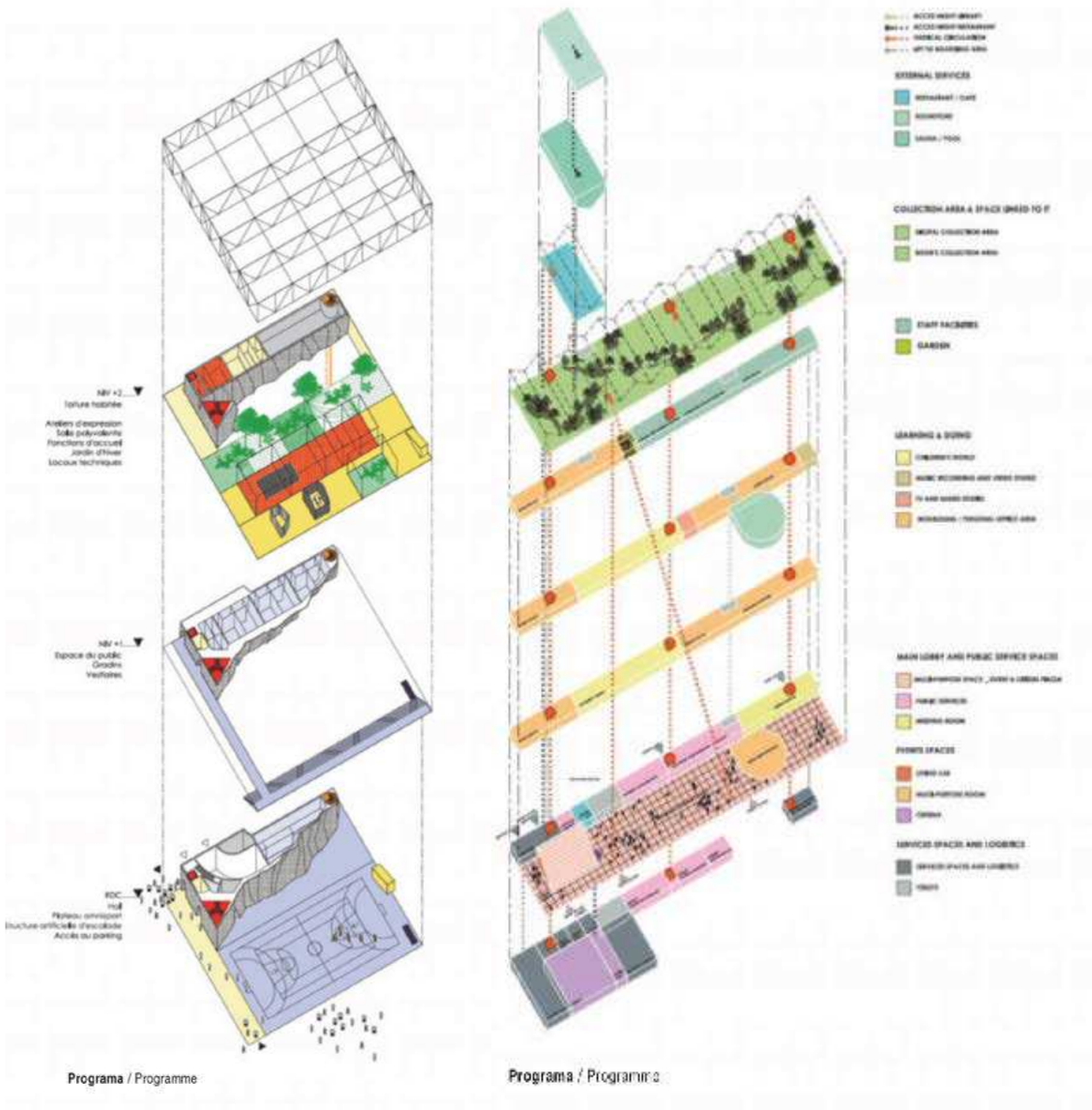
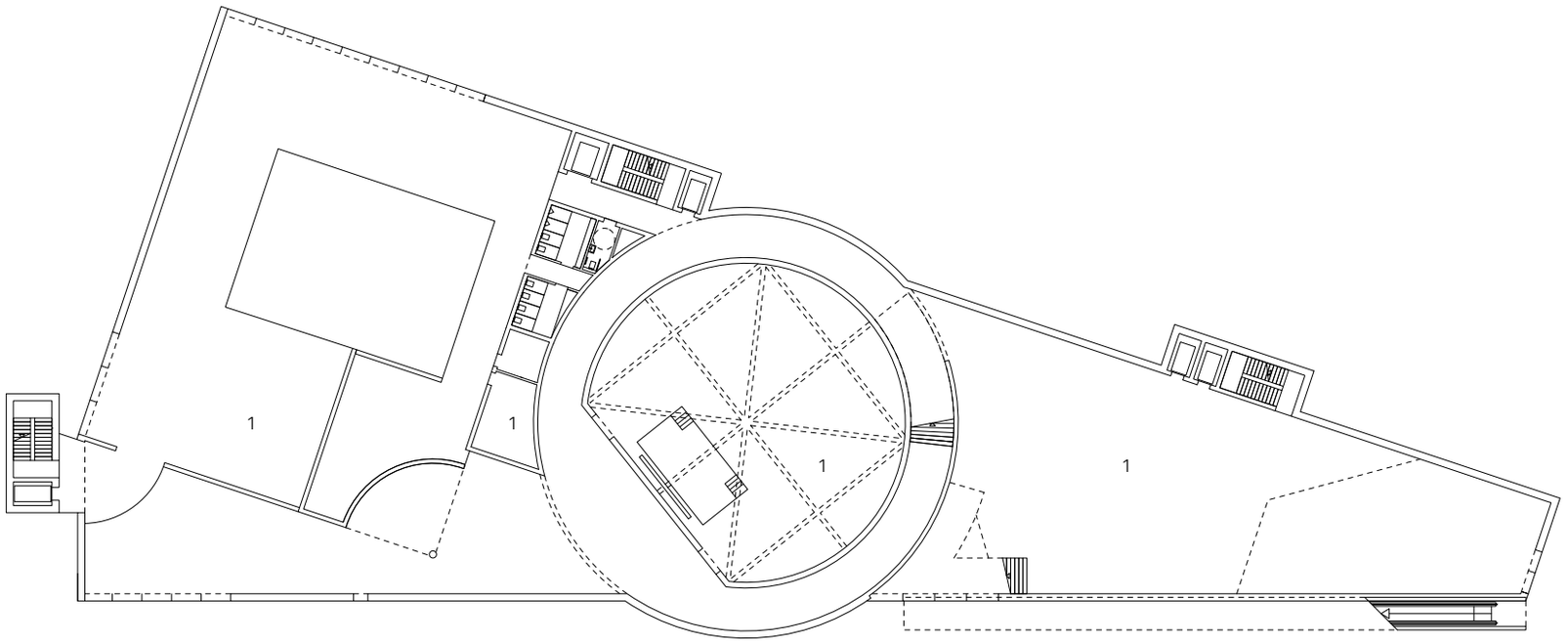


Diagram of program and circulation

1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

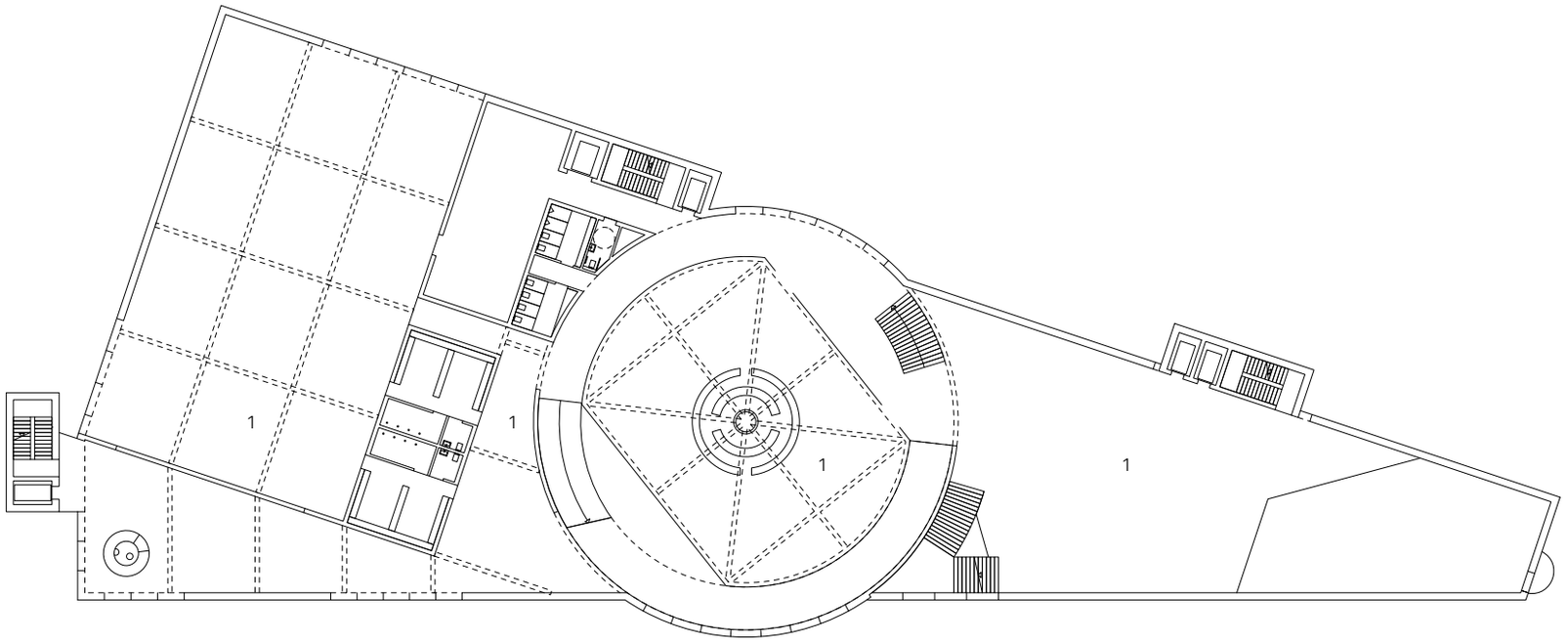
1 5 10 20

Groundfloor
1:500



1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

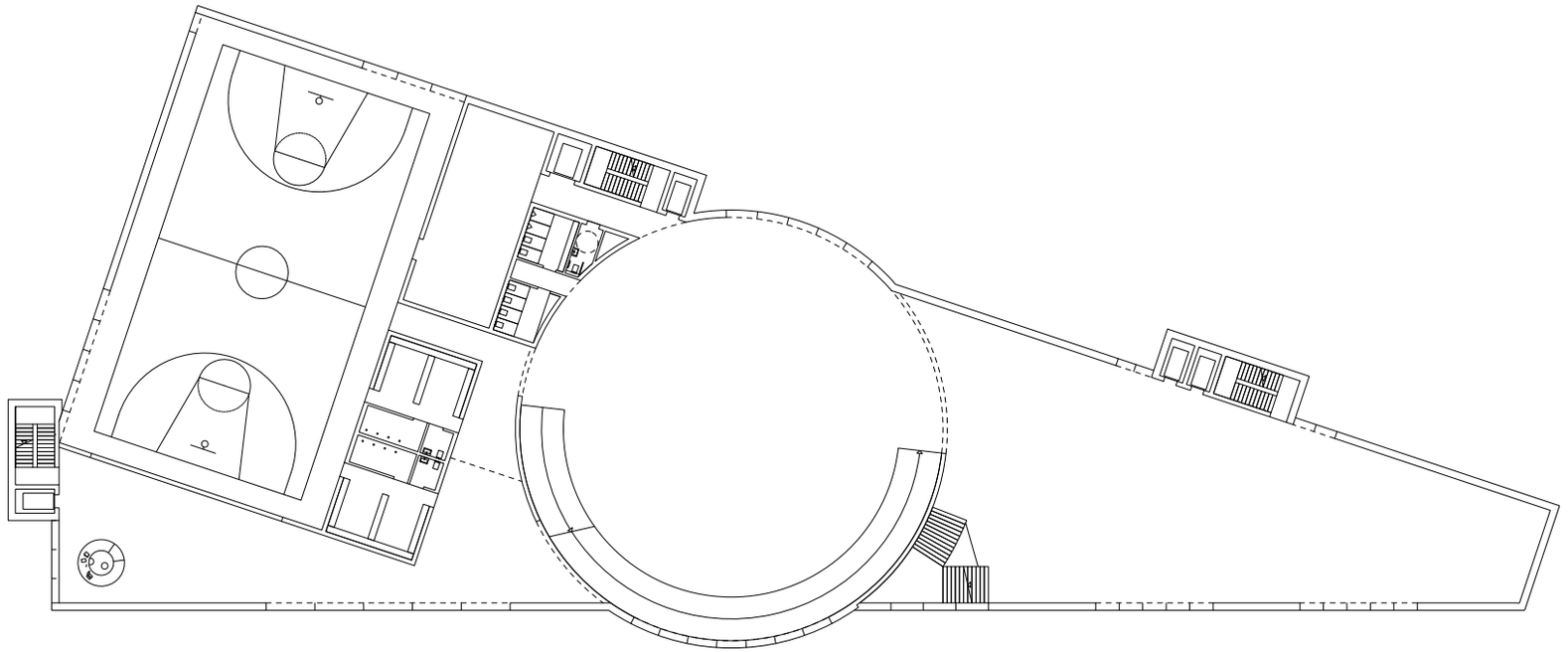
Mezzanine
1:500



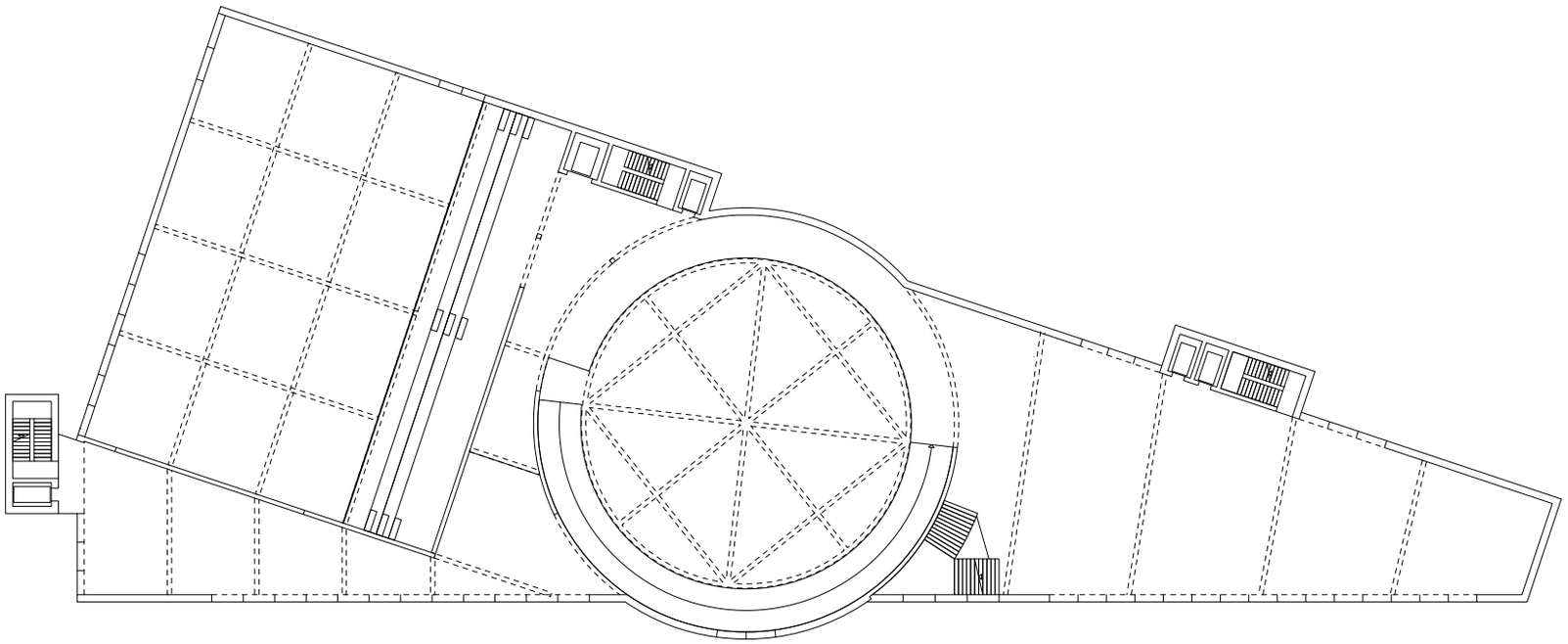
1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

1st Floor
1:500

1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

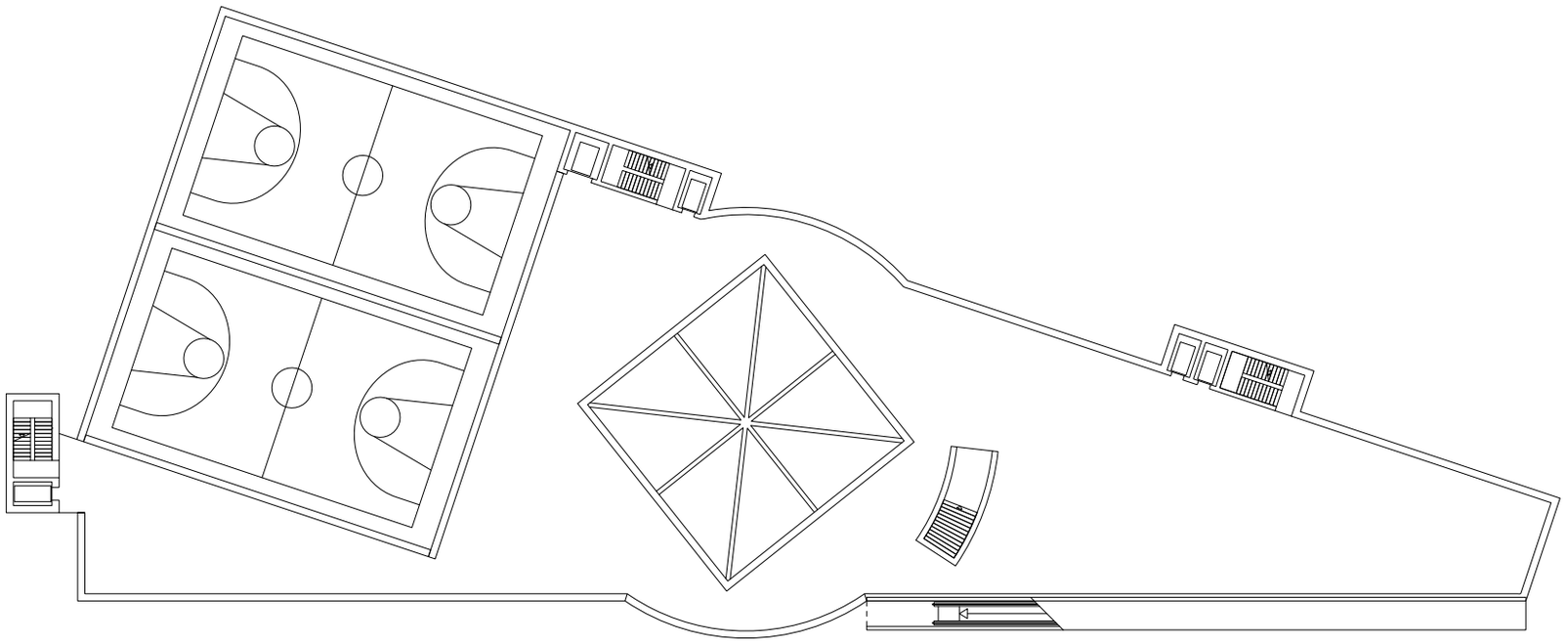


2nd Floor
1:500



1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

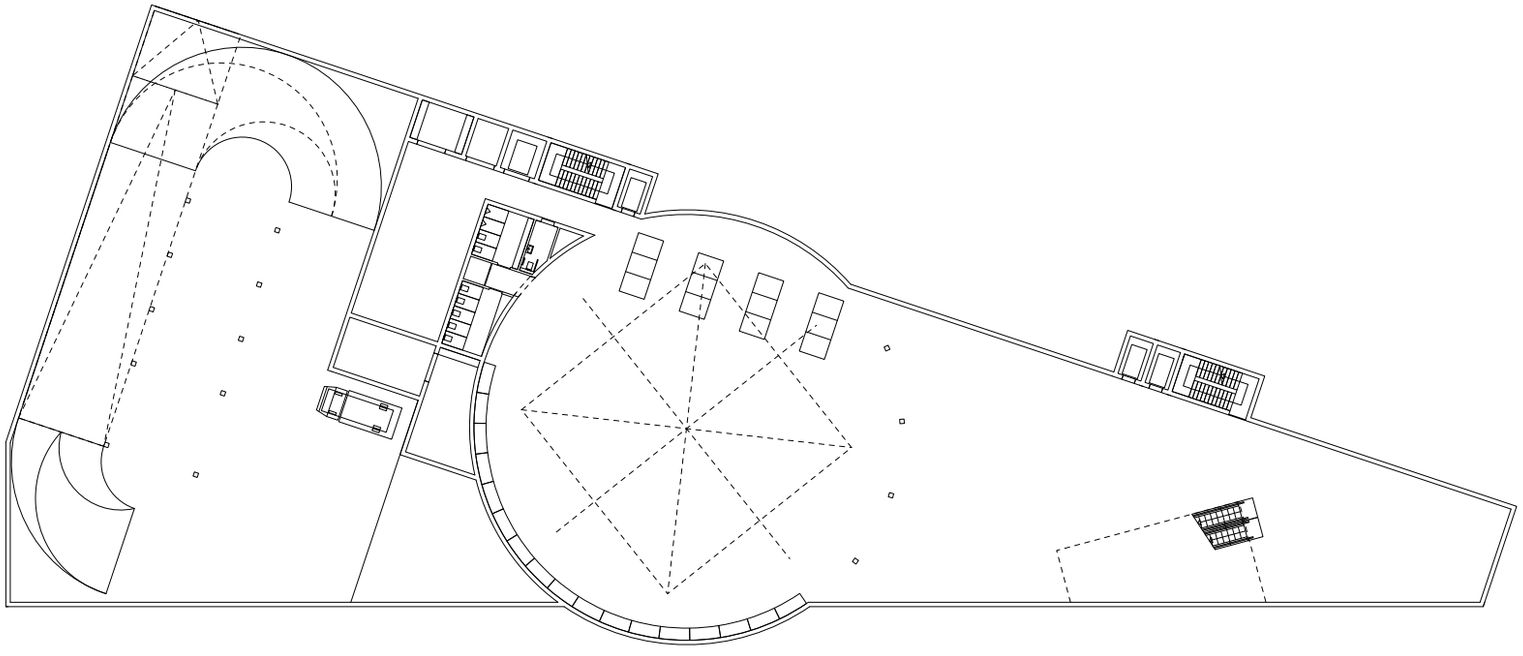
3rd Floor
1:500



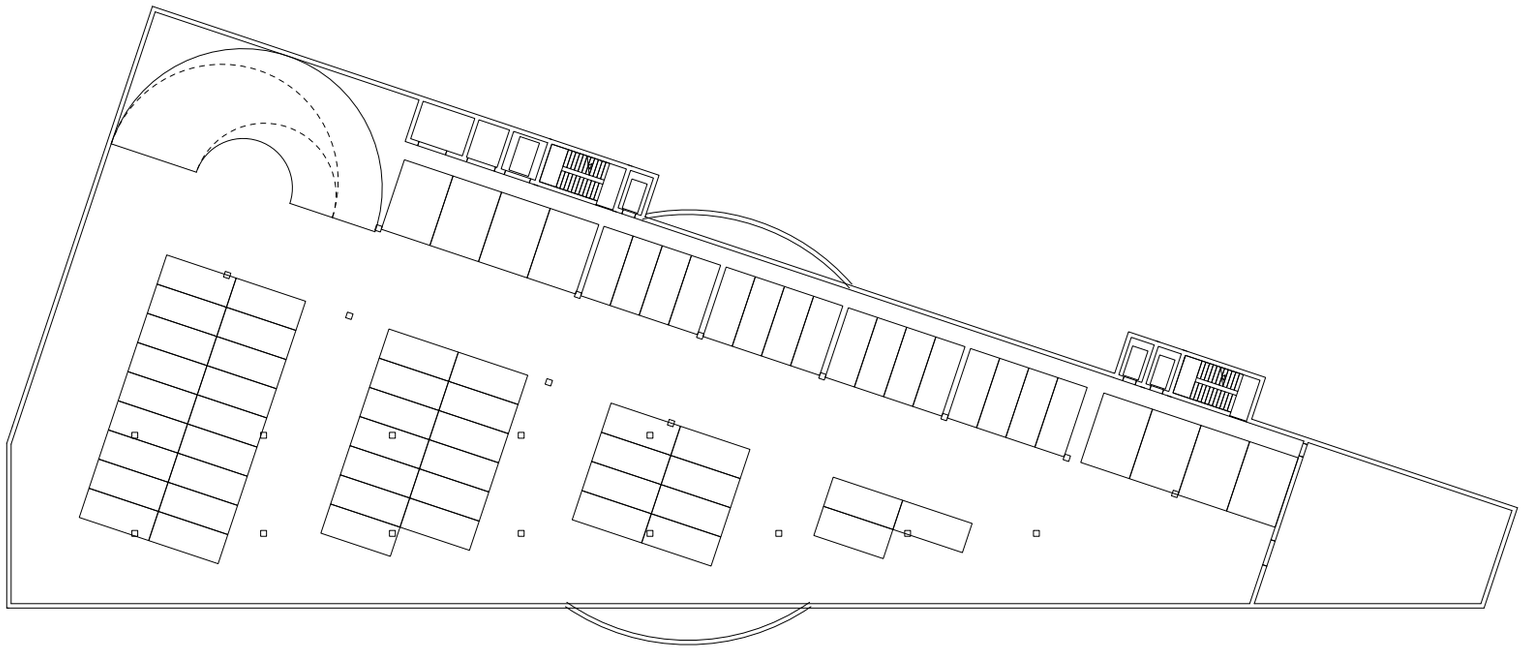
1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

Rooftop
1:500

1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.



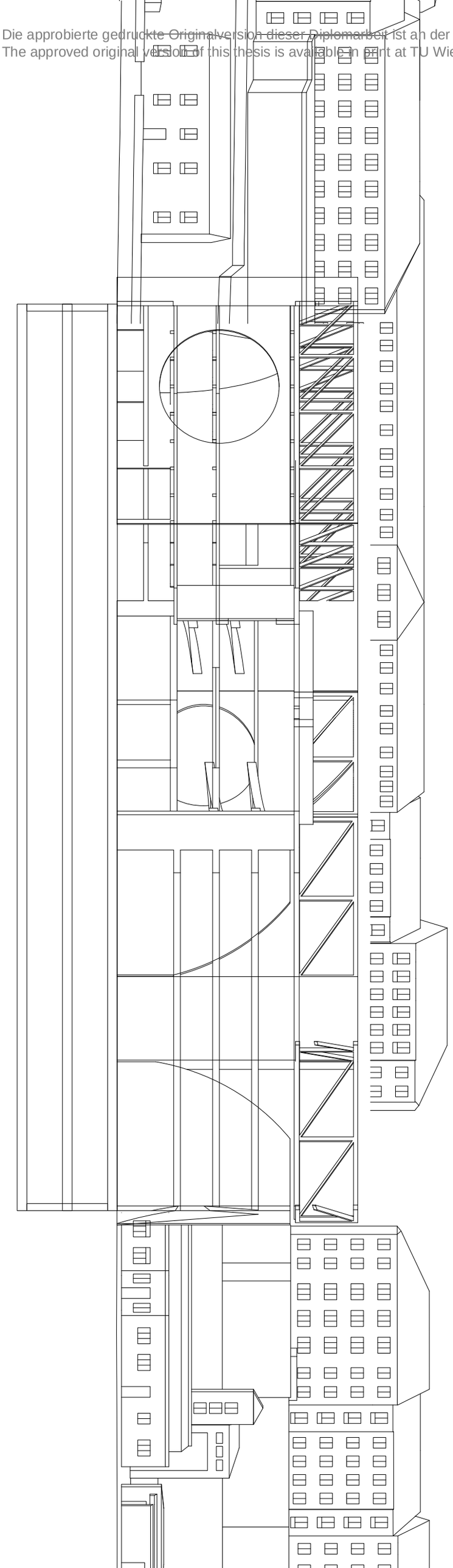
1st Basement
1:500



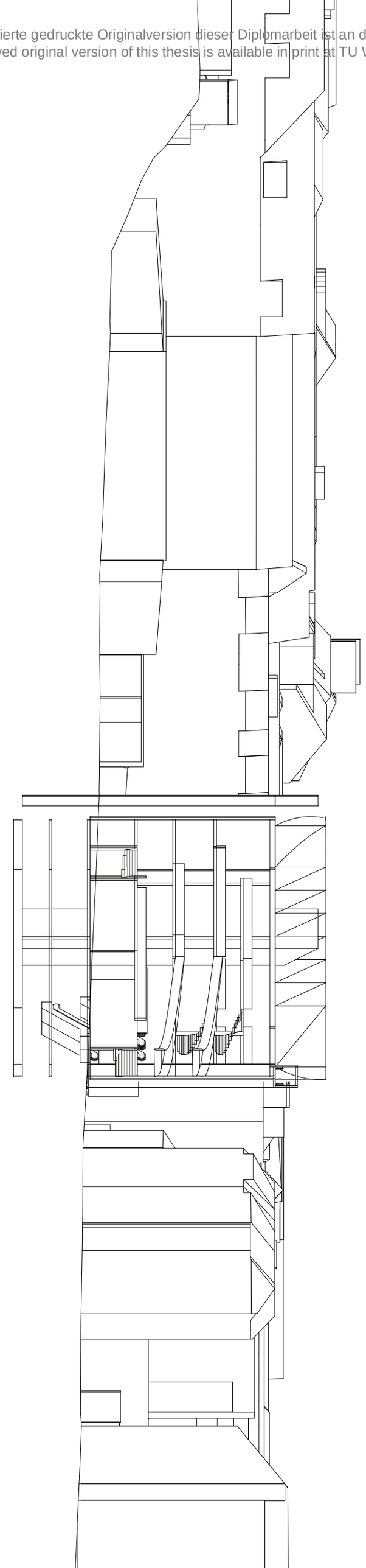
1. Retail
2. Dance Studio
3. Entrance
4. Lobby
5. Event Hall
6. Escalator to Roof
7. Restaurant
8. Office
9.

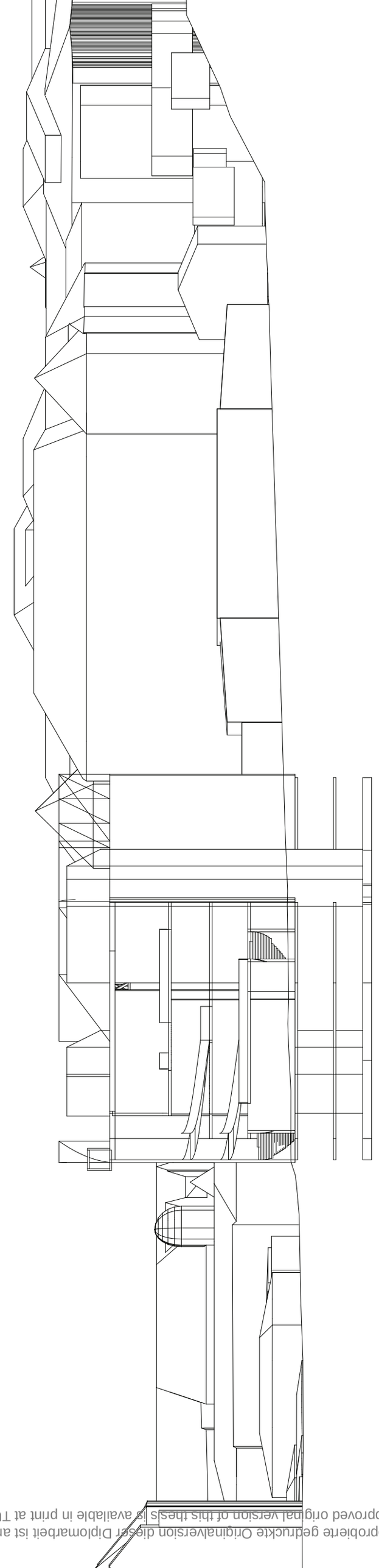
2. Basement Floor Plan
1:500

Section A-A
1:500

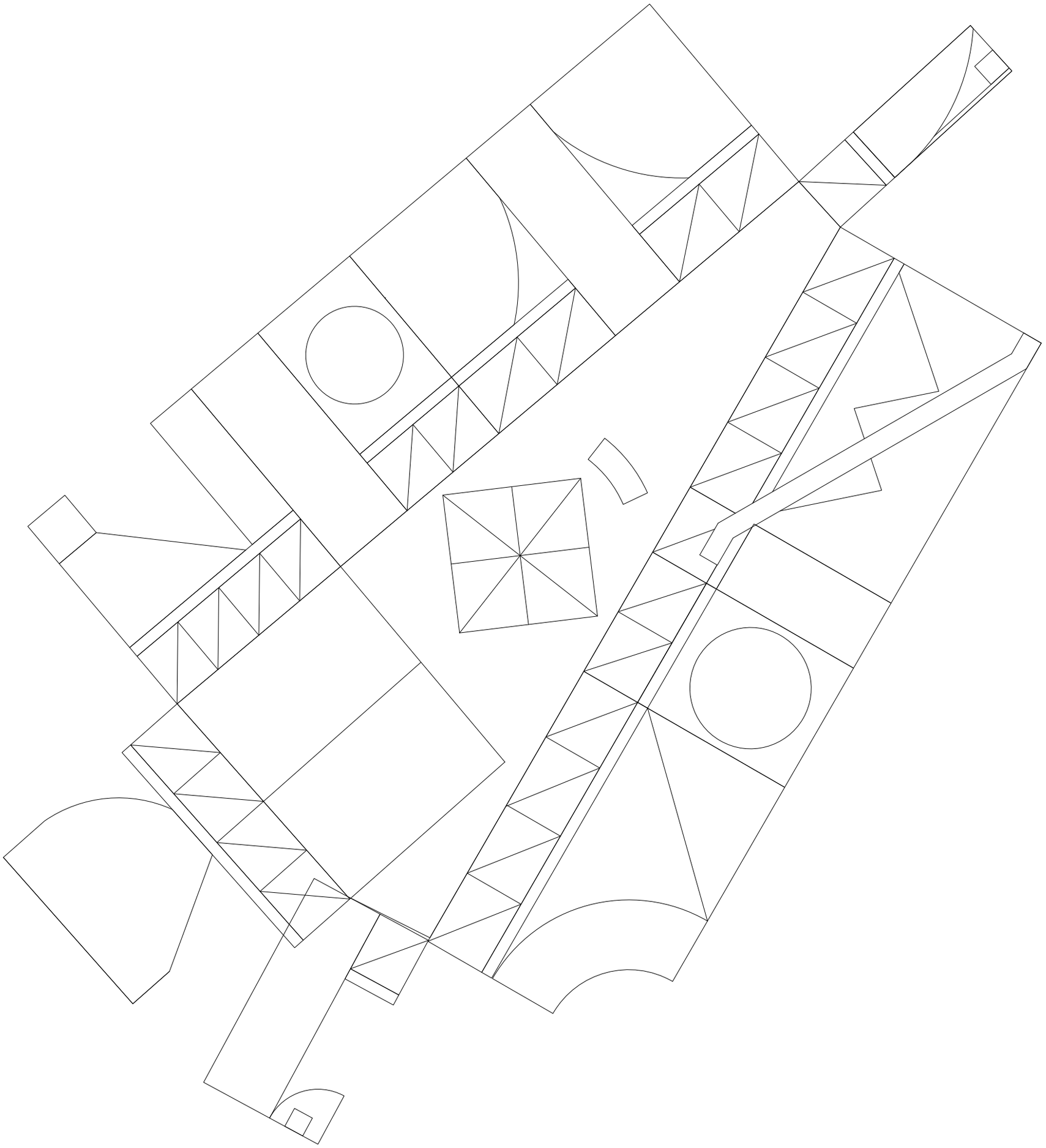


Section B-B
1:500



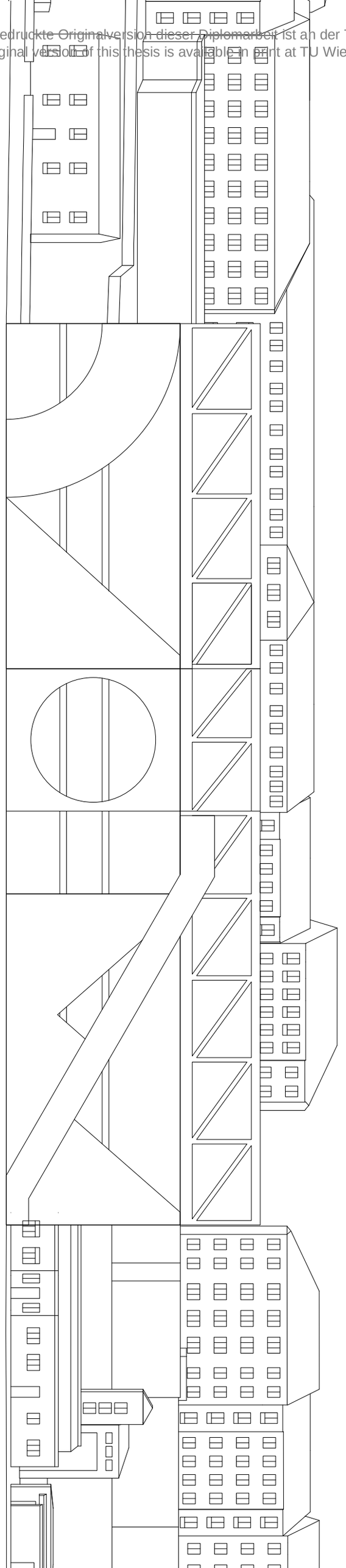


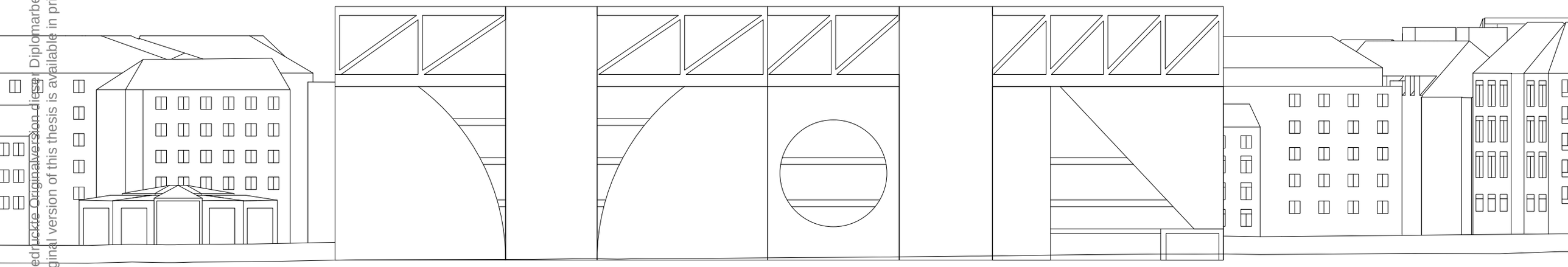
Section C–C
1:500



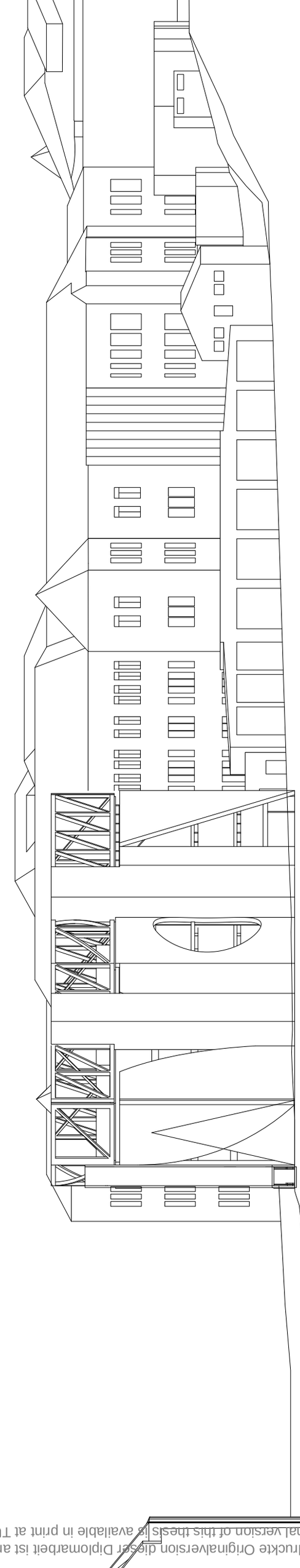
Exploded Facades
1:500

South Elevation
1:500

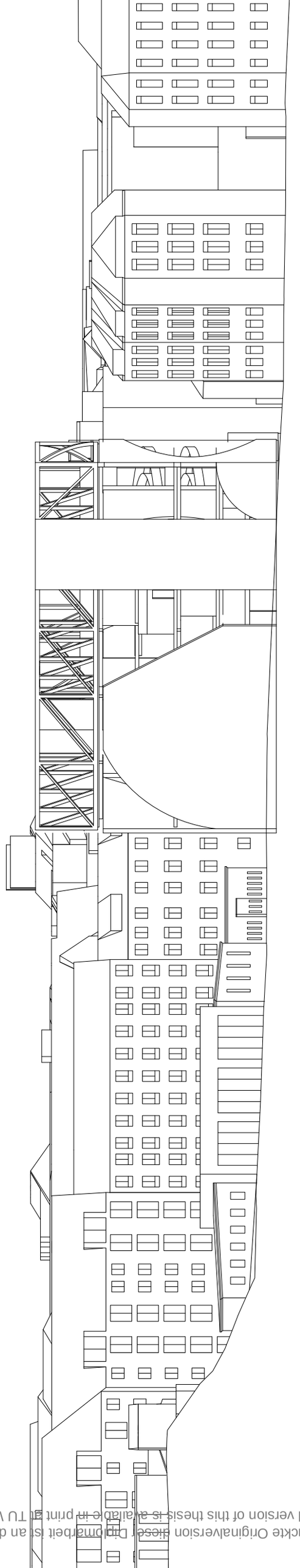




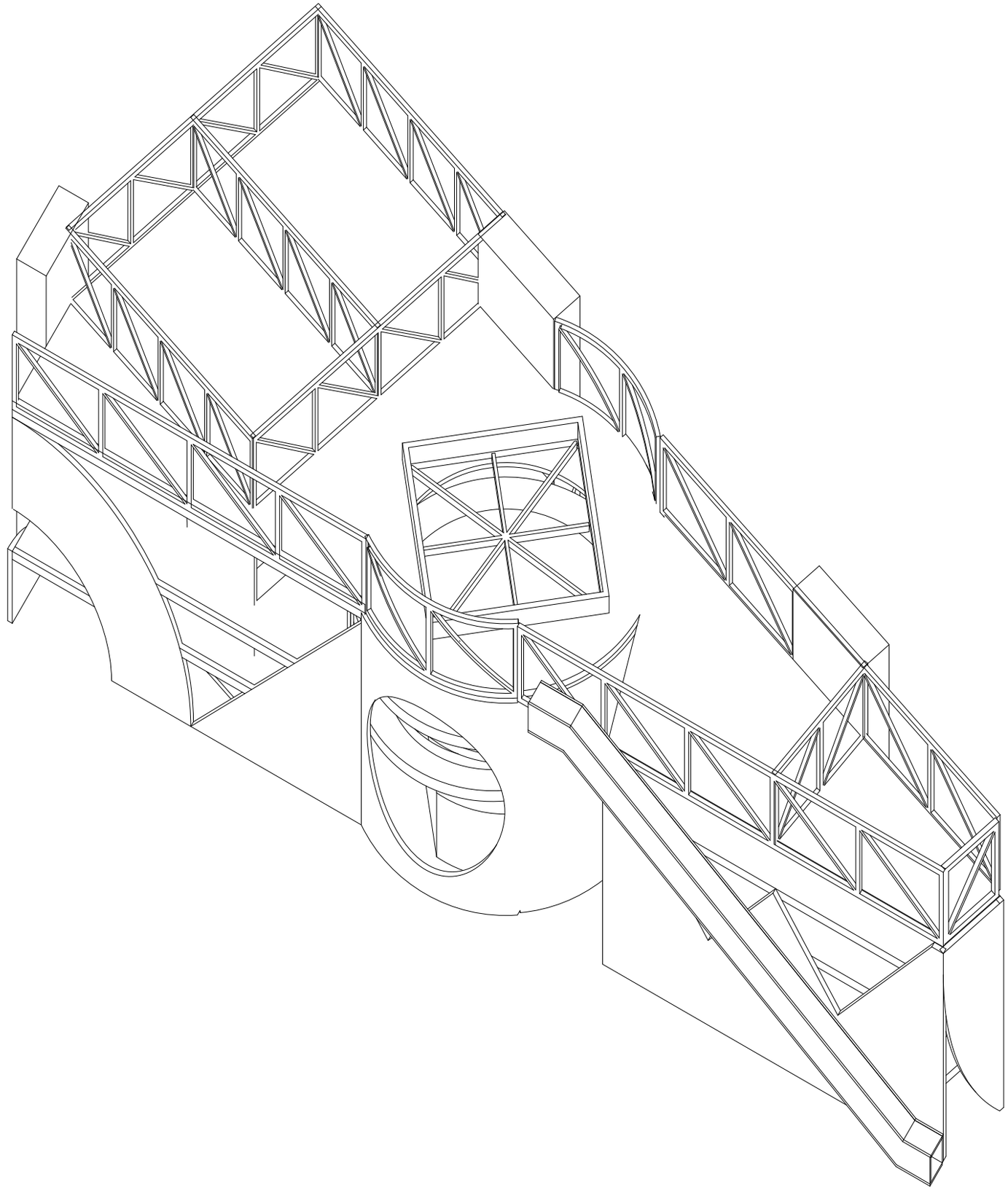
North Elevation
1:500



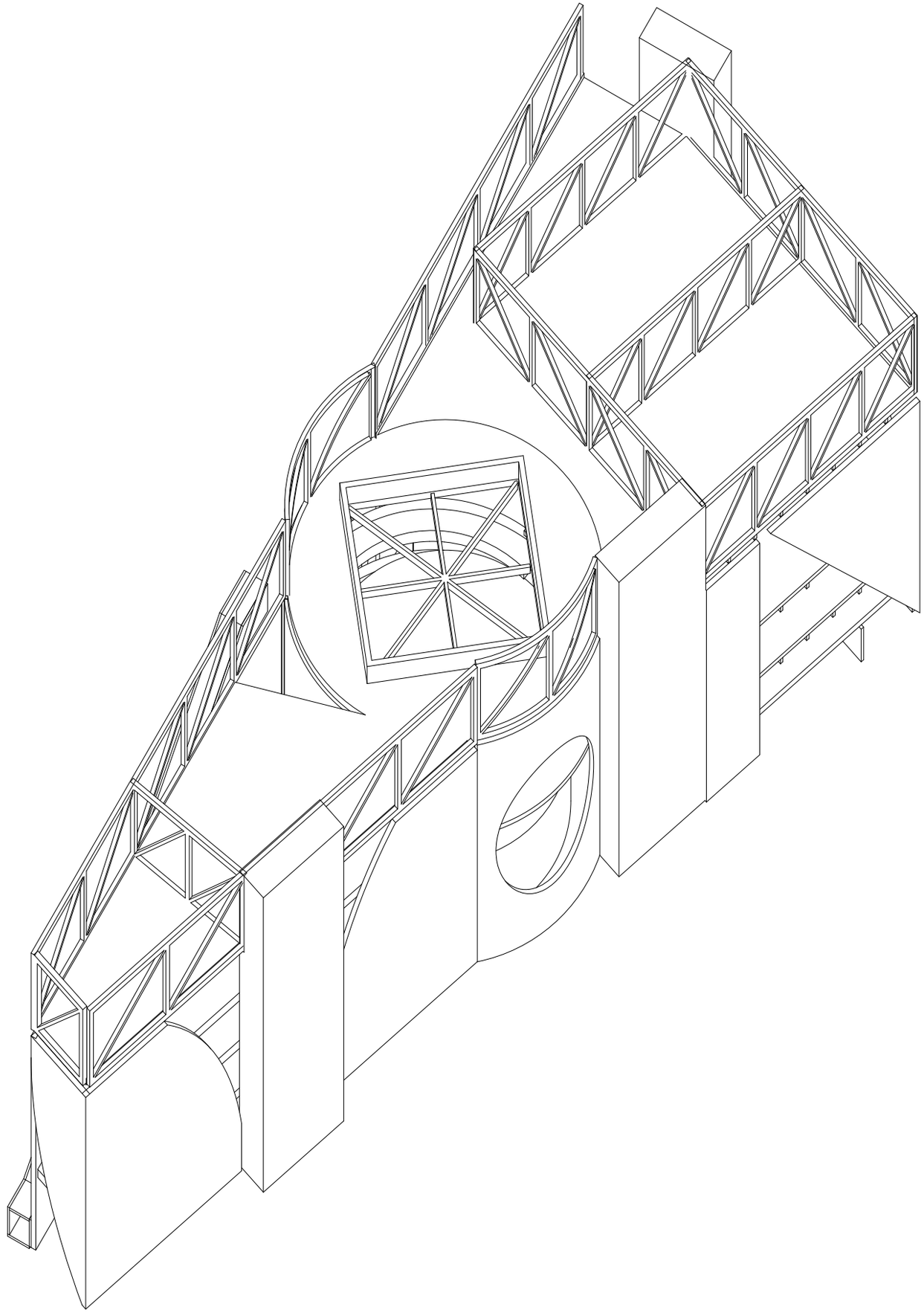
East Elevation
1:500



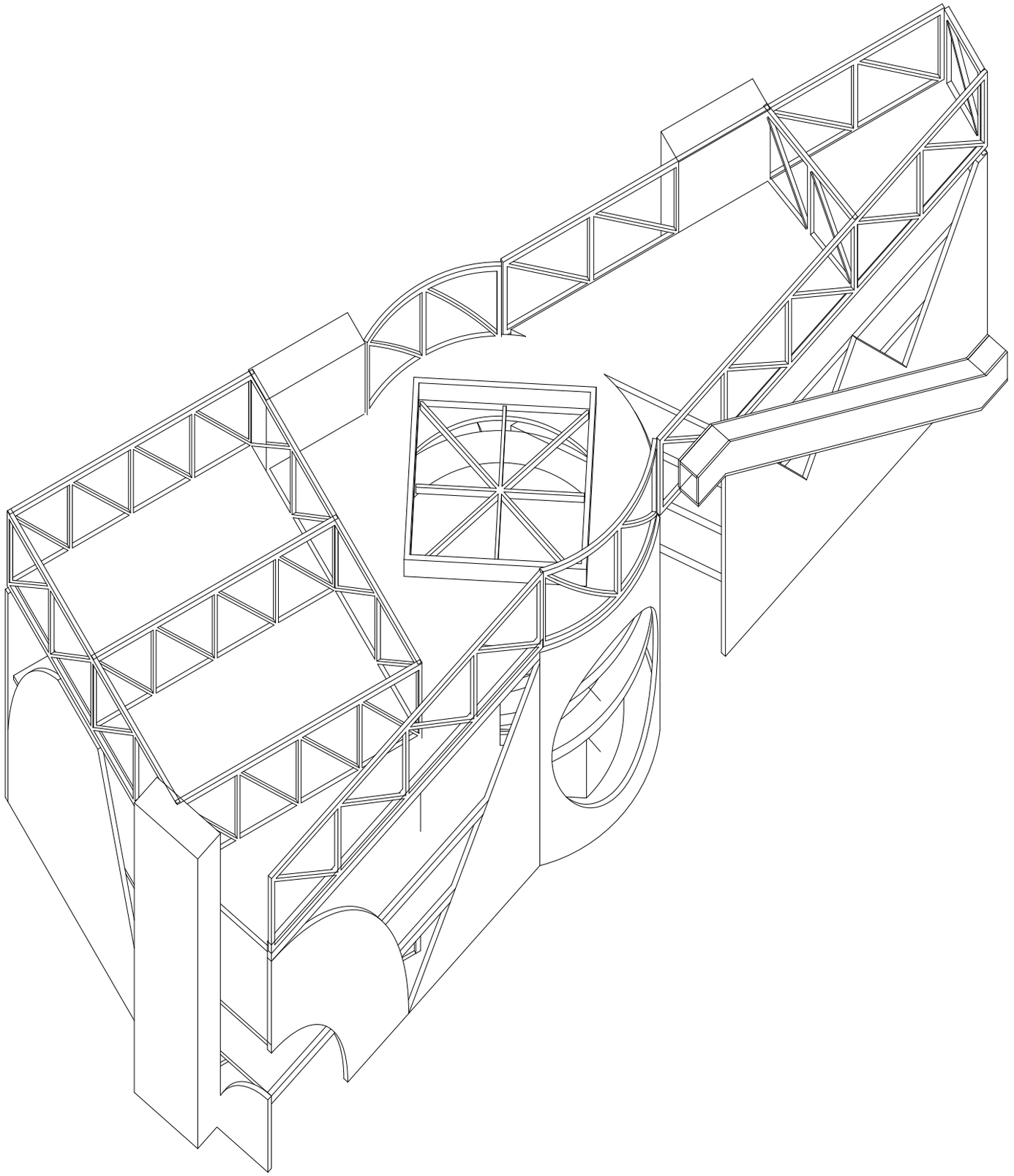
West Elevation
1:500



Axonometry of South and East Facade



Axonometry of North and East Facade



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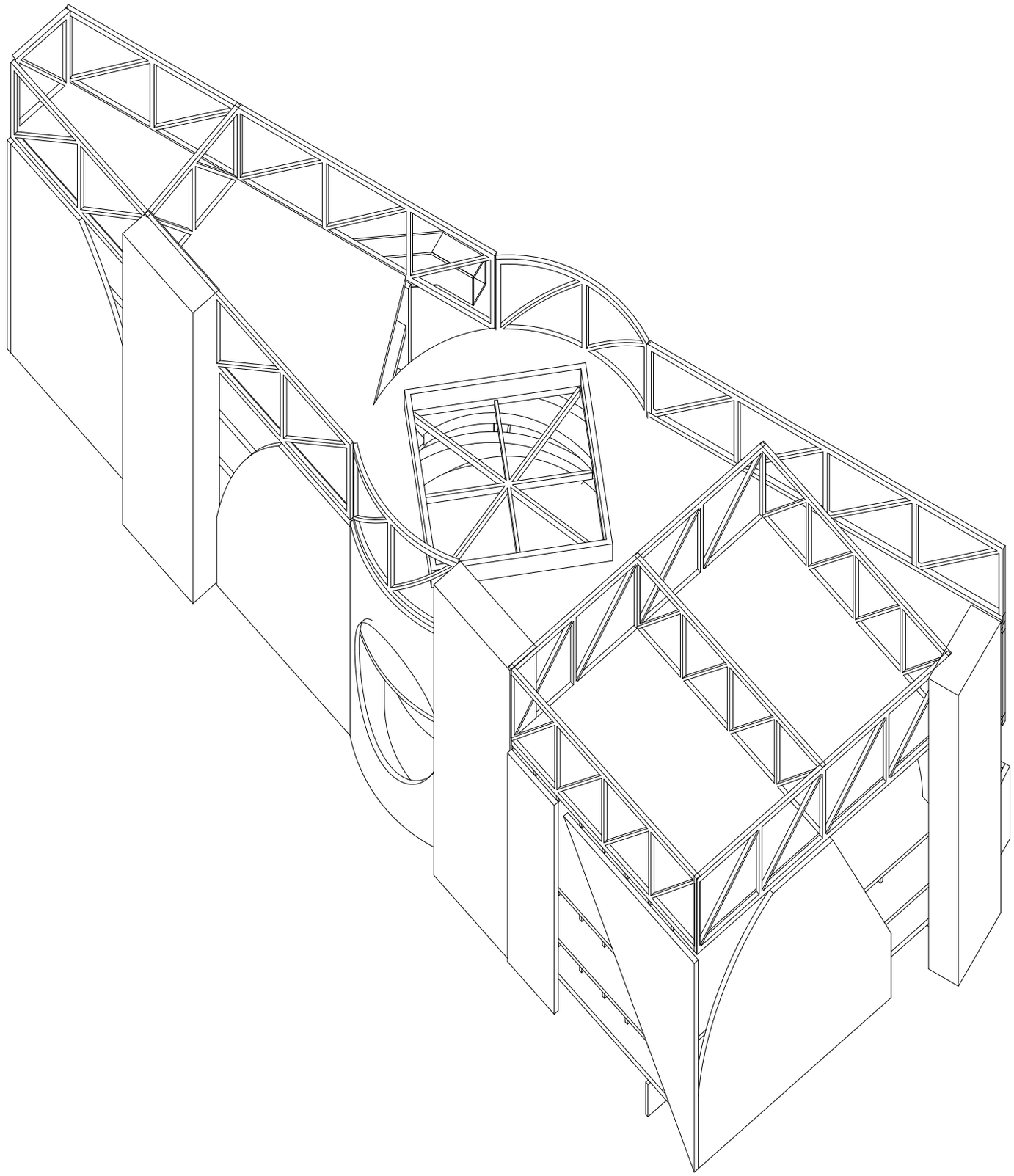
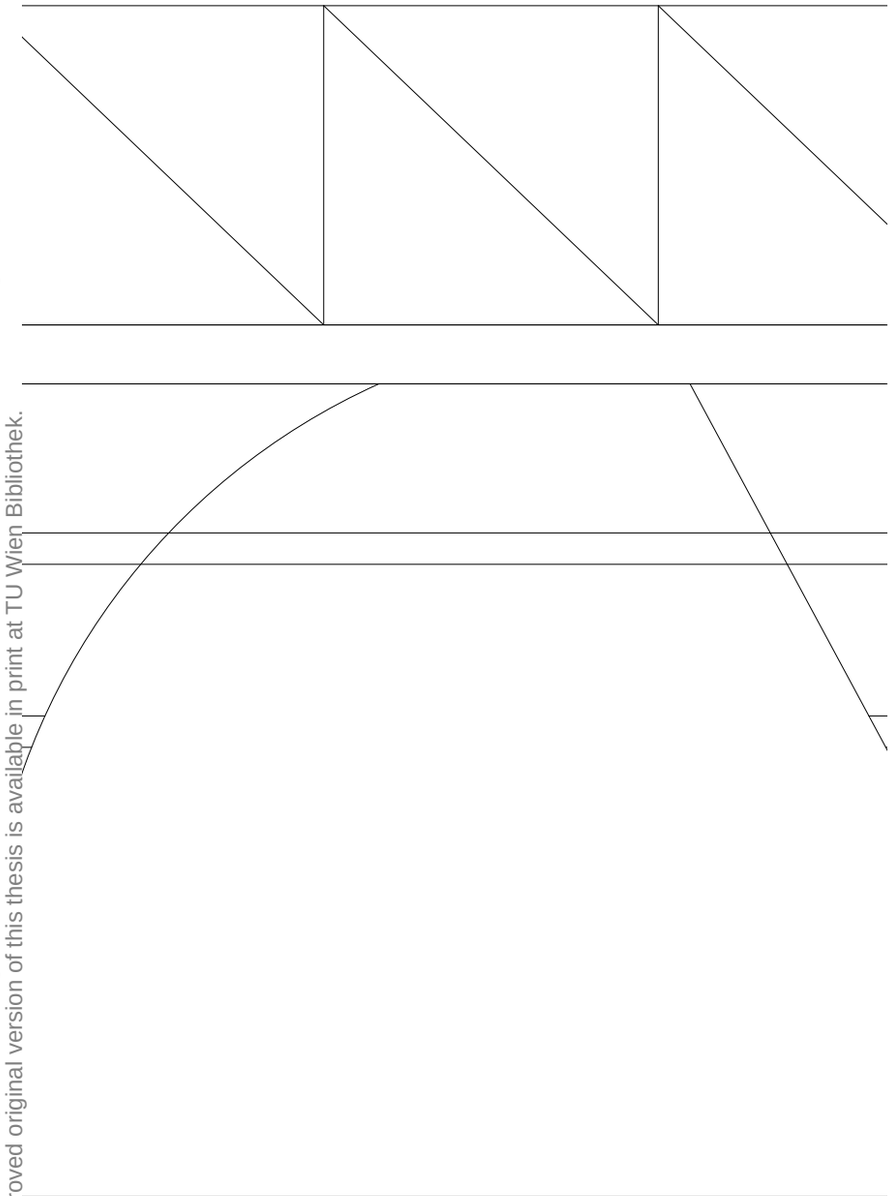


Axonometry of North and West Facade



Facade Elevation
1:175

1 Fahrbahnbeschichtung
WU-Beton- Fundamentplatte 50cm
Trennfolie
Perimeterdämmung 8cm
Sauberkeitsschicht

2 Geschliffener Estrich 8cm
Trennfolie
Trittschalldämmung 3cm
Wärmedämmung 5cm
Ausgleichschüttung 4cm
STB-Decke 30cm
Tektalan 5cm

3 Teppichbelag 1cm
Estrich 7cm
Trennfolie
Trittschalldämmung 5cm
Ausgleichschüttung 7cm
STB-Decke Sichtbeton 30cm

4 Parkett geklebt 2cm
Estrich schwimmend 7cm
Trennfolie
Trittschalldämmung 5cm
Ausgleichschüttung 6cm
STB-Rippendecke Sichtbeton 15cm

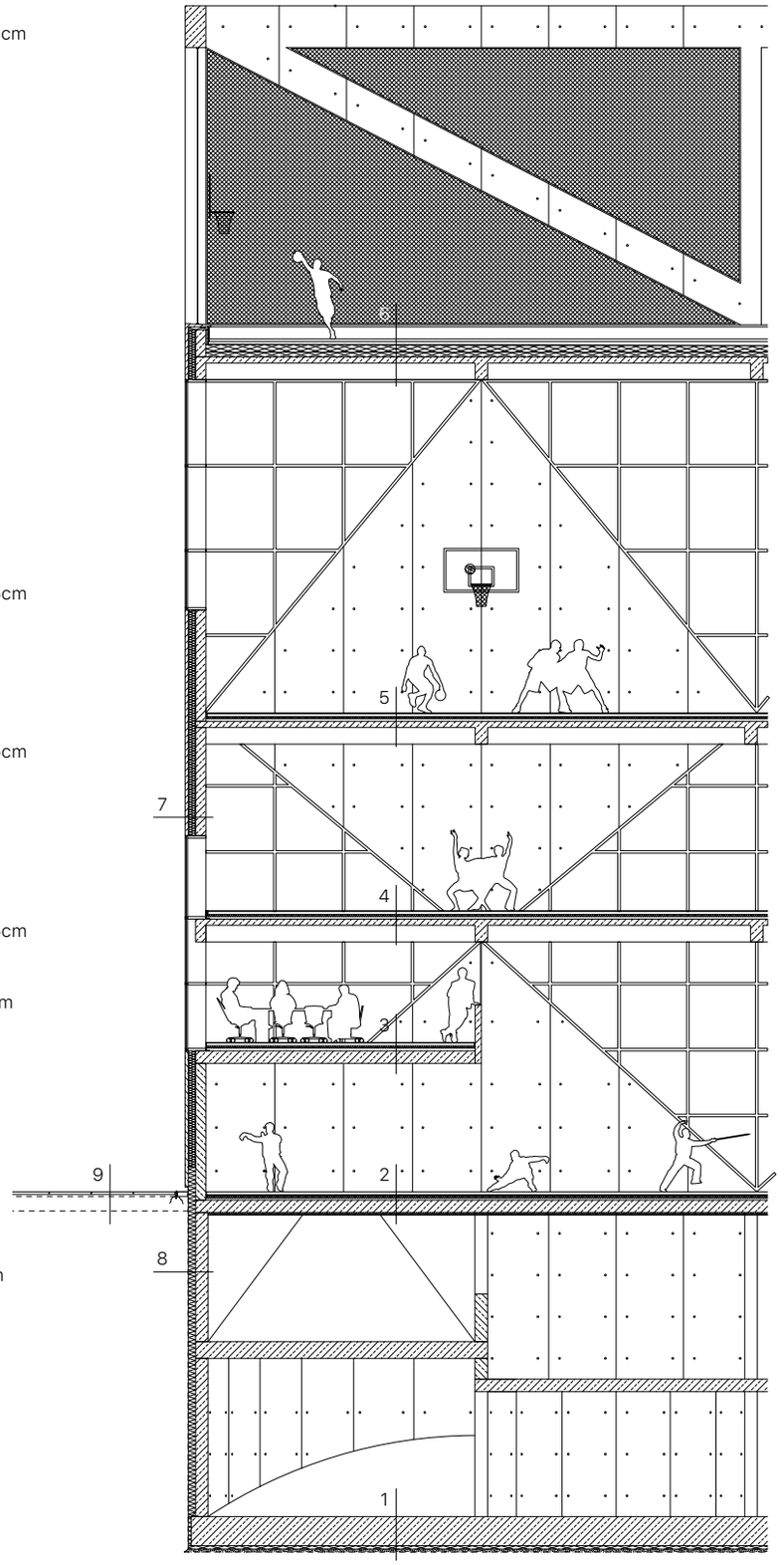
5 Parkett geklebt 2cm
Estrich schwimmend 7cm
Trennfolie
Trittschalldämmung 5cm
Ausgleichschüttung 6cm
STB-Rippendecke Sichtbeton 15cm

6 Beton sandgestrahlt 6cm
Folie
Ausgleichsschüttung 5cm
Abdichtung 2cm
Gefälledämmung 18cm
Dämmung 10cm
STB-Rippendecke Sichtbeton 15cm

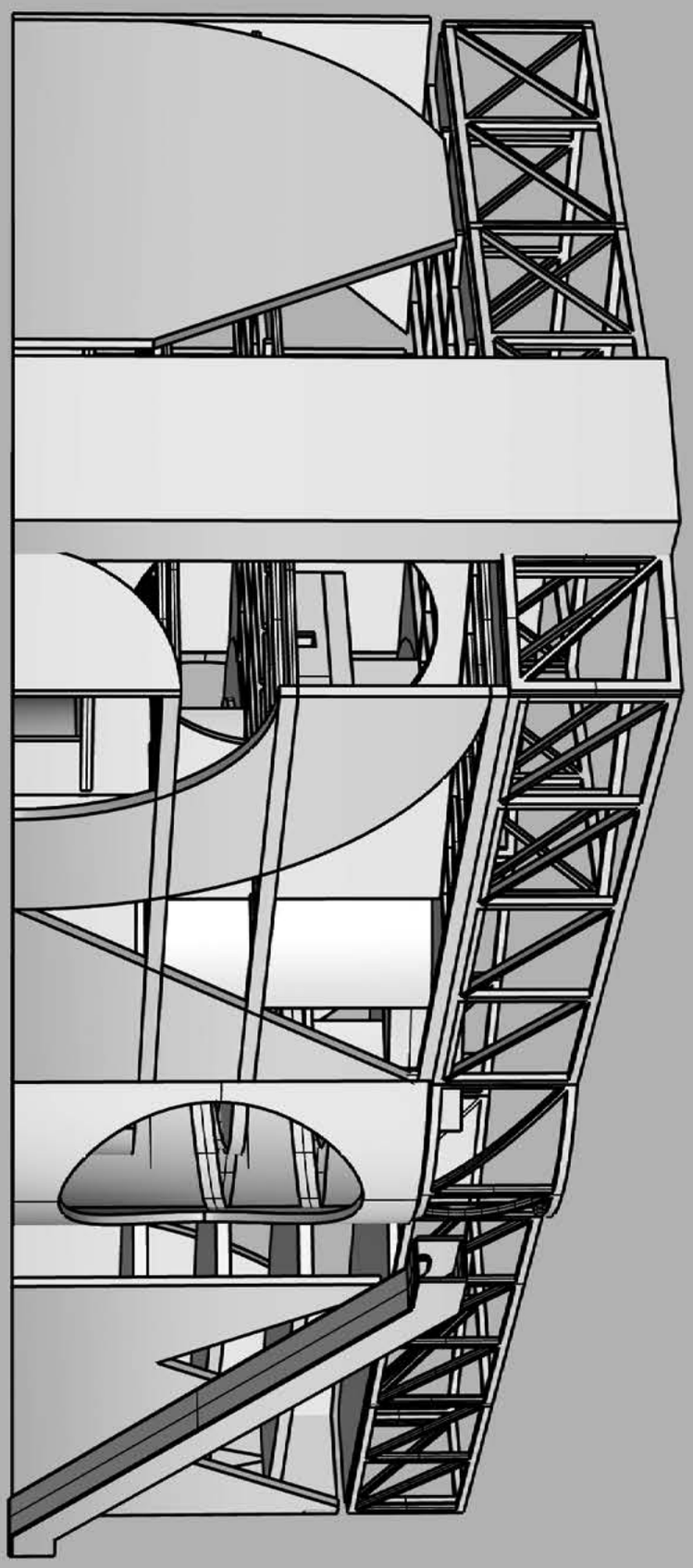
7 Fertigteil Sichtbeton 8cm
Dämmung 17cm
Stahlbetonwand Sichtbeton 25cm

8 Noppenmatte 1cm
Perimeterdämmung 10cm
WU-Betonwand 30cm

9 Betonplatten sandgestrahlt 6cm
Splittbettung 5cm
Flies
Schottertragschicht 35cm
Flies
Erdreich



Facade Section
1:175



FINAL THOUGHTS

During the course of my studies, I have collected (and still do now) references from all sorts of places. They have been one of my most important tool, when it comes to a project. They have help me see much more, without being physically there at the building. Through the internet, the world of references felt at a single click away. To this day, even after this project, it acted as a backbone for the developement of my project. But it also acted as a great source of obstruction. In the sense, where I am completely overloaded and found it difficult to find that one single clear image of the project.

It was my first time attempting to design a large building like this, while attempting to understand Shinohara. I wanted, for once, to really go in-depth with one single architect, rather than use his projects as a reference on a surface level. In a sense, I was fueled by his intense resilience and spirit to push forward in the field of architecture through the method of research and experimentation.

While I was trying to find a directive on my own, there were many questions in my mind:

What are the possible program for a public building?
What programs to juxtapose with?
How they are juxtaposed?
What are the shapes for each program?
What are the messages that each program give when they are juxtaposed?
What happens when they are juxtaposed?
How is this relevant?
How will Shinohara approach this project?
How will Shinohara approach a project in Vienna?

I ended up fragmenting the entire building in order to progress myself further. As I saw Shinohara approached some of his project this way, I felt I was going in the right direction. But by researching on Shinohara's personal process and development, he showed me that finding the one single clear image was never an easy task. It took him his entire career to develop and combine a multiple of themes into one single Style. Even as an extremely self-conscious, he based a lot of his design decisions on basic gut feeling. It is what he does after the project that is the most important. It's the act of great self-reflection that allows him to be so self-aware of what he is doing.

By going through his sketches and multiple iterations of each projects, I noticed he went through great lengths in many different directions to get to a final design, even if the final design is vastly different to his sketches. But it is through his sketches, where all his thoughts and contemplations can be found. Even though they are sketches of floor plans or elevations, I see them as information with a multitude of layers that combines floor plans, diagrams, sections, etc. together in one drawing. He has mentioned how slow he was, and that he requries quite a long time to develop a project, which is quite apparent with the way he works. I believe the one advice he gave to Massip-Bosch sums up the kind of architect Shinohara is.

"You have to imagine a project with your heart, but then build it with your brains. Architecture cannot be based on emotion; it is impossible, the work would get completely out of hand and the result could be banal and unstructured."

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TABLE OF FIGURES

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