MONTAGE AS A COLLISION OF FORMS
AN EXPERIMENTAL SCHOOL IN ANKARA

Fulya Yener

Thesis Project
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Supervisor: Prof. Elvio Manganaro

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To my one and only family who always supported me and stood by me through this journey...

ABSTRACT

This thesis is an investigation of the changing concept of space through a consideration of montage as a crushed form between past and present. How architecture has evolved from the past to the present and how to keep building itself in the future with this changing past is one of the main focuses of this concept for waiting to get its answer. It was not clear before, it is not stable now.

Montage is a compositive device that reveals the space's dynamism in different professions such as art, cinema, or architecture. It is a necessary tool for the production of meaning and imagination. Therefore, it directly emerges as a layer that provokes people to perceive the space. How this aspect of montage has evolved throughout time and its impact on historiography stands out as a significant point for the first part of the thesis.

The main research questions after a critical approach towards montage are ‘‘how montage will generate architectural forms in today’s world?’’ and ‘‘how is it possible to reach a three-dimension that people can experience the montage by using both vehicles of past and present?’’. While seeking answers to these questions, designing the in-between process from the research and critical stage to an experimental architectural project is the main core of this thesis. This translation process is defined using a three-dimensional compositive generator that includes different layers from different scales. All the rules are defined inside the generator and the ‘‘grid’’ is used as a main regulating element. By this, a new linkage will be created between the ‘‘theory of montage’’ and ‘‘formal architecture’’ both on an architectural and urban scale. After the in-between process, the output is an experimental composition by making education the main function. This composition is one of the results from the generator and is ready to be applied to the selection site, experiencing its characteristics of it.

Questa tesi vuole indagare il concetto mutevole di spazio attraverso una considerazione del montaggio come forma frantumata tra passato e presente. Come l'architettura si sia evoluta dal passato al presente e come continua a costruirsi nel futuro attraverso questo passato mutevole è una delle principali domande che si pone questa ricerca, e che attende una risposta. Non era chiaro prima, non è stabile ora.

Il montaggio è un dispositivo compositivo che rivela il dinamismo dello spazio in diversi campi, come l'arte, il cinema o l'architettura. È uno strumento necessario per la produzione di significato e immaginazione. Pertanto, emerge direttamente come uno strato che induce le persone a percepire lo spazio. Il modo in cui questo aspetto del montaggio si è evoluto nel tempo ed il suo impatto sulla storiografia, emerge come punto significativo nella prima parte della tesi.

Le principali domande che si pone la ricerca, dopo un approccio critico al montaggio, sono "in che modo il montaggio genera forme architettoniche nel mondo di oggi?" e "come è possibile raggiungere una tridimensionalità in cui le persone possano far esperienza del montaggio utilizzando entrambi i mezzi del passato e presente?". Nel cercare risposta a queste domande, si è delineato il nucleo principale di questa tesi, ovvero la progettazione di un processo intermedio che muove dalla fase di critica e ricerca verso un progetto architettonico sperimentale. Questo processo di traduzione è stato caratterizzato dall'uso di un generatore compositivo tridimensionale che include diversi strati a scale diverse. Tutte le regole sono definite all'interno del generatore stesso e la "griglia" è utilizzata come elemento di regolazione principale. In questo modo, si genera un nuovo collegamento tra la "teoria del montaggio" e l'"architettura formale", sia a scala architettonica che urbana. Alla fine del processo intermedio, il risultato è una composizione sperimentale la cui funzione principale è quella educativa. Questa composizione, che è uno dei possibili risultati del generatore, è pronta per essere applicata al sito scelto, sperimentandone le caratteristiche.

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INTRODUCTION

This thesis aims to study the theory of montage as the main source for creating a generator that would form an experimental architectural project. Using a methodological frame with different elements such as time, space, memory, architecture; ‘‘how montage can be used as a device for generating new architectural forms and prototypes’’, and ‘‘what are the main components which need to be defined’’ will be the main research questions in this thesis for waiting to get their answers.

The strength of the complexity of constructed relations during the production process of knowledge has always had a significant role in the history of architecture. The emergence and re-meaning of the ties that formed this complexity occurred at the intersections throughout history. Presenting this complex in simple ways can happen by using montage as a compositive device in between both times and different intersection points. It creates a new entity for representing the overlapping of time, concepts. It constructs a new meaning and imagination in the human mind with its simple formulation but also the wide capability to reach complex situations because of its diverse ingredients. Therefore, it is one of the crucial milestones in the history of art and architecture from the beginning.

Understanding the general frame of montage should be started by analyzing the relationship between the human being and space. The effects of the past on people’s daily perspectives play a significant role in the way people perceive. After that, one of the main points is ‘‘How materials, images from different periods come together and create relations through multilayering of memory’’. It will be explained that it can be directly just by collecting all in a common ground or finding traces of a more recent period in an old painting. Furthermore, the characteristics and potentials of montage emerge differently within the scope of historical flow. Its frame is not a stable one, it floats or gets wider and narrower according to what it has inside of it in specific conditions. This framework of montage evolves to environments belonging to both past and present throughout the timeline.

Montage is defined as a compositive device so its elements of it help to clearly understand its role in terms of acting as a mixer and combiner. Elements cover the main features that affect the process rather than concrete things. To understand the formation process of montage and its relationship with architecture, it is first necessary to grasp the general framework of

cinema montage. The two main approaches that will form this framework will be Eisenstein and Godard.

After these, selected examples from different periods and scales are explained how montage can help to generate architecture, especially in modern and post-modern periods. In addition, understanding the formation of relations between architecture and city by the montage tool is also considered. Comparisons play an important role in showing how the same technique can be perceived and applied in different ways.

Integrating and using montage for the future possibilities related to formal architecture is the next step in considering the time and its effects. Newly defined techniques will be included in the process and they can give more possibilities to a combination of present and future in terms of imagination.

The first step of the in-between process from ‘‘theory of montage’’ to ‘‘architectural space’’ is defining a compositive generator. It is a three-dimensional matrix that creates infinite processes from inputs of memory, time, architecture, art, or city. Understanding the collective memory in an aspect of formal way is the base for imagination. The formal components of this collective memory can be from any given topic. For instance, this can be from an urban feature of the chosen city, an informal painting that contains several formal layers, or a floor plan of one of the significant buildings of Modernism. This flexibility allows different and spontaneous images or components to come together as inputs. In other words, we can call this an ‘‘initial imaginary universe’’. As a second step, what unites all of them in a common point is the compositive matrix by using the ‘‘grid’’ and the rules which are defined in it. According to Krauss, the ordering lines of the grid can be seen as contrasting tendencies: delineating a finite fragment, while in another sense resembling open trajectories, which creates an opportunity to transform the logic of the ‘‘grid’’ outward to an infinite process. When the grid lines begin to be seen as the lines which define the relationships of the open-ended fragments, they start to act like machines that regulate and define the connections, not limiting them as borders. Furthermore, by using the ‘‘Grid’’, it is possible to switch between different scales. The biggest experiment of this is the relationship between the initial inputs and the city. Putting the city into the generator as a last

layer, and creating the reflection of the inputs in that city layer is provided by this "Grid". The last step is the definition and application of the rules. The lines of the grid themselves become rules and do not have to be completed or finished. They are open to connections that may occur in the future.

The implementation process is one of the significant and final parts of the trial of this experimental in-between section. The region chosen for this experiment is the old city center of Ankara, Turkey which is one of the greatest sources of collected memory. It is a land with several historical and formal layers. While the historical ones are used as inputs, the formal ones are redefined by establishing new links with the proposed urban plan. After this application process to the city scale, a new urban image and vision are formed.

The second phase of the implementation process is creating a new intervention on an architectural scale. It is one of the possible prototypes which is one of the outputs generated by the three-dimensional matrix. Educational purposes constitute the main function of the experimental process. Therefore, school architecture is the main field for designing new relations from theory and research to practical trials by using montage as a crushed element in-between them.

This thesis, as a field for experiments, creates an opportunity for people to experience physical reality by reflecting on the possibilities of chosen theory and methodology. The uniqueness of the real reflection of the imaginary world that every person creates in his/her mind depends on two main factors. The first one is that the contents of the collective memory are different, and the second is that the defined generative process builds different relationships each time. This fact is directly related to the hypothesis which is based on the creation of a system that feeds the process from both order and disorder and allows random and spontaneous developments.

In the end, a complex framework is tried to be achieved for opening the way for certain debates about new concepts and ideas in the architectural world. We hope this thesis will be useful in this field for readers in the future.

A.

A CRITICAL APPROACH TO MONTAGE BY USING CINEMA, ART AND ARCHITECTURE

“Editing is an instrument not of the logical exhaustion of given possibilities, but of the inexhaustible opening to possible not yet given.”

Georges Didi-Huberman

Questioning and perceiving are defined as two basic characteristics of human beings' minds. Continuity of them can be seen as the factor that keeps the order of humanity alive. This continuity emerges by questioning the previous one. However, how it is questioned and how it is perceived are more crucial points than the event itself. Here, more subjective elements start to emerge in this step. They are the perception capacity and shape of the human. This is most evident in the concepts of time and space.

According to Sigmund Freud, consciousness is the awareness of the self in space and time. This awareness is related to both internal and external stimuli. These occur differently because of the parameter which is called perception. Conscious experience can be in the moment or recalled experiences from memory. The moment is named phenomenal, and experiences from memory are named access. While perceiving space and time, these two types can emerge and when it is the access one, an overlapping of the images that have formed in the brain in the past is starting to occur. Therefore, this consideration is a base for creating a montage with a meaning inside of it. Time and space components are starting to get more abstract and intertwined. As Freud said; ''Memories are projected onto screen as images, where they are superimposed on one another. Images are thus built on top of other images.''[1] This is changing the human's perception, especially in terms of time while they are considering the collection of images, words, or important elements coming from the past. In mental life, nothing that has once existed is ever lost.

Sigmund Freud was an Austrian neurologist. He invented the treatment of mental illness and neurosis using psychoanalysis. Other than these significant topics, his importance in psychology mainly comes from the topic of the unconscious mind. The unconscious part of the mind cannot be easily controlled or noticed by a person. At the same time, the unconscious mind is one of the crucial components in understanding conscious thought and behavior. There are three different layers of mind defined by Freud. The two main ones are conscious and unconscious layers. The third layer is the in-between one which is named preconscious. It contains thoughts and feelings that a person is not currently aware of, but which can easily be

1. Cameron Mcewan, Architecture of Analogy. https://cameronmcewan.wordpress.com/tag/sigmund-freud/

brought to consciousness. It is like a mental waiting room, in which thoughts remain until they succeed in attracting the eye of the conscious. (Freud, 1924, p.306). Therefore, it can be said that preconscious is the connection point between two main blocks of the mind. The unconscious mind is defined as a reservoir of feelings, thoughts, and memories that outside of conscious awareness. According to Freud, even if this part of the mind looks indepedent from other part, it influences behaviors from conscious even though people are unaware of them. Accessiblity to unconscious is not seen or directly felt by people but it always has an impact on our current vision. They will be collected under two main topics if components want to be defined. They are the repository of forgotten memories and the locus of implicit knowledge. This knowledge type is gained without awareness that learning is occuring.

After understanding the different layers of mind, it can be said that drawings, images and built environments reflect unconscious forms of thinking realised through architecture. The layers defined by Freud can easily be transmitted to a world represented by different imaginations occuring because of different interstitial meanings. Perception of these meanings turns in to things that have nearly no human awareness, mostly coming from the unconscious layer of mind. People are actually perceive something out of their control. What they associate and feel after these perceptions are consisting of imaginations which come from deep, unconscious part and actually carry traces from the past and its experiences.

There have always been certain systems to affect this part of people's brains. Pioneering professions in this regards are those which are related with art. While the art mentioned here is a general title, it is divided into sub-titles such as cinema, architecture or fine arts. Seeing how montage has been applied in these different fields throughtout history with certain examples is one of the first steps to understand its effects in both form and memory. Even if the way of representation changes, the form of collective memory or the created imaginary has emerged in all of these professions. Unexpected experiences occur because of overlaps or spontaneous intersections of different formal languages. The newly emerging forms from these complex connections can be called as crush forms. In terms of established relations, it can be divided into two as dependent or independent. Determining one of them as a category is actually in the hands of the author, and it is a situation that can be changed for each possibility of coming together.

Representation of all of these professions in a visual manner is done by using collage, assembly, or montage techniques. This creates the base intellectual framework of further steps which can be diverse in each profession according to its needs. Therefore, the process of representation can be defined in three main cores; an intellectual understanding of memory which comes from a pre-conscious part of our brains, components of the theory of montage and collage as a representation path, and diverse explanations and inputs which are coming from each field's unique elements. It can be said that these are the milestone blocks of the skeleton that form the critical approach towards montage.

1. Form of Memory; as a Crush between Past and Present

Understanding history by using different methodologies creates a more diverse path. This applies to almost every subject that a human can imagine. Throughout history, human decisions and how they were built depending on certain events were the sources of all this process. Historiography emerged from these chronological events and decisions of people. Further, there were other tools to represent the history of humanity. It is the way of collecting and showing visuals instead of just explaining verbally or in writing.

Collecting and arranging fragmentary materials is an effective way of representing the process by giving the visuality of history. When different fragments start to come next to each other, the reading of history also changes. They belong to both past and present. Therefore, today when you look at and start to understand these collections, the way they are read can change. While reading the process, a crust begins to form in this wander between different times. The real potential is revealed at that point. Perceiving this potential starts as abstract but then it can be transformed into certain shapes and forms and reducing it to more real by using architectural representation elements. Hence, the content of the real product, which we call crush form at the end, is the combination of different layers created in history or their interlacing.

Throughout history, different techniques and mediums were used to show different combinations of multilayering. They are instances for understanding memory from different perspectives. Three different

approaches are explained in this chapter for showing that a crush between past and present is always possible instead of trying to understand them separately.

The first one is related to Walter Benjamin's works. Benjamin presents a critique of historicism in his essay named; "Theses on the Philosophy of History". He was influenced by surrealism and the nature of modern life in the mid 20th century. He wrote bricolages which are collections of fragmentary materials. For instance, the theses are aphorisms. They are short statements for collecting a lot of meaning into a few words. To decide whether these phrases are good or bad, the most important parameter is making arguments in unsystematic ways. If they are doing this, they can be called good aphoristic texts.

The main focus of Benjamin is related to the term; historical materialism. It is a concept coming from Marxist theory and is based on the idea that all developments in human history occur as a result of a struggle among people around the conditions of production. However, there are also humanist variants of historical materialism, too. Benjamin wanted to focus on the humanistic part instead of just explaining it in a materialist approach. He tried to define this concept from different perspectives. For instance, he preferred to save the past and invert Marxist historical materialism whose main aim is creating a revolutionary future.

When the moments from the past start to occupy today, they are not exactly in the past anymore, they can be called "now time". The process is not directly the answer to the needs. A more important component is the notion of a time that stops. The value of a specific moment in the past is not related to progress. It is about taking that moment and seeing it as a self-standing element in today's conditions. Therefore, Benjamin tried to take attention to the points from the past which is pinned today, instead of taking the whole.

Another approach by Benjamin is the critique of historicism by rejecting the past as a continuum of progress. Historicism describes the eternality of the past. However, historical materialism according to Benjamin sees the idea of history as a self-standing experience. Thus, Benjamin states "To articulate the past historically does not mean to recognize it 'the way it

really was.' It means to seize hold of a memory as it flashes up at a moment of danger." (Thesis VI).[2]

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The second example is ''Mnemosyne'' which is a figurative atlas consisting of a series of tables, montages with photographies that bring reproductions of different works together: evidence of a Renaissance context (works of art, playing cards, etc.); but also archaeological finds from Greek and Roman antiquity; and also testimonies of the culture of the twentieth century (newspaper clippings, advertising labels, postage stamps). It is directly an example of a way of collecting memory by using different mediums such as images, and objects. (Figure 1) Warburg believes that these symbolic images could create immediate insights into the afterlife and depicts a new life that is said to live in motion or animated life. The Atlas has a new thematic sequence with that motion.

The Atlas explores how meanings are constituted by the movement of themes and styles between East and West, North and South in this newly defined life in motion. Transforming the cartographic and scientific notions of what an "atlas" should be, Warburg creates a dynamic "thought-space" where cosmographic and art-historical images reveal how subjective and objective forces shape Western culture. The main purpose underlying these formal associations was actually to show the spectators to experience for themselves the "polarities" that riddle culture and thought.

The Atlas can be called transdisciplinary: creating relations between art history and the fields of archaeology, anthropology, psychology, and literary criticism. He felt that images could not be held within their

2. Walter Benjamin, Theses on the Philosophy of History, Thesis VI.

Figure 1, 2: Warburg's Atlas by panel number 39[1] and 77.[2]

historical containers. In terms of period, Renaissance was seen as a time of transition and uncertainty. Therefore, especially images from that period were the main ones not existing only in their historical containers.

In the first and second figures, these black panels are seen as a collecting base. In panel 39, Botticelli is the star, with black and white reproductions of ''Birth of Venus'', ''Primavera'', and ''Pallas and the Centaur.'' In another panel which is numbered 77, there are images of paintings by Eugene Delacroix, a photograph of Erika Sellschopp who is the 1929 German golf champion.

All these human material cultures are collected in a flat world where they have a spatial adjacency. Every component from this material culture meets another component on the study table as equal, scale disappeared. Their sizes do not matter anymore. It is entirely up to the discretion of the viewer. Although architecture only plays a minor role in ''Mnemosyne'', Alina Payne suggests that the Atlas can be a model for understanding how architects use images in order to overcome the world of complicated systems and objects.[3]

The last example is a fresco (Figure 3) which is a puzzling one from the fifteenth century in the convent of San Marco in Florence. The painter was Fra Angelico and it was completed in 1400-1455. The name of this fresco is ''Madonna Delle ombre'' or ''The Madonna of the Shadows''. The work is divided into two equal parts. The top part depicts the theme of the Sacred environment with the Virgin Mary, Jesus, and surrounded by eight saints. The bottom part is an entire of marble panels. They did not answer what an art historian can generally expect to see during this period, it is not similar to any works on the art of the Renaissance. They were multicolored stains and they seemed not to imitate anything definite.

According to Didi-Huberman, those marble panels can be considered as a symbolic representation of Christ's tomb.[4] Therefore, he has demonstrated that those panels' main function is acting as shifters to metaphysics. He saw this as an example of anachronism. An anachronism is a chronological inconsistency in some arrangement, juxtaposition of persons, events,

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3 Martino Sterli, Montage and the Metropolis (Yale University Press, 2018), 10.
4 The Madonna delle Ombre, Mother of Mercy Chapter https://motherofmercychapter.com/Art/The%20Madonna%20delle%20Ombre.pdf

Figure 3: Fra Angelico, Madonna delle Ombre (details of marbles) ca, 1450, Convent of San Marco in Florence.[3]

objects from different periods. It can be both material or immaterial, or just a verbal expression or a technology. "Madonna Della ombre" has this inconsistency in terms of painting technique and way of representation. They are more than just being marbles, they are also representing mystery.

These non-figurative paintings conjured up a Jackson Pollock dripping if they will be compared with today's critical approach towards informal art. It could not be noticed before seeing Jackson Pollock's way of representation in his paintings. Therefore, the capacity for reading the past has changed after the advent of Pollock. The chronological order of the time is just disappeared and left its place for another way of understanding the past and existing collective memory.

2. Elements of Montage

The word ‘‘montage’’ is rooted in the French language as a term for describing the connection of individual pieces, they can be a film, music, or images, into a cohesive whole. In Soviet montage theory, it was introduced by Sergei Eisenstein. It was used to create symbolism. After this, the term ‘‘montage sequence’’ came a common technique for the passage of time. It can be said that by these sequences, three previously described components; time, space, and movement are condensed.

What if it is a turn to talk about a theory of architectural montage and its main elements? Five main features can be considered. Firstly, montage is defined by a heterogeneity or plurality of the image. It is a component serving more than one; this plurality can apply to a single sheet or a sequential work. Therefore, it can be either spatial or temporal. For historians such as Benjamin and Manfredo Tafuri as well as for Koolhaas, the heterogeneity of artistic montage became a model for a historiographical method that can include a multiplicity of viewpoints, especially those that have been omitted from received accounts.[5] Secondly, montage is a spatial team composed of different elements. There are gaps or open spaces between individual elements in both architectural and film montages. It is one of the most significant concepts which is called interposition. It creates a meaning of production in the mind of the viewer. Therefore, the spatial order of the image is started to occur inside the human brain. Another important feature is polyfocality. The concept of polyfocality was introduced by the art historian Werner Hofmann to describe the fact that art before the Renaissance generally allowed a great variety of modes of presentation, points of view, media, styles, and levels of reality withing one single depiction, and that it had the tendency to treat single images as part of a larger visual ensemble.[6] Thus, the viewer of this presentation is not fixed to just one point. On the contrary, he starts to construct his perspective by using different focal points. Modern space is conceived as a moving point of reference, not as the absolute and static.

Slightly different from the first three, the fourth feature is seeing montage as a consequence of industrialization and technology. Montage

5. Martino Sterli, Montage and the Metropolis (Yale University Press, 2018), 8.
6. (Ibid), 11.

came from French influence but then turned itself into an artistic concept in Dadaist circles after World War I. And, its main aim was to construct a new society. This social function of montage plays an important role in graphic design, advertisement, or exhibition

design related to architecture. The newspaper is a medium for mass culture and production. It is a significant element of the industrialization period for montage artists. It is a physical platform for collecting different illustrations on the same flat surface. Photomontage and assemblage are some options for creating relationships. A visual and intellectual concept is defined as a result of the implementation of those options.

Lastly, montage always seeks to visualize a reality; in the scale of urban and architecture not yet seen. Instead of accepting the conventional representation and thinking, it helps to extend the existing ideas. If it happens by a shock to the human brain, it will not just be seen through a traumatic aspect. These moments turn customary experience into a new experience, which brings the unconscious into awareness. According to German sociologist Georg Simmel, the space of the modern metropolis resembles to montage in the way it is organized: ''The psychological foundation upon which metropolitan individuality is erected is the intensification of emotional life due to the swift and continuous shift of external and internal stimuli. Man is a creature whose existence is dependent on differences, his mind is stimulated by the difference between present impressions and those which have preceded.''[7] After these aspects of urban visionary and montage relationship, it can be said that the montaged condition of the modern metropolis provokes different visual perceptions and the ''shock'' effect. Those formed the base for the modern architecture culture of the twentieth century.

After these five features of montage, meaning is certainly generated with a system of relationships determined by shifting discursive functions. In Krauss's terms, ''Meaning is always mediated by the system; it is inevitably, irremediably, irrevocably, processed by the system's

7. Georg Simmel, The Metropolis and Mental Life, 103.

own structural relations and conventions.'' [8] Therefore, montage acts as the main element of the skeleton which makes up this system. As it is seen with instances, especially from twentieth century, it is also seen that it has spread and influenced many other professions. We can see all of these defined features with different variations in fields such as cinema, art and architecture. The significant point is actually how the system produces a new imagination and meaning by bringing different elements together. In fact, it is nothing more than this imagination created by montage which changes human perception in all of these diverse fields.

''In a world where the notion of unity is lost and where life seems to recompose into constellations made up of many small pieces, artists have intuited that representing the real is still possible only through an appropriation and montage of its elements. In their practice this leads aesthetically to the arousal of either a shock or sensitivity in perception, and semantically to the awakening of an ethical and political awareness.''[9]

from ''Montages ,Assembling
as a Form and Symptom in
Contemporary Arts''
Walter Benjamin

8. Rosalind Krauss, The Motivation of the Sign in Picasso and Braque: A Symposium, ed. Lynn Zelevanksy (New York: Museum of Modern Art, 1992) 273.
9. Walter Benjamin, Montages, Assembling as a Form and Symptom in Contemporary Arts

3. Cinematic Montage by Different Approaches

In the context of cinema, the relationship between spectator and object evolved into a different scenario. An imaginary path is followed by the eye, and this produces a multiplicity of phenomena and varying perceptions in the human mind. These different impressions pass in front of a stabilized spectator. In the past, the second scenario appeared. The spectator moved between different sequences with her visual sense. According to Eisenstein, it can be seen in any child's drawing. The picture converts directly into a path where several different scenarios of the object can be revealed sequentially. A typical child's drawing of trees shows this perception of the path with various options and sequences in one frame. Therefore, the path starts to evolve into a tool with many diversities in terms of time and space. It creates an abstract movement related to both two elements inside the human brain. Then, isn't it a montage in a human's mind?

Two different approaches related to a montage from film directors Eisenstein and Godard will be analyzed in this part. They have two different perspectives on cinematic montages from both visual and technical aspects. Sergei Eisenstein's montage is an example of an integrative montage. On the other hand, Jean Godard is an example of a demonstrative montage. While a demonstrative one displays the breaks and ruptures, an integrative one seeks to conceal the heterogeneous nature of the image. This is a noticeable difference when montaging the flow of different scenes in the setting of the cinema.

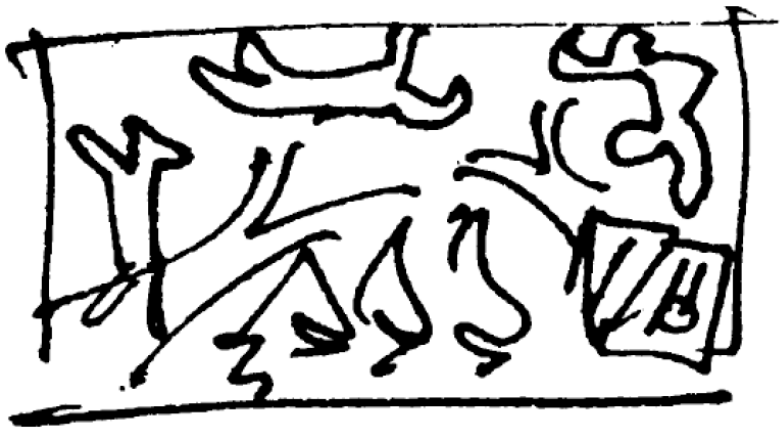

Figure 4: This drawing has not been traced, but a similar argument, leding to a work by David Burliuk that was clearly marked by his fondness for children's drawings, can be found in S. M. Eisenstein,Non-indifferent Nature, trans. Herbert Marshall (Cambridge: Cambridge University Press, 1987), 247-48.[4]

3.1. Sergei Eisenstein; an integrative montage

Soviet montage theory is an approach for creating cinema that relies on ‘‘editing’’. It is the contribution of Soviet theorists to global cinema and it brought formalism. Sergei Eisenstein is one of the Soviet film directors and film theorists who contributed to this montage theory by explaining it in terms of both practice and theory. Eisenstein’s view that ‘‘montage is an idea that arises from the collision of independent shots” wherein “each sequential element is perceived not next to the other, but on top of the other” and "in ways that are altogether new." [10] The collision of shots is used to manipulate the emotions of the audience and create film metaphors. This is one of the main ideas behind what Eisenstein wanted to reach.

According to him, there are five main methods of montage which are metric, rhythmic, tonal, Overton, and intellectual montages. Focusing on intellectual montage can be more important than other ones because it directly activates the production of meaning captured by the viewer. This creates not only an aesthetic aspect but also a real social action. Formally, it seeks to use a few images which are rich in cultural and symbolic history. Their collision creates complex concepts that traditional montages cannot achieve.

Movement through space is another topic which Eisenstein proposed different approaches for. According to him, it is a dominant component in architecture as it is in film. In 1927, he began to work on an experimental movie project named ‘‘The Glass House’’. He proposes a mobile camera and an elevator which moves between floors, ceilings all made of glass. Views of the observer constantly change through the transparent structure. Light is a significant concept for showing the materiality of glass. Nothing is limiting the vision, the distinction between inside and outside, above and below are all eliminated. Therefore, there is no strict control or any gravity that limits also possibilities in a vertical way.

Another study on the link between architectural space and movement by Eisenstein is related to the Acropolis. It is an architectural tour around

10. Christian Metz, Film Language; A Semiotics of Cinema. 133.

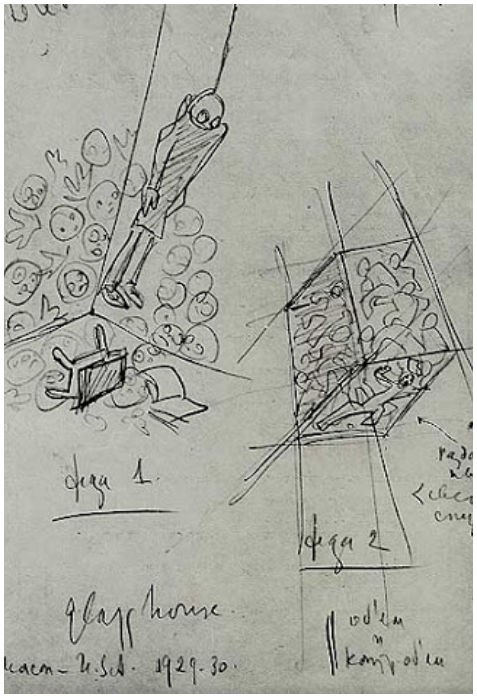

Figure 5: Story Board by Eisenstein of Glass House.[5]

Acropolis by creating a physical or imaginary path. By this, there are perceptions of an object which are varying. He links the architecture, film and the perceptual path to ‘‘peripatetics’’ which is a theory of itinerant by Aristotle. The walk starts with physical movement but then progresses towards a peripatetic vision of the Acropolis. By the movement of walking around the Acropolis, it is our legs that construct meaning, they create, ‘‘ a montage sequence or an architectural ensemble...subtly composed, shot by shot’’.[11]

Lastly, Eisenstein’s approach toward montage and movement in architectural space stays close to integrative montage rather than demonstrative montage. It conceals the heterogeneous nature and allows the viewer to discover this lurking for himself.

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11. G. Bruno, Atlas of Emotion: Journey in Art, Architecture, and Film (London, 2002), 56.

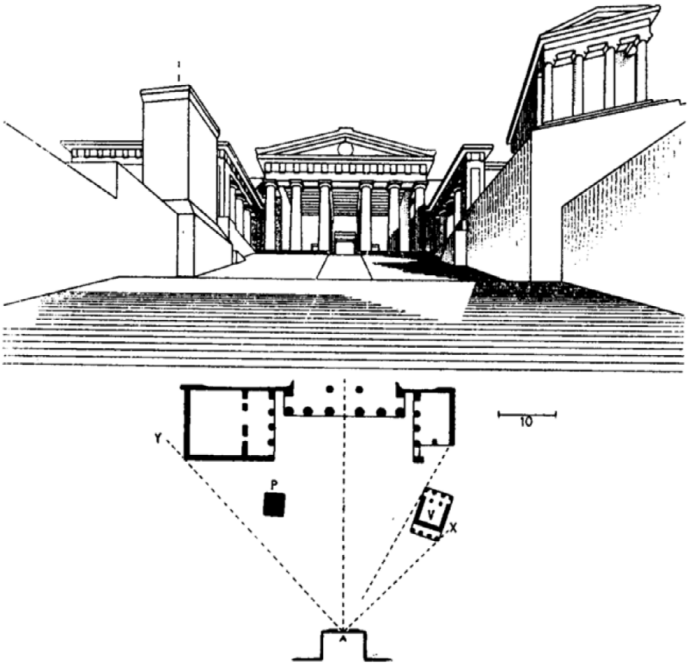


Figure 6: Diagram showing Acropolis of Athens.[6]

3.2. Jean-Luc Godard; a demonstrative montage

Jean-Luc Godard is a French and Swiss influential figure in cinema because of his new approaches as a film director. He tried to find all the possibilities of cinema from its atoms. For doing this, some juxtapositions are composed of different pieces from different scenarios. For instance, he merges an image of an immortal work in the history of cinema with another image of a less known film, even a film he also does not see. After this operation, a question arises: Why bring two unrelated shots together? The answer to this can be; why not they cannot create a new composition by these two?

Godard states that montage is the main element of cinematographic construction. In addition, cinema is not about continuous movement. It is a composition of discontinuous moments and instants. All the images are separated from each other and have small barriers between them when they are next to each other. Permanent ruptures start to occur. Therefore, montage, as a directing principle; helps to create a composition from these unrelated shots by putting them onto a strip. Another important logic behind using montage and discontinuity is not having a dominant discourse

anymore. What emerges is the consciousness of a world that no longer has a single line. It is necessary to work on diverse and diverging lines.

The first line is the image band; the second, the words; the third, sounds and noise; the fourth, the music, etc.[12] Because of these new definitions, a radical conception of cinema is born. Seeing the relationship among these lines as an independent connection is the crucial point of this new conception. Each line has its freedom. It can be just music or a word. The question of how different lines are existing together without giving up their freedoms starts to act as the main issue. The change in the definition of the elements in the cinema by using the montage principle starts to change the large-scale layout of order as well. According to Godard, one civilization died, and another one needs to be born. And this new civilisation must feed itself from the preceding one, but without reproducing it: it must transform it into something else.[13]After all of these new conceptions and components, it can be said that Godard's montage is focused mainly on the demonstrative type. There is no intention to hide relations/connections. Just the opposite, this discontinuity turns into a situation that exhibits relationships instead of concealing them.

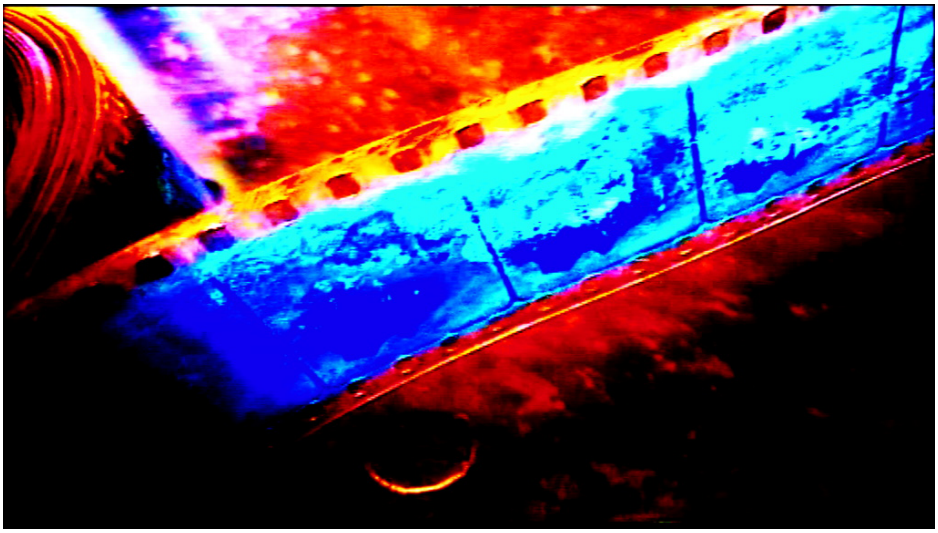
An example work/film of Godard can be observed for understanding the visualization and form components better. ''The Image Book''(Figure 6,7) shows the possibilities of salvation and beauty that might be still there despite the uncertain and horrific world. His main aim of him is to bring memory into the present tense and evoke the depth of the inner sense of people. He tried to achieve this by creating sequences with clips from different films including many of Godard's own. Therefore, it is not a conventional film despite it being an essay film composed of collages. They are images of paintings, photographs, titles, or some documentary footage shot for this film. They all start to weave together borrowed from the memory of films. ''The Image Book'' acts like a cinematographical political poem.

The general layout of the film composes of five chapters as an introduction. After, they all form the sixth one. Images located in these chapters edited

12.. Jean Douchet, Godard's Science (An article from Comparative Cinema).

13. (Ibid).

so boldly and surprisingly. The main purpose behind this is to create a film that should be used, studied, and considered slowly like a book. There are shifts of color, dramatic changes in the contrasts of images, analytical reframings, non-naturalistic colors, heavy pixelation, abrupt changes in aspect ratio, shifting, and superimposing. In addition, sounds are also modified. They are sometimes more extreme or in slow motion. Hence, images and sounds are all manipulated according to different defined features.



Figures 7,8: Shots from " The Image Book" film.[7] [8]

4. Montage as a Tool for Generating Architecture

When montage and architecture begin to relate, they also begin to coexist because montage becomes a tool that is directly involved in the design process of architecture and the city. This process, and indeed why it progresses like that and its components are as crucial as the final product, maybe even more. There are several different examples and approaches to architecture and montage or city and montage. The main opportunity provided by the montage is the right to intervene regardless of scale. It creates a common ground for architectural and urban components of the city. It is possible to see a building or structure rising next to a human scale statue. The intellectual framework starts to extend and reveal what is not discovered before. There are side components for completing this new framework. Firstly, interposition meanings turn into interstitial spaces in the architectural medium. This helps to understand the relationships that make up the whole. Another consideration is related to "order". In the montage, it cannot be directly said that there is a common order followed. Instead, the complicated disorder is perceived when a viewer sees different compositions together. Therefore, instead of creating an abstract order this dynamic disorder of complexity can be used in generating new forms. The final step, as a compilation of the steps so far, maybe to perceive the form and space as the image of the future. The final product is a new experiment every time because all the circumstances and components are changing for each different scenario.

In this sub-chapter, several examples are analyzed to understand these differences. It starts with Piranesi's urban vision of the city of Rome. In an urban scale, how montage and playing with the scale provide new images in one big canvas is seen in this instance. Another approach is from Mel'nikov with his Soviet pavilion. Clashing of geometries and spaces of intersection in an architectural space are the main topics that are observed. The flow continues by comparison of two significant examples from architectural-urban history: Analogical city by Rossi and Collage city by Rowe. Those are also analyzing the city scale and context. In addition, the concept of movement and the concept of contrasting and mixing are defined by Tschumi and Venturi. They help to extend a new aspect with new compositions and concepts. Lastly, there are also analyses by comparing Libeskind's deconstruction and Galofaro's surfaces, and Koolhaas' New York

and Benjamin's Arcades Project. These comparisons are all examples of the relationship between the city and urban visionary. All of these critical approaches are explained for understanding the direct relation between montage and architecture.

4.1. Piranesi's iconic representation of Rome

Piranesi is one of the significant architectural theorists and historians. In his work which is called a representation of Rome, he produced evocative views of the city and emphasized the irrational spaces' invention. In his representations, Rome's past is not an example form of a continuous chronologically ordered narrative, but a visual history. It represents a plan view of the reconstruction of the Campomarzia region.

It documented decrepit buildings and broken down infrastructures of Rome for reinventing the past. In the 18th century, Rome becomes for Piranesi a laboratory for questioning architecture and a discussion on style. The city is almost dissolved and replaced by populous fragments. When they are re-examined on the grounds of contemporary architectural and urban theory, Piranesi's views reveal anticipations of phenomena that affect the metropolis of today. Piranesi captures the public buildings which are representative of public life such as the forums, the tombs, the places dedicated to the memory of emperors, and the forums. There are regulating lines that create a unification of the variety of different orientations. They are the complex frameworks to tie groups of constructions. New recompositions occur concerning the Roman typology but at the same time, new original forms are created by using new-defined spatial connections. In terms of scale, there are some monumental elements whose proportions are out of space. This play with the scale is done by using a base for systemization.

Rome is an example of a multilayered medium for Sigmund Freud to describe the possibility of the existence of different stages of perceptions and memories in the mind. For Freud, the pictorial description of the city can only represent the historical sequence in spatial terms by juxtaposition in space. Rome offers the spatial configuration to the complexity of mental life.

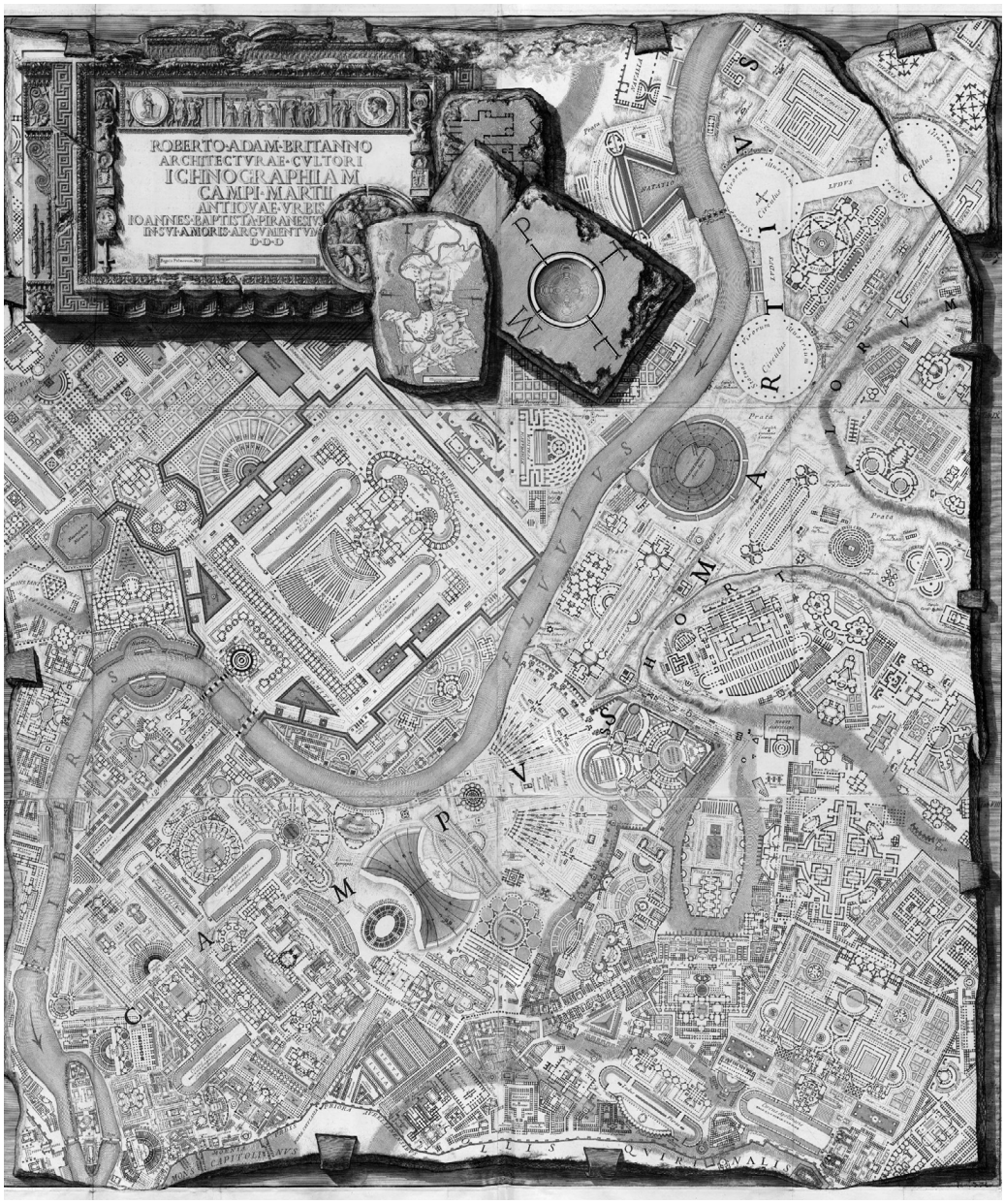


Figure 9: Representation of Rome by Piranesi.[9]

According to Freud; '' In mental life nothing that has once existed is ever lost. He asks us to imagine Rome to be like the unconscious, "a psychical entity with a similarly long, rich past, in which nothing that ever took shape has passed away, and in which all previous phases of development exist beside the most recent."[14]

In the space of representation, there are elements for scale-comparison and measurement highlights such as the magnificence of colossal monuments and territorial infrastructures of the Romans (Figure 8). These creatures relieve the over-scaling. Such structures represent the collapse of the principles, political orders, and organizational systems. Piranesi's Rome is not a space, but a terrain vague of improper inhabitation, abandoned by the control of legal, spatial, and architectural orders. The terrain vague has no form, it changes and it is dynamic and available. There is indeterminacy in its boundaries. It redefines space and produces space in a different way than the conventional one. For the order of classical architecture and its geometry, this is a revolution. Piranesi's images of Rome define working on material of time without an architectural project, operate outside the imperative of form. Architecture does not dictate form but it offers reusable materials and makeshift shelters. Fragments are proposed for rich production of Roman views- environments, contexts, and assemblages of which the Campo Marzio dell Antica Roma(1762) offers a misleading treasure map. Fragments show the reality of Piranesi's fantastic views.

The presence of the human figures in Piranesi's views provides moving rapidly from one fragment to another, from broken objects to the inhabitation of space, bringing things together through categories in which architecture can be reconsidered. They are the project design, its representation-drawing, and its construction-building. All of these elements provide a discourse on space. Finally, a series of visuals create a narrative for the history of the human brain.

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14. Sigmund Freud, Civilisation and Its Discontent

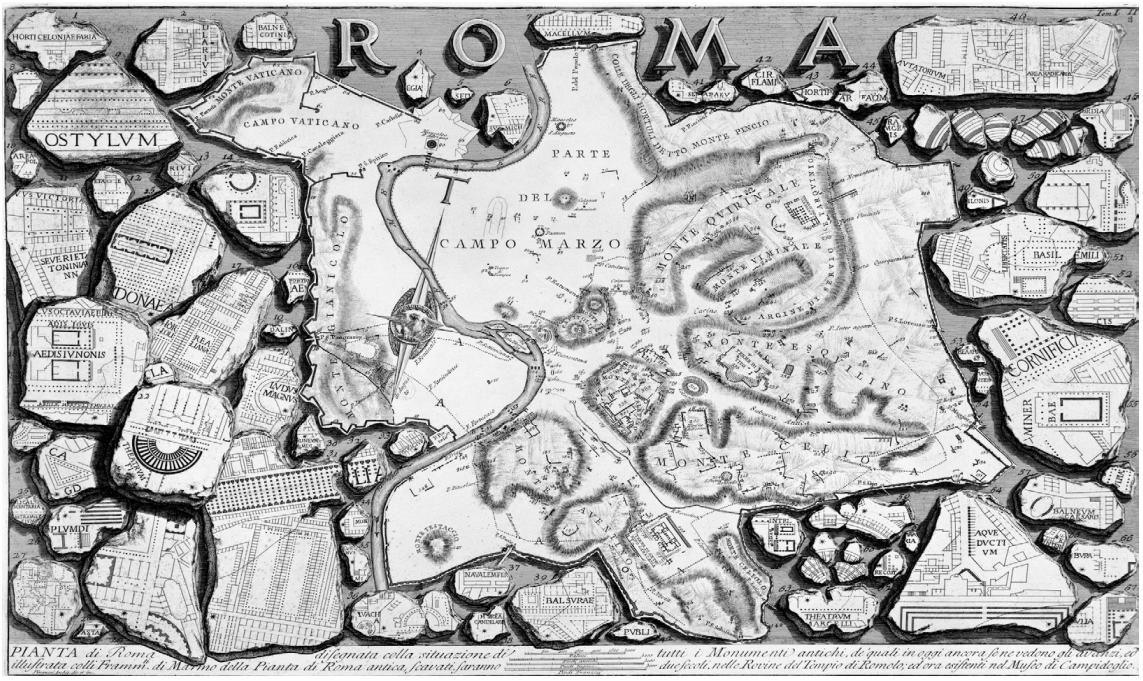
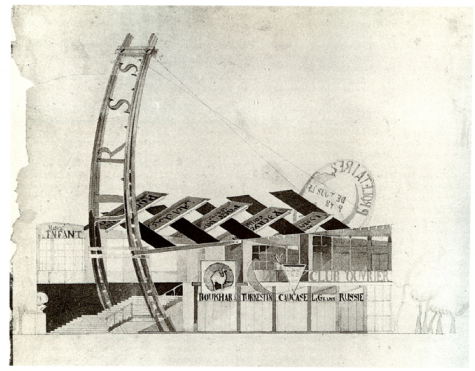


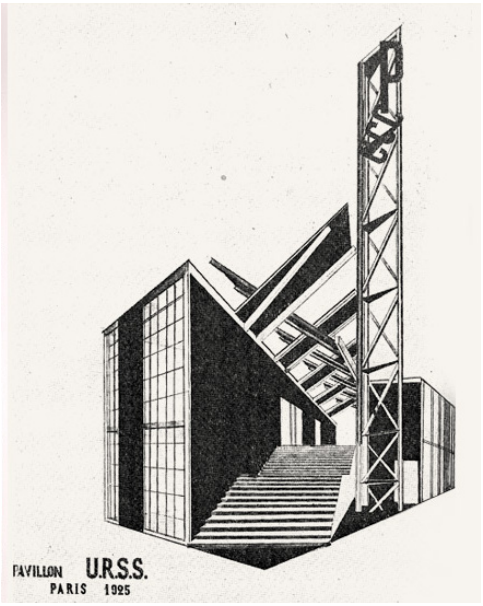
Figure 10: Representation of Rome by Piranesi.[10]

4.2. Mel'nikov's Pavilion, a study of clashing geometries

The Soviet Pavilion by Konstantin Melnikov at the 1925 Paris International Exposition is an example of architectural thinking rather than a political message. From the initial sketches, the pavilion can be said as a formal experiment. It is a dynamic building related to the intersections of deformed geometrical masses. They are broken up, inclined, and interconnected informally in the initial drawings of the pavilion. Instead of any social metaphors, the architect's intention was only an experiment with a language consisting of alienated objects and volumes which are clashing with each other in terms of geometry. It is a constructivist instance of how different fragments can melt in the same pot for creating a new architectural form from different pieces.

In the first one(Figure 11), a detailed sketch by Mel'nikov is seen. In the second one (Figure 12), a dynamic perspective of the proposal is defined by a black and white drawing. In the third one (Figure 13), a colored sketch shows different fragments of the pavilion. On the other side, elements of the building are seen with an image of an end miniaturized product. Stairs are significant components on both sides of the building. Its form becomes as extremely striking and dynamic because of different types of volumes and elements coming together.





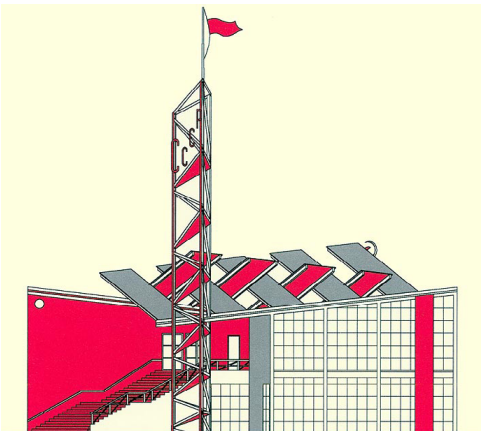


Figure 11,12,13: The Soviet Pavilion, Paris Exposition, Mel'nikov, 1925. [11] [12] [13]

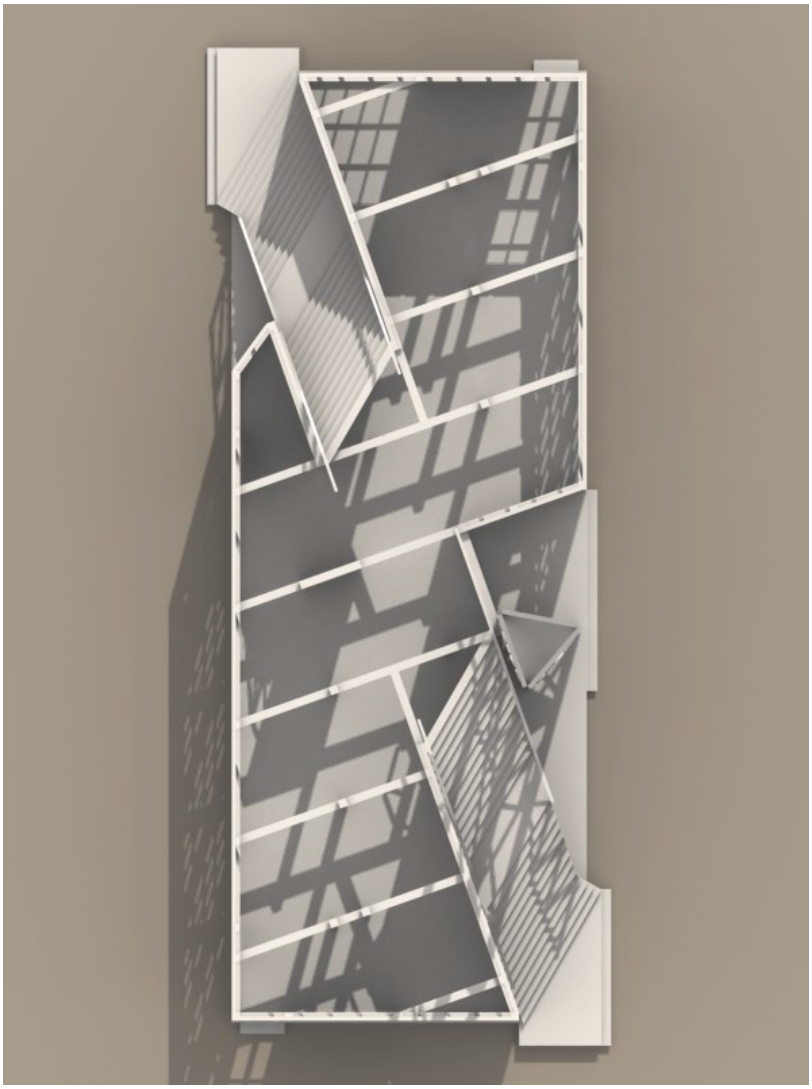


Figure 14: The Soviet Pavilion, Paris International Exposition, Konstantin Mel'nikov, 1925.[14]

4.3. Aldo Rossi's imagination versus Collage city of Colin Rowe

Aldo Rossi's Analogical City creates a new perspective looking toward the city and architecture. Rossi called both the city and his drawings architecture, and as a result, their relationship is always unstable. Both the drawing and the architecture of the city become alternative ways to produce architectural thinking. Through the operations of liberating form, Rossi's drawings act as a surface upon which to project and accumulate formal knowledge and architectural thinking on the city. It concerns the relation between reality and imagination.

He said: "The capacity of the imagination born from the concrete. In this respect I stressed Canaletto's painting where, through a most remarkable collage, an imaginary Venice is built on top of the real one. And this construction takes place by means of projects and things, invented or real, quoted and put together, thus proposing an alternative within reality." (Rossi, 1976).[15] Concrete opportunities can provide a reference to other solutions. Therefore, different solutions can be worked out. According to Analogical City, the aesthetic model is not the proper option for new cities. Existing problems can be the main sources for making comparisons or creating categories. Reality and imagination are two significant components of civilized progress for the improvement of the city. Freedom can be better when it defines by the concrete truth. As he said: " Between past and present, reality and imagination, the analogous city is perhaps simply the city to be designed day by day, tackling problems and overcoming them, with a reasonable certainty that things will ultimately be better." (Rossi, 1976).[16]

There is a new type that is in-between modernists' concept of utopia as no place and the humanists' notion of a real place. It is an imaginative space where real place and time have been changed. In addition, it is a different type of no-space which is full of history and memories. Inserting reality into imaginative world and eliminating the time of life and death are the main

15. Aldo Rossi, The Analogous City (1976), 6. https://monoskop.org/images/0/01/Rossi_Aldo_1976_The_Analogous_City_Panel.pdf
16. (Ibid) 8.

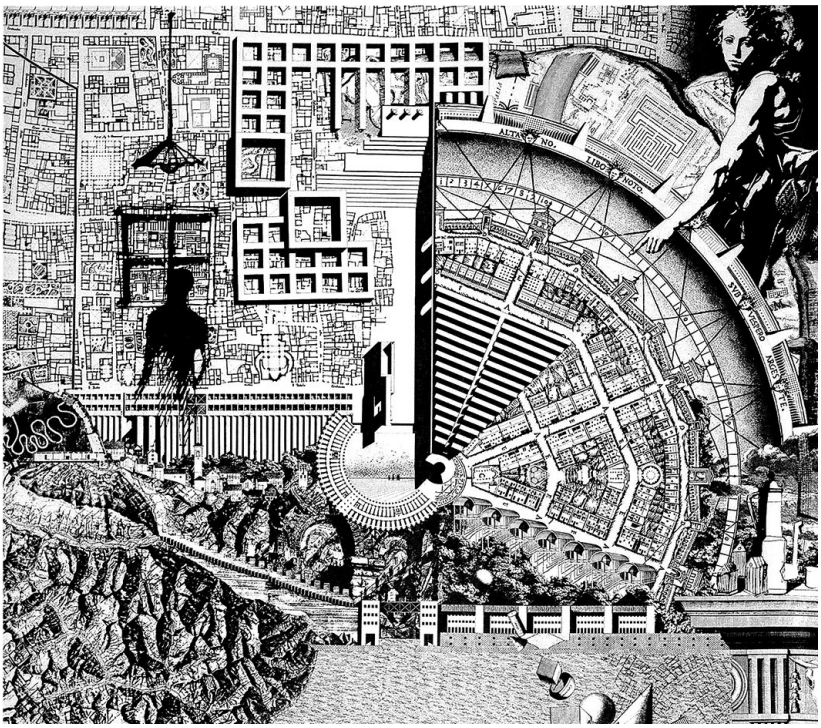


Figure 15: Analogical city by Aldo Rossi, 1976.[15]

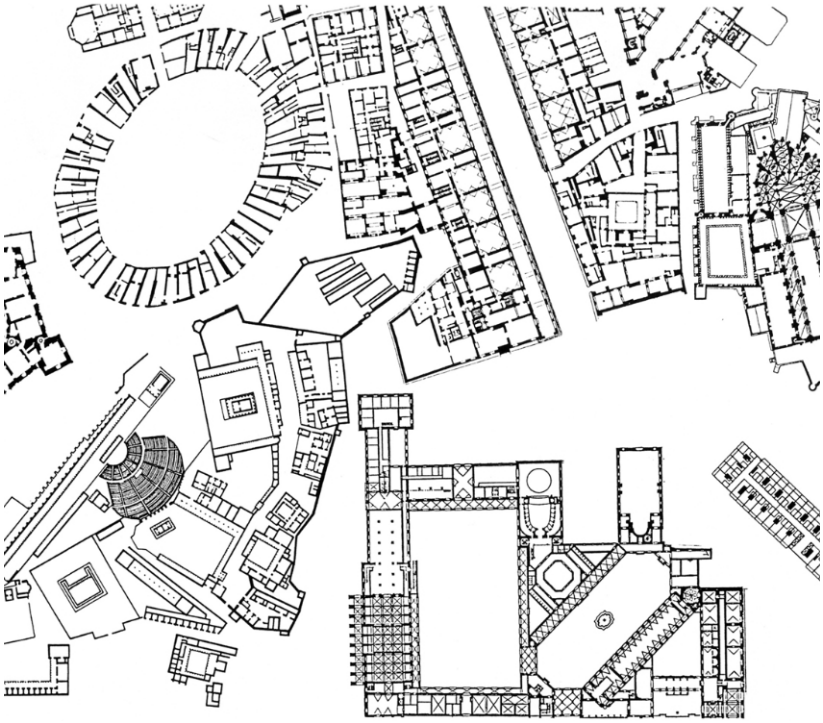


Figure 16: City of composite presences, Collage City.[16]

tools for creating this analogical city. While doing these, dislocation of place and dissolution of scale are the next steps. Dimension of the a city depends on the construction of its meaning rather than its scale. In the drawing of an analogous city (Figure 15), analogized things are repeated for creating a collective memory. Repeated fragments can be seen in the drawing. They also have contrasting concepts such as daily life and city, life and death, or ruins. These are trying to give an effect of paradoxical intention to the human brain. Rossi's purpose is to create a world with both reality and imagination inside of it, with collective memory in a drawing of fragments.

In Colin Rowe's Collage City, the authors argue that instead of a total-design approach for urban design proposals, the design should be considered through fragmentation and a functioning network of pocket utopias. According to Rowe, ''mystery of what is beyond'' brings more life to the city.[17] Actors of the city create their own experiences by determining their speculative pleasures. Flow is more connected rather than very free. Buildings are acting as both space occupiers and space definer. Therefore, the urban void texture gets more continuous by these definitions.

Rowe and Koetter suggest that architects should create a middle ground between a scientific approach and bricolage for producing solutions that can be used for both today and have possible flexible points for adaptation to the future. Then, what is ''bricolage''? According to French anthropologist Levi-Strauss, while modern thinking and cultural practice are defined by rationality and the model of the engineer, mythological, pre-scientific thinking is based on improvisation which he calls bricolage. The first step is seeing what is at hand and looking in retrospect. People should look at the already existent sets made up of tools and materials. Before choosing between different tools, dialogue should be created between them. In the chapter 'Collage City and the Reconquest of Time', the city is defined by fragments that are coming from the past, present, and future, taking references from working examples. It can be scientific, picturesque, contemporary, antique, or disordered. Collage city create itself by using these coming points from fragments in terms of both meaning and form.[18] Therefore, the city that will lead to future composes of different fragments coming from different backgrounds in

17. Colin Rowe, Fred Koetter, Collage City (MIT Press, Cambridge, London)

18. (Ibid) 118-150.

terms of time, characteristic, and meaning. It starts to become an infinite and heterogenous object that transforms itself according to its significant points.

After analyzing two important aspects of newly defined cities by using fragmentation techniques, the role of the montage and bricolage are seen in both of them. The representation of both architectural and urban space becomes the main keystone for telling the narrative of the context. In Aldo Rossi's analogical city, it includes both the reality and imagination inside of it. Connections between imagined scenes are provided by using rational tools. Therefore, the city starts to act in between these two different tensions. Solving existing problems can be done by using these two different components in the process. In Collage City, a middle ground between more rational and related with more bricolage is proposed as an in-between solution. Therefore, in the end, these two city proposals are resembling in each other in terms of the main significant components in the process. The reality and imagination of the human brain start to act together for a new continuous experience between different spaces. While creating this, collective memory which comes from both past and present is an important aspect of this journey of actors.

In the representational way of drawings, both of the examples try to collect different fragments from the city for providing a new meaning which can be seen in the junction points of fragments. Therefore, the drawing itself also starts to provide a new interpretation of the existing problems of the city. However, in the example of Analogical City, these newly defined fragments are repeated in different parts of the representation. Meaning of the reality alters itself to a different approach which can be said as more related to memory instead of real timing. This repetition of analogous things helps to create this collective memory, also in the representation of the spaces in the drawing.

In final, it can be said that both of the examples' purposes are nearly the same in terms of providing a new meaning by looking towards the past and present. In addition, it works as same also in the opportunities which are created for extensions towards future possibilities.

4.4. Tschumi and images of movement

Bernard Tschumi, one of the leading figures of contemporary architecture, developed his ideas mostly on space, experience, and human movements as opposed to the analogy between machine and building that was brought by modern architecture. He introduced a new phrase like event architecture which says that a building is not just a form but also related to the activity of the user inside of it. Events can be generated by only the users, not by the architects. According to Tschumi, the design consists of the scenario and its components. There are random junctions between voids and vectors. They can be directly said as concepts such as in-between, flow, vectors and dis-programming.[19]

Starting with the example of Le Fresnoy is a complex for international arts that includes a school, a film studio, two cinemas, and production laboratories for sound, image, video, and film. Tschumi left the existing structures and protect them with a big steel roof canopy. The general composition is a box representation with several boxes inside. The space between the tiled roofs of the existing buildings and the new roof is left for the experiment, in which the superimposition of spaces forms an architectural collage. The relation between architectural space and cinematic montage is seen in Le Fresnoy Art Center by using architecture-event, action within space. In the drawing, a montage of filmstrip ''beams'' in which events generate form and life takes shape in the building. The drawing (Figure 16) shows both the abstract elevation of the building and the sequences of different movements together. The montage of filmstrips is combined with some architectural elements which can be seen in the elevation drawings. For instance, stairs are shown as the main circulation elements between different levels. Furthermore, lighting is another interesting component acting as an element for emphasizing some parts of the building. Strips and these architectural elements start to act together in the image. Tschumi creates a new composition that is composed of overlapping layers and juxtapositions of experience and architecture. Therefore, from the drawing, it can be understood that there is a definition of architecture-event rather than architecture-object.

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19. S. Bengi, A.Akalin, Bernard Tschumi and "Event and Architecture" (Online Journal of Art and Design, 2019) http://www.adjournal.net/articles/72/723.pdf

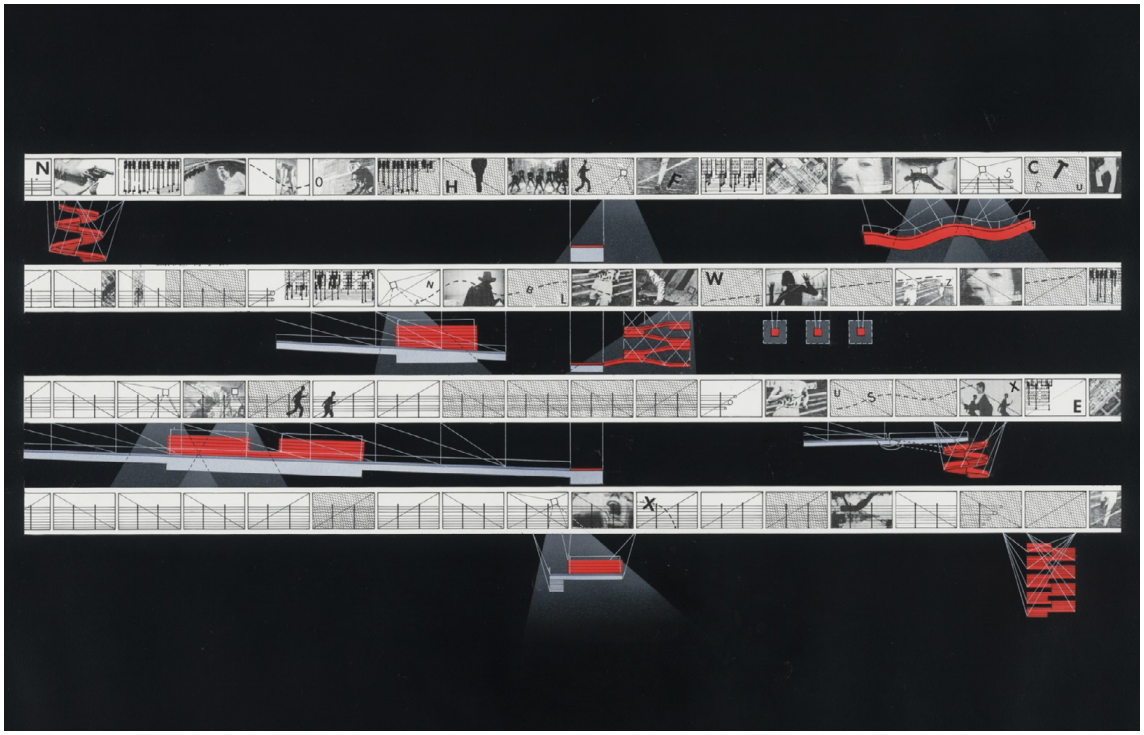

Figure 17: Le Fresnoy, National Studio for Contemporary Arts Tourcoing, France, Cinematic beams elevation, B. Tschumi, 1992.[17]

The experience of Bernard Tschumi is defined by three layers which are space, event, and movement in Manhattan transcripts. Transcripts (Figure 18,19,20) of these layers are not directly real projects or imaginaries. They are the in-between interpretations of architectural reality, and this act of transcribing an architectural interpretation of reality raises the question of how to define architecture after Modernism.

Plans, sections, and diagrams are indicating the movements of the different protagonists in the architectural stage set. These transcripts' main purpose is to show things that are normally removed from the representation. They can be between type and program, between objects and events, and between space and their use.

Manhattan Transcripts are theoretical compositions that show imagined events in real New York conditions. This urban core is selected for creating scenarios that can be familiar to any reader. Three different scenarios are depicted by Tschumi. The first one is a Park where murder is uncovered, the second one is a Street where the movements of a person through violent events happen and the last one is a Tower where a fall from a Manhattan skyscraper is depicted.

The main purpose of Tschumi is to represent an event and show the architecture of difference and opposition rather than completeness. He criticizes the conventional architectural practice because of the idea of separation between events and architecture itself. Instead of this, he defines a new way of understanding architecture by using features of filmography. Therefore, most of the transcript templates follow three focal points such as the buildings, the movement through these buildings or places, and a photographic representation of the event and people who are participating as main characters or only in certain parts of the scene. One of the significant results from Manhattan Transcripts is how to build a dialogue between the living and the architecture. While doing this, Tschumi tries to use examples from real life, sometimes even he does not hesitate to show violent or dangerous conditions. Therefore, understanding reality by creating a balance between different perspectives and rules helps to see the general framework of mentioned three components by him.

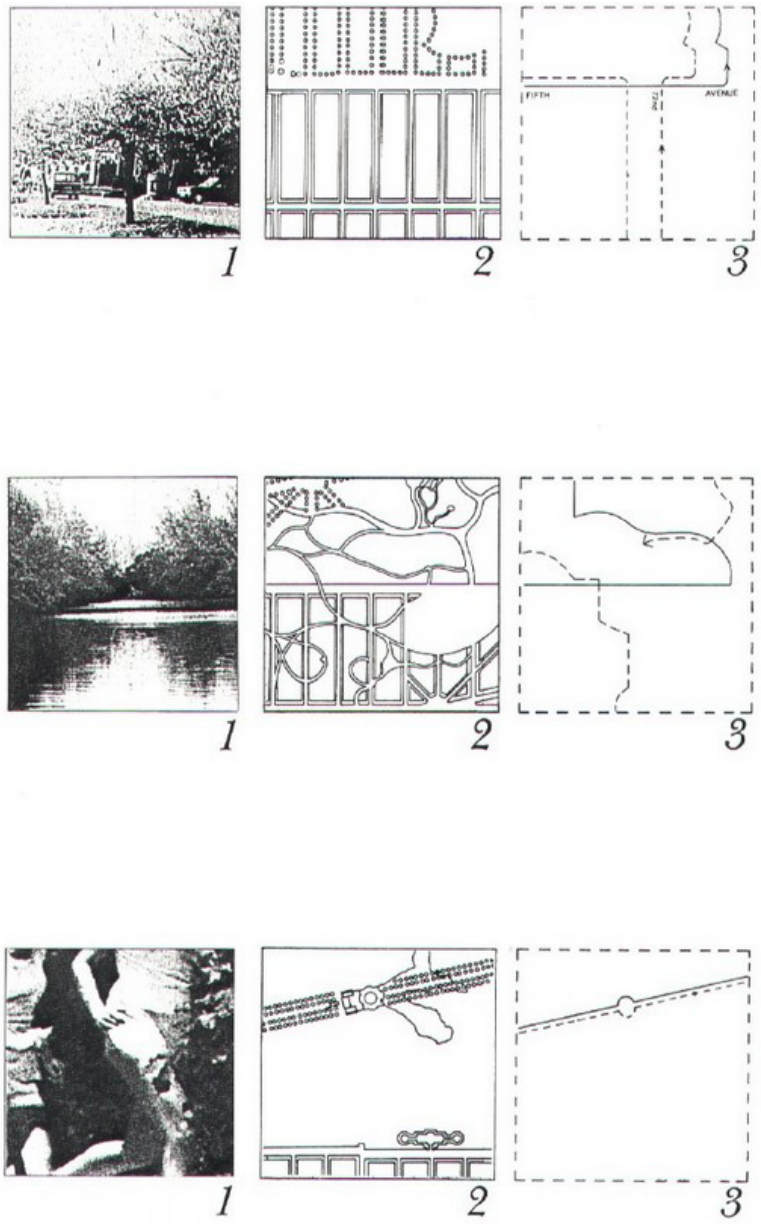

Figure 18: Manhattan transcripts by Tschumi; The Park.[18]

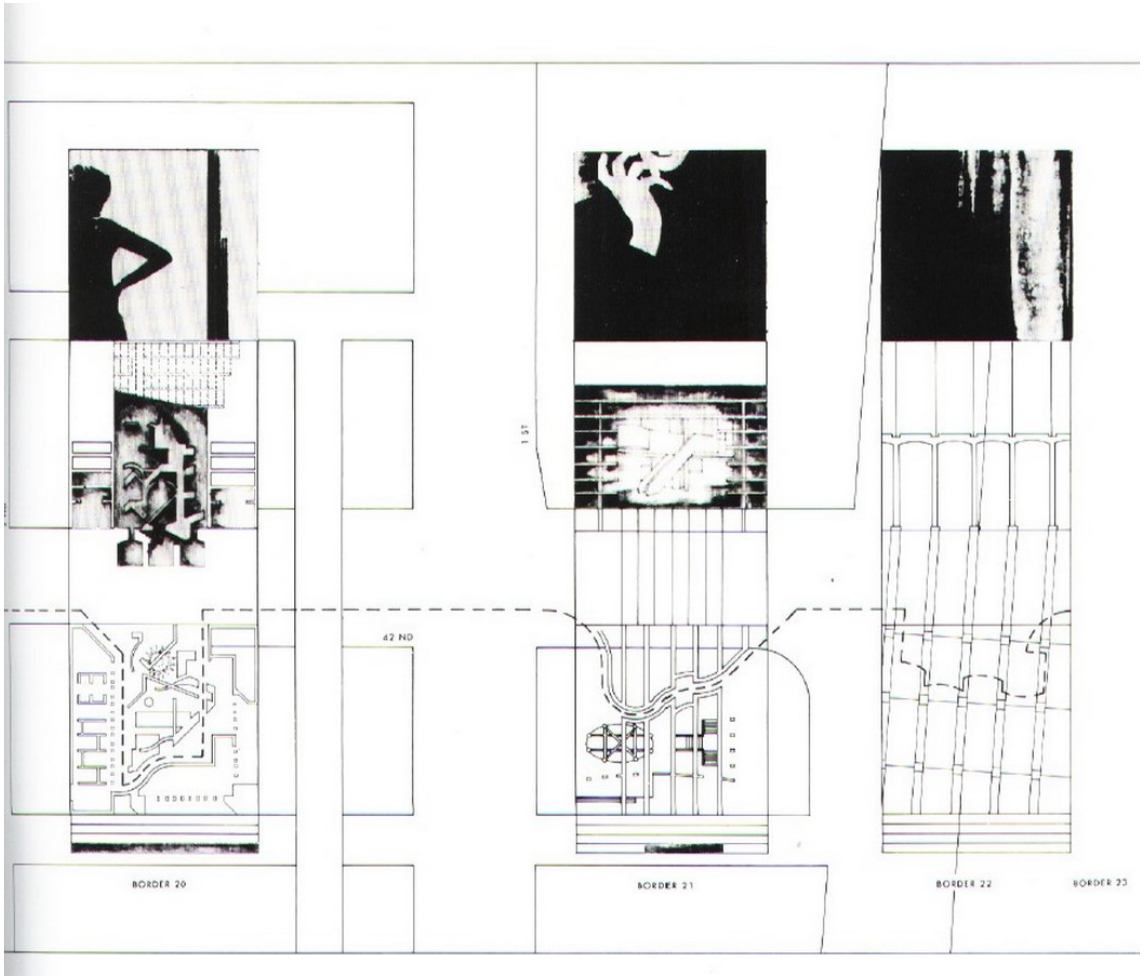

Figure 19: Manhattan transcripts by Tschumi; The Street.[19]

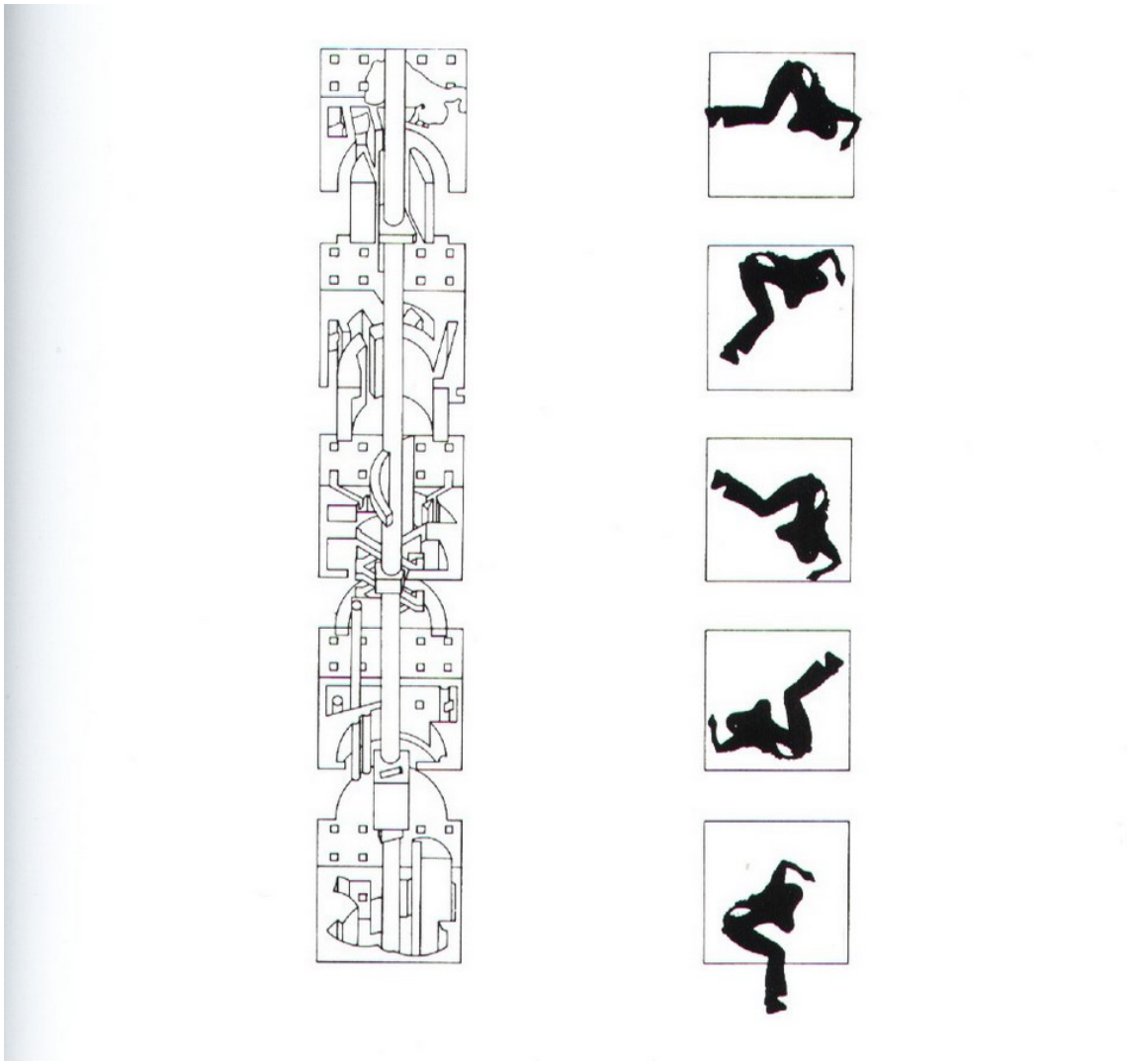

Figure 20: Manhattan transcripts by Tschumi; The Tower.[20]

4.5. Venturi's postmodernism as a mixing and contrasting

Robert Venturi is one of the architects who contributed to postmodernism in the second half of the 20th century. He rejected the reductive goals of modernist architecture and wrote a gentle manifesto for non-straightforward architecture. History, popular culture, symbolism, and complexity were achieved through the layers such as signs and context. He used the history of architecture not as a source of forms, but for creating abstract compositional rules to be applied to contemporary production. The main role of architects is the creation of orderly wholes by using conventional parts with newly introduced ones.

While producing the architectural and urban spaces, concepts such as "ambiguity", "contradictory levels", "the inside and outside", and "the difficult whole" are all presented without directly involving historical context. Instead, they are all analyzed for their compositional value. Therefore, his approach to the design process is an intellectual rigor of formal investigation.

''I speak of a complex and contradictory architecture based on the richness and ambiguity of modern experience, including that experience which is inherent in art ... I welcome the problems and exploit the uncertainties ... I like elements which are hybrid rather than "pure", compromising rather than "clean", ... accommodating rather than excluding ... I am for messy vitality over obvious unity ... I prefer "both-and" to "either-or", black and white, and sometimes gray, to black or white ... An architecture of complexity and contradiction must embody the difficult unity of inclusion rather than the easy unity of exclusion.'' [20]

Through the unconventional organization of conventional parts, new meanings can be created within the whole. If familiar things are organized in an unfamiliar way, they will change the perception of context. Both new and old elements coexist together in the same context.

After understanding the relation between new and old, complexity starts to occur among these elements from diffferent times. They should be

20. R.Venturi, Complexity and Contradiction in Architecture, (MoMA, New York,1977), 16.

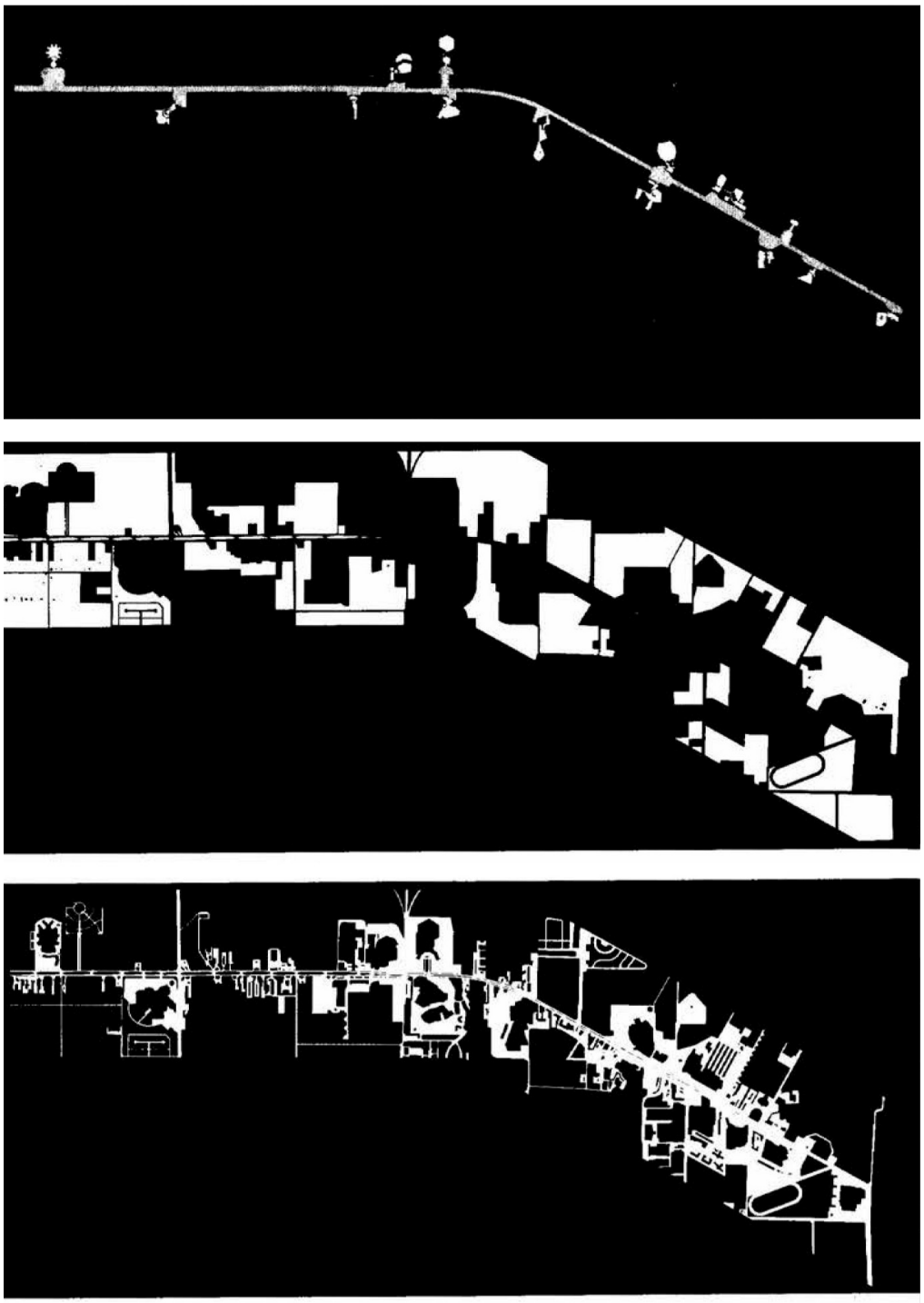

Figure 21: Figure and Ground diagrams. From Robert Venturi, Denise Scott Brown, Steven Izenour, Learning from Las Vegas: The forgotten Symbolism of Architectural Form (Cambridge: The MIT Press, 1977), 25.[21]

derived from not self-expression. Instead, they should follow the interior and outside characteristics, and also the structure of the whole. "Since the inside is different from the outside, the wall becomes an architectural event. Architecture occurs at the meeting of interior and exterior forces. These interior and environmental forces are both general and particular, generic and circumstantial. Architecture as the wall between the inside and the outside becomes the spatial record of this resolution and its drama." [21] If the architecture occurs at the border, the clash of contrasting forces produces the collage of architectural artifacts. In addition, the forms of these architectural artifacts are influenced by the way the city is experienced.

In terms of the urban context, Las Vegas is discussed by Venturi. There are defined vast spaces, high speeds, and complex programs which produce a landscape with symbols. The city creates communication through symbols instead of subtle formal expressions. If these types of transformed cities are compared with ancient ones, the difference is seen in terms of existing signs. Venturi displayed the relationship between the specificity of architecture and urban textures in a series of figure-ground diagrams(Figure 18) on the Las Vegas Strip. This city is just a starting point for him. According to Venturi, the zone adjacent to highways is the zone of shared order and the public zone. The zone far away from the highway is an individual order and the private zone. [22]

In terms of the architectural space, an important topic that Venturi analyzed is the relationship between inside and outside. He argues that the contraction between inside and outside is one of the essential features of urban architecture. The contradiction and complexity can be observed in a form of relationships between the outside and inside. Examples of that process are given from Renaissance and Baroque periods to create meaning in architectural forms. According to him, one of these examples is Francesco Borromini's San Carlo Alle Quattro Fontane in Rome. It has a Greek cross in plan. However, the edges are distorted towards the east-west axis which shows a Latin cross at the same time. In the end, it has a distorted circular plan (Figure 23).

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21. Robert Venturi, Denise Scott Brown, Steven Izenour, Learning from Las Vegas: The forgot ten Symbolism of Architectural Form (Cambridge: The MIT Press, 1977), 86.
22. (Ibid) 88.

These contradictions are seen in every part of the building. In the section, it is shown that there is a dome resting on a Greek cross. Although the overall building is continuous, some of the elements contradict its main logic and the period. Therefore, this gives an ambiguous result.

For Venturi, architecture is a spatial record of clashing external and internal forces. Architectural form is being produced from this clash. This form is a collage which is done by using contrasting forces, and the edges of the collage are acting as a poché. It is a general name for the walls, columns and other solids of a building which are indicated as black on an architectural plan. In the plan, the black walls are acting as the in-between form between inside and outside. Facades are serving to a particular urban pattern from two different sides. When you are inside, the flow of the space is from inside to outside. On the other hand, when you are outside, the flow of the space is from outside to inside. The building was designed according to that tension. This methodology creates the in-between leftover space.

This ambiguous result can be seen as a combination of contrast and complex components. While the fact that the building was built in the Baroque period which is the base of it, it is seen that it also contains many different layers outside of this period.

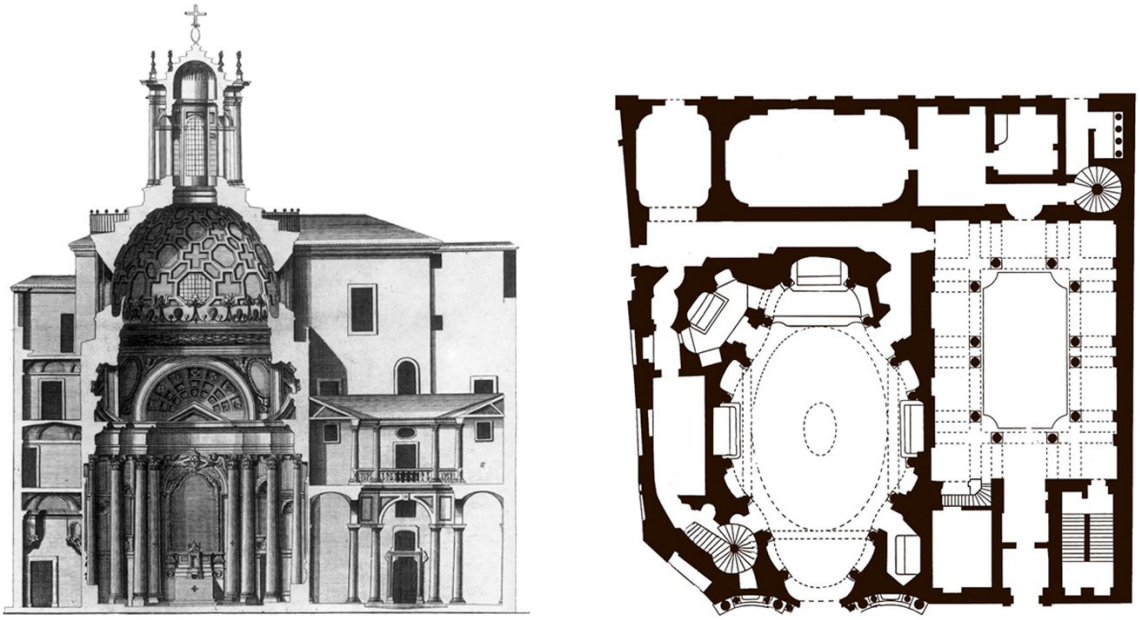

Figure 22,23: Francesco Borromini: San Carlo alle Quattro Fontane; section and plan drawings.[22] [23]

Figure 24: Francesco Borromini: San Carlo alle Quattro Fontane; view from outside.[24]

4.6. Libeskind's destructive urbanism versus Luca Galofaro's planar surfaces

The Berlin City Edge was designed within the framework of the renewal of the Tiergarten district in West Berlin which was a derelict area that had suffered severe damage during the war. Transforming the horizon into an oblique line running 450 meters in length, Libeskind planned a building that straddles the site and opens up the space from a focal point. The meaning of this project can be found in the architectural history of the place and film. A "montage" of references, this city-text tells a story of destruction, dislocation and reconstruction.[23] Libeskind's digital images of Berlin are dissolved and then recomposed its significations. Therefore, a formal composition of different images provides a certain logic to the union of the elements with it.

On the contrary, in Luca Galofaro's situation, the process is quite different. Mies van der Rohe's skyscraper is seen next to a pyramid in Eygpt, and it is related to the surfaces of the objects that are seen as flat in images. The meaning behind it is not destruction and reconstruction again. It is more related to juxtapositions. In addition, the illusion of reality is occurred because of these juxtapositions. Rather than displaying the relationship they have established together, what is intended to be given is the illusion of reality created by coming together of different actual elements.

Lastly, Libeskind's montage can create more effective situations for human perception in searching for hidden meanings and forms. It will create an intellectual framework with several layers for understanding the composition from another aspect. However, in Galofaro's example, they are all standing there as flat two-dimensional surfaces.

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23. Nadine Labedade, Frac Centre

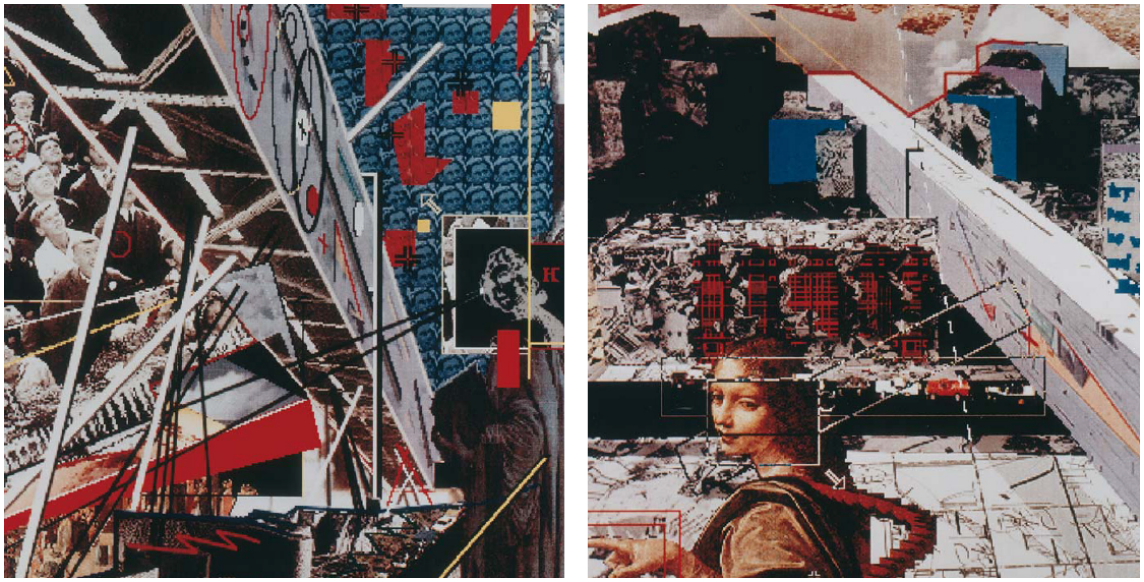

Figure 25,26: Daniel Libeskind, Projection Psycho-Cybernétique de Berlin, 1988.[25] [26]

Figure 27,28: Montages by Luca Galofaro.[27] [28]

4.7. Koolhaas' New York versus Benjamin's Arcades Project

Delirious New York is a retroactive manifesto of Rem Koolhaas, which appeared at a moment when theoretical discourse had become one of the major media of architectural production. It centers on Manhattan's urban development in the period roughly 1890 to 1940. It said that architects did not have to build projects in order to be taken as protagonists. The manifesto attempted to write an alternative history of modern times in terms of both content and methodology. Montage is defined as a principle for the production of historiographical meaning. Koolhaas applies Dali's "paranoid-critical method" to produce meaning based on latent images to show the adjacency and simultaneity of opposing ideas. According to Koolhaas, a new experimental spatial order of metropolitan space is achieved by Manhattan.

Two main elements which are used in creating the montage principle are utopian visionary and the pragmatic builder. They enable a dialectical approach that turns into one synthetic point at the end. If Manhattan is defined as a montage and the skyscraper repeats Manhattan on a smaller scale, individual montage elements can be changed over time. Each skyscraper is expanding in just a vertical direction which leads to a culture of congestion. This way is the principle of this utopian visionary.

With respect to Koolhaas; "The fatal weakness of manifestos is their inherent lack of evidence, Manhattan's problem is the opposite: it is a mountain range of evidence without manifesto."[24] Therefore, this manifesto is named as a retroactive manifesto by him.

Benjamin's Arcades Project is another example of using montage as a tool for writing history. It is one of the examples of literary montage because of bringing together all the collection of texts. They belong to experiences of life in 19th century Paris. Montage is seen as fragments while completing the process. Benjamin said "Finished works weigh lighter than those fragments on which they labor their entire lives." He explained this approach to the process by focusing on the arcades of nineteenth-century Paris glass-roofed rows of shops which are directly centered elements of consumerism in this

24. Koolhaas, Delirious New York, 9.

Figure 29: Rem Koolhaas and Madelon Vriesendorp, The City of the Captive Globe project, 1972. The Museum of Modern Art, New York.[29]

period. He represented a montage of quotations and several published sources by arranging them in categories such as ‘‘Fashion’’, ‘‘Advertising’’. His main purpose is showing the lost times embedded in the spaces of things by using montage.[25]

The way of arrangement of the book and the several topics inside this structure are two different features but at the same time, they both have their base in the logic of montage. The structure is idiosyncratic. The convolutes refer to letters of the alphabet. There are sometimes individual lines, sometimes multi-paragraph analyses which are ordered with square brackets. This numbering system is coming from the pieces of folded paper that Benjamin wrote on before. His handwriting also changes according to two different types of textual sections. A larger typeface is for his writings, smaller ones for citations.

The publication of Arcades Project has given rise to different methods for editors. They started to think about ordering the fragments. This reconstructive approach provides a discussion about creating a multi-layered palimpsest by using a book.

In Delirious New York by Koolhaas, Manhattan directly acts as a montage with its floating blocks. Every block is seen as a small-scale Manhattan in itself. It is a new tool for writing history by showing Manhattan as a city inside the city. This theoric base is more understandable after seeing Manhattan in reality. Therefore, it is a manifesto coming after the application.

In Benjamin’s case, it is also shown as a new approach to looking at history by using not forms or cities, but texts, phrases, or quotations from this period for finding the lost times in urban history and city life of Paris in the nineteenth century. This comparison is a significant example of showing the use of the montage in two different mediums. Both of them are acting as radical manifestos as the date of release but at the same time, these are two important instances of perceiving the urban reality from diverse perspectives in both visual and writing matters.

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25. Martino Sterli, Montage and the Metropolis (Yale University Press, 2018), 228-232.

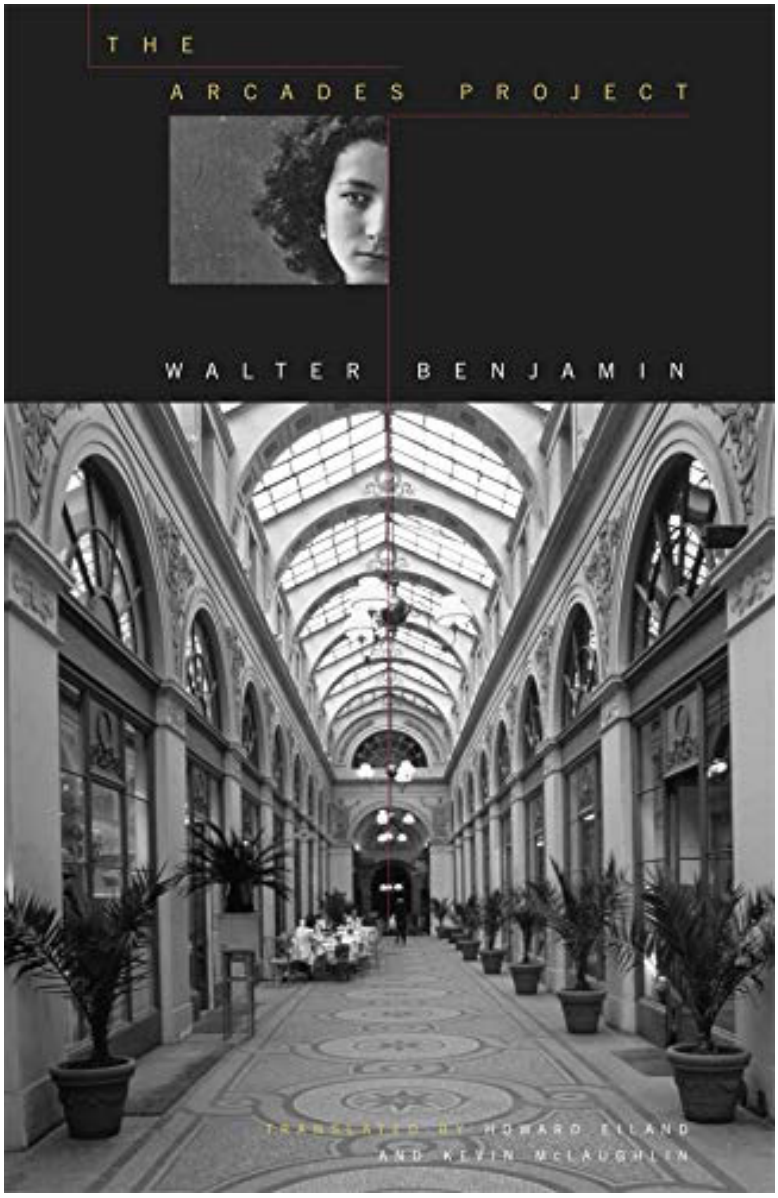


Figure 30: Walter Benjamin's The Arcades Project.[30]

B.

A COMPOSITIVE GENERATOR; FROM MONTAGE TO ARCHITECTURAL SPACE

A critical analysis from the first chapter provides a base for the chapter of the process. A compositive generator is defined for this design process starting from montage and ending with architectural space. This emphasizes the main research question of the thesis which seeks a way to translate the theory of montage into an architectural composition.

A compositive generator is a three-dimensional machine that consists of several layers. While this generator has a systematic structure in itself, it also acts as a two-way machine that enables spontaneous relationships to be formed. The spontaneous part comes from the principles of montage itself. It allows the establishment of relationships that have not been created before. In addition, the generator and layering system which are defined at the beginning ensures that this randomness is done in a certain order. The end product begins to exist as a result of the tension between these two separate situations. Firstly, the system is defined both formally and logically. Layers are grouped from beginning to end according to the definitions of certain elements. The number of layers can be increased or decreased, but they consist of four main basic groups such as inputs, sequences, experiences, and the city. When they all come together inside the generator, they start to act as a three-dimensional composition. On the other hand, first, each one of them starts to work together with a two-dimensional base. Therefore, the system is divided into two main cores; regulating relationships between different layers in three-dimension and internal relationships within each layer. The most important generator element which provides the transition between these two different systems is the "grid". It is the abstract regulating element of all the generators. Although it is seen as a limiting component, it is a fact that it allows the formation of many new connections when it is used during the assembly process. It starts to become an element that gives flexibility. Secondly, after the system of the generator is defined, the spontaneous situation established within it is another significant case. Even if the grid structure remains stable, the inside of each frame may change according to the added inputs. Therefore, this situation creates an infinite process inside the generator. For instance, there can be six squares or nine squares as an input. Each time the process works differently as the initial inputs change and give a different result as the final product. In this chapter, every step of the process from the theory of montage to architectural practice is explained. The most important point here is not the input or the output, but the design of the process and seeing the process itself as the main source of the design.

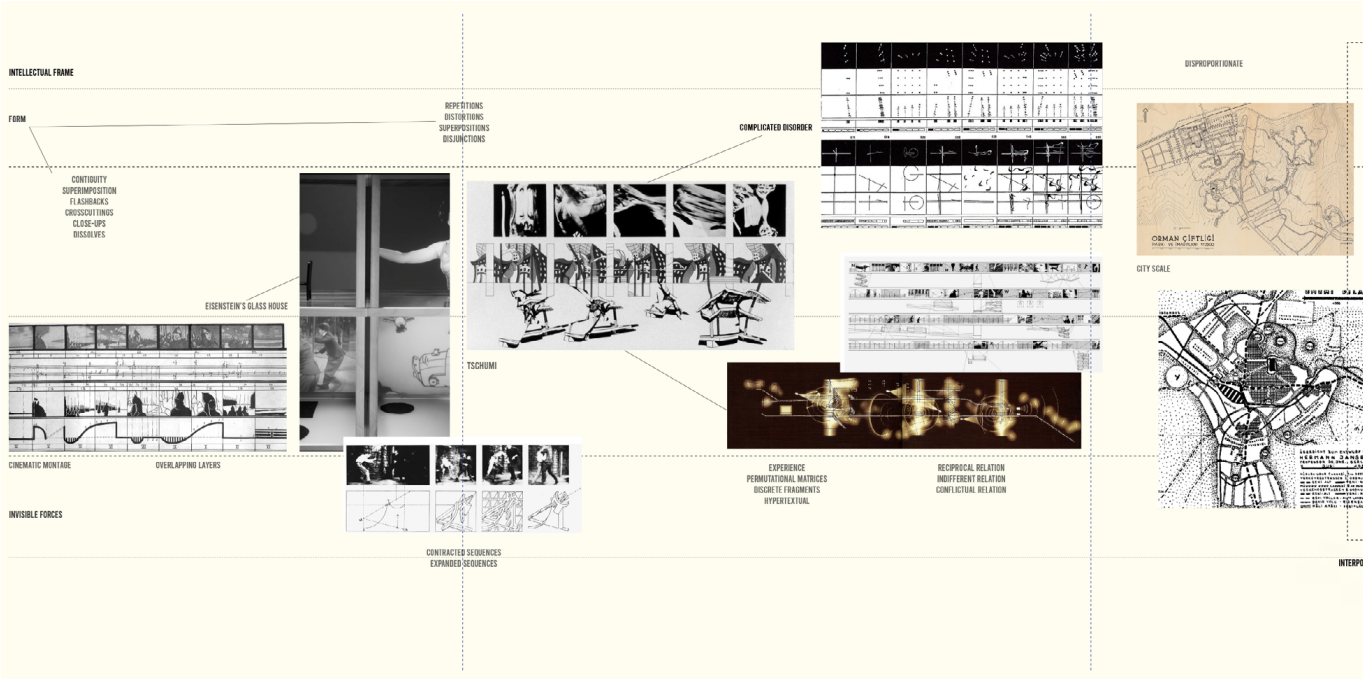
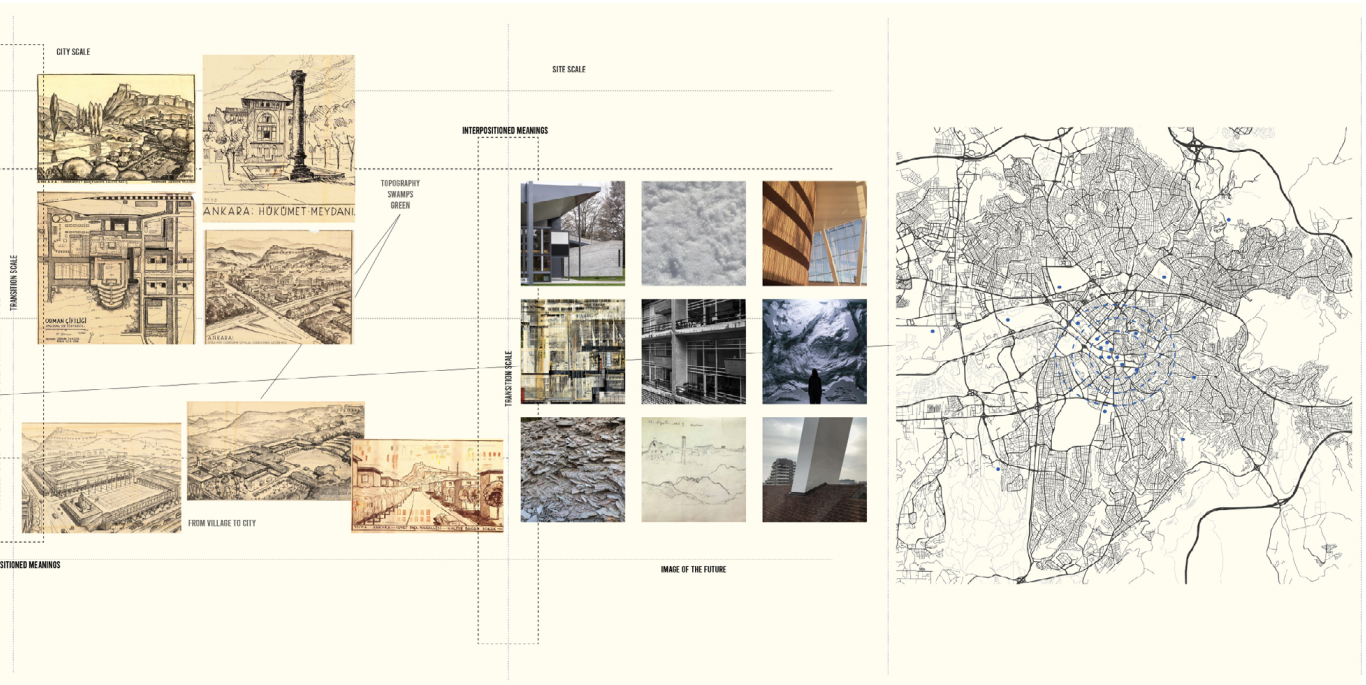


Figure 31: Base board of the experimental process.[31]


CITY SCALE
SITE SCALE
INTERPOSITIONED MEANINGS
TOPOGRAPHY
SWAMPS
GREEN
ANKARA: HÜKÜMET MEYDANI
TRANSITION SCALE
TRANSITION SCALE
FROM VILLAGE TO CITY
SITIONED MEANINGS
IMAGE OF THE FUTURE

1. Nine Images, Nine Squares

The design of the generator starts from the collective memory. As an author, there are many components in my memory. First filtering and detecting these elements more systematically is a very crucial step. The description of this system simply begins with certain square frames being elements that highlight each memory component. It is not an important factor that the selected image fits completely. the square covers and highlights the desired part of the image. The determining factor for choosing the part to be emphasized is its formal composition of it.

Formal composition allows looking at each image from a certain perspective which represents an architectural aspect. While this can be a real structural element, it can also be a purely abstract painting. They all come together on two common grounds. They are being formal images and take place in the squares.

In Figure 32, we see the first step of the process. The number of squares is determined as nine and they are always in equal measure in both vertical and horizontal directions. When these nine squares come together, they create the whole composition. Even if there is a decrease or an increase in the number of frames, it is still a composition. Therefore, regardless of the total number, the composition can be created with any number of inputs. But as a first experiment, nine images fit into nine squares.

As the next step, the collective memory is placed in these frames. This collective memory belongs to me as the author. Any experience or memory can be included in this, but the important thing is that it should present a visual experience in form. Apart from this, there are no restrictions or rules in the selection process of the pictures. Furthermore, six images that will be explained were taken by the author.

To start with the first row, the image on the left is a view from Le Corbusier's, one of the pioneers of Modernism, a pavilion in Zurich, Switzerland. It is a Swiss art museum that is dedicated to the work of the Swiss architect. It is located near Zurich lake and in between a landscape with trees. Significant components such as concrete, steel, and multi-colored plates are seen as signatures from him. There is also a free-floating roof as an

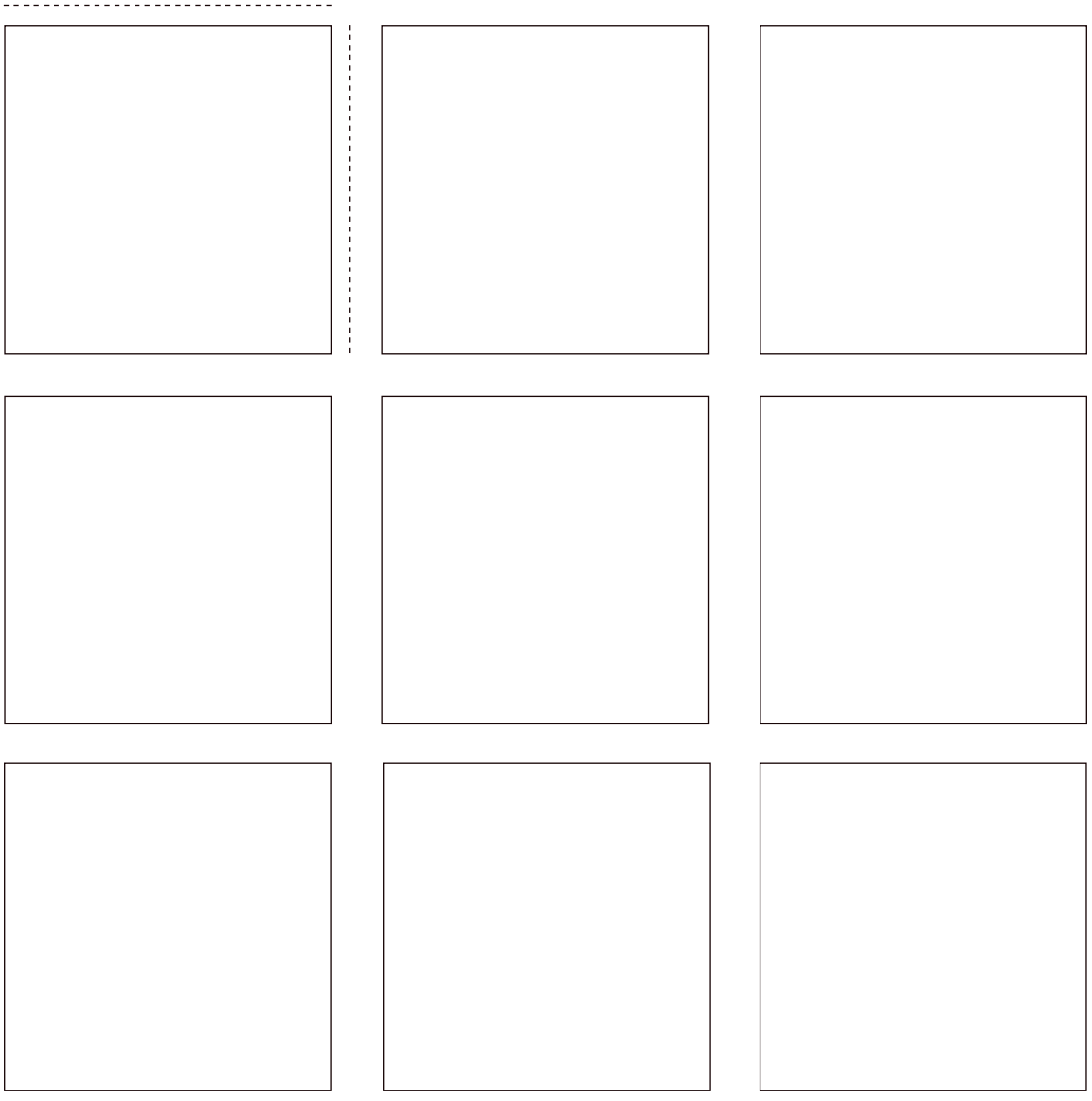


Figure 32: Frames of nine squares.[32]

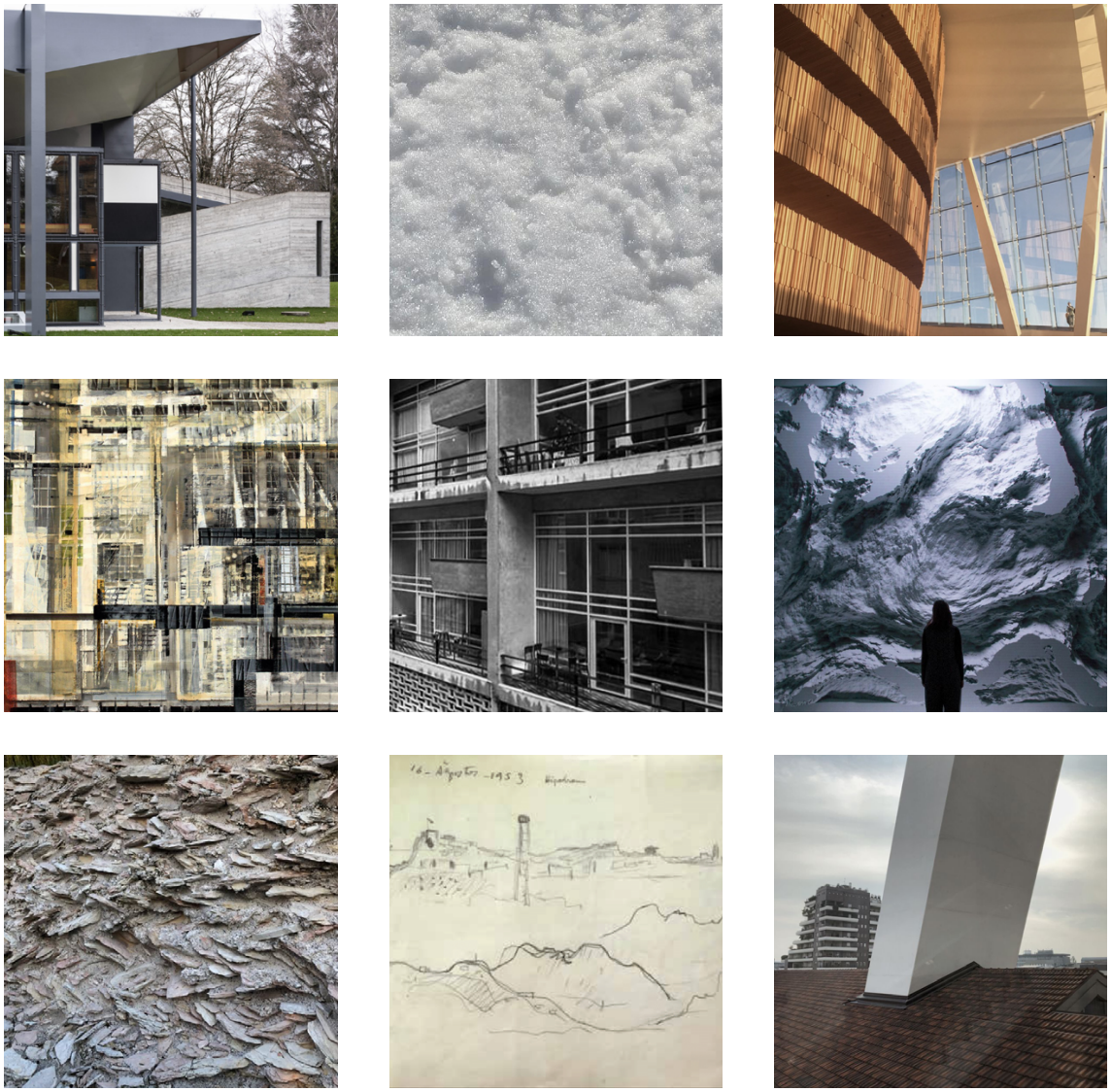


Figure 33: Nine squares with images from collective memory.[33]

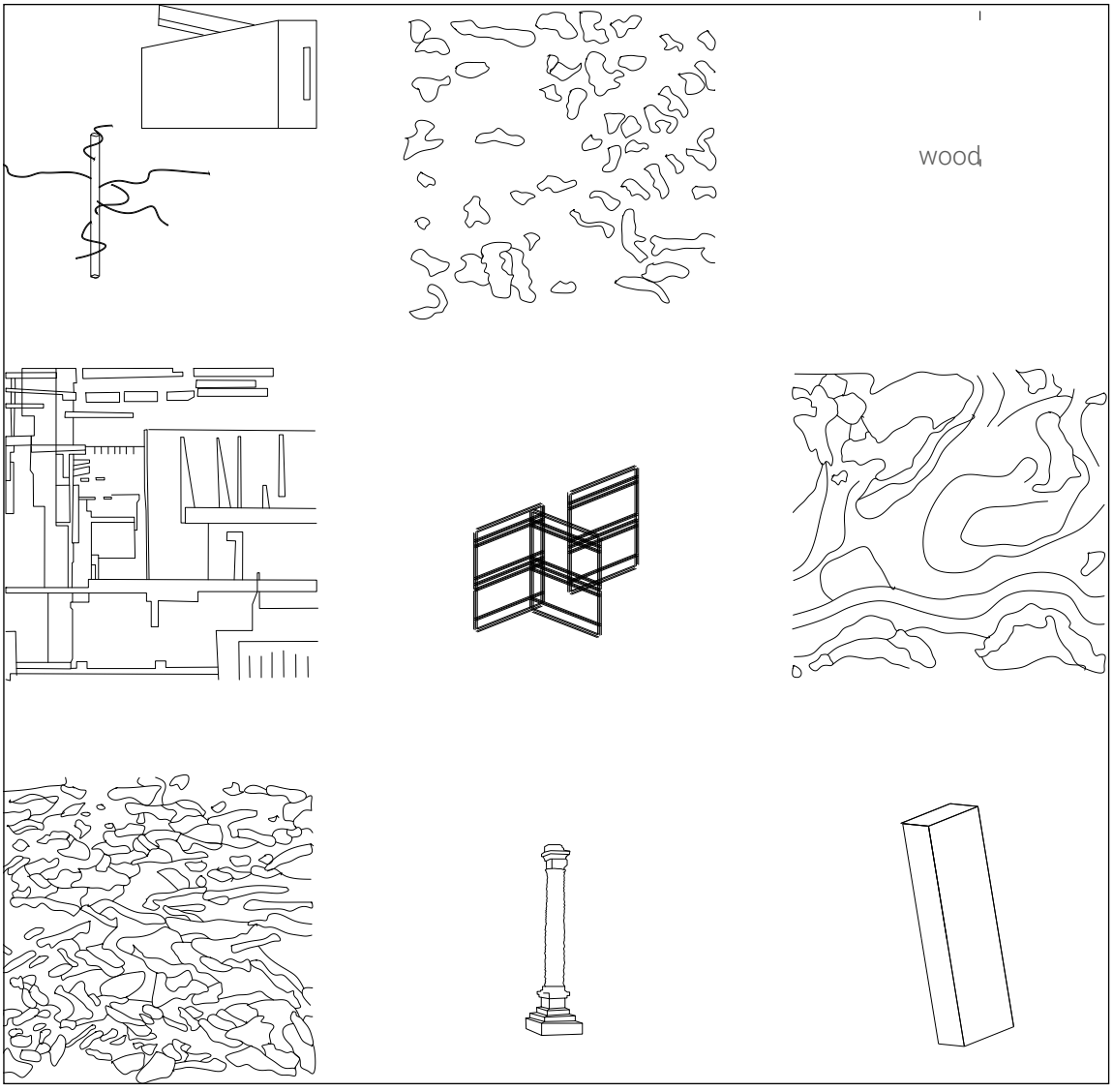


Figure 34: Redrawing of nine squares.[34]

element for cover. These are seen in the composition of the image. The middle image in the first row is a texture of random snow on the ground in Ankara, Turkey. The background idea is coming from the weather conditions in Ankara. It is a city where the winters are very cold and snowy. There are always days when the snow stays on the ground for a certain period. Therefore, this image is a formal representation of the snow by emphasizing its texture with a square frame. The last image from the first row is an example from the entrance hall of Oslo Opera House in Norway. It is the home of the Norwegian National Opera and Ballet, and the national opera theatre. The crucial part of this image is the material selection. The big glass facade and wood inside the core for the main auditorium are intersecting and create a composition together. Another component that emphasizes this relationship between different materials is the daylight. The glass facade allows it to get inside and it creates an overlapping situation with the wood part.

In the second row starting with the left image is an abstract painting by Canan Tolon who is a Turkish artist. Her works are in the mediums of printmaking, painting, drawing, and installation. This image shows one of the examples of printmaking. It is one of the instances which is complex in terms of formal structure and coloring and contains many layers at the same time. The middle image in the second row is a photograph from the front facade of Cinnah 19 which is one of the first examples of modern buildings during the 1950s in Ankara, Turkey. It is a housing complex that consists of two-story apartment units on every floor. The north facade seen in the image is a facade that reveals the cellular geometry of the apartment units. The element which completes the facade of the two-story apartment is a large glass curtain wall with its frame divided into units.

The last image from the second row is an artwork of Refik Anadol who is a young Turkish new media artist. His projects consist of data-driven machine learning algorithms that create abstract environments. The artwork in the image is named Melting Memories. It represents a translation of the elusive process of memory retrieval into data collections. In other words, it is a creative vision of "recollection".[26]

In the last row starting with the left image, it is an image of one of

26. Refik Anadol, "Melting Memories"

the walls remain in an archaeological site which is located next to Lake Garda in Italy. Since it is a close-up photograph, it is possible to observe the formation process and details of the wall. It can be analyzed that the masonry elements have taken their shape and stood over the years with the overlapping of the elements.

The middle image is a drawing representation of the topography of Ankara by artist Eşref Üren. He lived in Ankara for the last 45 years of his life and did several analyzes during his life in that city. Topography is one of the main features in terms of representation of Ankara. Since the city was built on certain hills, it is a significant feature in the expression of the city in a formal way.

The last image of nine squares is a photograph from the intersection point of old and new buildings in Fondazione Prada by architecture firm OMA. It is located in Milan, Italy, and is a center for art exhibitions that are shared with the public. It is a complex consisting of both preservation and the creation of a new architecture. This image is a radical example of the relationship between the new and the old. The white column of the high-rise building as a new intervention establishes a direct formal relationship with the roof of the old existing building on the site.

After analyzing the sources of all the images and what they express formally, redrawing them or making certain quotations from them are the next steps in the process. New drawings are made completely flexible and free in order not to lose the potential created by spontaneous relationships. Therefore, they can be done in both two-dimensional and three-dimensional.

Starting with the first row, two components are coming from the first image. They are a ramp with concrete sidewalls and a tree from the landscape. They were selected because they are acting as the main characters of the visual composition. They are redrawn in two-dimensional but they represent three-dimensional components. In the second example, the texture of the snow is redrawn for understanding the natural pattern of the environment. It represents a two-dimensional abstraction. In the last example, redrawing process is a little different from the first two images because it is translated as just a material selection which is wood. Therefore, the word "wood" is seen and the choice of material is taken as a reference

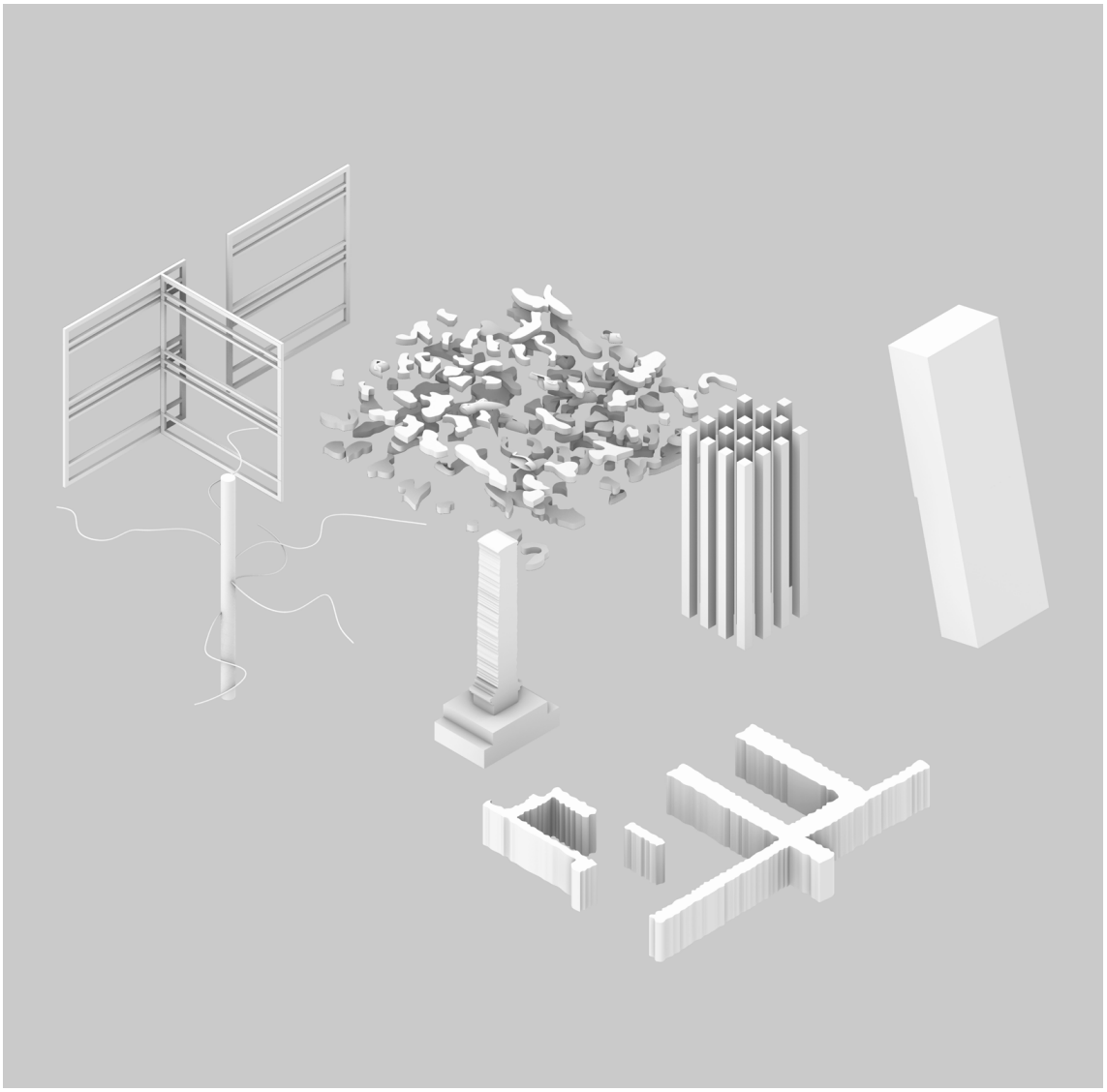


Figure 35: Initial collective 3D models of inputs.[35]

for form-making.

Continuing with the second row, in the first image several layers of the abstract painting are redrawn on a 2D canvas. While drawing the layers, colors and formal differences are taken into consideration. In the second instance, intervention from the modern building in Ankara is the main North facade element; two-story frames of glass. They are directly taken as three-dimensional elements. In the last one of this row, it is an abstract representation of art painting which is similar to the first image of this row. In the last row, the first redrawing shows the complex pattern of the historical wall. The horizontal and vertical flow of the materials can be read by the abstraction of the existing texture. In the next instance, a historical column is redrawn. It is one of the monuments which represents the history of Ankara in addition to its topography. It is drawn directly as a three-dimensional element. In the last image, there is a 3D column representation from Fondazione Prada. It is the main element that connects the old and new parts of the complex. Therefore, it is taken for redrawing process for emphasizing this radical intervention in reality.

Defining square frames, locating the nine images inside these frames, and redrawing some parts or all of them are three main initial steps of the design process. After understanding some components of redrawing process abstractly, 3D modeling starts. This modeling step helps to understand the different scales and potentials of each component in an architectural space. The inputs include not only nine images, but also other elements from the universe.

In Figure 35, the collective 3D model is seen with several inputs. The most crucial point of starting modeling is the flexibility of playing with different scales. For instance, in reality, the white column in Fondazione Prada is much larger in scale than many elements next to it, while this difference disappears or decreases in modeling. Another important point is that some two-dimensional abstract drawings become three-dimensional and begin to define architectural space. They can turn into a structural element, a sitting unit, or a landscape element such as trees, and soil grounds. The general composition is a complex of elements both from real and abstract worlds. Therefore, new links and imaginations will be constructed which are not been defined before.

Figure 36: 3D models of inputs.[36]

If we examine some elements briefly, firstly, the model of the slender tree in the example of Le Corbusier's Pavilion is seen. It is modeled on the human scale as a dimension, taking its reference from the image described. The model taken as the second example is an experimental column that contains several smaller slender columns.

Furthermore, the texture of the snow is modeled in the third image according to its formal natural language. The image is translated from two-dimension to three-dimension during this process. Therefore, there is a collective 3D image of certain elements. In the next instance, the white monumental column from Fondazione Prada is shown with its tilted structural condition.

In addition, there are three more example images. The first one is showing the frames of the glass facade. It is an experiment for the composition of using three frames together. They start to define an architectural space when more than one of them comes together. The base of the second image is coming from an abstract painting with different layers. 3D modeling of it can be translated into a sitting unit or a regulating element for a public space. The last image is a monumental column from Ankara's history. Although it is not the same as the real one, as a representation, it is important to preserve the historical past and that monumentality in scale.

To sum up, in general, new interventions are all described as new imaginations. While doing this, the question of "how we can translate inputs into new situations by focusing on the formal features of each input" has always sought an answer. To answer this question, doing three-dimensional analysis and experiments with different possibilities will be the most efficient way.

2. Transition between Different Scales by “Grid”

After creating the base with nine squares for the experimental process, the second step is to determine how the generator will work in three dimensions and with several layers inside. The first layer is the inputs described before, but also different layers will come on top of it. The relationship types and scale definitions will occur for each of them by the "grid" chosen as the main element of the generator.

According to Rosalind Krauss, the grid declares the space of art to be at once autonomous and autotelic.[27] The peculiar power of the grid, its long life in the specialized space of modern art, arises from its potential to preside over this shame: to mask and to reveal it at one and the same time.[28]

In addition to its formal composition, the grid also serves some mtyhs. Like all myths, it deals with paradox or contradiction not by dissolving the paradox or resolving the contradiction, but by covering them over so that they seem to go away. [29] According to Krauss; " The notion of myth I am using depends on a structuralist mode of analysis, by which the sequential features of a story are rearranged to form a spatial organization. By spatializing the story into vertical columns, they are able to display the features of the contradiction and to show how these underlie the attempts of a specific mythical tale to paper over the opposition with narrative.[30] Therefore, the grid can be seen as a matrix of knowledge.

The lines of the grid give the flexibility that comes from its ability to exist in the line between material and metaphor. In this case, the grid lines themselves become relation-defining elements. These new relations start to appear in both horizontal and vertical directions inside the matrix. Furthermore, the grid is a way of canceling the claims of natural objects to have an order particular to themselves. New relations define the new knowledge in a world apart concerning existing objects.

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27. Rosalind Krauss, The Originality of the Avant-Garde and Other Modernist Myths, 10.
28. (ibid) 12.
29. (ibid) 12.
30. (ibid) 13.

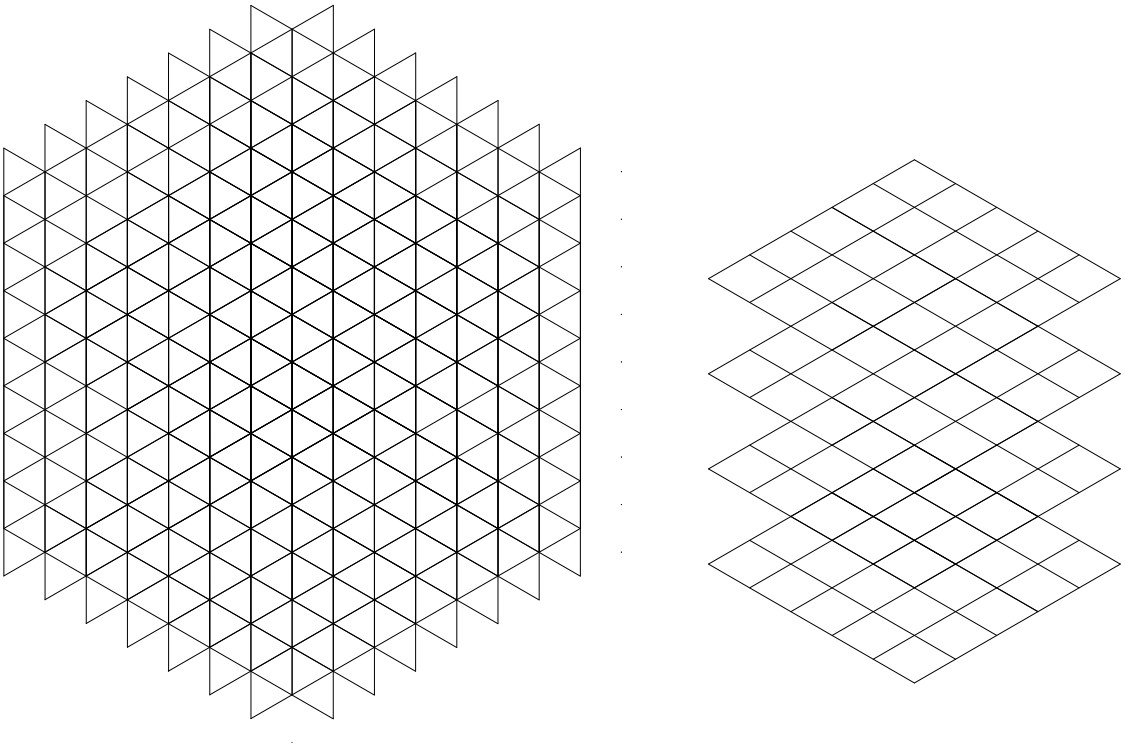

Figure 37: Diagrammatic representation of 3D matrix and layers.[37]

When the scale parameter takes into consideration, the fact that elements that are not on the same scale and in a relationship can meet in the same collective ground by the flexibility provided by the "grid". This transition between different scales allows a new image that is just specific to defined scenarios. The initial objects are changing, and as a result, scenarios and imaginations begin to change as well. Therefore, the process is rewritten every time. The elements that stay the same and regulate are the "grid" and generator.

Another significant topic about the grid and generator is how to define framing and locating the inputs and objects. The squares are sometimes limiting but sometimes completely open to the relationship. As explained earlier, grid lines act as autonomous. They regulate the general flow.

According to Krauss, there are two main modes of relating the grid of the artwork to the reality of the rest of the world: centripetal and centrifugal. The former implies a drawing in toward a center, establishing “something complete and internally organized,” bounded by implicit or explicit limits. The latter, on the other hand, speaks to a “theoretical continuity of the work of art with the world”—the extension to infinity so characteristic of Modernist art. Thus, the ordering lines of the grid can be seen to take on deeply contrasting tendencies: in one sense, coming to serve as borders that delineate a finite fragment, while in another sense resembling open trajectories, that seek to extend the logic of the grid outward to an infinity.[31] An example can be given to this situation. When we are looking at a landscape through a window, the frame of the window arbitrarily truncating our view but it is certain that the landscape continues beyond the limits of the window.[32] Concerning Krauss' definition, some frames are left complete and finite. Images in this type of frame cover the entire square and the areas outside the square are cut off. In other types, images may protrude beyond the frame or not fill the frame.

In Figure 38, the operations on some selected images are explained in three separate columns. In the first column, images are shown in their original dimensions. There are several different options such as photograph, drawing, sketch, and painting in the first column. Some of them have already

31. Rosalind Krauss, "Grids", October, Volume 9(Summer 1979)
32. Rosalind Krauss, The Originality of the Avant-Garde and Other Modernist Myths, 21.

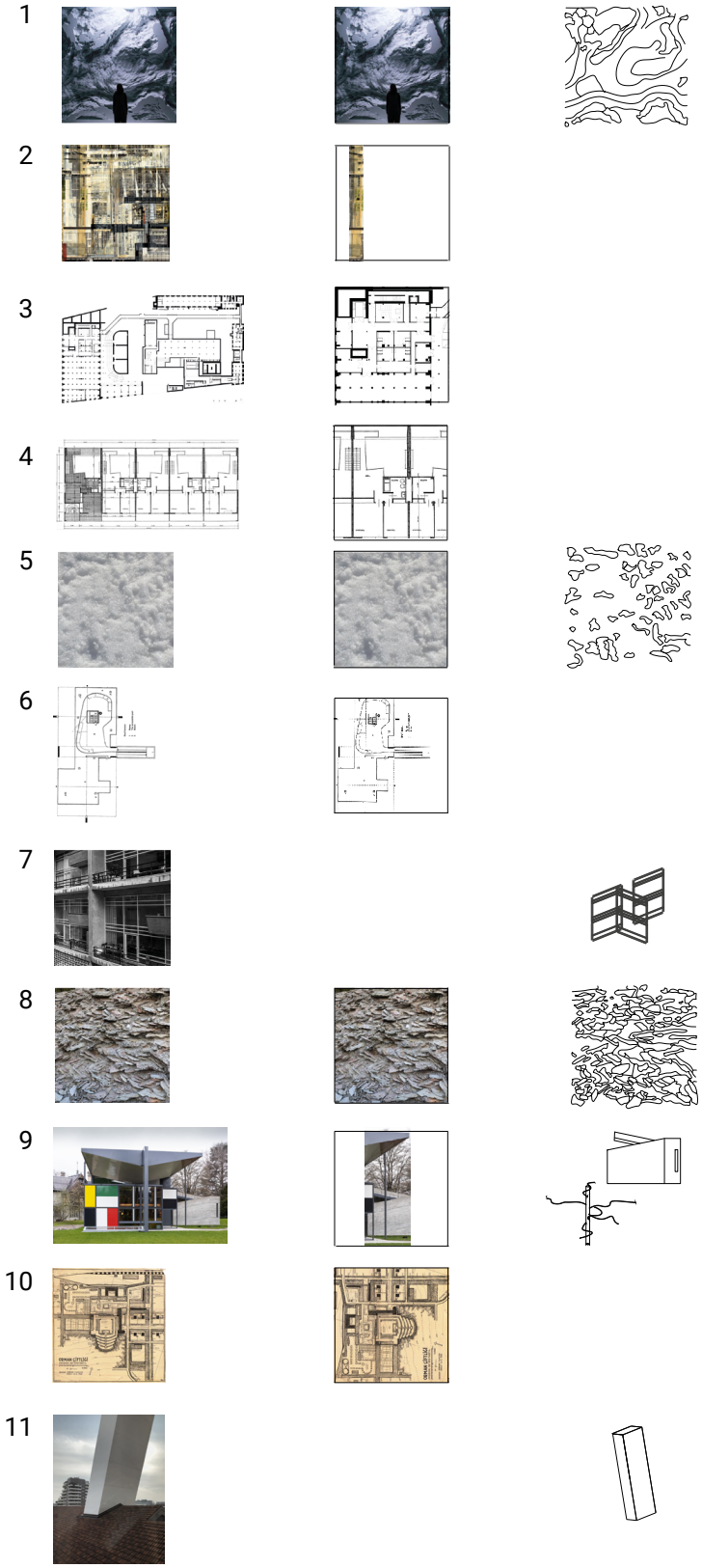

Figure 38: Process of framing and redrawing inside generator.[38]

a square frame. On the other hand, some of them have a rectangular form or no boundaries. In the second column, after understanding the different forms of images in the first column, images are placed inside squares of equal size. In some images such as the first example, the square stays the same when the image is translated from the first column to the second column. In this type, there is no difference in terms of content or formal composition. Furthermore, there are some examples whose format in the first column exceeds when they are placed in the square frame, and the parts outside the frame are cut off. For instance, in the third image which is a drawing of the ground floor plan of Fondaizone Prada, there is a cut in the drawing when it is translated from the first column to the second one. This operation is not done according to any rules, it is a completely spontaneous installation. In the third type, whether the image fits in the frame or not, only a certain part of the image is inserted into the frame. For example in the second image. A very slender part near the left side of the image has been cut out and placed in the frame. In the fourth and last type, there is no intervention between the first and second columns. İmages are directly translated from the first column to the third column. In the third column, redrawing phase is shown. It can be done by using the entire frame or certain elements. There is just one exception. In some examples, there is no drawing in the third column. The reason for this is that the drawing itself is already seen in the second column and it will be used for the next steps in the process.

There are two types in the redrawing phase. The first type is to draw the image inside the frame the same. For instance, the first image can be considered for this type. A two-dimensional drawing is created for showing the pattern of the abstract digital installation. The second type is related to taking and modeling certain elements in 3D. They are always the main elements in the composition of images. As in the seventh picture, this can be the outer frame of a glass facade, while in the ninth picture it can be a tree as a landscape component. In addition, while the concrete wall and ramp can be taken and modeled directly, a monumental column can be modeled. If we look at the definition of these three columns and their relationships between each other, it is observed that there are both a system and a spontaneous state by the "grid". While there are defined finite fragments, there are also incomplete or unfinished fragments with points open to discussion. Therefore, many of them are still open to experiments and relations which can define new and unexpected imaginations in the whole composition.

3. One Generator, Infinite Process

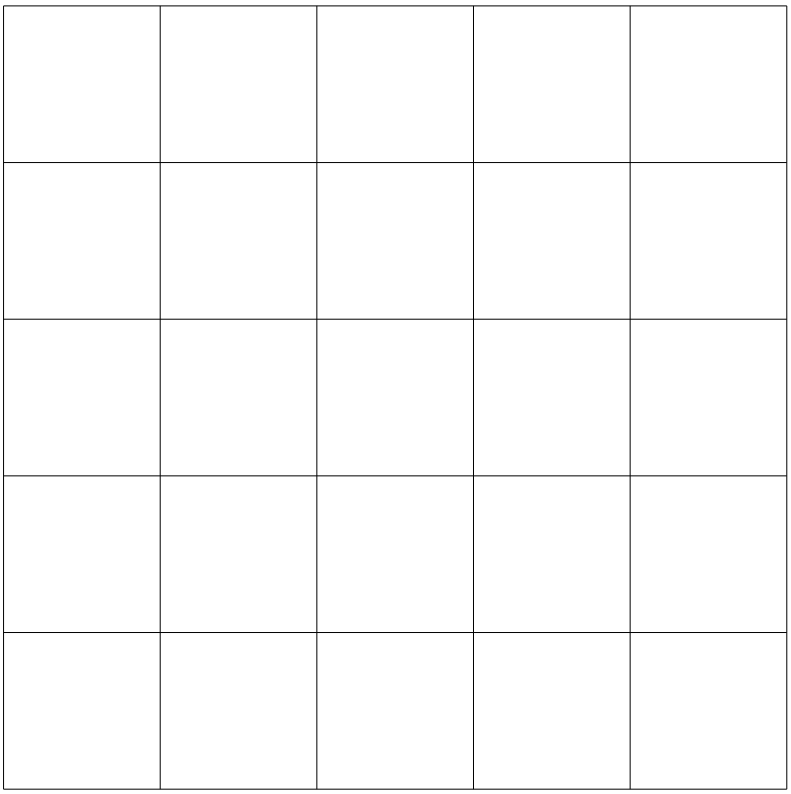

Figure 39: Abstract diagram of 2D grid.[39]

After the first two topics, if one process is considered in more detail, established relationships will be explained more clearly. Until now, each frame was observed individually, and the general framework of the generator and grid were mentioned as regulating elements. This sub-topic will be about the composition that is formed by the juxtaposition of each frame and the explanation of the relations between these frames. In Figure 39, the simplest form of composition is seen. This is the grid system created by horizontal and vertical lines. Each formed square represents an image. This five-by-five grid is just an abstract diagram for initial experiments. Its number may increase or decrease. In addition, it can be filled or not be filled with images. The important thing here is that the composition always takes reference from this two-dimensional basis for creating its relations.

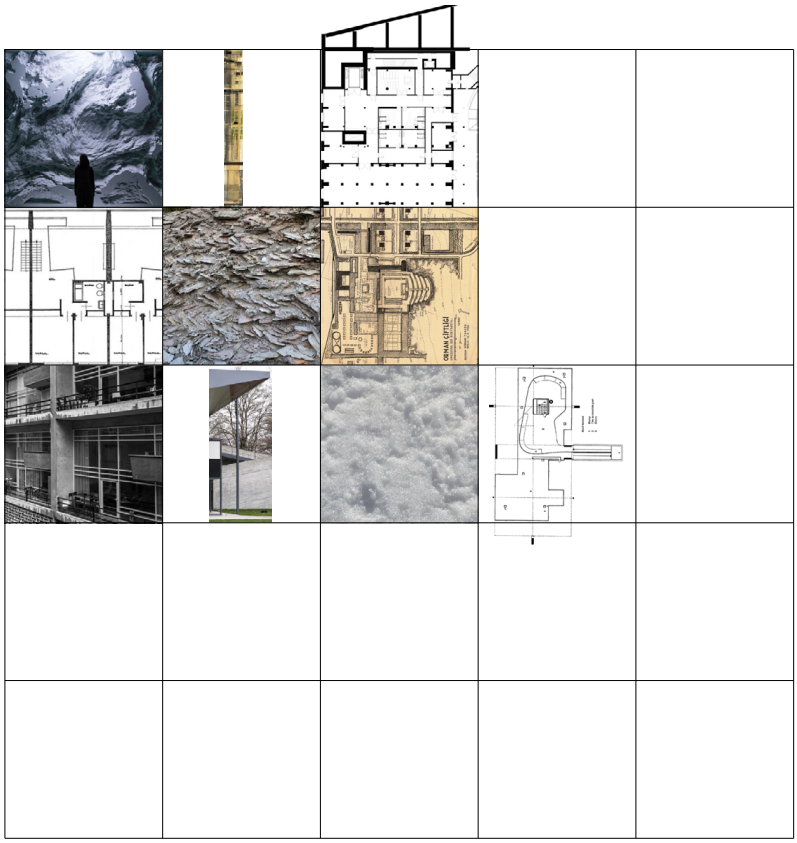

Figure 40: Abstract diagram of 2D grid with placed images.[40]

In Figure 40, by protecting the base abstract diagram from the previous figure, each image is inserted in individual frames. The scale of each picture is adjusted to fit each frame. The place of any image is not determined according to a certain rule or order. It is a completely spontaneous and random settlement. As in the first experiment, the number of images is not equal to the total number of squares. While this number may increase or it may decrease. It can be said that while taking place inside the frame emerges, as a rule, there are no restrictions on placements and number of the inputs.

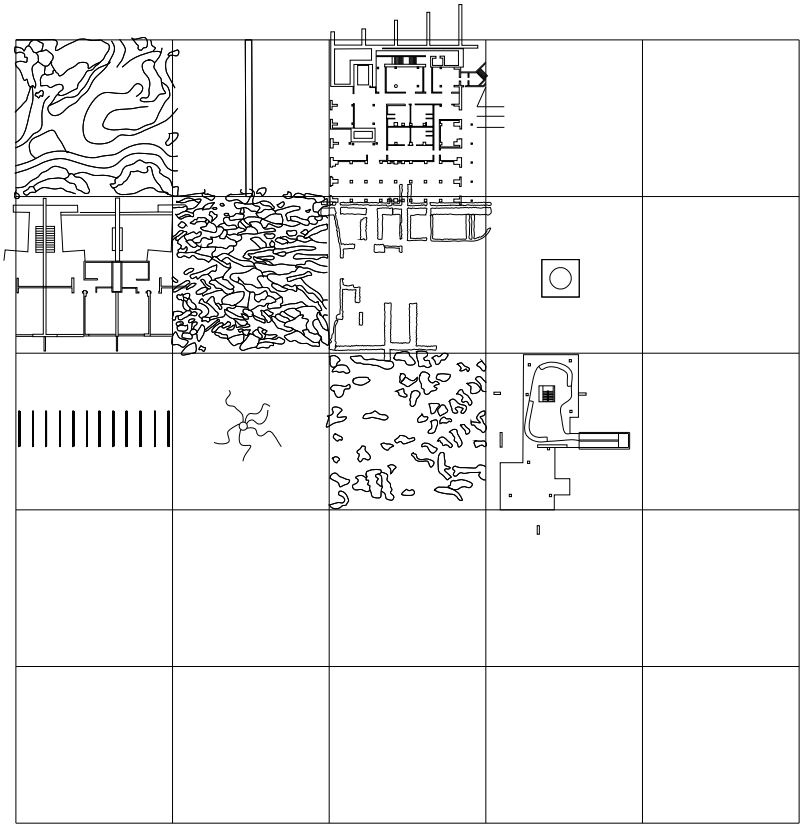

Figure 41: Abstract diagram of 2D grid with redrawing.[41]

In Figure 41, it is shown that the composition is created by the side of the drawing side after the images are placed. During the redrawing phase, the plan views of images are always placed because the main goal is to create a collective top view in this general composition. In the redrawing phase, assuming that three-dimensional elements are taken directly from some images and their plan views are drawn directly. This composition will form the base of the first three-dimensional experiment in the further steps.

4. Components of Generator

Until this sub-topic, the general structure and layer of inputs are explained. In this part, the other layers in detail and the relationships between different layers will be explained. After the redrawing phase, a layer of inputs is complete and placed at the first level of the 3D matrix.

The second layer is named as sequences after inputs. In this layer, there is a stage of converting two-dimensional drawings to three dimensions. How many times this step is repeated for each drawing is shown. The three-dimensional composition creates a general sequence. For instance, how many times a wall is repeated or how it is placed as a location can be said. While this can be a structural element such as a wall, it can also be an abstract element.

The third layer is named experiences. In this layer, possible movements in the architectural space are shown. Therefore, a total composition is seen as a result of people's movement routes. The diagram shows the abstract form of an experience. This diagram also shows how to achieve the physical relationship between different frames. The differences in the types of relationships established are also exhibited.

As the last and fourth layer, the city is the main component as a finishing layer. The focus of the first three layers is on the definition of architectural space and the relationships established between different frames. In the transition phase to the last layer, the important thing is the relationship between the architectural and urban scale. As explained before, the most significant factor which enables this transition is the "grid" and the "generator". Placing the grid as a base under the selected part of the city is the main activity during the process.

In Figure 43, inputs are placed in each frame one by one. They are represented as line drawings in that layer. In Figure 44, it is possible to perceive architectural spaces. It is especially seen in the vertical direction because at certain points the shadows are seen more intensely, while at some points, it is less observed.

Starting from the first frame in the first row, the abstract image is converted

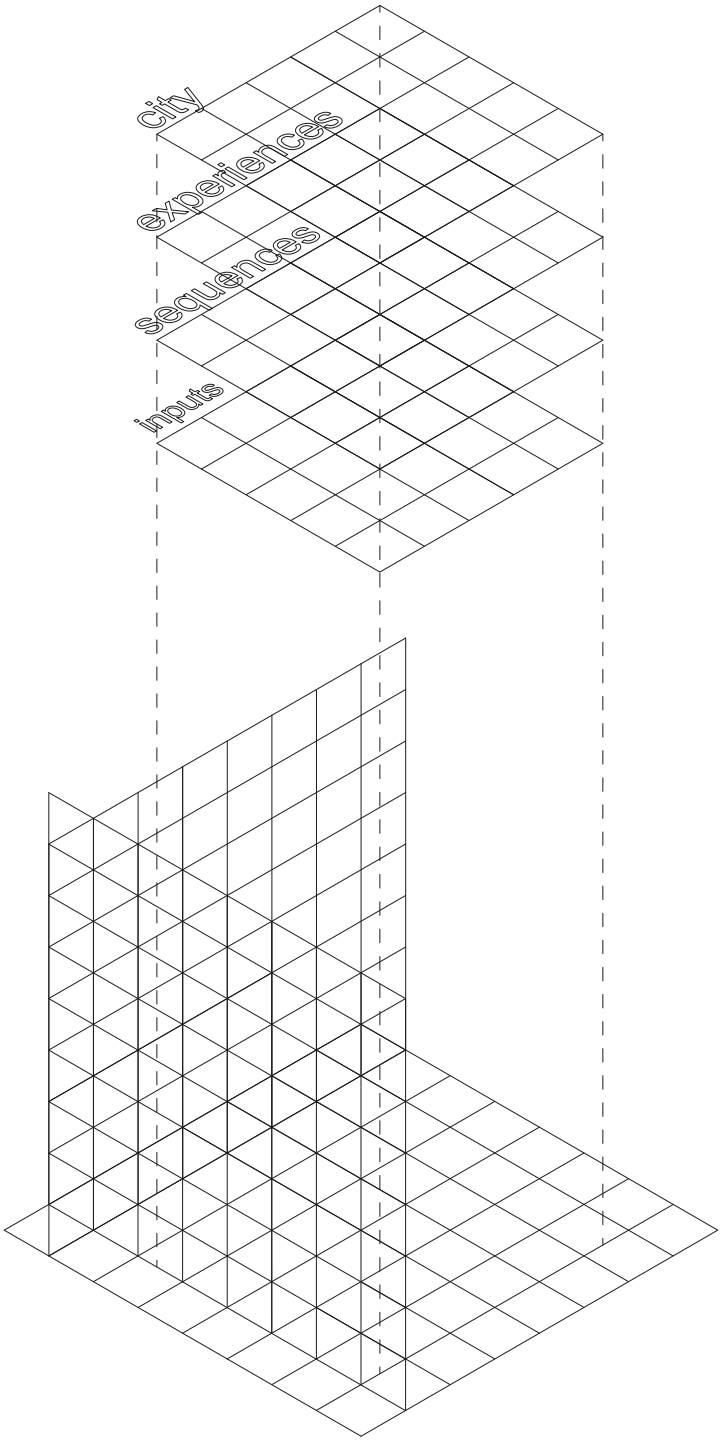

Figure 42: Abstract diagram of generator with its layers.[42]

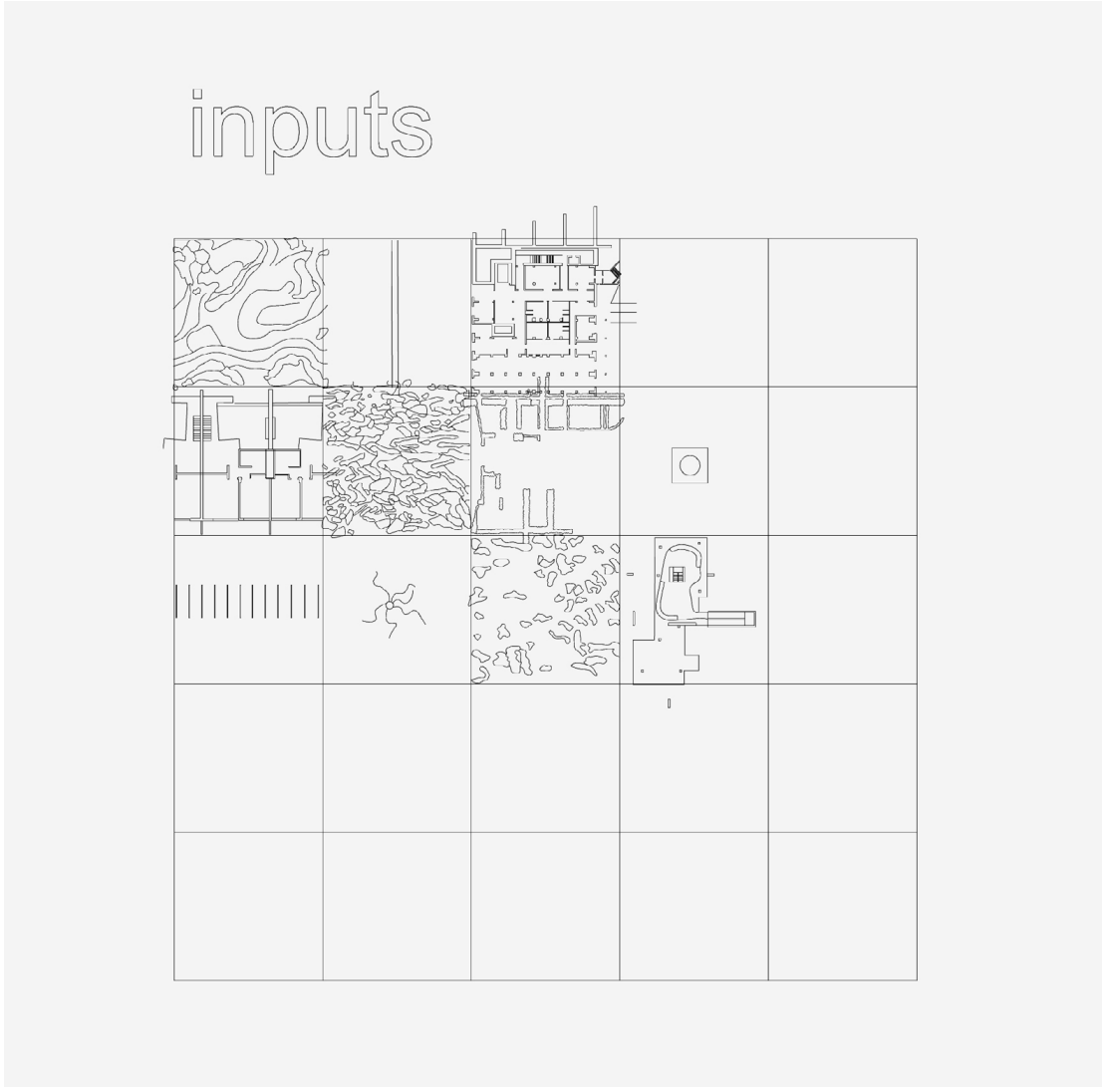

Figure 43: Abstract diagram of inputs.[43]

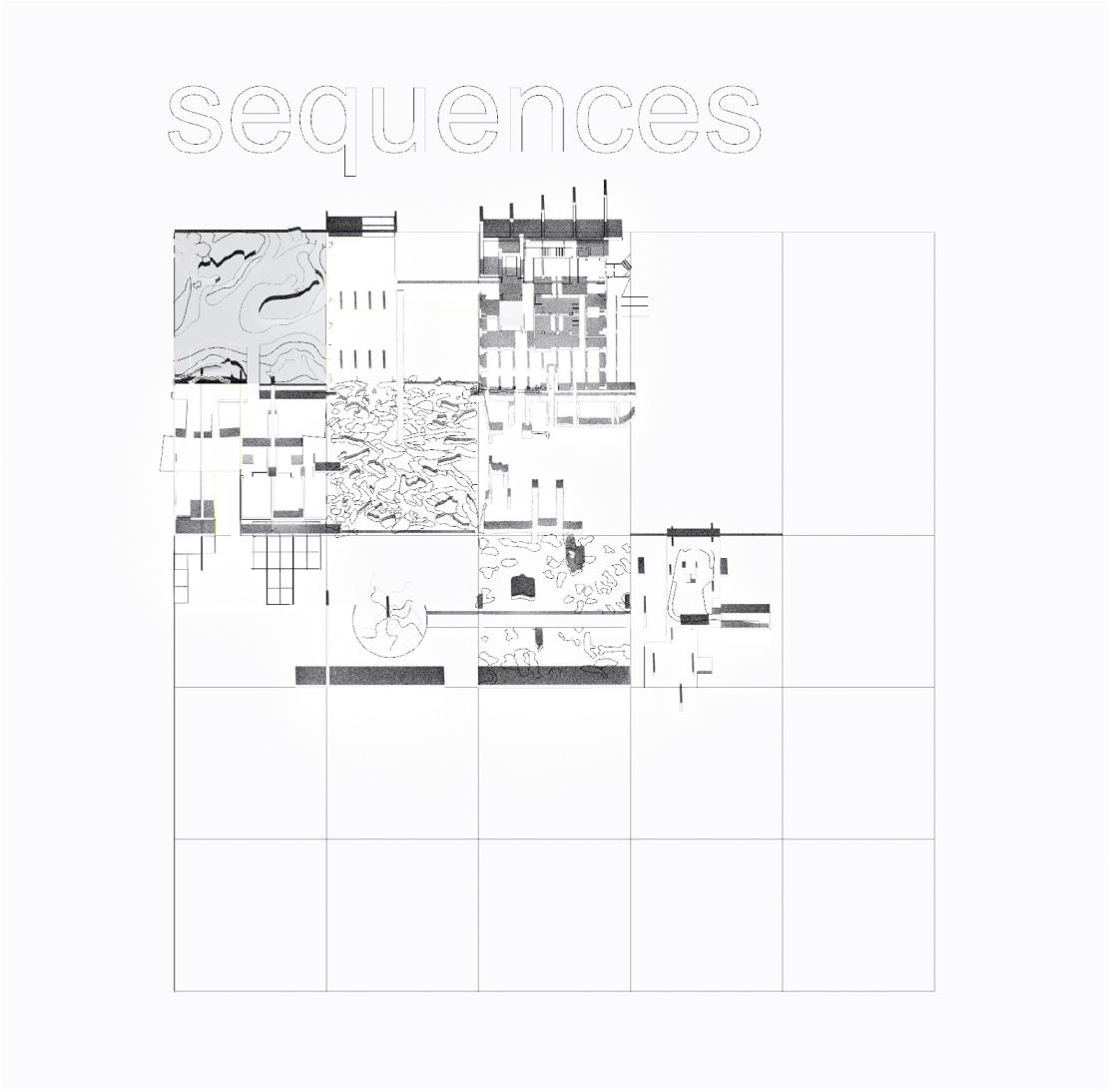

Figure 44: Abstract diagram of sequences.[44]

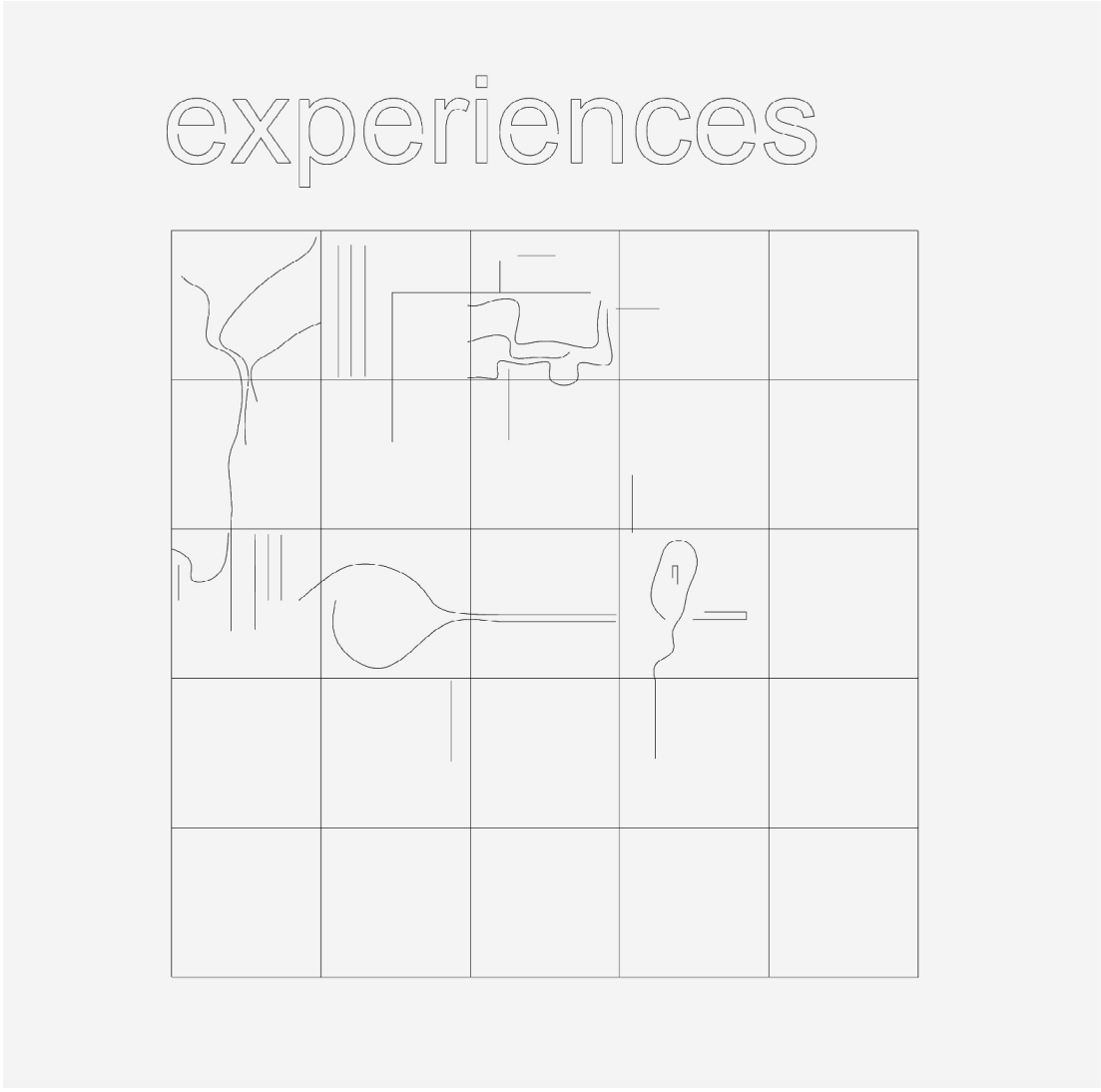

Figure 45: Abstract diagram of experiences.[45]

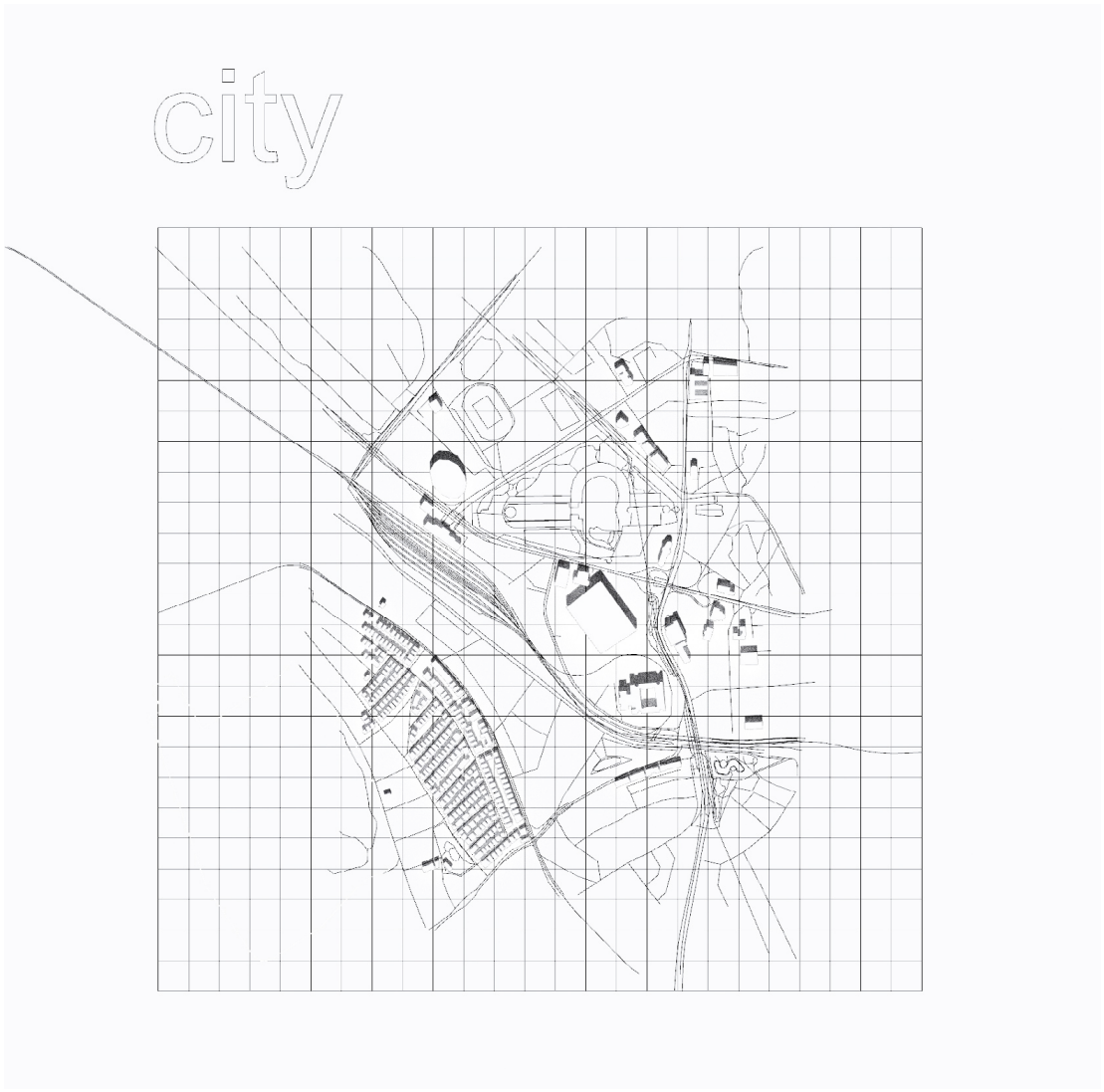

Figure 46: Abstract diagram of city.[46]

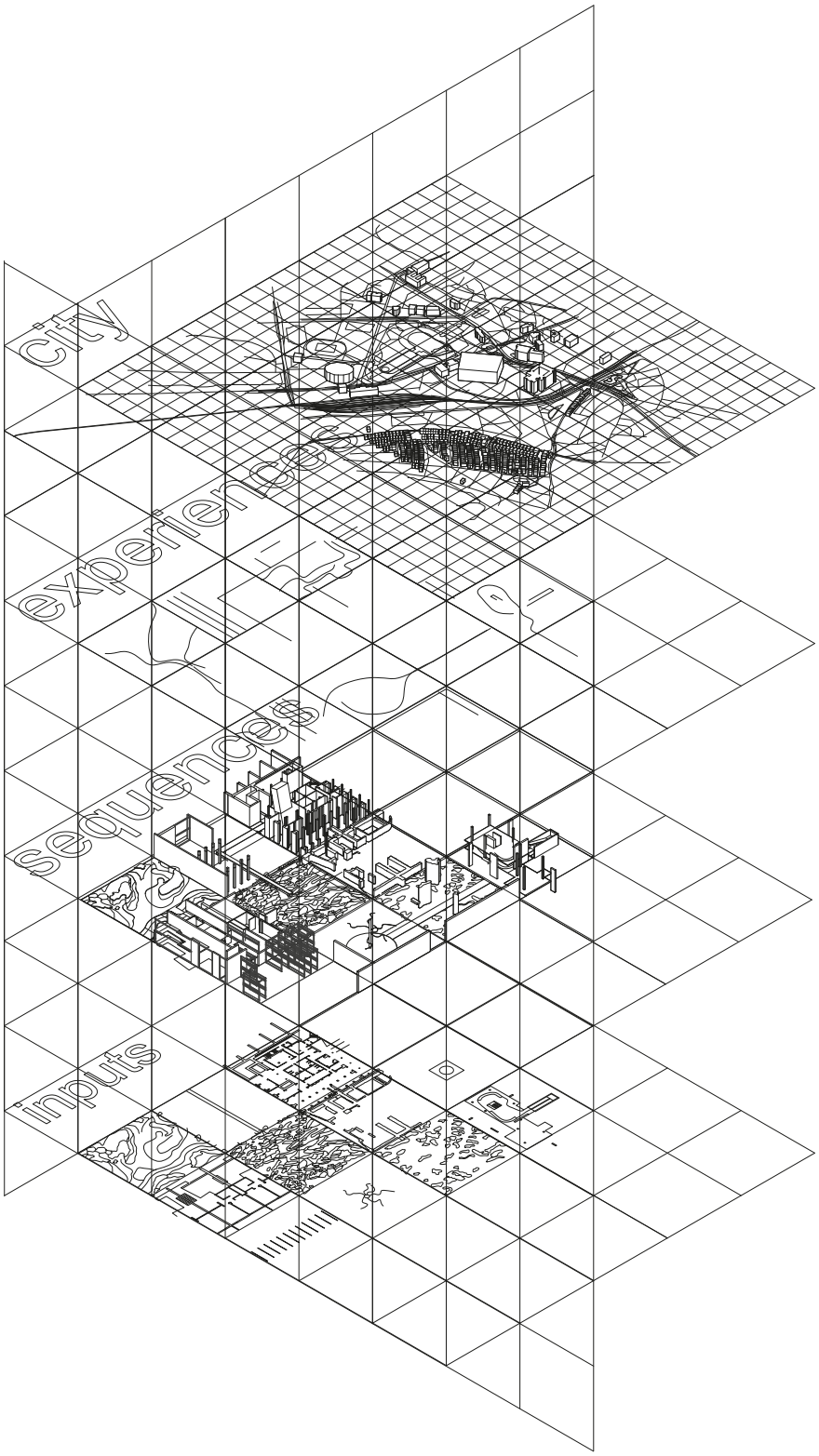

Figure 47: Abstract diagram of generator with its components.[47]

to a landscape element. While the lines from the drawing sometimes emphasize the walking route at certain points, it sometimes turns into sitting units at certain points. In the second frame, the line drawing is turned into a platform for walking in the sequence layer. In the next frame of the first row, the drawing of a partial plan is extruded from a 2D base. There are walls and columns which are placed as poché. These elements are placed frequently and they are higher and more dominant than other frames in terms of height.

In the second row, in the first frame, solid elements such as the walls or floors are created by modeling. Two different levels are defined as the ground floor and the mezzanine floor. Stairs are also modeled as the main circulation element. In the second and third frames, while the wall texture turns into certain three-dimensional elements in the second one, an abstract drawing is modeled to certain solids for flexible use. In the third row, there is a different sample for each frame. Firstly, the framing of the curtain wall is modeled in three dimensions, and several of them come together to form a three-dimensional scaffold within themselves. Secondly, a tree is placed at the center of the frame and it defines an open public space around it. In the next frame, the texture of the snow turns into three-dimensional solids in some places or remains the same pattern in some places. In the last frame, the process is similar to the first frame in the second row. Solid elements such as walls and columns are modeled as vertical solid elements for defining architectural spaces.

In Figure 46, the grid is located under the city, but it is denser in scale and frequency than the other three layers. This abstract generator provides an opportunity for the transition from architectural scale to city scale.

5.Rules and Layers inside the Process

After examining in detail how the generator is working formally and what it contains as layers, the final step in the process is to define the internal rules. These relationships are defined between frames. The grid is the main reference for them as a base drawing. As it can be understood, the "grid" starts to act as not a limiting factor, the opposite it begins to serve as a structure of abstract lines that enable to establish relationships or connections.

In Figure 48, three abstract diagrams show the different types of rules for defining internal relations. The first one is representing the visual connection between two adjacent squares. In this type, there is a one-to-one relationship but this is only achieved by the presence of a visual flow.

The second diagram represents the physical connection between two adjacent squares. In this type of relationship, the element belonging to either side of the elements belonging to both sides is physically transferred to the other adjacent square. This situation can be said as the physical intersection of two squares with each other.

The last diagram in Figure 48 shows that there is no relation between two adjacent squares neither physically nor visually. This indicates that the "grid" itself is starting to act as a physical element. For instance, it could be a wall or a curtain.

After these three rules are defined, by putting all of them as overlapping each other, relation types are defined on all lines of the grid. In Figure 49, the abstract diagram of the final composition is shown with three different types of relationships. Each relationship type does not have a total number. It can be none of one of them or it can be equal for all of them. This situation is left open to spontaneous or random possibilities.

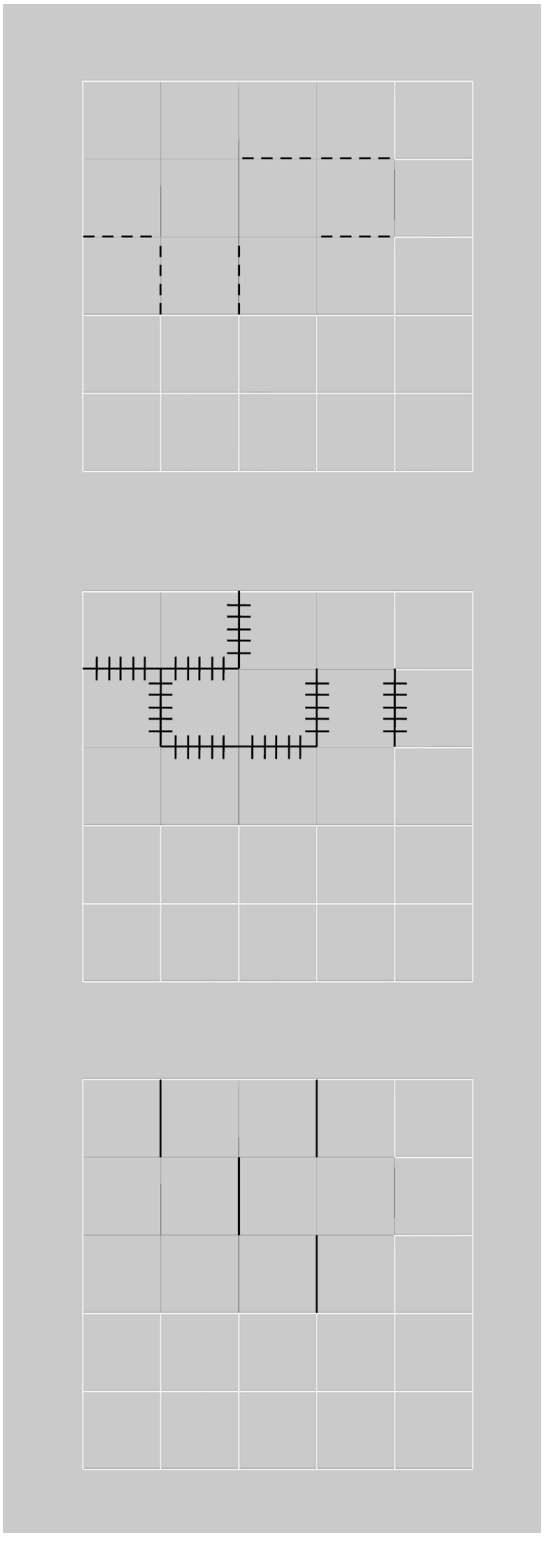

Figure 48: Abstract diagram of different rules.[48]

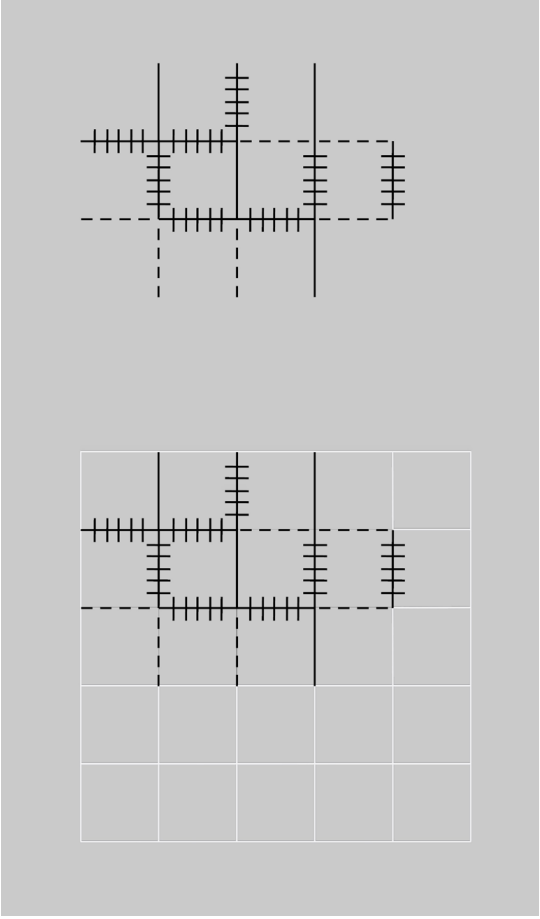

Figure 49: Abstract diagram of collection of different rules.[49]

After defining the rules, the steps required to perform the first experiment are completed. In Figure 50, there is a plan view of the first experiment by using the generator and the defined rules. This can also be called a prototype. Certain parts are still open and incomplete. This shows that new squares can be added to or removed from the current composition. The reason why this can be done is the flexibility provided by the generator and the "grid".

In Figures 51 and 52, the three-dimensional compositions of the elements in each square are seen from two different axonometric perspectives. While some squares are almost complete in themselves, on the other hand, some are still completely open to relationships.

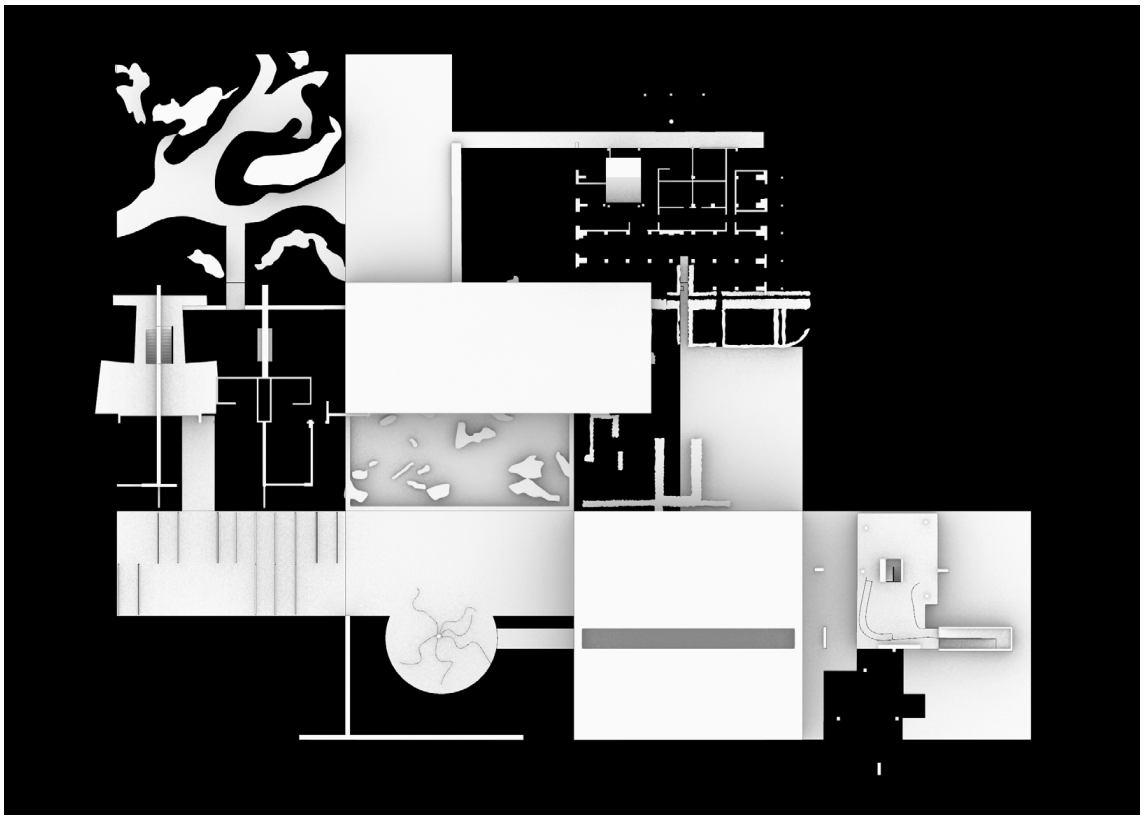

Figure 50: Plan view of first experiment from generator.[50]

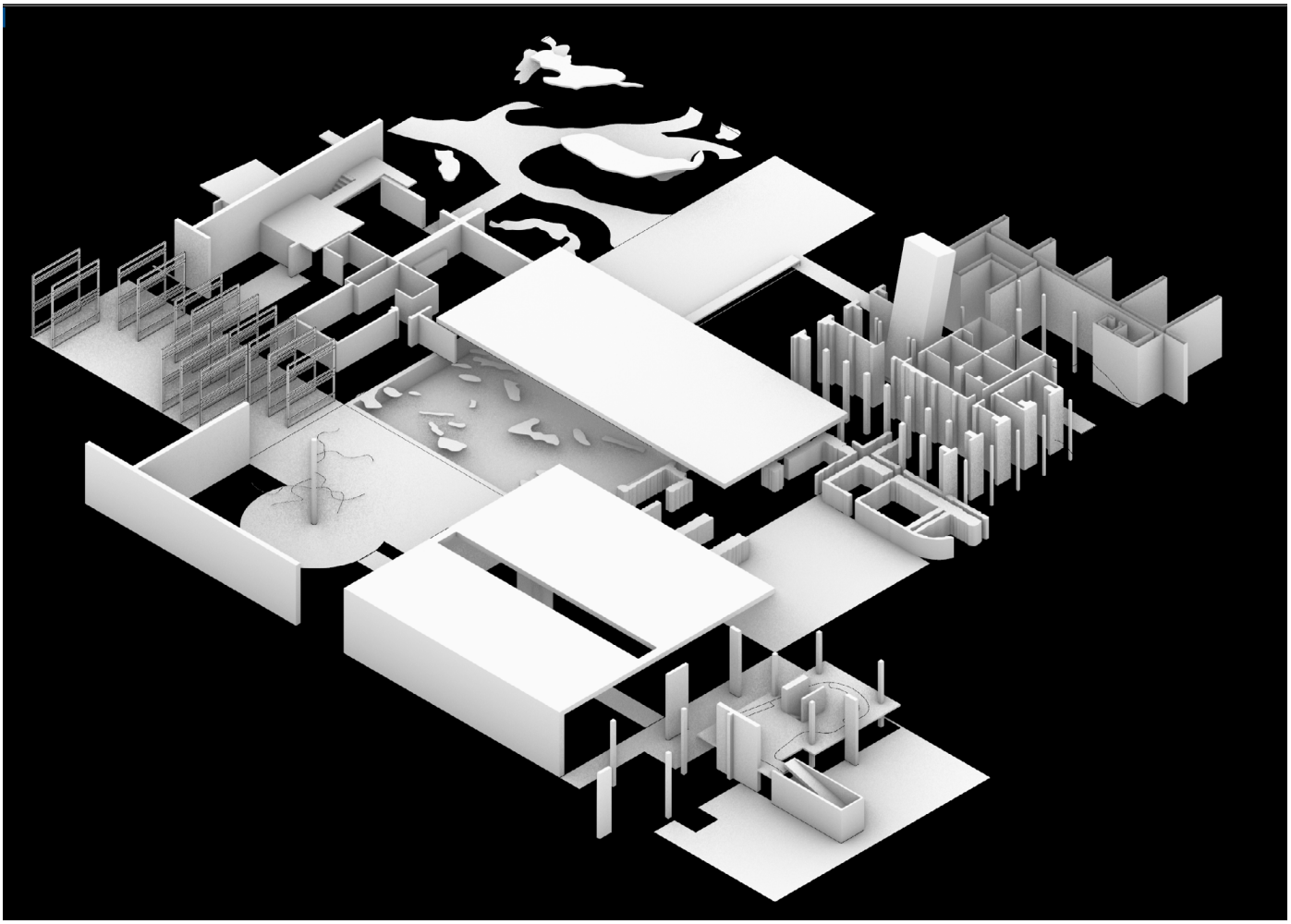

Figure 51: First axonometric view of first experiment from generator.[51]

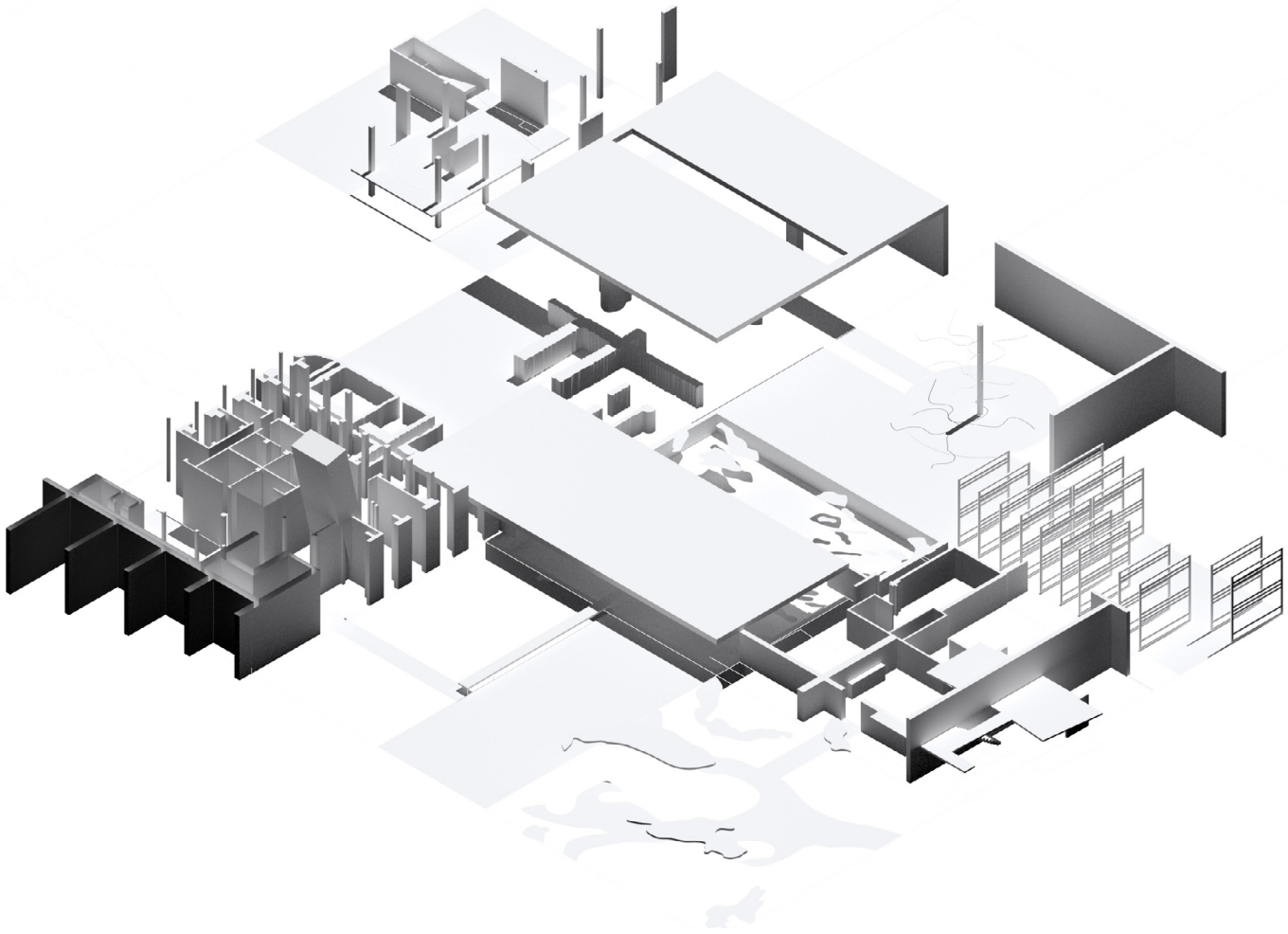

Figure 52: Second axonometric view of first experiment from generator.[52]

If we examine how relationship types work in three dimensions, it is necessary to observe the three axonometric views in Figures 53,54,55. In the first example, visual relation is created by a big public space on the border of two adjacent squares. Two squares flow into each other completely. A Square with a tree and a square with a linear platform start to work together visually because of the open space in-between the two of them. Therefore, activities can be done together or they can be separate but visually connected.

In the second example, it is seen that the structural linear frames extend beyond their squares and begin to exist in the adjacent square as well. This is the type of physical relationship established between two adjacent squares. The line of the "grid" disappears and turns into an abstract element that produces a relationship.

In the third example, there is no relation between two adjacent squares neither physically nor visually. There is a wall on top of the gridline which separates left and right squares into two different parts of the composition. Therefore, the grid line is converted into a structural wall. In this case, two different parts are formed outside and inside.

After analyzing different types of relationships, in summary, three paths are defined. The first is that the grid allows two areas to flow visually into each other without creating any boundaries. The second is that the grid disappears completely and the component from one side is completely integrated into the other side. The third and last one is the definition of a divisive relationship type by transforming the grid itself into a blocking element. Thus, the grid itself comes to the front as the generator that regulates the system in both two and three dimensions. A result created by this generator is the final composition of a first trial prototype.

1

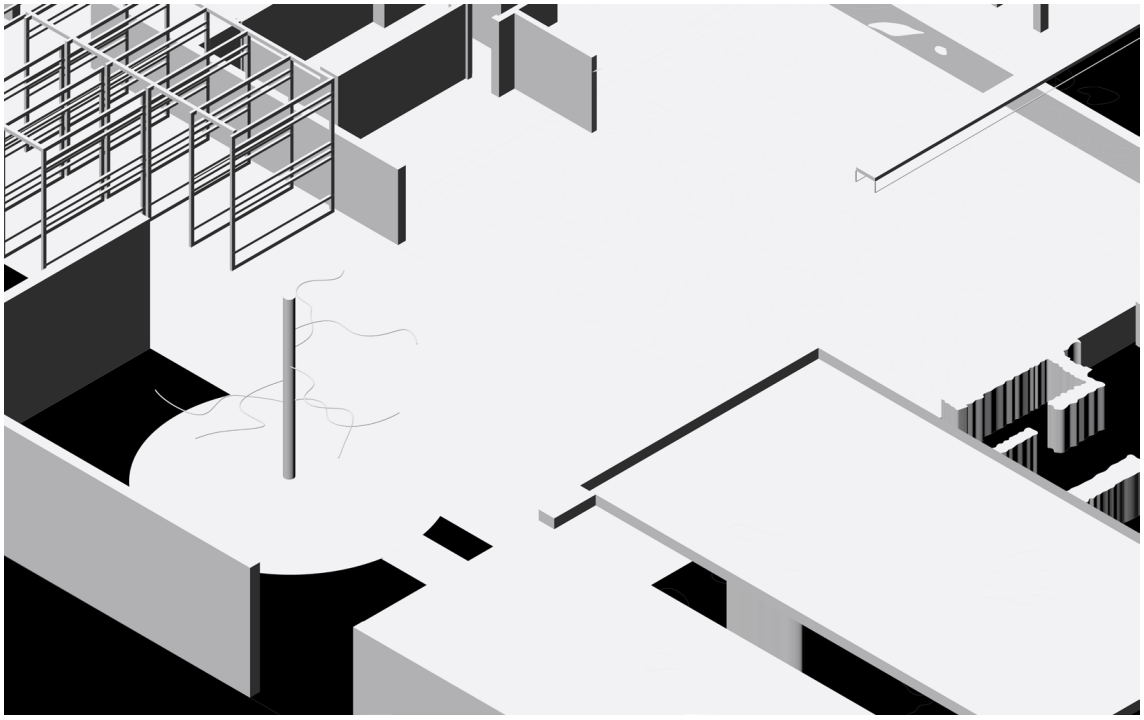

Figure 53: Close-up axonometric views for showing relation 1.[53]

2

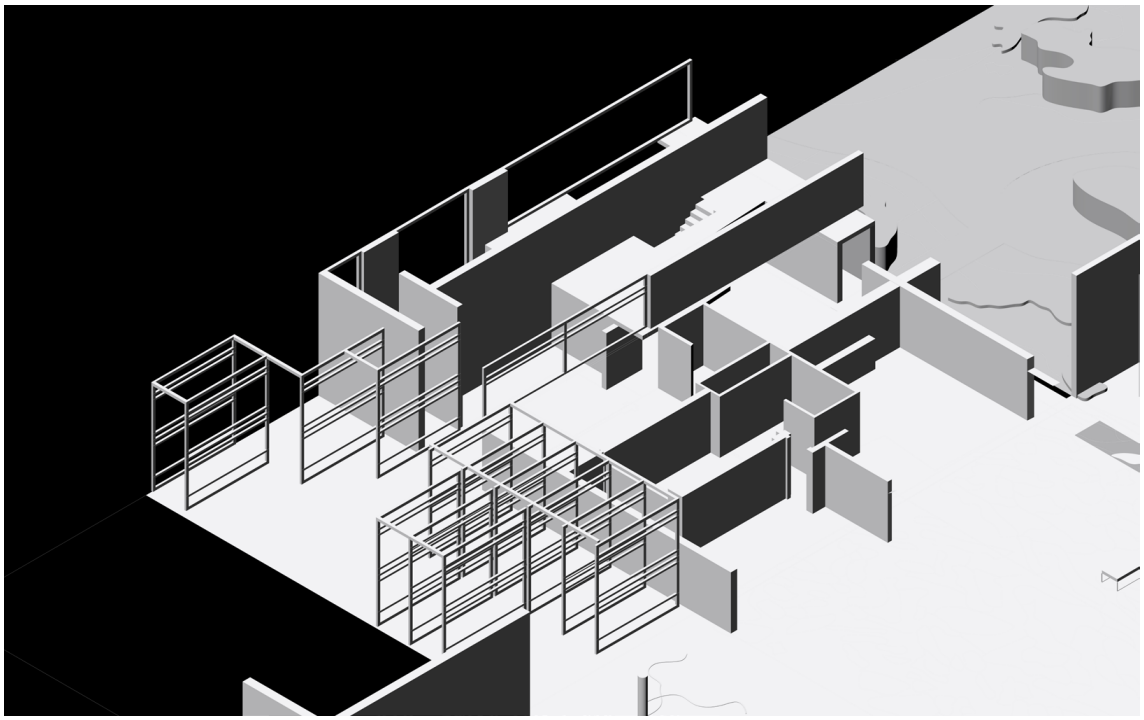

Figure 54: Close-up axonometric view for showing relation 2.[54]

3

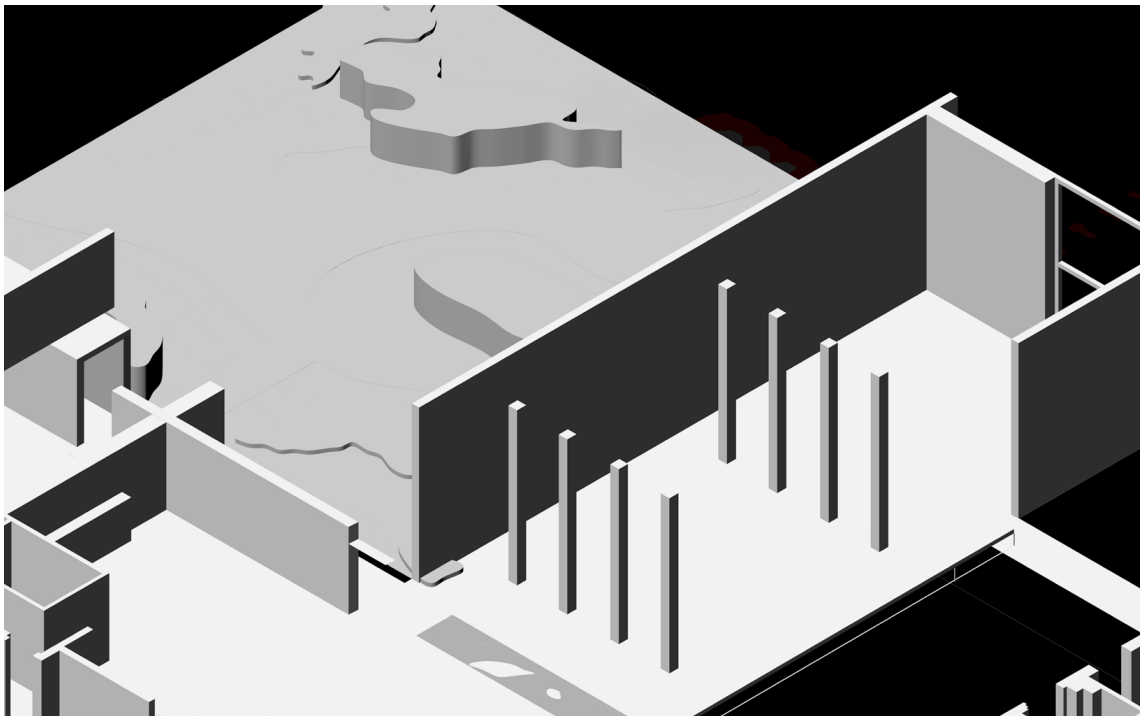

Figure 55: Close-up axonometric views for showing relation 3.[55]

C.

EXPERIMENTAL SITE

From this point on, the research and compositive process turn into an urban and architectural composition. Therefore, a specific city and site are proposed for the project part. This chapter starts with analyzing the selected urban site in terms of its features of formality and memory and then proposing a montage urban plan for the selected site. In this regard, although it takes place on a real site, the main goal seeks an answer to this question: "How will the compositive process, which takes reference from the previously defined montage, play a role in a selected region as an urban and architectural composition?"

Therefore, the selection of the experimental site is a significant point in the whole process of design. In Figure 54, its location is seen on the map of Turkey. In this manner, Ankara which is the capital of Turkey was chosen as the context. The fact that Ankara is the hometown of the author, this situation helps to define the compositive process in terms of collective memory in a more clear way.

As Ankara is the city where the experimental process will be applied, certain urban features are reflected in the design process. It is important to say that the proposal in both urban and architectural scales is entirely compositional. At the same time, it has features that will respond to the needs of the selected site in terms of social and economical senses. Thus, the experiment of a formal composition will be applied in a field that has real conditions. These two separate layers intersect and begin to define a new compositive layer together.

In terms of scale transition, first, there is a compositional urban plan which acts on the city scale, and then an architectural composition, which is part of the urban plan, is defined. Therefore, the main scenario will appear in Ankara as the result of a complex experimental process that exists on both urban and architectural scales.

Figure 56: Location of Ankara on Turkey map.[56]

1. Site for experiment; old city center of Ankara, Turkey

After the selection of Ankara as a city, on a smaller scale, it is determined that the focus site for the experiment is the old city center. It is placed in the Ulus neighborhood. Nowadays, the city is divided into two main blocks which are the old and new sections. The old section is called Ulus and the new section is called Yenişehir. The old section consists of important ancient buildings reflecting Roman and Ottoman history. In 1923, since it was made Turkey's capital, it has experienced a huge growth when it was a small town with no importance.[33] After the government moved there, Ankara continued to grow very rapidly. Therefore, the new section of the city also continued to grow in a formal way by creating wide streets, hotels, shopping malls and high-rises, and population reached to five million in 2015. [34]

With the growth of the new city to other directions, Ulus and Sıhhıye neighborhood became as secondary center and less important in terms of infrastructure. By the end of 1970s, the gradual change in the physical, functional, socio-cultural and visual aspects of Ulus accelerated.[35] This situation affected the neighborhood in a bad manner. The neighborhood, where the old historical texture with theaters, art centers, and old governmental buildings are located, has lost its importance of collective urban memory. Since there is no detailed framework study, the old settlement and the newly proposed buildings started to work independently of each other. In this case, it has caused the old tissue to lose its importance on the city scale both functionally and physically.

The selected site is placed next to the buildings and urban areas where the old tissue is seen, as well as it is close to the significant main car transportation axes and train station of the city. In addition, another important point is that certain new interventions to the city are also seen close to the selected site. The coexistence of several layers coming from both old and new tissue is the main thing that feeds the proposed montage urban plan. Thus, the compositive process is applied to a multi-layered site.

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33. Columbia Lippincott Gazetteer
34. "Turkey: Major cities and provinces". citypopulation.de. Archived from the original on 24 February 2015.
35. Ayhan Koçyiğit, A Tale of Ulus Square: Emergence, Transformation and Change, 69

Figure 57: Selected site in city map of Ankara.[57]

Figure 58: Selected site in city image of Ankara.[58]

In Figure 59, the scale to be intervened is seen. The proposed design on an urban scale is applied to this shown area (figure 59). The components are the urban park named as "Youth Park", the newly completed CSO Concert Hall, the Justice building of Ankara, the exhibition and art center named as "Cermodern" and old train tracks. Furthermore, Talatpaşa Boulevard which is one of the important infrastructures of the city is also included as a component. Although the new train station and stadium are not included in the intervention site, they still affect the selected site by their proximity situations.

If the significant components of the selected site are explained, the Youth Park will take place as first. The place where the park is located was a marshland. After marshes were drained, they were opened to the public in 1943. There were tracks, swimming and main pools, an open-air theatre and a luna park. In the 2000s, the main pool is still used for some light performances.[36] In Figures 61 and 63, the old condition of the park is seen. The pool was a social gathering and place for people in the city. In the early years of the Republic, Hermann Jansen, who was invited to plan Ankara, had designed the Youth Park as a contemporary entertainment-leisure venue.[37]

The current state of the park does not reflect the functions that were originally planned, because the park has turned from being a historical urban public park to a problematic location in terms of security, which people rarely visit. In the urban design proposal, using the potentials and old function of the park is the main aim for integrating it into surrounding components.

36.Ankara Municipality page. Archived from 2011.
37. Kültür Portalı, Gençlik Parkı, https://www.kulturportali.gov.tr/turkiye/ankara/gezilecekyer/genclk-parki

Figure 59: Selected site.[59]

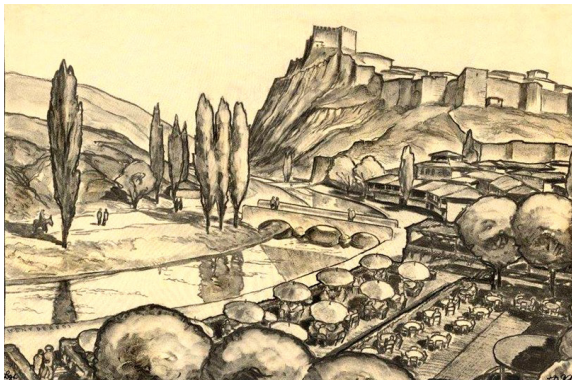

Figure 60, 61, 62, 63: Old images from selected site.[60 61 62 63]

As another important components are old train road and Cermodern. Cer Ateliers, which were built right after the nationalization process of the railways in the first years of the Republic (1926-1927), have an important memory value in terms of the Republic's history, in addition to its architectural value. The building is one of the limited examples of industrial archeology in Ankara. Its facade is carrying some elements of the transition from Ottoman architecture to contemporary architecture.[38]

Its position can provide urban transformation due to its location. The building's function related with art contributes to this transformation. At the same time, historical features of the building in terms of architectural memory are preserved and integrated with new concepts.

If the history of the building, before it was renovated as Cermodern in 2010, is explained, it is seen that it goes back to the first years of the Turkish Republic. In addition to old train station building, there were warehouses in this context. These warehouses were structures where railway vehicles such as locomotives and wagons were protected when they were not in use, and some minor repairs are also made for maintenance.[39] These facilities lose their functions over time and become unusable because the railways show different developments due to the end of the era of steam locomotives. Unfortunately, the old workshop buildings turned into ruins over time.[40] In 1995, it was decided to transform these buildings into a contemporary art and exhibition center. At this point, Cermodern was designed and old buildings of warehouses were renovated and met with their new functions. Cermodern consists of an exhibition center, a conference hall, a library, a store, workshop spaces, artist rooms, studios and a cafe.

Although train tracks have no function in terms of infrastructure nowadays, they are still symbols of the memory and are located behind the buildings of Cermodern. The fact that they exist in the context as almost same with their

38. Arkitera.com, Cer Modern, https://www.arkiv.com.tr/proje/cer-modern/1535
39. Gülseren Mungan Yavuztürk, Ankara'da Demiryolunun Cermodern'e Uzanan Tarihi, http://kentvedemiryolu.com/ankarada-demiryolunun-cermoderne-uzanan-tarihi/
40. (Ibid)

Figure 64, 65: Old train tracks, CSO Concert Hall. [64] [65]

old forms are instances of the collective memory being seen as a form. Another feature that makes this situation significant is that the formal architectural or industrial components reflecting Ankara's industrial history are rarely preserved and seen today. In Figure 64, old train tracks which are continuing towards to Cermodern area are seen. Behind the rails, there is a permeable glass facade which serves as a renovated workshop area and library. In Figure 66, an inside view of one of the main exhibition halls is seen.

In Figure 67, there is a car parking area located next to train tracks and it belongs to Ankara Justice Hall. As it is seen in the picture, this relationship between the car parking and train tracks is not effective in terms of usage of the space. The importance of the formal memory of the rails remains in the background. Therefore, in order to regain the importance of the rails, the formal and functional definition of this in-between space should be made better.

The last significant component in this selected context is CSO Concert Hall. The concert hall represents a symbolic behavior which affects the city scale over time rather than just being a building. The reason for this is that it is located in one of the historical neighborhoods of the city with a contemporary architectural design language. It is also a very critical point that it hosts Presidential Symphony Orchestra which was established in 1826. The architectural form consists of two opaque spheres with a glass triangle in between the spheres.[41] Therefore, it is apart from being just a building, it has a strong geometrical form and it is a radical symbol for the city. In Figure 65, one of the spheres and the transparent triangular structure in-between are clearly visible.

By considering the positive and negative aspects of the components in the selected site, it is aimed to define a more integrated area which reflects the collective memory of the city in terms of both form and function.

41. CSO Yeni Evinde: Cumhurbaşkanlığı Senfoni Orkestrası, http://cso.gov.tr/en/cso-yeni-binasinda/

Figure 66, 67: Interior view of Cermodern, car parking area behind Cermodern.[66] [67]

2. Analysis of the formal language of the site

The second step after the analysis of the architecture and historical tissue in the context is the formal analysis of the region. The first way to understand the formal situation at the city scale is defined by observing solid and void relationships.

In Figures 68 and 69, two solid and void maps are shown, which are opposite of each other in terms of coloring solid and void. From these maps, certain points can be analyzed. First of all, in the general picture, it is seen that the integration of solids with each other is problematic. Each region has created a tissue within itself and is independent fromof each other in terms of formal language. Therefore, in total, there is a disconnected language. One of the main factors affecting this situation is that the punctual public buildings stay within themselves and refuse to establish a strong relationship with the environment.

Secondly, the dominance of some buildings as a scale creates some problems in the general picture of the form of the context. The new train station and the stadium are two examples of this situation.

As a result of these analyses, there are disconnected spaces in the context in terms of both architecture and landscape. Therefore, the main aim of the proposed design is to integrate these disconnected spaces at the city scale.

The base component, in addition to the grid coming from the generator, is a secondary grid that is drawn concerning the orientation of the context. It is the tilted one because of this reference. In Figure 68, both grid systems are seen as overlapping components. And also, existing used or unused train tracks are also significant references from the context in terms of formal components.

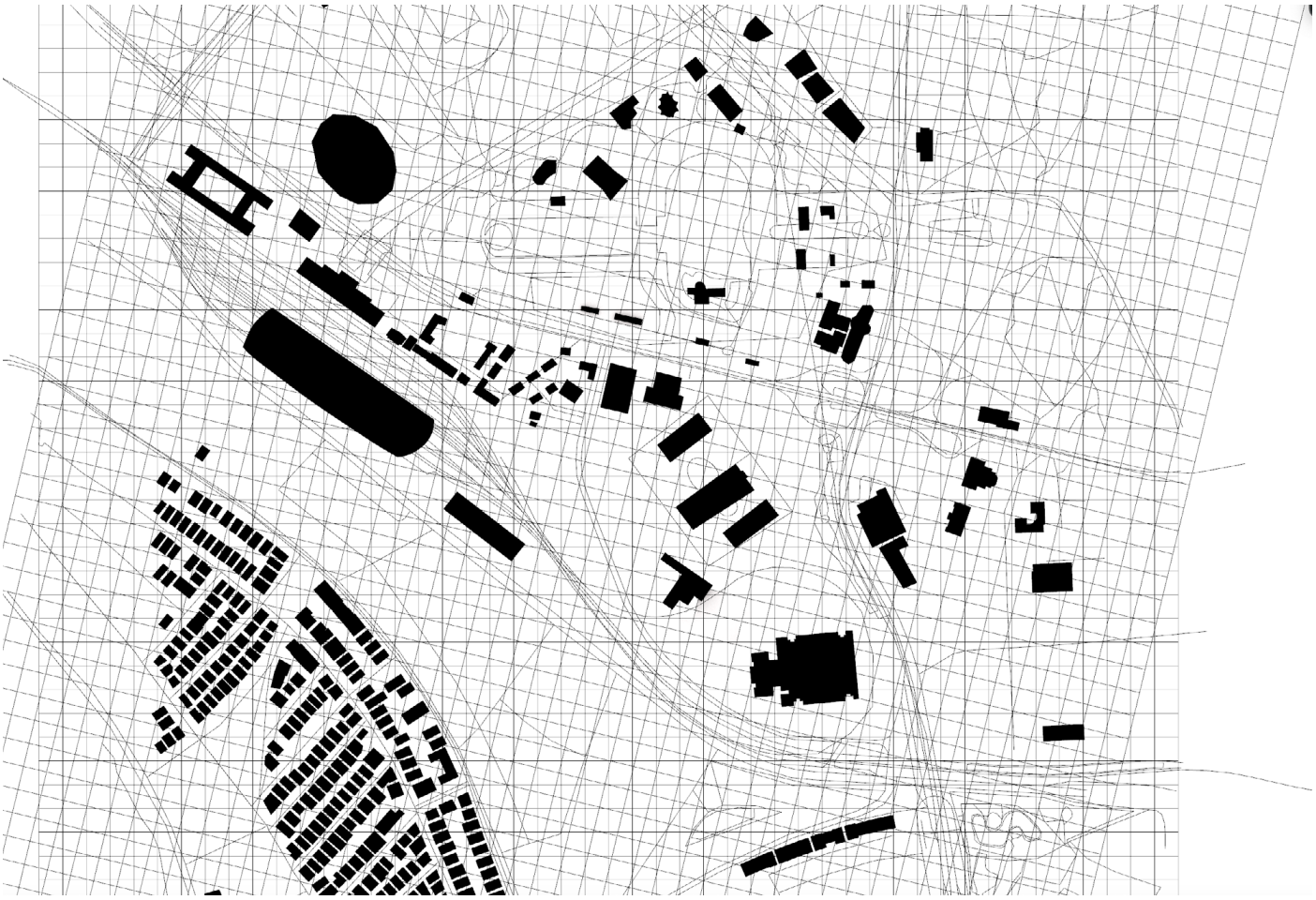

Figure 68: Solid Void map of selected site.[68]

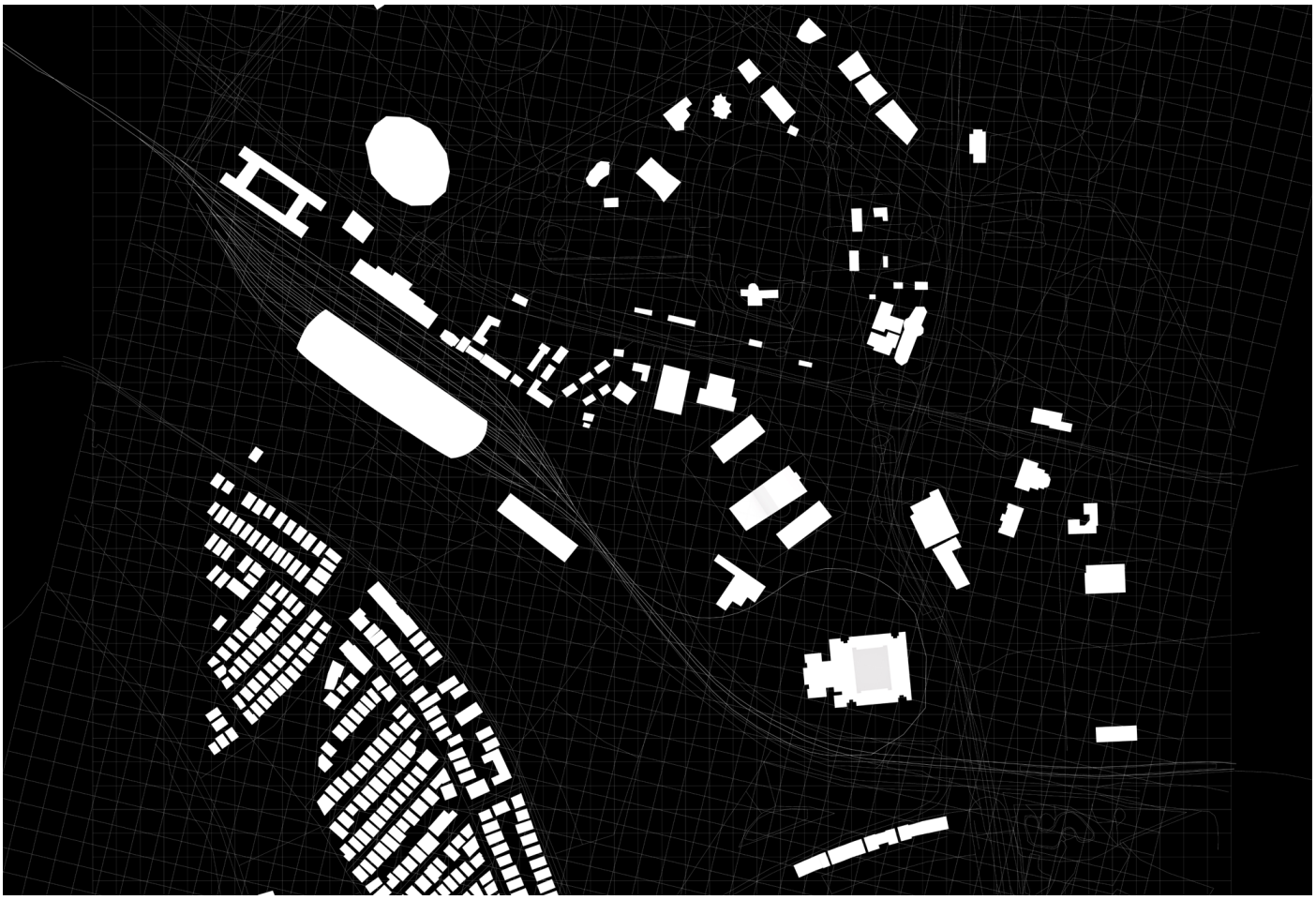

Figure 69: Void Solid map of selected site.[69]

Formal change over the past twenty years is mapped out in three stages. On these three maps (Figures 70,71,72), buildings are shown in black as solid and every remaining element is shown in white as void.

In Figure 70, the formal situation in 2002 is seen. Voids are more visible on this map because the new train station and CSO Concert Hall have not been built yet.

In Figure 71, the formal situation in 2014 is seen. It can be still said that voids are more visible on this map. Unlike in 2002, the construction of the CSO concert hall has started and the void around the Cermodern started to decrease.

In Figure 72, the formal situation in 2021 is seen. This is the same as the current formal picture of the site. The solid void balance has changed towards the solid side because the new train station has been built. This is a radical addition that has changed the solid void composition drastically.

After analyzing the temporal flow of the formal composition chronologically, the most significant output is that the number of disconnected spaces has gradually increased over the years. Instead of an integrated total formal composition, punctual buildings and landscapes began to form. Furthermore, although new geometric types were tried in terms of architectural form, the coherence in the general composition is not successful in terms of geometry.

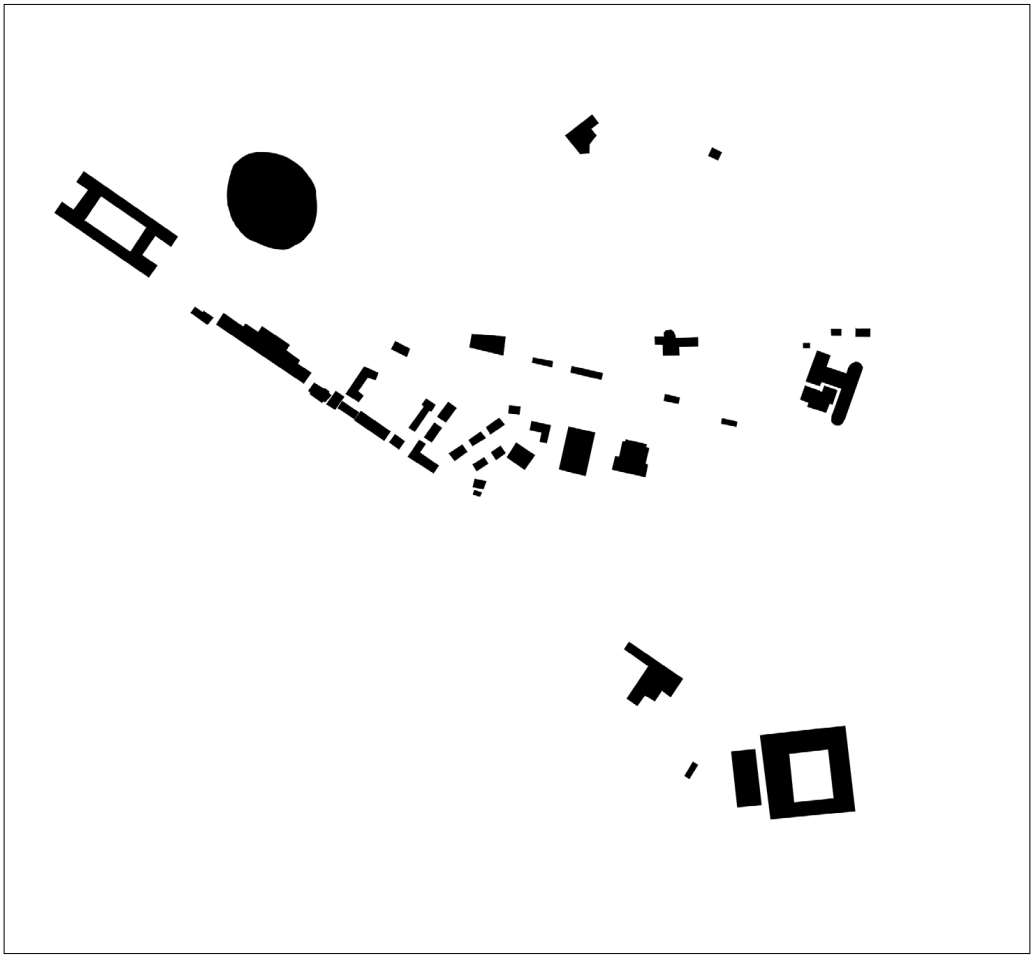

Figure 70: Formal condition of site in 2002.[70]

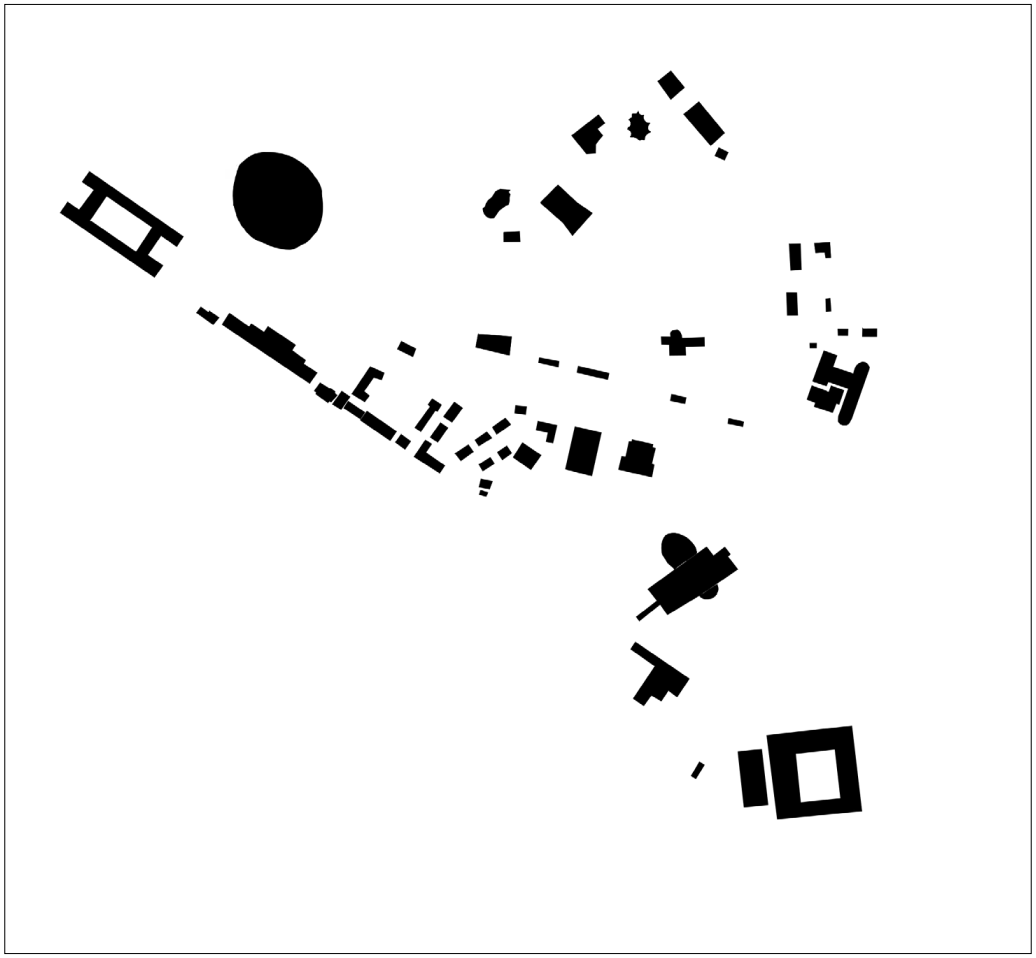

Figure 71: Formal condition of site in 2014.[71]

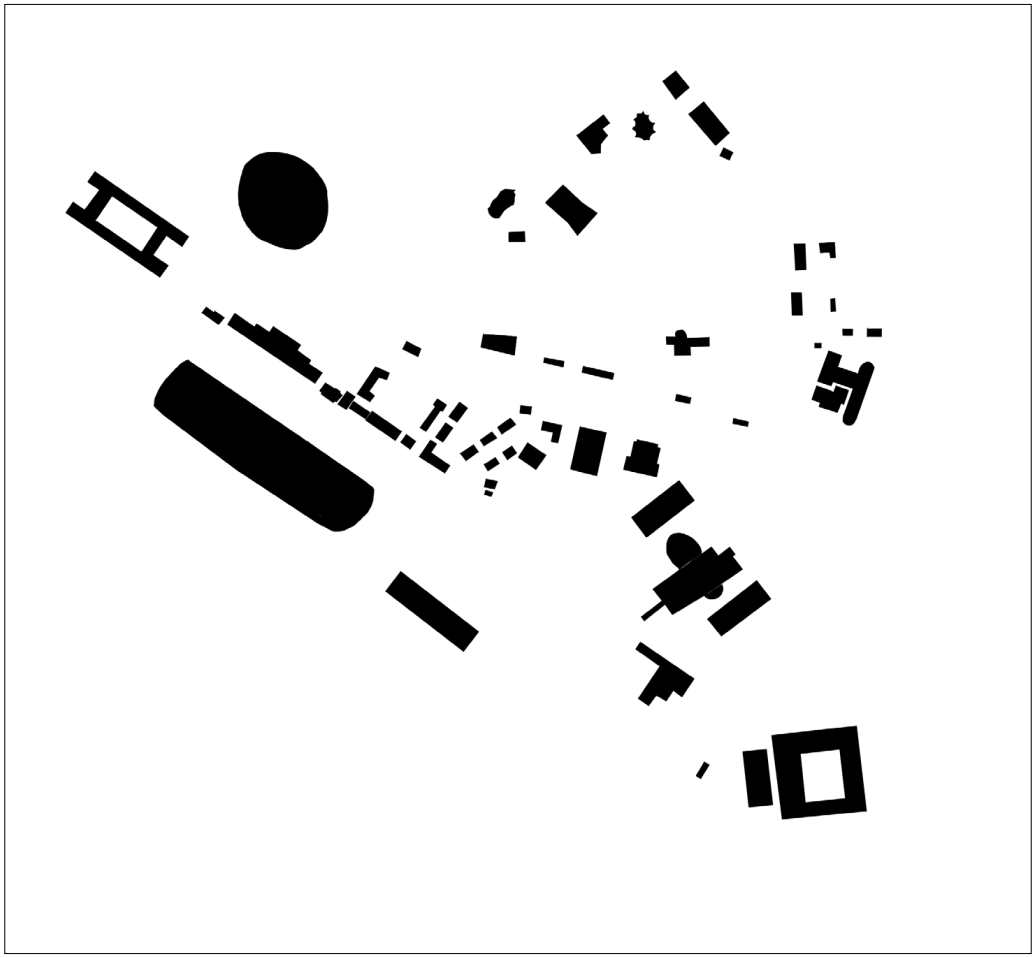

Figure 72: Formal condition of site in 2021.[72]

3. Behavior of the Generator on site

After completing the formal analysis of the context, the next significant step in the design process is to define the relationship between the context and the generator.

The city enters the generator as the last layer and incorporates the previously defined input, sequence, and experience layers. The two-dimensional grid, which comes from the compositive process, is smaller in scale and more frequent in the city layer. Therefore, the main element that provides the transition between architectural and urban scale is the grid itself.

In Figure 73, there is an exploded diagram of the process on the site. It is an explanation of what is happening on the urban scale. There are five main components during the process. All of them are explained one by one according to their features.

Existing site

This is the first layer of the process. By taking the area to be intervened as the first layer, the decisions are determined about which buildings, roads, lines, or landscape elements will be included in the process. In addition to the two-dimensional reference map of context, the three-dimensional solids of the buildings are also included in the process. Thus, the height perception can be adjusted according to the surrounding buildings' layout. The regions which are going through the generator are composed of the old train tracks, some parts of the new train tracks, Cermodern, the entire Youth Park, Talatpaşa Boulevard, and the car parking area behind Cermodern, and CSO Concert Hall. This is a wide-ranging context that is completely public land in terms of its functions. These can be seen as inputs that are coming from the memory of the city in terms of both function and form.

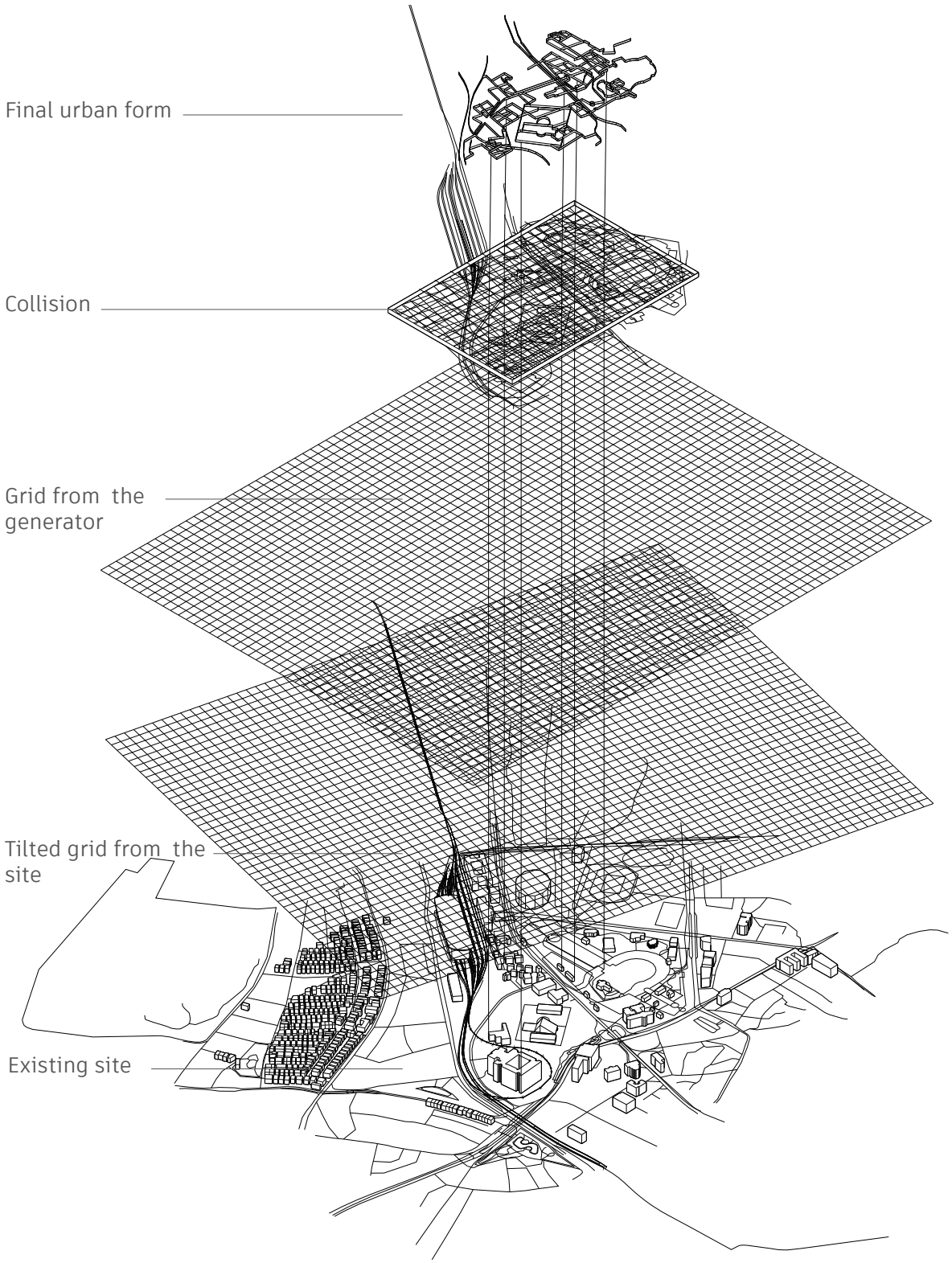

Figure 73: Exploded diagram of process in the site.[73]

Tilted grid from the site

This is the second layer of the process. It is one of the most important references from the site in terms of formal reference because in addition to the rules and system of the generator, what will make the process specific to this context will be a two-dimensional formal reference taken from the site. A tilted grid is defined because this angle I created concerning the Talatpaşa Boulevard divides the selected context into two by standing as the main axis.

The frequency of the lines and the dimension of the squares are exactly the same as the two-dimensional grid system which is defined in the compositive generator process.

Grid from the generator

This is the third layer of the process. This is the grid that is already defined in the previous chapter. It comes from the compositive matrix process.

This layer is the frame system which consists of squares of equal dimensions determined abstractly. Therefore, it takes place in the process as the main element that formally regulates the city. In addition to this, the grid is there as a matrix of knowledge.[42] It contributed to the process not only formally but also functionally. While doing this, enables us to deal with the different and separate elements of the city in a common ground. It is capable of establishing contradictory contexts. This is possible because the grid can be used for many different things depending on how it is placed.[43] This creates an opportunity for flexibility while the process is designed.

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42. Rosalind Krauss, The Originality of the Avant-Garde and Other Modernist Myths, 15
43. Nicole Sylvia, The Site Magazine, The Grid, https://www.thesitemagazine.com/read/the-grid

Collision

This is the fourth layer of the process. In this layer, there is an overlap of the first three layers. All existing lines of the context from the first layer, the lines of the tilted grid referenced from the context from the second layer and the lines of the abstract grid defined in the generator from the third layer collide by overlapping. This collision is made to the selected site which is composed of elements described previously.

This stage is the first step of the montage in on urban scale after all the inputs coming from the city and process are described.

Final urban form

This is the last layer of the process. At the same time, it is the output of this design process on an urban scale. After the collision step, this is the final image of the urban form.

Redrawing phase occurs between the collision layer and this layer. The urban montage of three different layers which collide is created at the end.

Rem Koolhaas states that: "The Grid's two-dimensional discipline also creates undreamt-of freedom for three-dimensional anarchy. The Grid defines a new balance between control and de-control in which the city can be at the same time ordered and fluid, a metropolis of rigid chaos."[44] This is exactly that balance which is desired to be achieved for the end urban product. It is both systematic and fluid but at the same time it allows certain freedoms.

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44. Rem Koolhaas. "Delirious New York." (New York, The Montacelli Press, 1994), 20

4. Multilayered Montage urban plan: Krauss' Grids

Figure 74: Plan of Montage.[74]

The final subject of this chapter is the placement of the urban form, which is obtained after several different layers in the process, to the context. In Figure 74, the future image of the Plan of Montage is shown. The compositive process is both abstract and mechanical. Therefore, the resulting product is an experimental instance in terms of form. But at the same time, since it contains references from the context as a result of mechanical analyses, it is also realistic and can be applied. The applied version to the city is seen in Figure 75.

After this city scale, there is one more phase that needs to be defined before moving on to the next chapter about architectural prototypes. Three selected areas appear in the Masterplan as gray solids. (Figure 75) The first one establishes a one-to-one relationship with Cermodern and old train tracks. The second one is located inside the Youth Park and plays a role in turning the park into a social public space again. The last one has defined in-between the first two buildings as a transition element. The first option is selected for future interventions. Possible interventions in architectural scale are seen in Figures 76, 77, and 78 step by step. They are described in the same way by the process of the generator which is defined earlier.

According to Krauss, the grid can be used to explain the “antinatural”, the “antireal”, or “illusion”. It can also signify “surface” or “space”, “form” or “material.” In addition, it can represent “universal” and “fragment,” just as it represents “emblem and myth”. [45] These possibilities are taken into consideration in the architectural intervention scale by using the grid. While the space is described, the grid system can sometimes be a surface and sometimes creates possibilities that lead to an illusional appearance. Therefore, the grid is a way of aborgating the claims of natural components to have an order particular to themselves.[46] The final composition is the product of a montage that has created its system and works according to a completely redefined order.

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45. Rosalind Krauss. “Grids,” October, Volume 9 (Summer 1979): 52-63
46. (Ibid), 50-51

Figure 75: Masterplan.[75]

Figure 76: Existing site lines.[76]

Figure 77: Grid.[77]

Figure 78: Collision.[78]

D.

PROTOTYPE AS A POSSIBLE INTERVENTION FOR EDUCATION

In this chapter, after the urban scale, there is a broad explanation of the interventions at the architectural scale. This end product can be seen as one of the possible prototypes which are created by the generator.

An architectural prototype is a learning and communication vehicle used to explore and experiment with alternative architectural styles, features, and patterns to balance different architectural qualities. In this thesis, a generative matrix is used for exploring and experimenting with different types of forms. Therefore, at the end of each process, a prototype is created.

When the content of the generator changes, the resulting form also changes. The experimental architectural form, which we will see in this chapter, is one of these results. While this prototype may change according to the content defined as the form, the function of the building is to be defined as an independent parameter from the generator process. Education is the main function of this prototype. In addition to education, art takes place as a side component that feeds the main function. Art and education start to work together.

On the architectural scale, the grid starts to act as a main regulating element for both existing and newly defined spaces. While the grid defines the relationships between the existing elements coming from the input layer, new spaces and elements are placed into this created system. It can be done spontaneously or systematically.

This section includes an explanation and demonstration of the internal relationships which are defined between different frameworks. After, the first experimental design process and its drawings that emerged within the framework of the rules and system defined in the second part are seen. This is the end product of the first experiment, other prototypes may occur if the inputs and the context change.

1. Lines as a definition of rules

Defining the rules is one of the initial steps of the generator process. The points at which the rules will be defined are determined by the "grid" which is placed as an abstract base. In this case, the lines of the grid turn into an abstract matrix system that defines relationships instead of being a limiting frame. Therefore, the location of the rules emerges from the generator and matrix system which are already defined in the process. These rules are applied when internal relationships are described. The connection established with the context is defined according to the orientation of the components in the site and the different formal scenarios they provide.

There are three different internal relationship types inside the building. They are named as visual, physical, or no relationship. All internal connections are defined as one of these three types. The distribution as numbers is not made in a certain order. Every combination is possible in any case in terms of number. The system which has to be followed is just this; after the relation type is defined, the design applied at the borderline must comply with the rule.

The first type is the visual relationship. In this type, a visual flow must be maintained at all times. The first way to achieve this is not to use any element above the grid line and leave it empty. In this way, spaces defined in two different adjacent frames will begin to work together. As the second method, certain divided panels can be used because they are allowing to maintain the visual relationship but at the same time, the existence of the grid is revealed by using three-dimensional panels at regular intervals. In addition, they exist as load-bearing structural walls. In abstract diagrams, this type of relationship is seen in three points. In the first one, the line defines divided panels between two different spaces. They have a visual connection but they have two different functions as a place description. In the second example, there are no panels. The corridor connected to the main entrance hall establishes a completely clear visual relationship with the exhibition space. Therefore, the main corridor and exhibition space start to work together in terms of space flow. In the last example, the continuation of the main corridor is separated from the multi-purpose space by panels. They are separated from each other in terms of function but the visual relationship always continues.

The second type is the physical relationship. In this type, in addition to the visual relationship, a physical connection should also be established. This situation refers to a connection that is created by crossing over the grid line or destroying the grid completely. In both cases, these situations are created by using certain architectural elements.

Three different scenarios can be mentioned as examples of this second type. Firstly, instead of destroying the grid, establishing a connection by passing an element over it is an example of this type. In the abstract diagram of the building, it can be seen that this is created by defining a continuous path or axis. Therefore, the flow of movement takes place directly by crossing the grid. Secondly, elements in one of the frames next to the grid overflow into the other adjacent frame. Therefore, the abstract line of the grid disappears. For instance, some of the steel frames as components originally belong to one square, but they are located in both squares which are next to the grid line. In the final, two separate squares begin to act as a single space. Thirdly, a third space is defined in addition to the space defined in two separate squares. This new one is placed directly on top of the grid line. In the example of the building case, the spaces defined as administrative rooms are placed above the gridline where the two squares meet on both ground and the first floor. Therefore, instead of creating one single space, a new space and relationship with the grid are defined. This situation is seen in figure 89.

The third type is the no relationship. In this type, there is no physical or visual connection. The grid line itself becomes an architectural element and separates two adjacent squares from each other in terms of space definition. This is important in designing spaces that need to be completely separated from each other in terms of functionality. In the building case, the grid lines following this rule turn directly into load-bearing walls. Two adjacent spaces are separated from each other by an opaque wall and become completely independent from each other.

Eight axonometric views show different scenarios of these three different possible relationship types. As it is seen from these axonometric views, different places and experiences emerge in each scenario.

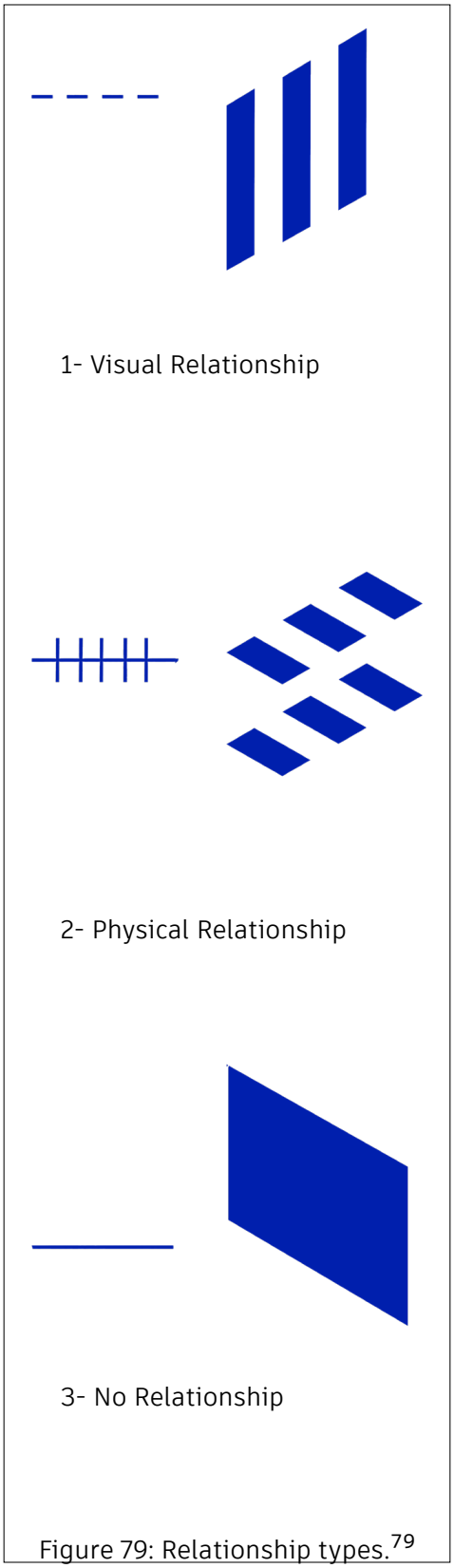


Figure 79: Relationship types.[79]

Figure 80: Plan diagram of internal relations.[80]

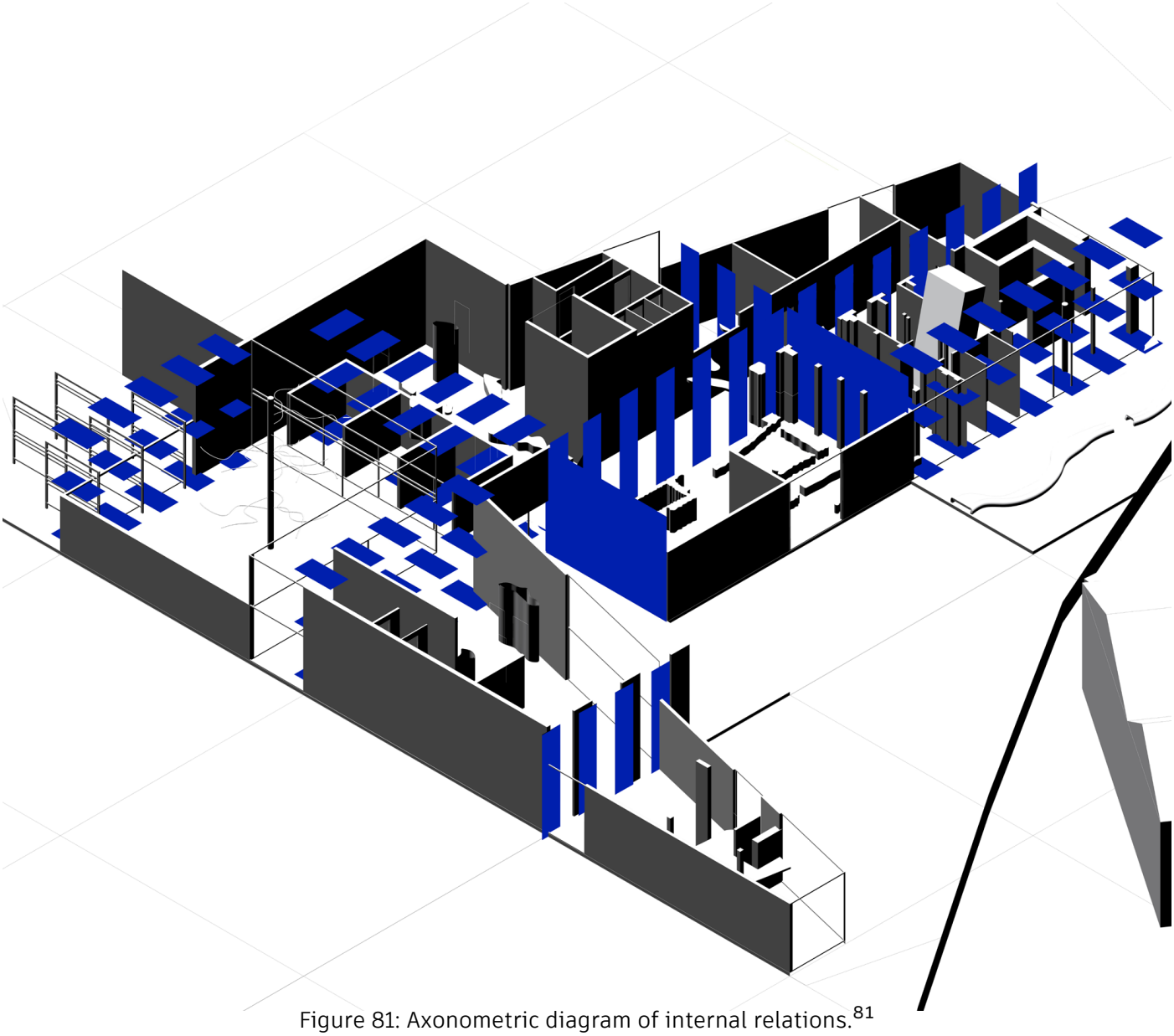


Figure 81: Axonometric diagram of internal relations.[81]

Although internal relationships operate very systematically among themselves, two very different experiences can emerge even from the same relationship type definition because of the flexibility provided by the generating process.

The significant point is that the generator which defines a system and the flexibility factor can coexist and work together at the same time during the design process. This type of relationship provides a common ground for possibilities that are still not discovered.

The elements which are used for the process can be part of a reference image or architecture. They can be also completely newly designed elements. The important point is which frame they fit in the grid and what are other frames have relations around themselves. Two examples can be given to this new and old relationship. Firstly, in Figure 84, the steel frames of the curtain wall, which is taken from one of the first Modern building examples in Ankara, establish a one-to-one relationship with the newly designed backyard. This experience is not a premeditated example. Secondly, in Figure 88, the structural walls which are taken from the partial plan of Fondazione Prada establish a visual relationship with a newly designed corridor of the building. Structural walls from Fondazione Prada's plan have a thickness of their own and the space between each of them provides this visual space flow at the same time, they act as partition panels because of their thicknesses.

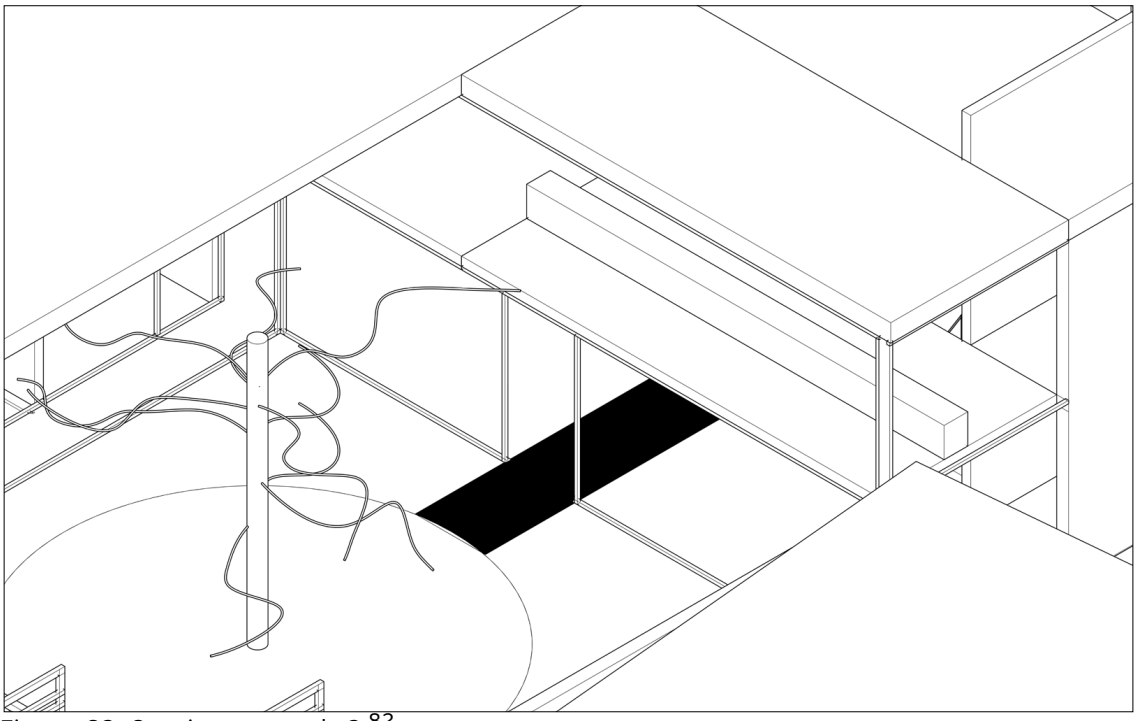


Figure 82: Continuous path-2.[82]

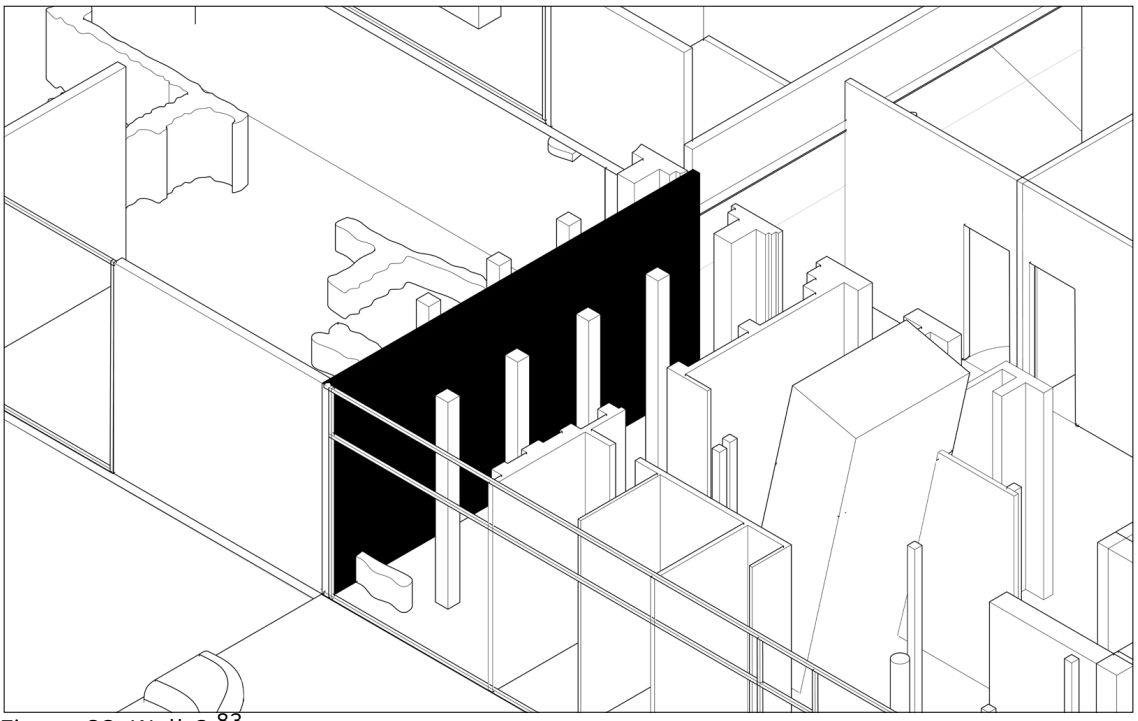


Figure 83: Wall-3.[83]

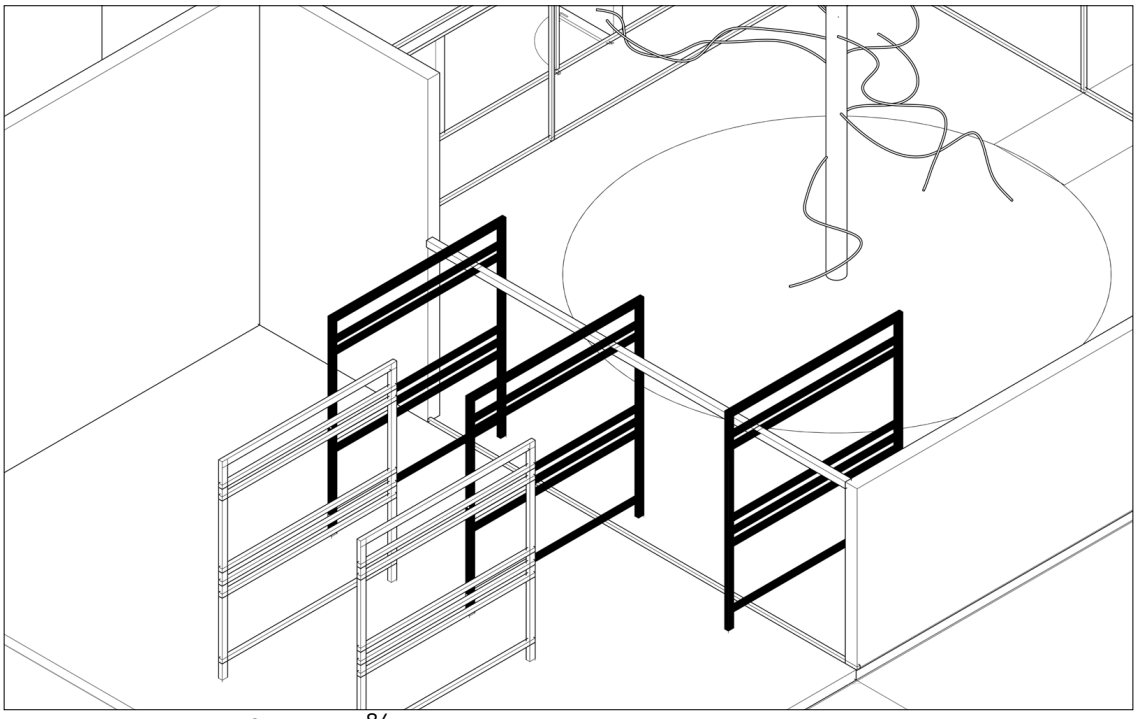


Figure 84: Common frames-2.[84]

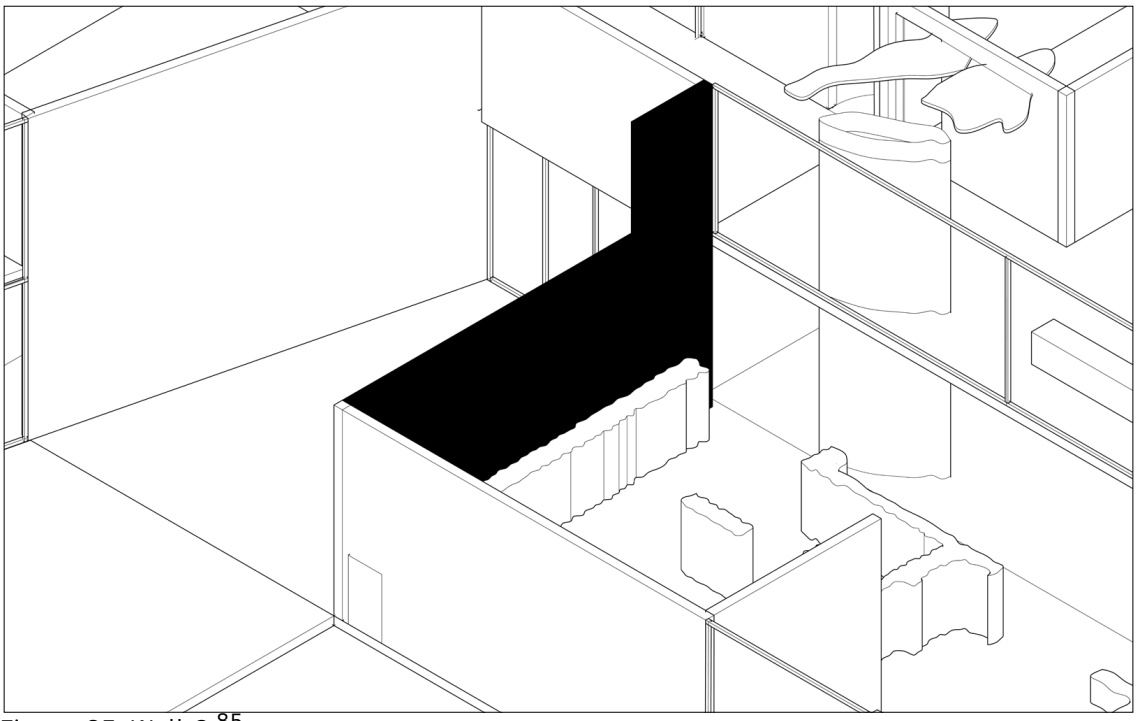


Figure 85: Wall-3.[85]

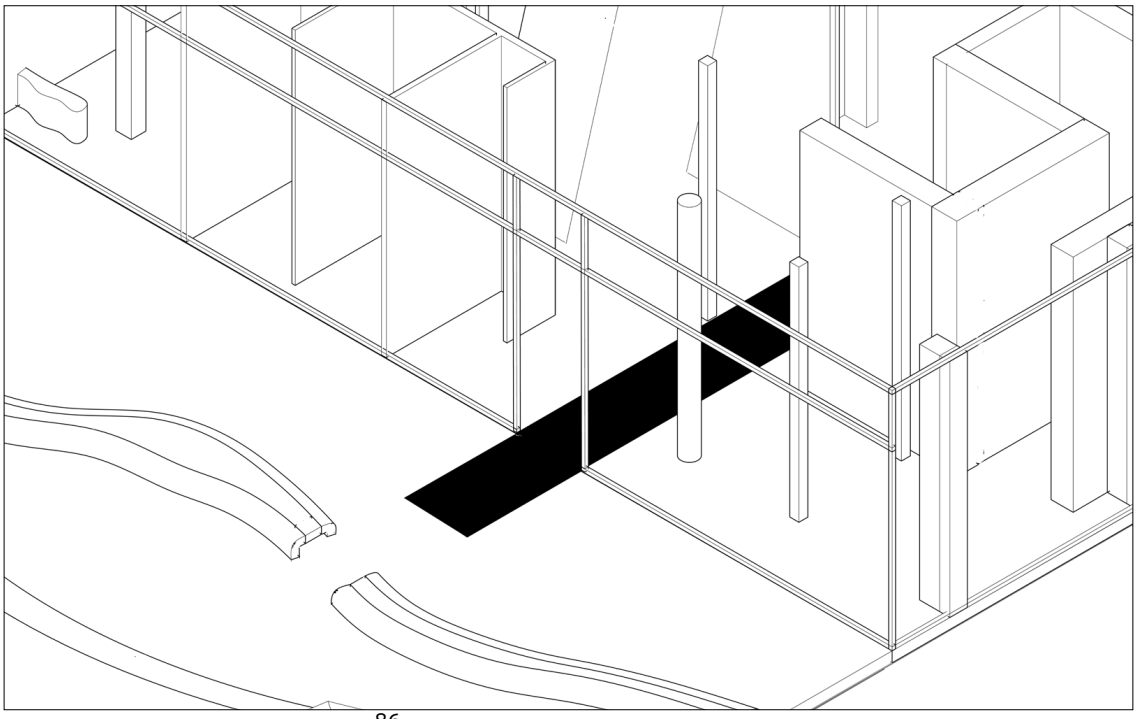


Figure 86: Continuous path-2.[86]

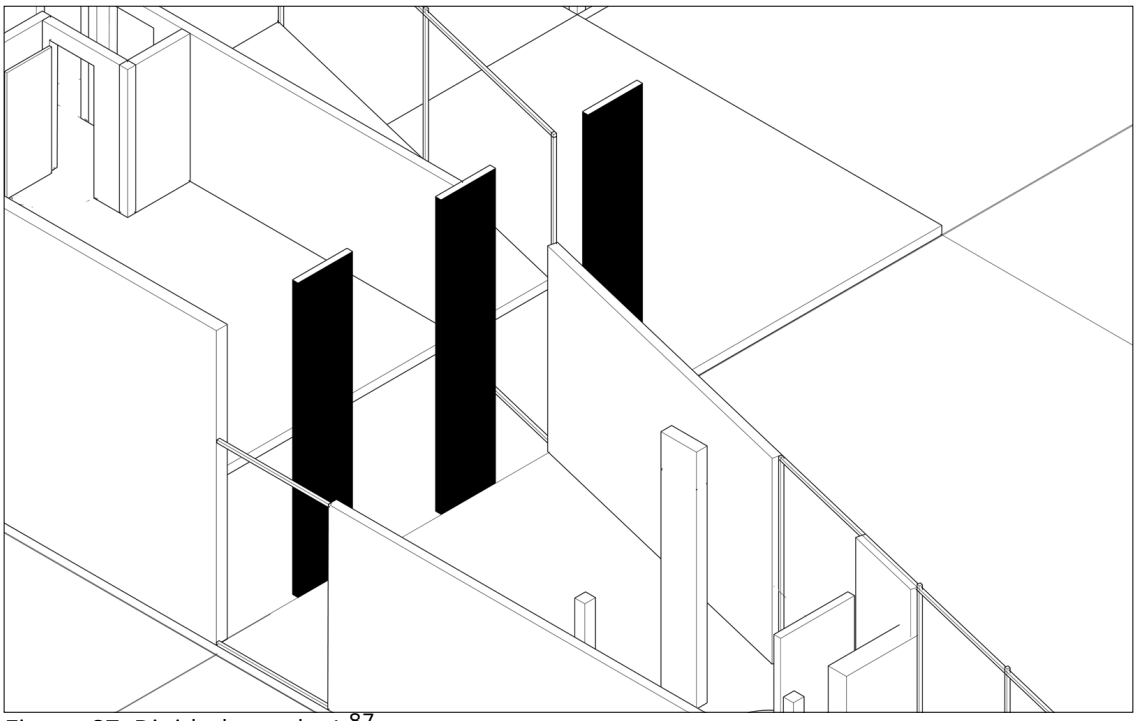


Figure 87: Divided panels-1.[87]

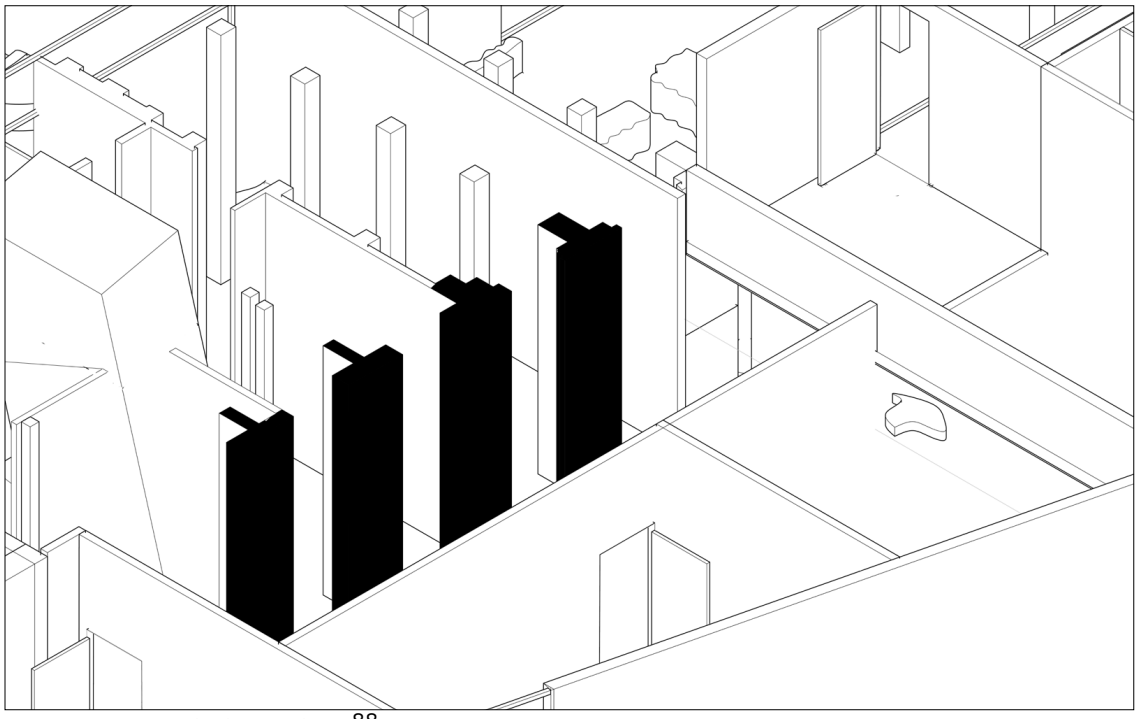


Figure 88: Divided panels-1.[88]

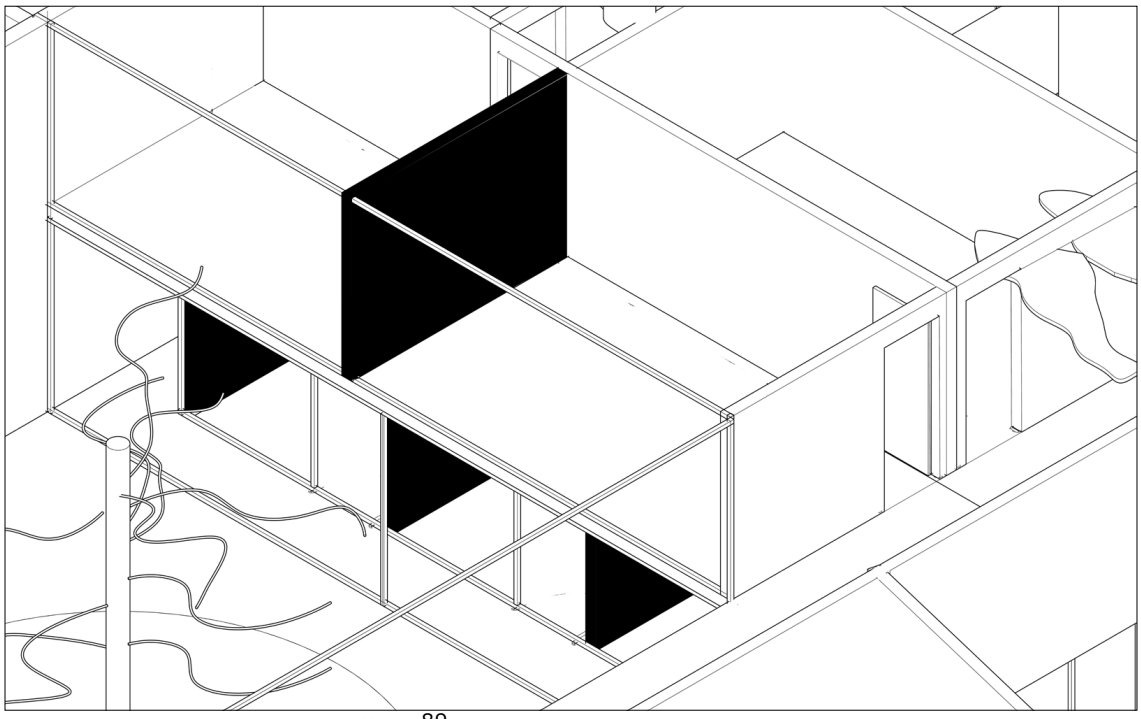


Figure 89: Common room walls-2.[89]

2. The design proposal

In this section, the project is explained by using layouts of an architectural project. It can be said that after the research and generator process, the end product is described by using proper technical drawings such as plans, sections, axonometric views, or human-scale visuals.

The form of the building is an output of a compositive process which is designed and completed inside the 3D generator. Architectural spaces obey a given set of rules which are coming from both the research and transition steps.

Volumetry and materiality are seen in several drawings. Different formal combinations create an overall heterogeneous image in terms of both volumetry and materiality. The solid-void relationship is placed in harmony with the context. The reference system, in an abstract way, is the "grid" that determines which square will be solid and which square will be void. In the axonometric view, open and void spaces are defined on the Northside which is associated with the exhibition center Cermodern. At the same time, an outer courtyard has been defined in the South facing the direction of the building at the rear. This is also made by defining a square of the void.

Solid parts are not completely closed with walls or structural elements and are always open to possible relationships. This can be seen as a result of an experimental approach. There are always different possibilities. It can be creating another architectural prototype from zero or it can be also adding certain things to an existing prototype. Therefore, the solid void relationship is fixed as a result of the first experiment but it can always change as an image within the new possibilities.

The main axis which is placed along the West and East direction is the historical train tracks. The entrance to the in-between void (between Cermodern and the new proposed design) is provided from these train tracks. Instead of being a barrier between two buildings, the tracks turn into one of the main circulation elements and give direction to the main public space between two buildings.

In terms of the internal space regulation, there are two main levels which

are the ground and first floor. It is a horizontal building with two storage because it is in harmony with the existing exhibition center Cermodern in terms of height and scale in urban form.

In Figure 91, the interior space regulation of the building is explained with a parallel axonometric view. The different materials are shown with different colors and textures. The main material used for load-bearing walls is concrete. While the color tone of the concrete is pure gray in many of them, it is sometimes snow-white color in some of them. The reference for this type of white comes from the image of the snow pattern in one of the squares of the grid. Snow is one of the important seasonal features of context, Ankara. In addition, brick is used for some non-load-bearing walls. They take place as elements that define the space with their patterns.

There are load-bearing columns in certain parts of the building in addition to walls. They are made of steel structure and appear as a second supporting material other than concrete. The use of the steel element is also seen in the frames of some curtain walls. Since they are steel, they act as self-supporting structures. In the remaining frames of curtain walls, wood takes place for supporting structural elements.

Wood material plays a significant role in the building. The reference for this material comes from the image of the interior of Oslo Opera House which is located in one of the squares in the process. For formally using that image is not to take any element but to take wood as a material. Therefore, wood is used for two different purposes in the building. Firstly, it is used in seating units and certain multi-functional space vehicles. Therefore, some of the elements that regulate the main public spaces are made by using wood. Secondly, some of the load-bearing columns are made of wood. In this way, certain spaces in interior design differ in terms of material selection, and people's experience is changed.

Another significant texture used for seating units and certain multi-functional space vehicles is taken from the image of an old wall. This wall is formed by the accumulation of certain materials from the soil. This texture is used as the outer coating and covered unit blocks.

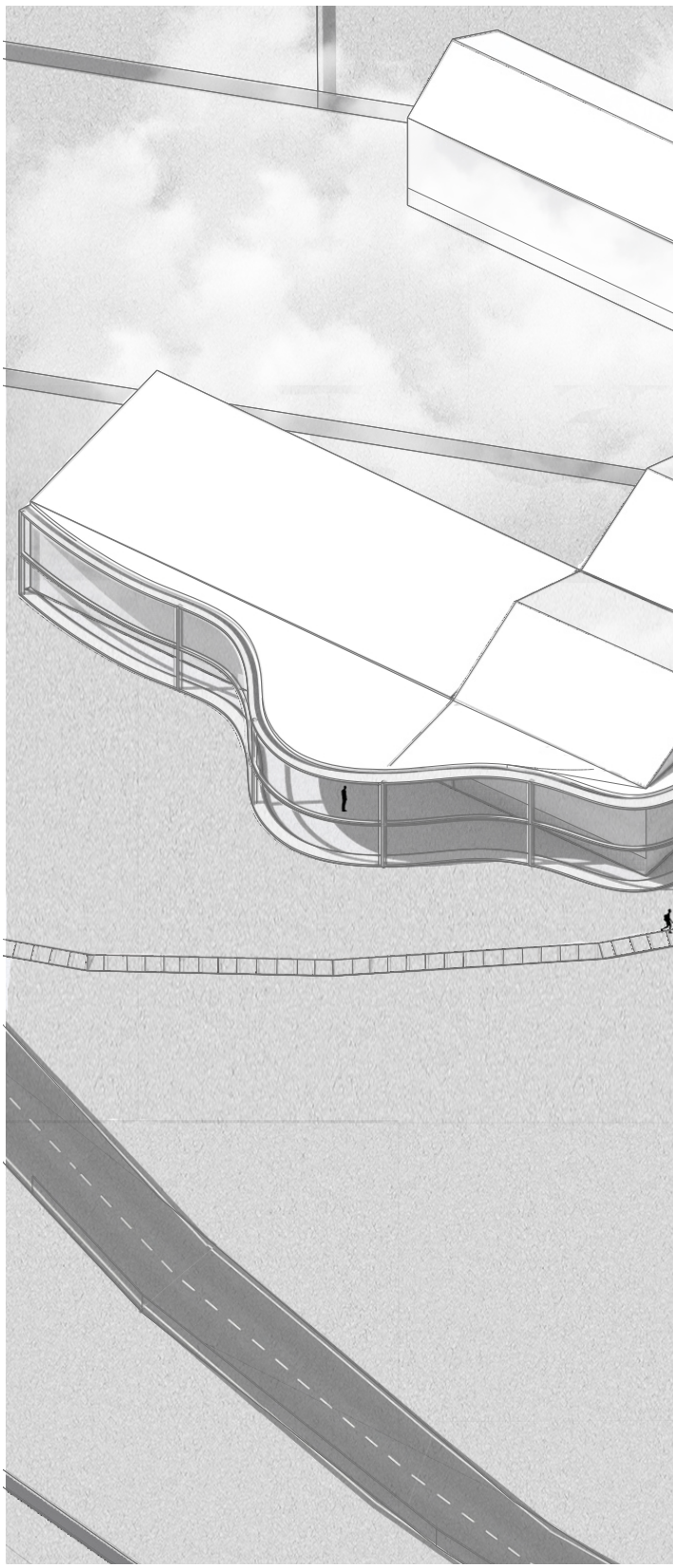


Figure 90: Parallel view of the building.[90]

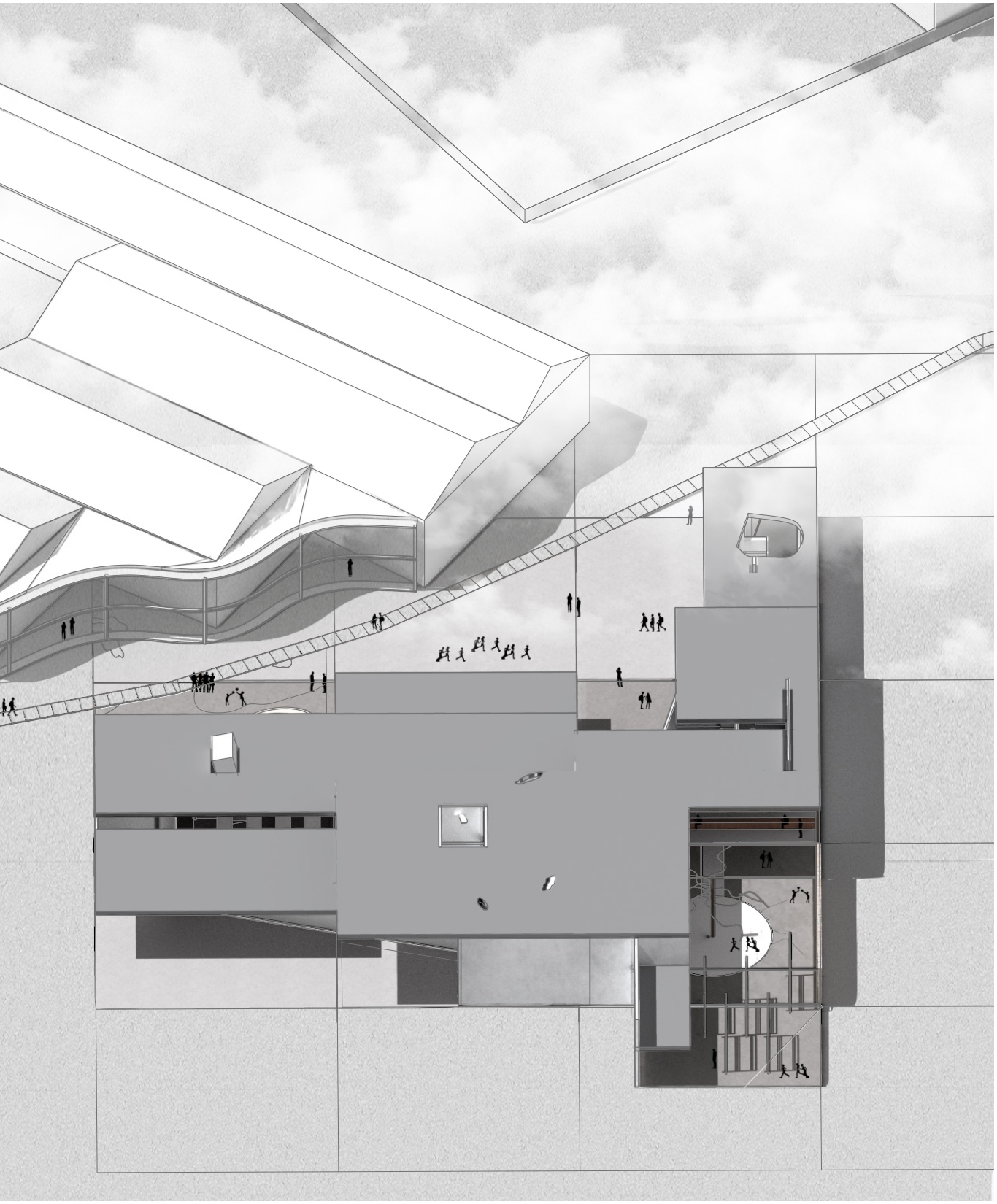


Figure 91: Parallel view of inside of the building.[91]

In some architectural elements which are translated from image to design phase directly in three dimensions, their materials and textures are preserved and represented in the same way during the process. For instance, the color and form of the high slanted white column are preserved and only adjusted to the building in terms of its scale during the process.

The distribution of spaces in terms of their functions is another important topic in the interior space layout. The main defined function of the building is an experimental school. While we are experimenting with this school concept, the first aim is to combine education and art. Therefore, as an end product, the building turns into an art education and training center for children. There is a valid reason for choosing art as a side element that feeds the main function. The new proposed building is located next to Ankara's biggest collective exhibition art center. Therefore, children who can get an education in this proposed experimental school are ensured to be intertwined with the significant art center in the city.

After the formal and material placement of the elements coming from the generator, new spaces are placed on both the ground and first floors according to the required spaces. The first placed spaces are circulation cores and service areas. There are two cores in the whole building.

There is the main entrance from Northside where the public open space is located between Cermodern and the proposed building. All other entrances from the ground floor are secondary ones.

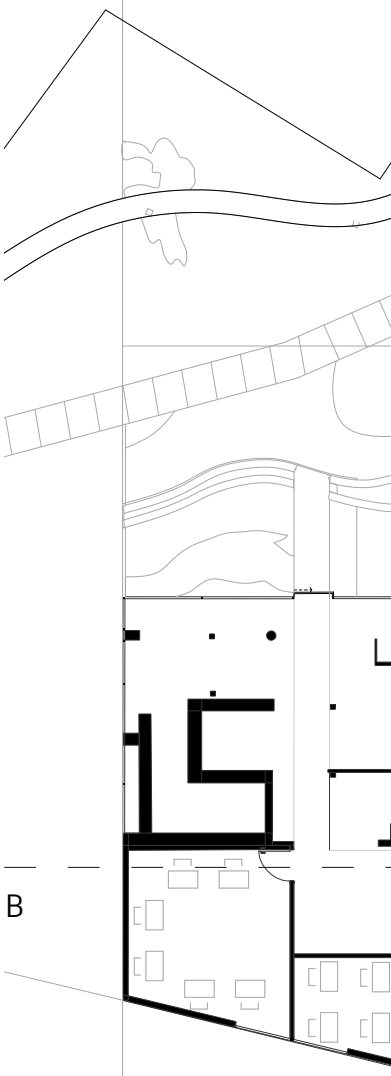
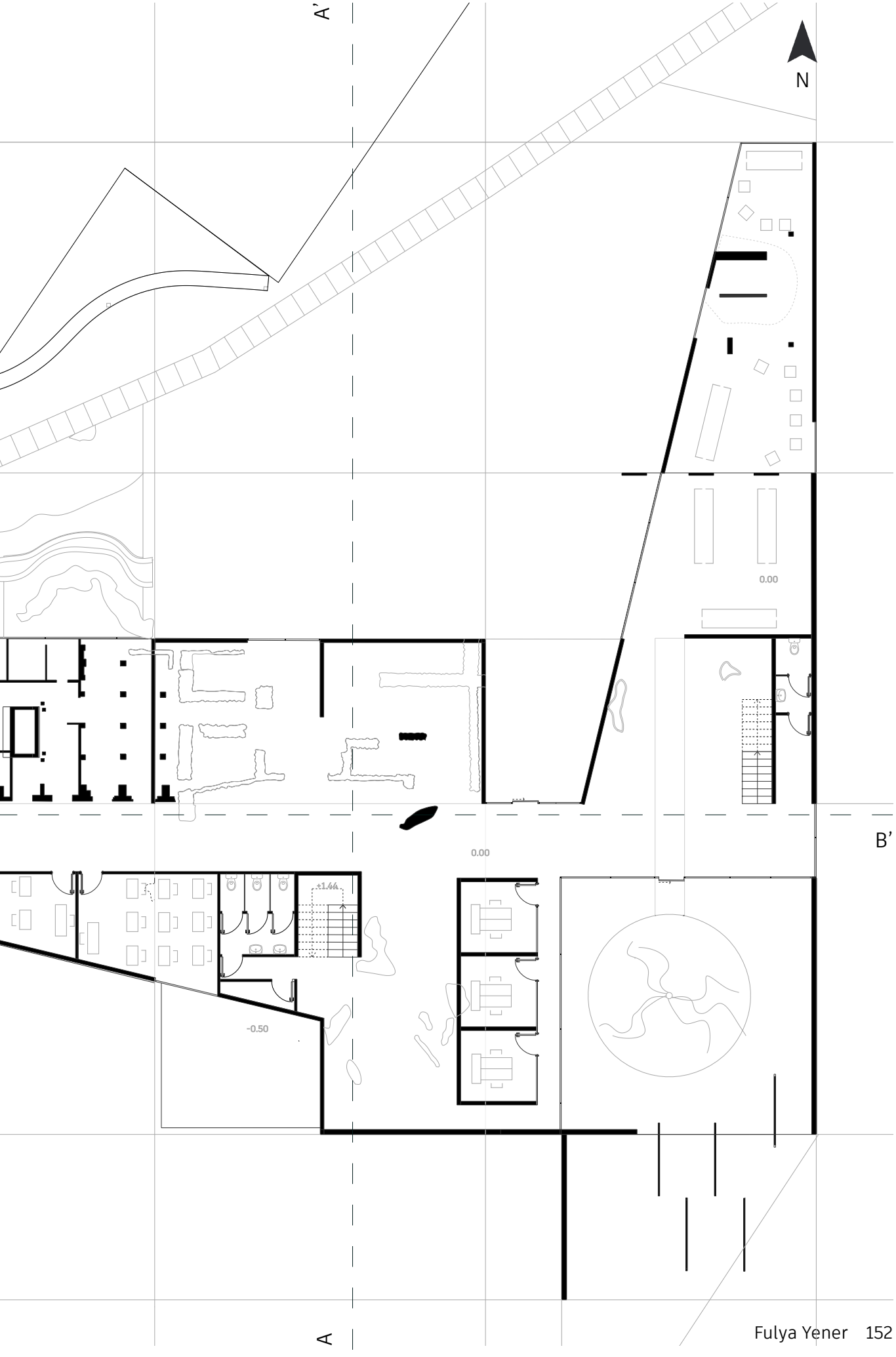


Figure 92: Ground floor plan. 1/200[92]


A'
N
0.00
B'
0.00
+1.44
-0.50
A

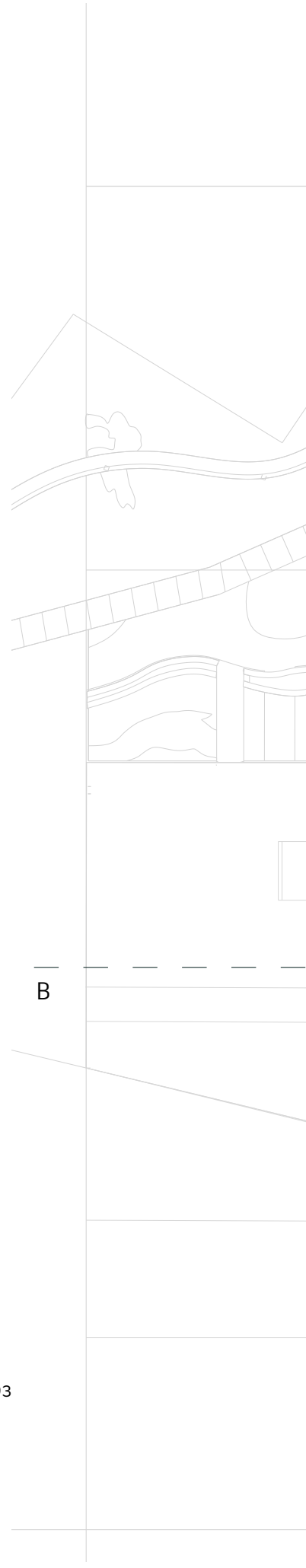
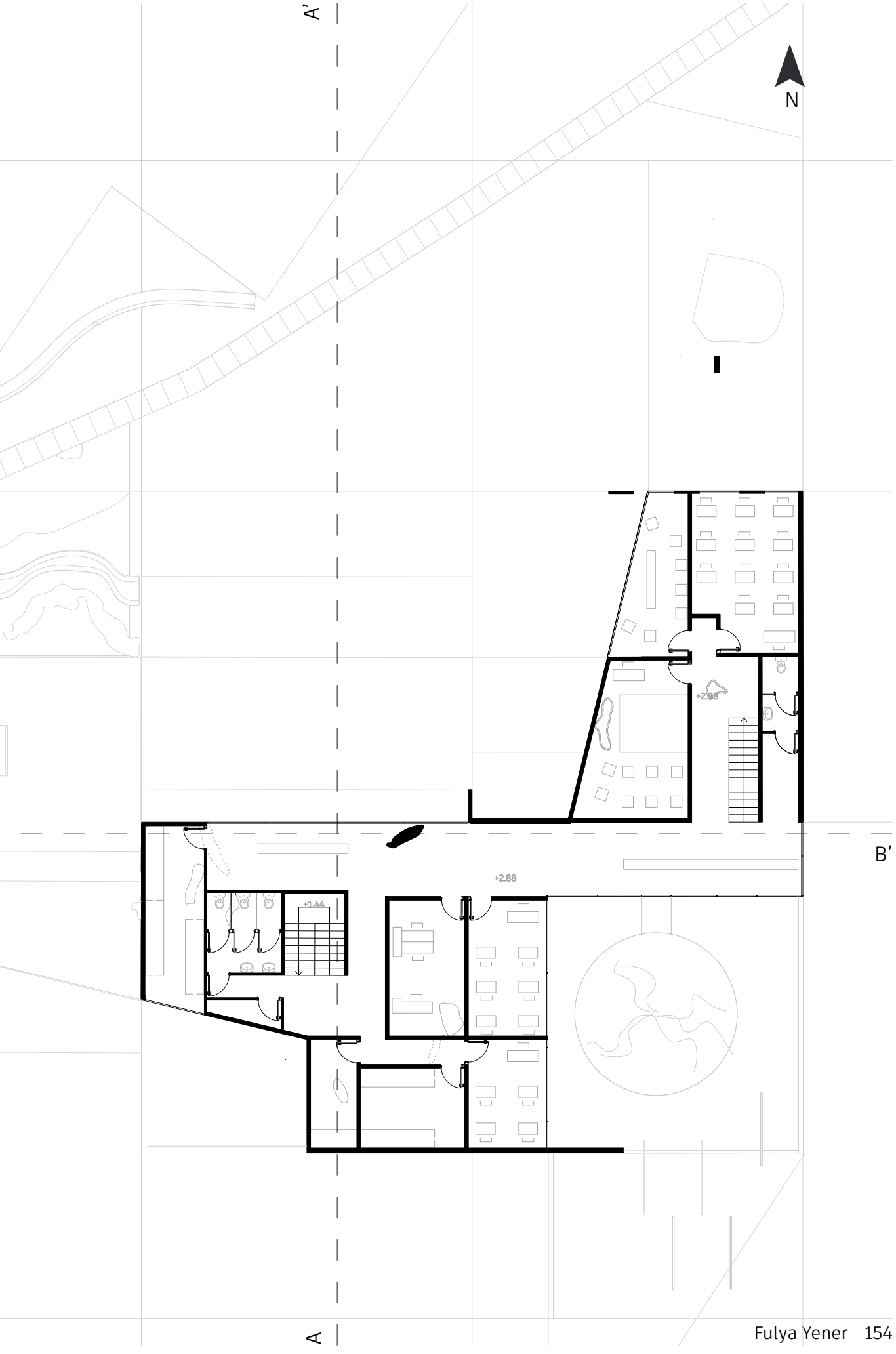


Figure 93: First floor plan. 1/200[93]


A'
N
+2.88
+1.44
+2.88
B'
A

In the ground floor plan (Figure 92), after main circulation cores are defined, the floor is divided into five main blocks which are classrooms, courtyard, exhibition, multi-functional spaces, administrative spaces, and collective training spaces. Exhibition and multi-functional spaces are directly the fields created by the forms coming from the generator. The courtyard is a void with a symbolic tree at the center. This tree is also coming from the process of the generator.

Classrooms, and administrative and collective training spaces are designed according to space and number requirements. There are three classrooms, and three administrative offices which are closed and opaque for providing private working and studying zones. Furthermore, the three collective training spaces are flexible and transparent. The spaces used for general circulation consist of seating units and some exhibition vehicles. Therefore, they become collective spaces rather than just transition areas.

In the first floor plan (Figure 93), there are classrooms, a library, an administrative office, and collective training spaces. All of them are designed according to space and number requirements. Different than the ground floor, there is no flexible or transparent space on this floor. All spaces are opaque and have private working and study zones. In addition, the visual relationship between the interior spaces and the courtyard is continuing. Similar to the ground floor, there are also seating units in the space of general circulation.

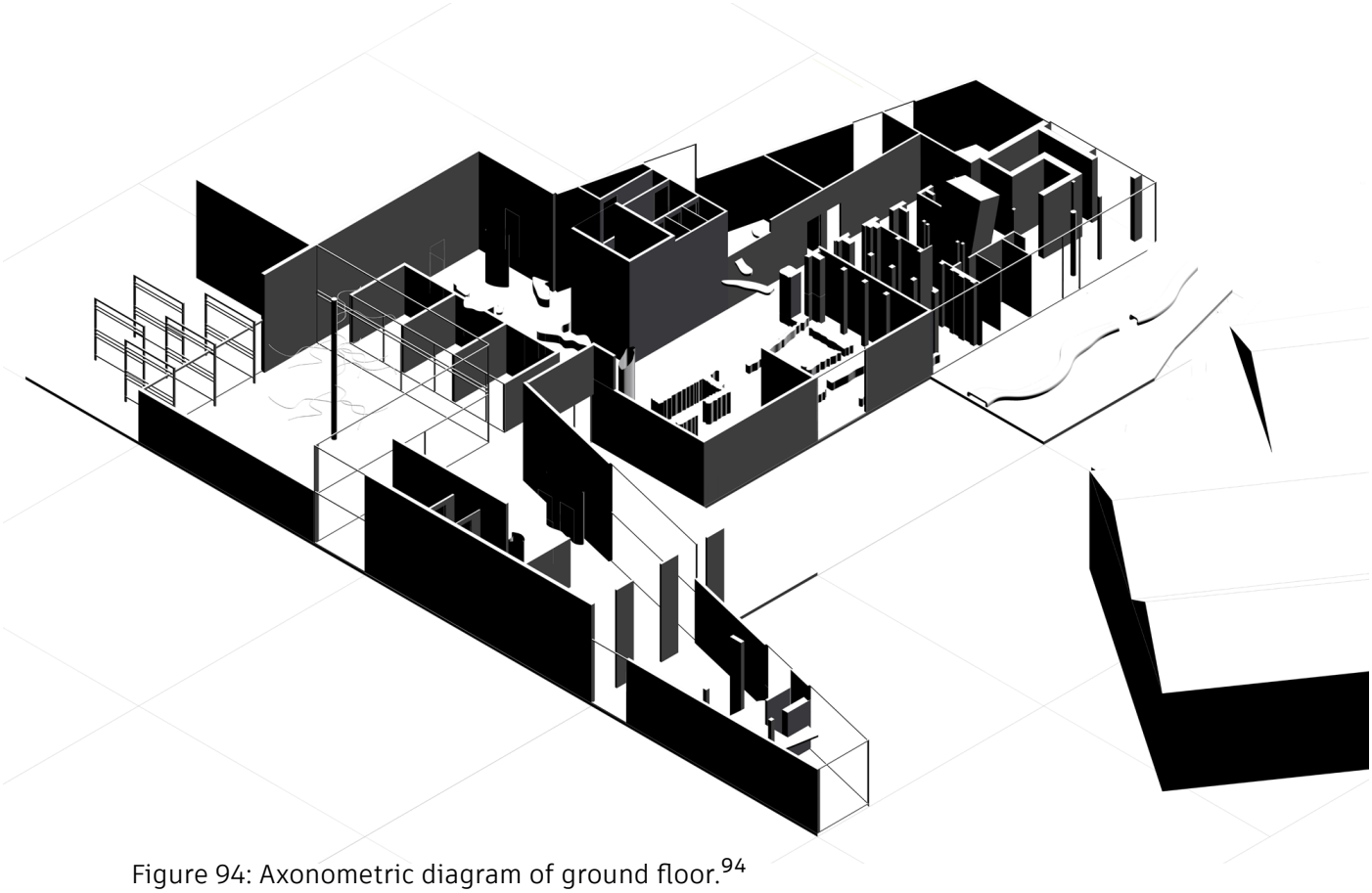


Figure 94: Axonometric diagram of ground floor.[94]

Figure 95: Axonometric diagram of first floor.[95]

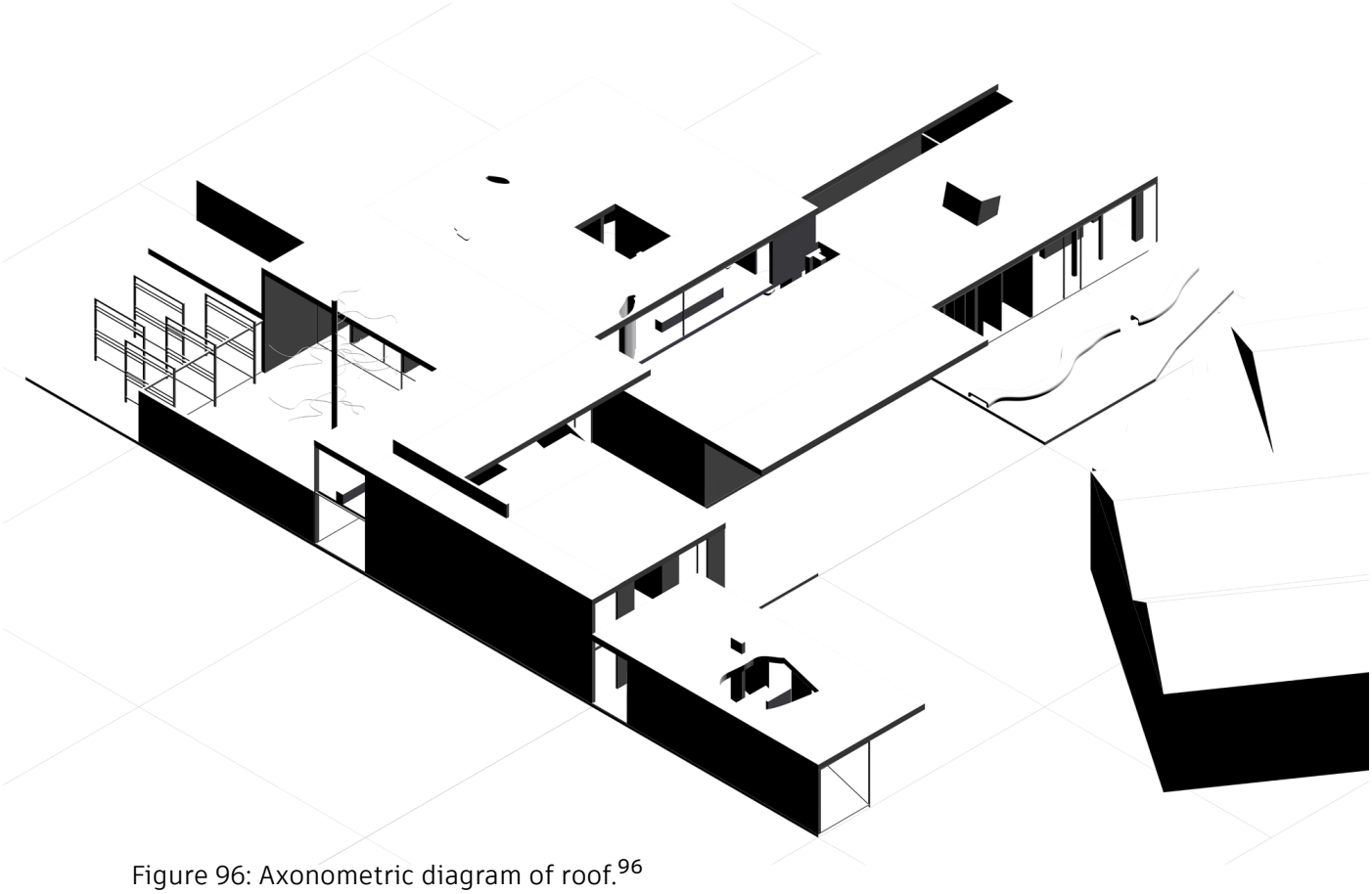


Figure 96: Axonometric diagram of roof.[96]

Figure 97: South Elevation 1/200.[97]

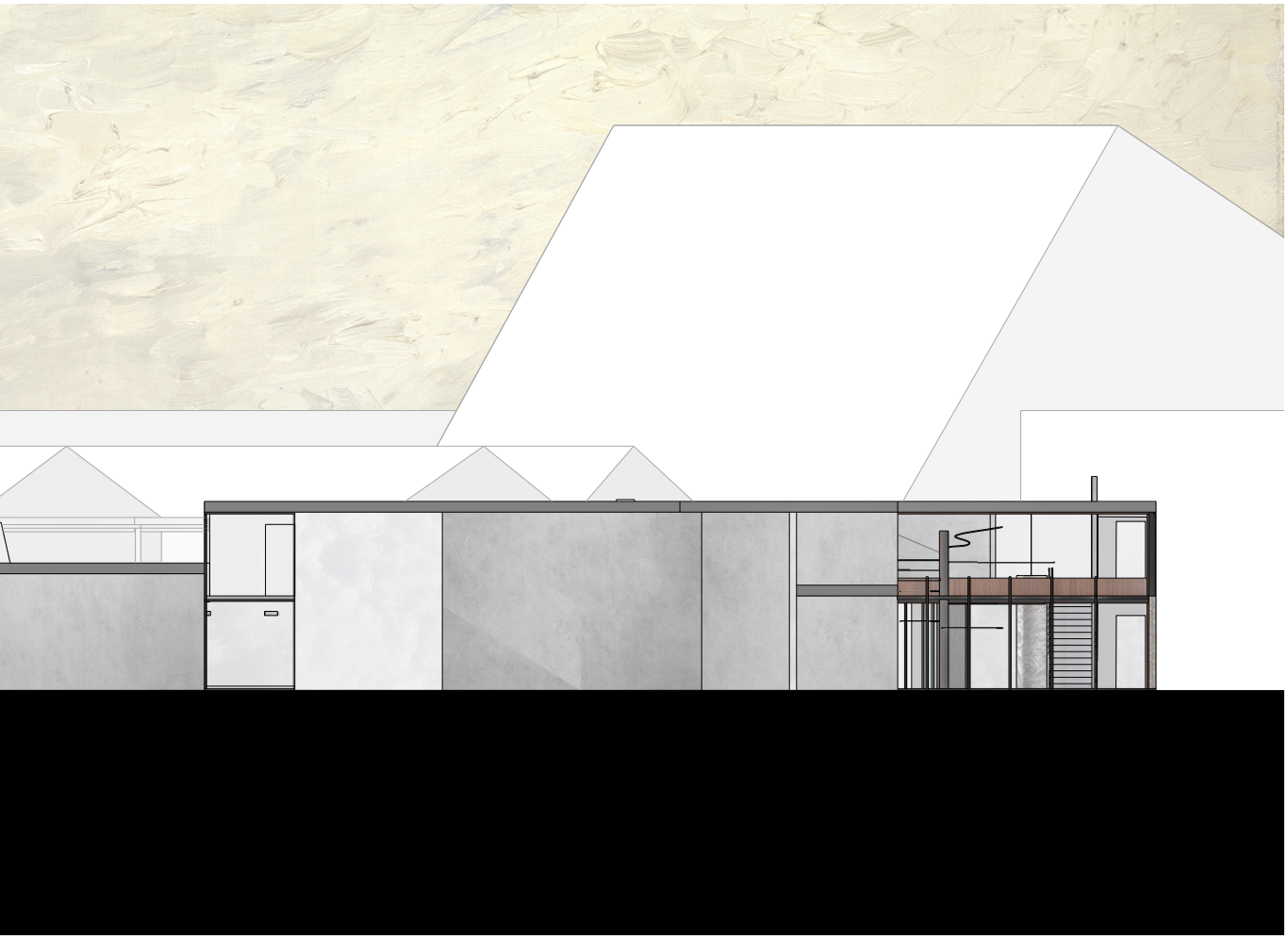


Figure 98: North Elevation 1/200.[98]

Figure 99: Section AA' 1/200.[99]

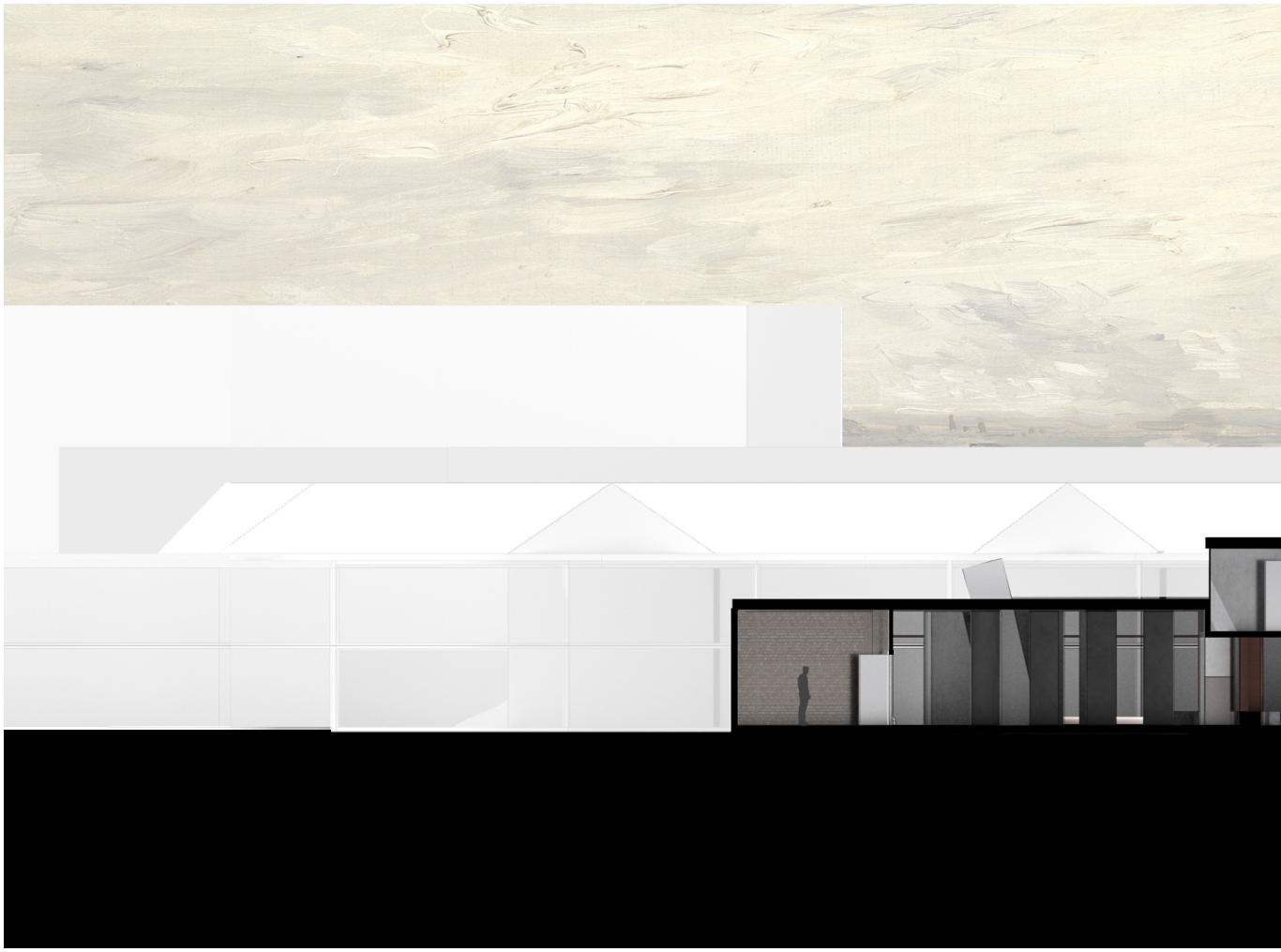
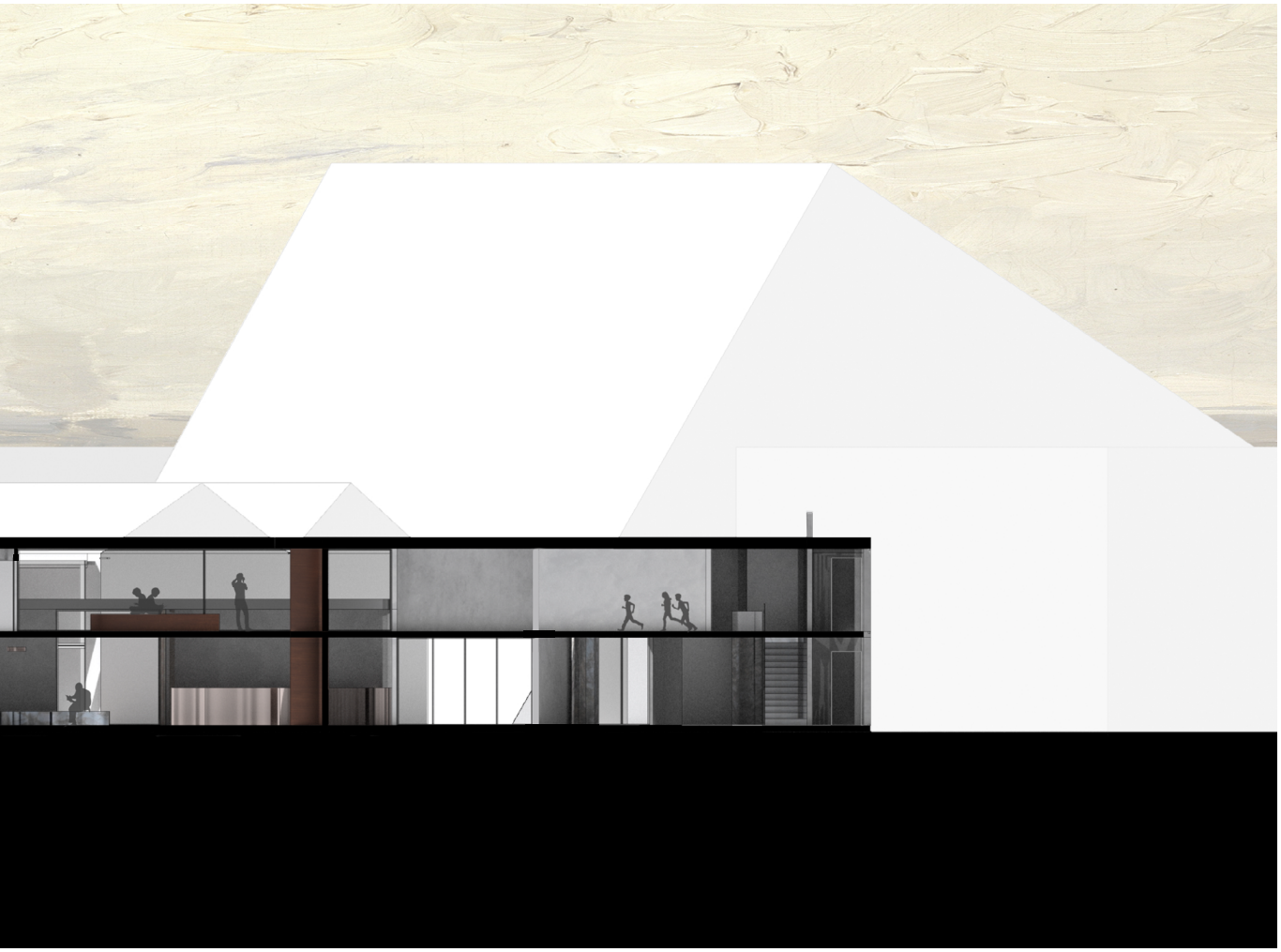


Figure 100: Section BB' 1/200.[100]



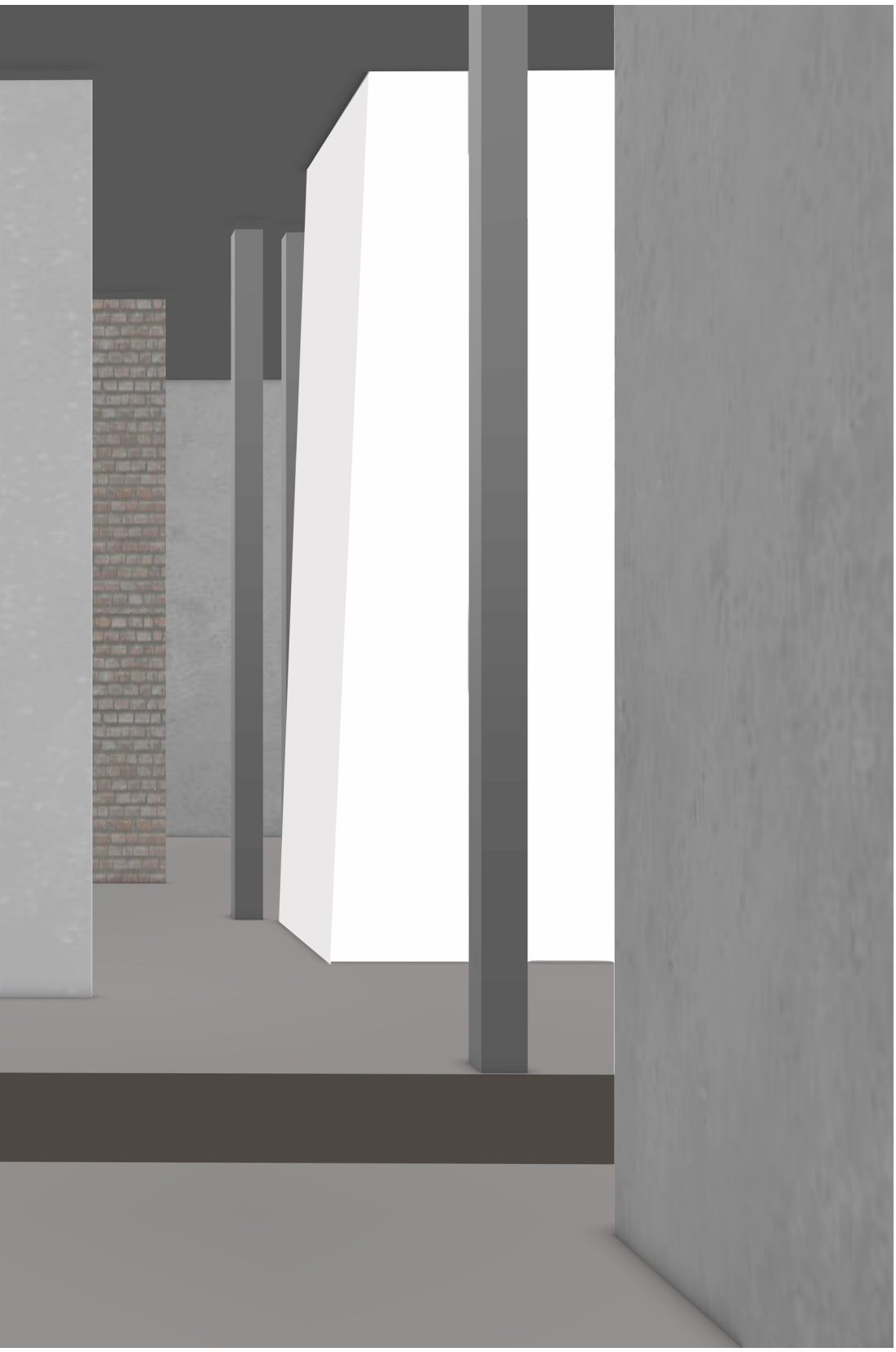


Figure 101:
Exhibition space with inner courtyard.[101]

Figure 102:
Main foyer.[102]

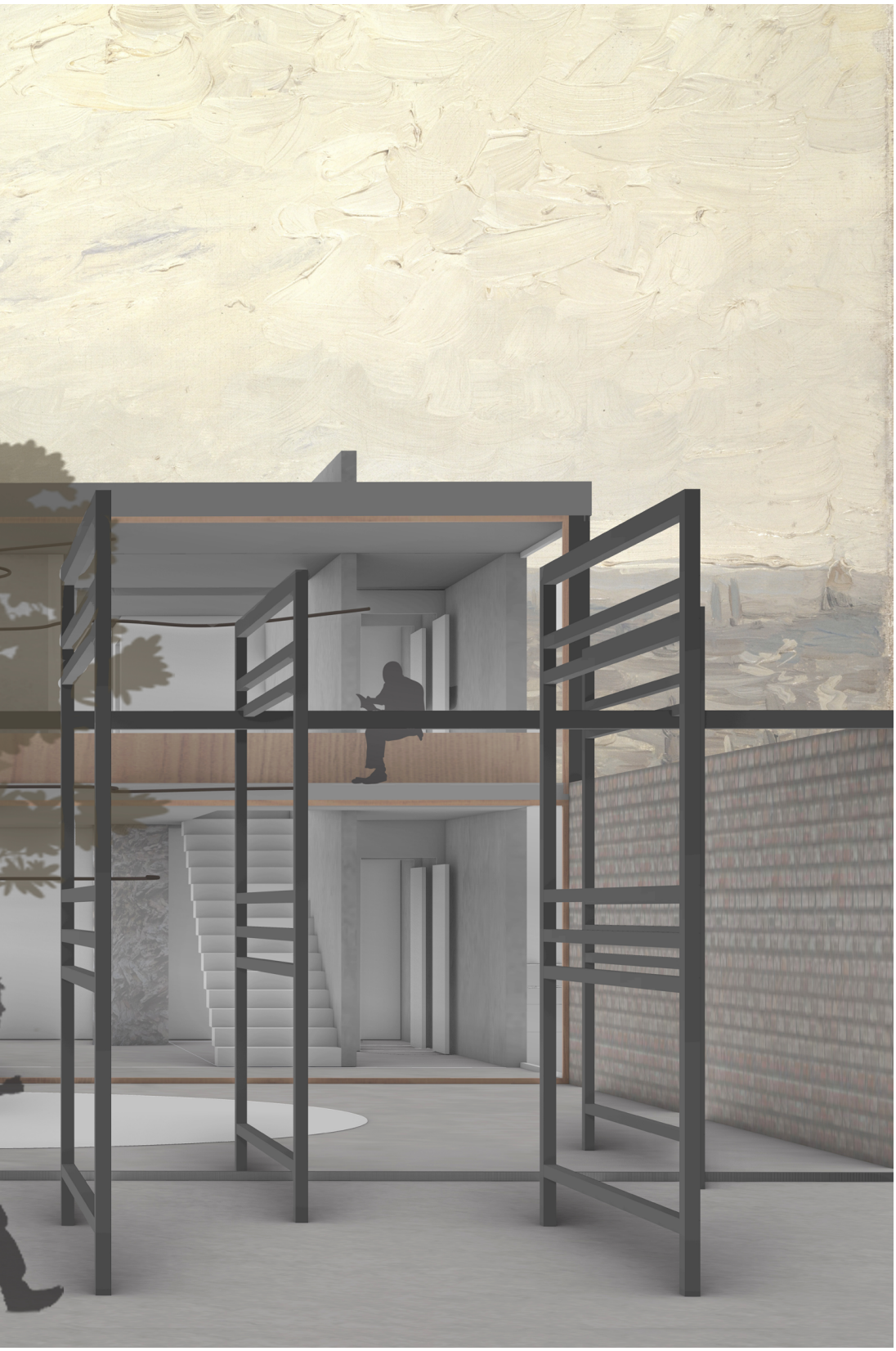


Figure 103:
Outer courtyard.[103]

Figure 104:
Entrance.[104]

CONCLUSION

This project has an interest in exploring the limits of montage in defining architectural space. The process leading to the project feeds itself from plurality rather than singularity. For this purpose, there can be no more appropriate concept than montage. Montage is a broad term that has found its role in many different disciplines such as art, cinema, and architecture. Therefore, this amplitude of the concept of montage was brought to discussion. Examples of montage in different disciplines and research on this concept throughout history have been analyzed.

After analyzing the samples from the discipline of cinema, focusing on the two types of montage can provide the basis for further steps. These are demonstrative and integrative types of montage. While a demonstrative one displays the breaks and ruptures, an integrative one seeks to conceal the heterogeneous nature of the image. Both of them can be related to producing new architectural forms because in fact, the established course either wants the relationships in the montage and architecture to occur directly in the human brain or it waits for it to give the necessary clues and create that frame itself. However, the demonstrative montage, that belongs to Eisenstein, was chosen to be applied in this experimental process. This type of montage can be directly described as an intellectual beginning step for creating new architectural forms.

While examining the relationship of montage with art and architecture disciplines, instances from several different periods are discussed. Montage has three roles in general frame towards art and architecture. First, it takes part in creating the intellectual theoretical framework. At the same time, it creates an imaginative composition by proposing unexplored possibilities. In addition to these abstract process components, it has a crucial role in describing the mechanical editing process between different images or objects. In the montage, it cannot be directly said that there is a common order followed. Instead, the complicated disorder is perceived when a viewer sees different compositions together. Therefore, instead of creating an abstract order, this dynamic disorder of complexity can be used in generating new architectural forms.

The path, where montage is included in the definition of architectural space, is both manual and systematic and sometimes completely arbitrary. As a result, the goal of focusing on the relationship between montage

and definition of architectural spaces brought a new discussion about the practice of formal architecture. This helps to understand the bonds that make up the whole process, not just the end architectural product.

As a result of the critical views of montage obtained from different disciplines, a compositional in-between process is defined as an outcome of blending them all into a common ground. The main goal in this part is to create a machine that defines a system of formal operations such as rearranging, scaling, composing, fitting, cutting, and many other operations. There is one machine for generating forms but there are infinite processes inside it. It generates a different process and creates a final product according to the inputs placed each time. The role of the "grid" is significant here. It is the tool that ensures that all formal operations are carried out on the common denominator. This includes both architectural and urban scales. The combination of units of different scales is a situation that can be easily created in the montage by using a "grid" as a regulating element of generator in both 2D and 3D. Hence, it is possible to see a building or structure rising next to a human scale statue. The flexibility provided by this scale of play is perhaps one of the most shaping features of these experimental approaches.

Besides the mechanical framework, there is always freedom and randomness in the procedure which is left to the author's opinion. This forces us to perceive and try to understand the formal architectural path in which the tension is created between this system and arbitrariness by using an analogous approach. The tension will show the struggle throughout the design process but at the same time how the design is fed from this created tension.

The selection of an experimental site in a context is determined as a multi-layered place where complicated disorders can be applied. The last component that is put into the previously described generator becomes the chosen city, Ankara. The transition from architectural scale to city scale or the reverse is possible within the generating machine by using the "grid".

The final step is to create a prototype integrated with the educational function. It emerges from certain experimental trials which are designed and observed throughout the formal expressions of the generator.

Understanding and transferring interposition meanings and relations from montage to architectural space are possible by examining the formal blend as an end product. It consists of the abstract machine process, and the realistic content taken from the site. and an educational proposal as a pragmatic function.

It is expected that the readers find this thesis very useful to broaden the perspective towards the discussion on the topics such as creating formal compositions by using diverse professions in addition to architecture itself. Observing the possibilities, which reveal that formal architectural experiments begin to get fed by plurality rather than singularity, will play a crucial role in expanding this perspective. Seeking new approaches to these topics will carry forward the role of designers and architects in the whole process.

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84. Axonometric diagram of common frames. Own authorship.

85. Axonometric diagram of wall. Own authorship.

86. Axonometric diagram of continuous path. Own authorship.

87. Axonometric diagram of divided panels. Own authorship.

88. Axonometric diagram of divided panels. Own authorship.

89. Axonometric diagram of common room walls. Own authorship.

90. Parallel view of the building. Own authorship.

91. Parallel view of inside of the building. Own authorship.

92. Ground floor plan. Own authorship.

93. First floor plan. Own authorship.

94. Axonometric diagram of ground floor. Own authorship.

95. Axonometric diagram of first floor. Own authorship.

96. Axonometric diagram of roof. Own authorship.

97. South elevation. Own authorship.

98. North elevation. Own authorship.

99. Section AA'. Own authorship.

100. Section BB'. Own authorship.

101. Visualization. Exhibition space with inner courtyard. Own authorship.

102. Visualization. Main foyer. Own authorship.

103. Visualization. Outer courtyard. Own authorship.

104. Visualization. Entrance. Own authorship.

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