The sound of architecture
Music in architectural design
Kristin Oretorp

THE SOUND OF ARCHITECTURE
MUSIC IN ARCHITECTURAL DESIGN

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Abstract

Throughout history, there have been analogies between Architecure and Music as creative and artistic practises. Analogies in the methods of conducting the creative design process. Analogies in the vocabulary used to describe how we create and experience music and architecture. Analogies in how we use notation as a means of describing our artistic intentions.

In this thesis, these analogies are explored using the shared vocabulary as framework and layered mapping as working method.

The aim is to explore how the shared vocabulary could be used as a framework within which architecture could be analysed and experienced through a musical lens, and how such a framework could be a starting point for developing a method where music can be integrated in the architectural design process.

The site for the final design proposal is the Gothenburg Opera, a building with a multitude of features and sequencial shifts. The existing building has been mapped using a framework including five terms from the shared vocabulary of both music and architecture.

The map has been the basis of continuous conversations within an established collaboration with Daniel Berg and Tobias Granmo, musicians and professors at the Academy of Music and Drama. Within this collaboration, one piece of music has been chosen for each sequence in the mapping. The music in combination with the mapping of the Gothenburg Opera has been the foundation in the design of an extension - The Little Opera.

DEFINED VOCABULARY
Rythm; Harmony; Volume; Ornamentation; Movement

Contents

Part One
FRAMEWORK

Music & Architecture

We are surrounded by matter. We create architecture by deconstrucing and re-synthesizing matter, organising it in ways that create meaning to us. Originally to find appropriate shelter, but eventually also as an important means of expression.

We are surrounded by sound. Similar to architecture, we create music by synthesising and organising sounds in ways that create meaning. Storytelling, worshipping, political opposition, emotional processing - music as well is a powerful medium of expression.

Throughout history, there have been analogies between the two fields. There are for instance similarities in the vocabulary used to describe how we create and experience music and architecture. Concepts like rythm and harmony are central both in architecture and music, but also words like volume, repetition, movement, ornamentation and sequences are used in both disciplines.

In both architecture and music, layers are used through the creative design process. From early sketches to technical drawings - or from early notations to finished musical scores.

Stan Allen elaborates on the similarities between the function of notation between architecture and allographic arts like music and poetry. Notations in both fields - drawings and note sheets - are abstract, and does not resemble the product of the notation. Nor can it control unpredictable and intangible factors that inevitably effects the product, like weather, shifting atmospheres, the skill of the producer or the character of the spectator/listener (2009, pp. 32-33).

Though the notation is essential to the production of a given musical performance or built architecture, it is not visible in the product itself. It is, rather, a means of creating a new reality, not formerly available (Allen, 2009, p. 34).

I aim to explore a method for the integration of music and architecture to investigate how such a method can contribute to the archtectural design process.

KEY WORDS
Shared vocabulary; layers; notation.

Relevance

Is integration of music in an architectural design process relevant? Does it add something; to me as an architect or to the field of architecture?

Studies show that the stimulation of different perceptual modes can enhance learning capabilities. For example, musical activity can impact both intellectual performance and spatial-temporal reasoning, as described by Hallam and Holmes (2017, pp.425-438). Fleming and Mills (1992, p. 137) developed the now commonly known four learning styles, which are strongly connected to the senses.

In The eyes of the Skin, Pallasmaa focuses on how we use all our senses to enhance our perceptual capacity. He argues that hearing helps us structure and articulate our perception of space, even when we are not aware of it (2012, p. 53).

I believe music has the capacity to both inspire to and help us make sense of architecture. For me, music is a vast source of inspiration, but also a filter through which I look upon the world. By integrating architecture and music I hope to develop methods that will expand my toolbox as a designer.

Shared vocabulary

Exploring the meaning of shared vocabulary within the fields of architecture and music creates a better understanding of how deep the analogies between them go.

The purpose of the thesis is to develop a way to use the shared vocabulary as a framework within which architecture could be analysed and experienced through a musical lens. A framework that could form a method for integrating music in architectural design processes.

Five terms found in the vocabulary of both music and architecture have been chosen to be included in the framework, each of them treated as a layer in the synthesised mapping.

Other existing shared terminology has been excluded for different reasons. Some terms, like repetition and sequences, can be automatically integrated in other layers as needed. Other terms were difficult to use in a way that added value. The term *form* is for instance clearly defined within both music and architecture. However, as music is governed by time and architecture by space, in music form could be said to relate to sequencial shifts as well as repetition, while in architecture it relates to the shape of a volume. Trying to find a way for these definitions to merge prooved difficult. It overlapped and interfered with volume, it did not add value that could not be obtained through the simple notation of sequencial shifts, and it seemed to invoke more restrictions than opportunities.

DEFINED VOCABULARY
Rythm; Harmony; Volume; Ornamentation; Movement

Glossary

RHYTHM In music, rhythm is a regular, recurring pattern, strongly connected to time where the beat is the basic unit of time. In architecture, a myriad of features can be used to create rhythm, such as columns, openings or ornamentation. It can be experienced visually as a defined pattern, but also in time as we move through a space.

HARMONY In music, harmony is a noun. When several tones are played simultaneously, they become a harmony. Whether they sound harmonious or not is a different matter - it is a harmony either way. Within architecture harmony is used in a more descriptive way. The discourse is often related to mathematical principles, where geometrical shapes play important roles. In both architecture and music, harmony is centered around relations. The relation between different pitches or between different architectural artefacts is what defines the harmony of the composition.

VOLUME With volume, the opposite is true - it is within architecture that volume is a noun, while in music it is descriptive. In music, volume is concerned with how strong or soft the music is performed or listened to. It may also be referred to as dynamics. In architecture, we use the term volume to describe a cohesive mass, but it says nothing about the characteristics of that mass. In order to give it characteristics we need to add adjectives.

ORNAMENTATION In both music and architecture, ornamentation is used for features that do not have an apparent function, but is there to enrich the output and make it more pleasing to the eye or the ear. In architecture, it can refer to patterns on surfaces, volutes on pillars or stick style carpentry. In classical music it can be for instance a trill, or in modern music a wail.

MOVEMENT Movement is a somewhat diffuse and unregulated term in both architecture and music but nevertheless very important in the aim of directing emotions and behaviour in relation to the music or built structure. In music, it can be related to tempo, where the same beat and harmony can be accomanied with shifts in how fast the music is performed. But the music can also be designed in a way that gives the listener a feeling of moving forward without neccessarily changing the tempo. In architecture, we can perceive movement in a space that is directed, where we experience a starting point and a route towards another point in the space. The route can be physical, with the purpose to move people from one spot to another, but it can also be focal, directing our focus in one direction and drawing our attention there.
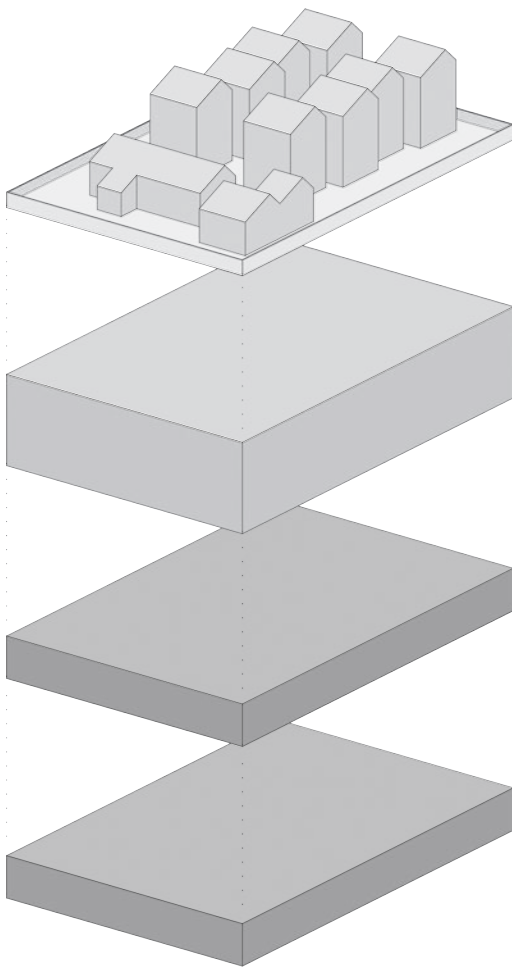
Figure 2 | **Linnea Olsson simultaneuously recording and performing layers of scores**
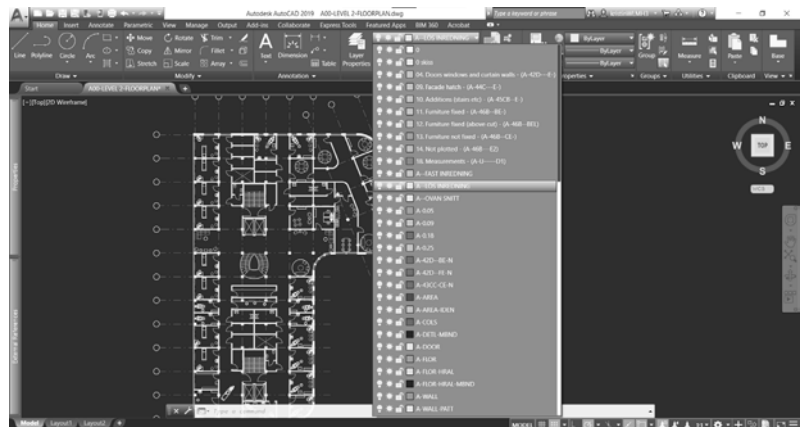
Figure 1 | **Conceptual layered diagram**

Figure 3 | **CAD software, using layers**

Layers

Within both architecture and music, we design, produce and experience the work in layers. Architects use layers in the design and drawing process, either on paper or in software. The same is true for the musical composer.

A built structure has different layers of shell, stories, building blocks etcetera. In music, the layers can consist of different instruments, different melodies for different voices, different after-effects for different scores and so on.

Similarly, layers influence how we experience architecture or music. As we live in the midst of architecture, layers of life interact with the built structure in different ways. And as we listen to music, the perception of the different layers may vary between individual listeners and it may depend on the situation or the mood of the listener. Someone listens to the words, while another is influenced by the beat.
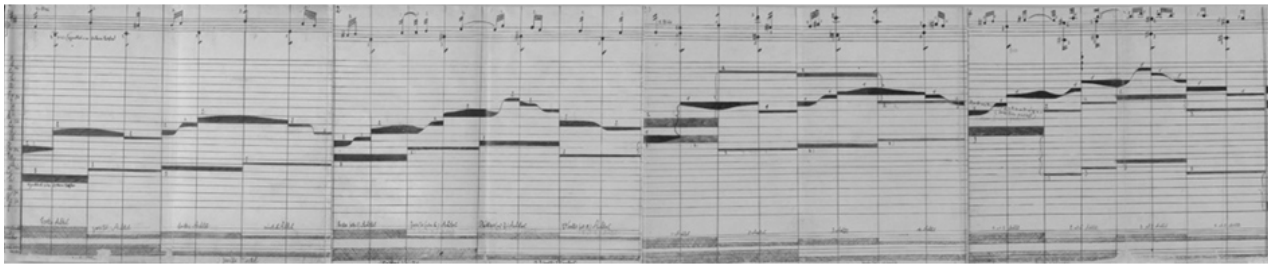
Figure 4 | **Bach Adagio #6** | *Paul Klee*

Figure 5 | **Hommage à J. S. Bach** | *Henrik Neugeboren*
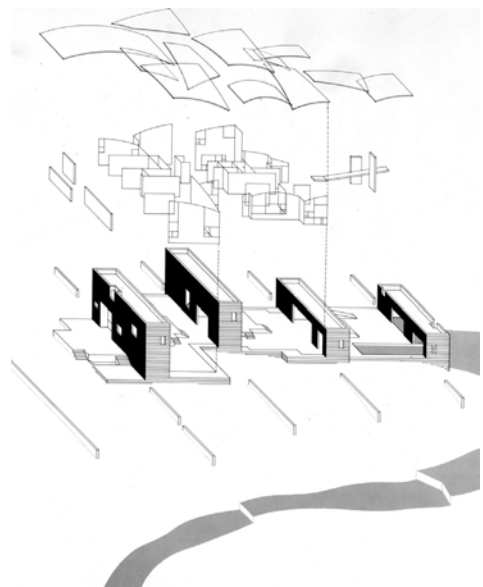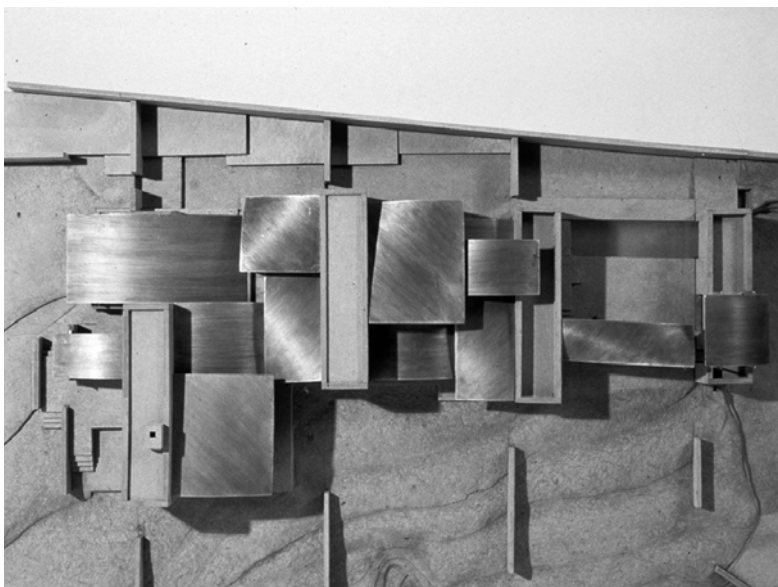
Figure 6-7 | **Stretto House** | *Steven Holl*

References

Others have worked with music as inspiration in architectural design, some in explorative artistic endeavours, others in projects that have been built. The many analogies has inspired architects through history to pose the question whether music could be translated into spatial configurations (Jormakka, 2013, p. 20).

In the 1920's, Bauhaus artist Paul Klee developed a notation system for turning a musical score into a visual representation. Transcribing Bachs Adagio No. 6, he used a grid of parallel horisonal lines, not unlike the lines on a musical sheet. The higher the pitch of a note, the higher up in the grid the notation line. The duration of each tone is shown in the length of the notation line, while dynamics can be derived from the thickness of the line (Jormakka, 2013, p. 23).

Klee's work inspired Henrik Neugeboren in the creation of his Bach Monument in 1928, turning the two dimensional representation of Klee into a physical three deminsional representation. Neugeboren let the x-axix represent the duration of the notes, and the y-axis the pitch. The vertical z-axis duplicates the y-axis and again uses the pitch to add the third dimension to the monument. The monument is a representation of Bach's fugue in E flat minor in the Well-tempered Clavier, Book I, where the three parallel scores are each represented by a continuous sheet shaped according to his established notation system. Thus, the monument could theoretically be read and played as a musical note sheet (Jormakka, 2013, pp. 24-25).

70 years later Steven Holl used the same method in his design of the Stretto House, which is a physical representation of Béla Bartók's Music for Strings, Percussion and Celeste. The symmetrical fugue stretto in the music is represented in the roof elements, while Bartók's spatial plan for the setup of the orchestra inspired the placement of four heavy volumes connected by light weight transparent facade elements (Jormakka, 2013, pp. 23-24).

Part Two
SITUATION

GÖTEBORGSO

OPERAN

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Situation

The Gothenburg Opera was designed by Jan Izikowitz and completed in 1994. It is firmly adressing the site, with references to ships, harbor cranes, seagull wings and the salty winds of the sea. It is a building with a multitude of features and sequencial shifts. A building that stirs emotion in most visitors, and that is not to everyone's liking.

There have been far reaching plans to extend the Gothenburg Opera to the southwest, creating much needed extra space for rehearsals and smaller productions. In 2019, the project was halted for financial reasons, and there are currently no official plans to continue the process.

The Opera is located close to both the city centre and the central train station, on the southern bank of the river. Despite its close proximity to the central parts of Gothenburg, the accessibility to the Opera is negatively affected by traffic and construction sites. However, the work now being done there will bring the waterfront closer to the pedestrian life of the city, making the Opera an integrated part of a city facing the river.

The Gothenburg Opera is designed with one dominant public entrance. A strong coreographed movement draws visitors into the illuminated foyer of the opera. Other possible pathways are both physically and visually blurred.

The curvation of the northern facade invokes a steady movement towards the unknowns of the path ahead. The strong rhythm of the flagpoles and the window setting sets a steady pace for the movement.

Occasionally, the shifts from one sequence to another are highly accentuated, urging a stop to take in the new view. A pause in the promenade.

There is a rich rhytmic diversity, mainly orchestrated by openings in different sizes and designs. The diversity appears both horisontally and vertically, as sequences and as layers.

Observe the two circular windows, how they are positioned in relation to other features in the facade. Horisontally, they are perfectly aligned with the wall sections and the neighbouring window. Vertically though, the are slightly off in relation to the windows and bay window above and the light fixtures below. An inspection of plan drawings reveal that they are not centered in the interior space either. The dissonance has no other reason than the dissonance itself.

Ornamentation is very sparse, apart from the uncharacteristic wall next to the entrance, with sculptural art work in bright blue.
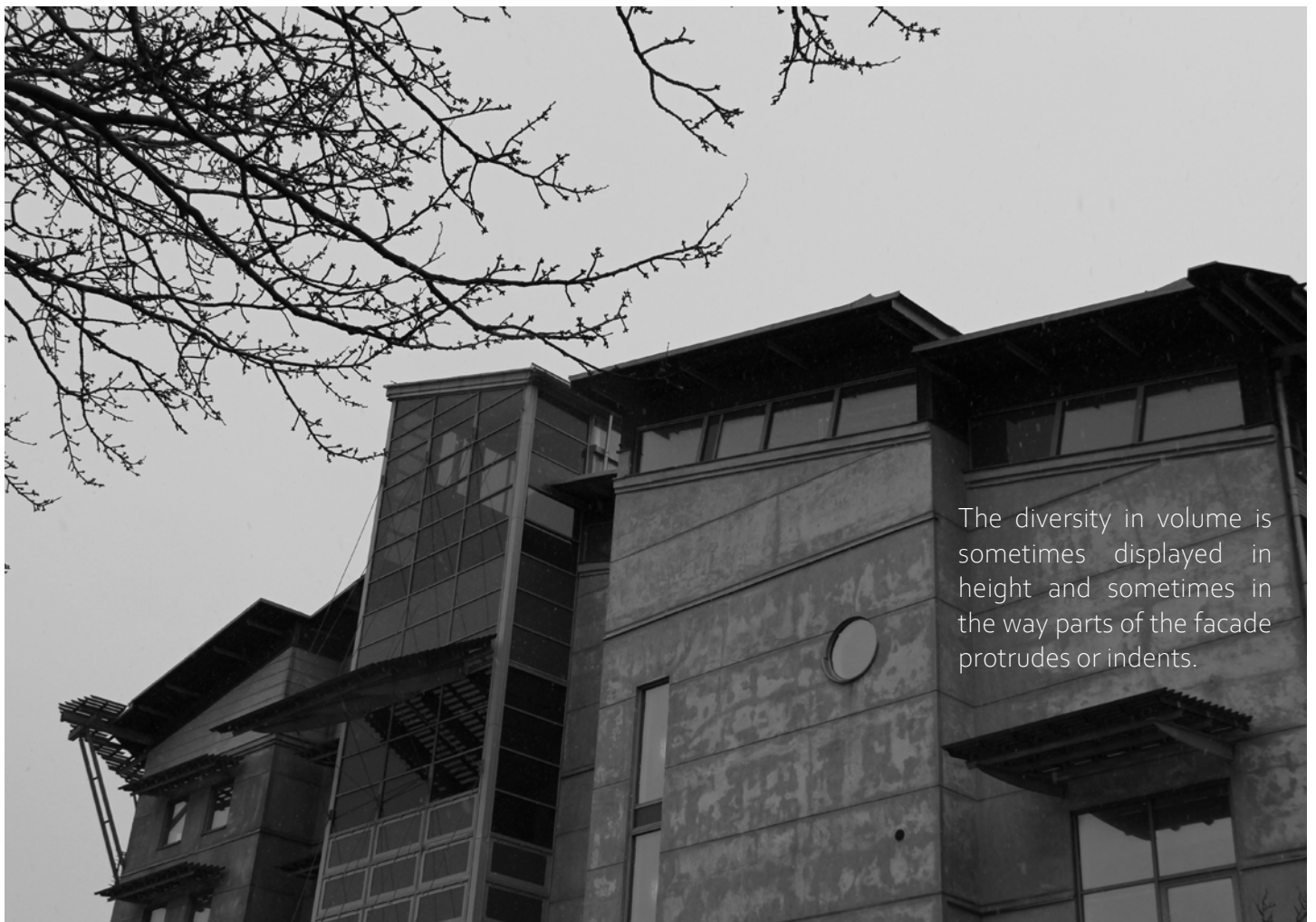
The diversity in volume is sometimes displayed in height and sometimes in the way parts of the facade protrudes or indents.

Mapping the opera

The Opera, with its multifaceted expression, is an ideal site for this thesis project. The existing building has been mapped with notations in five layers, originating from the shared vocabulary within architecture and music.

Mapping the exterior of the Gothenburg Opera involved decision making on a number of accounts. Does "volume" mean the silhouette of the building, or is it related to the experience of how the building imposes on me when I walk next to it? How significant must an ornament be in order to be relevant? What is the starting point and which direction does the promenade take from there?

These and other decisions have been made subjectively, as that is the only way to apporach them. Another reseracher might have made other decisions, which would have influenced the outcome of the map. This is as it should be, the arts are not to be appreciated objectively.

The mapping started east of the building, with an approach from the city centre towards the main entrance. The building was then circled counter clockwise. Another approach and direction would have yielded other results, most significant in the movement layer, but likely in the experience of the other layers as well.

The map offers guidance with regard to movement, volume, rhythm, harmony and ornamentation, but it says nothing about other design strategies, what architectural style to work with or which materials to use.

The synthesised map is the foundation to which the continued work and studies return for guidance when in doubt which step to take next. The design process has been entangled and overlapping with an ongoing conversation on music and architecture within a collaboration with musicians Daniel Berg and Tobias Granmo.

DEFINED VOCABULARY
Rythm; Harmony; Volume; Ornamentation; Movement

Synthesised map

Movement
Rhythm
Volume
Harmony
Ornament
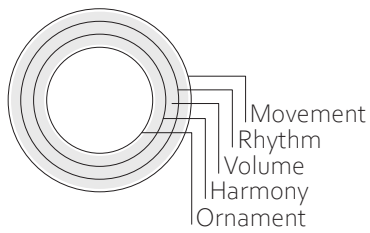
Single beat

Accentuated and ancillary beat

Harmonious features

Dissonant features

Volume

Ornament features

Movement direction

Pause

New sequence

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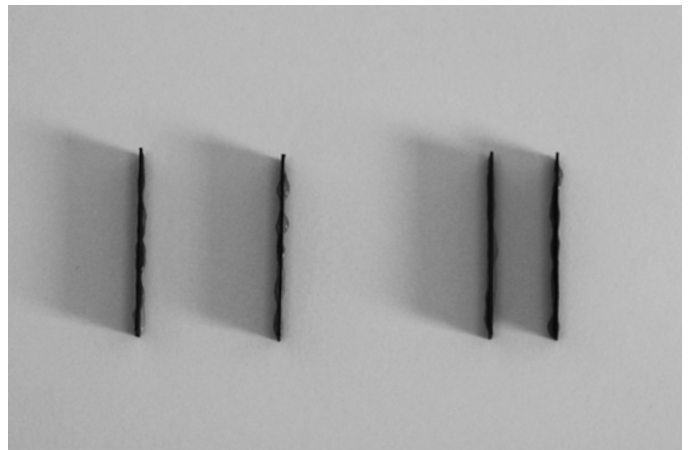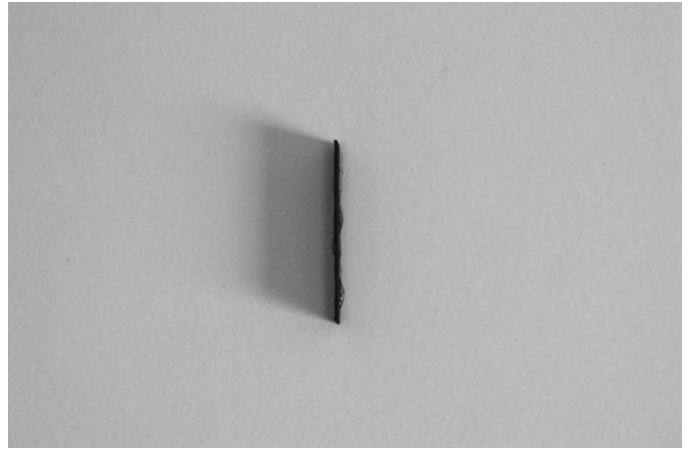
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GÖTEBORGSOPERAN
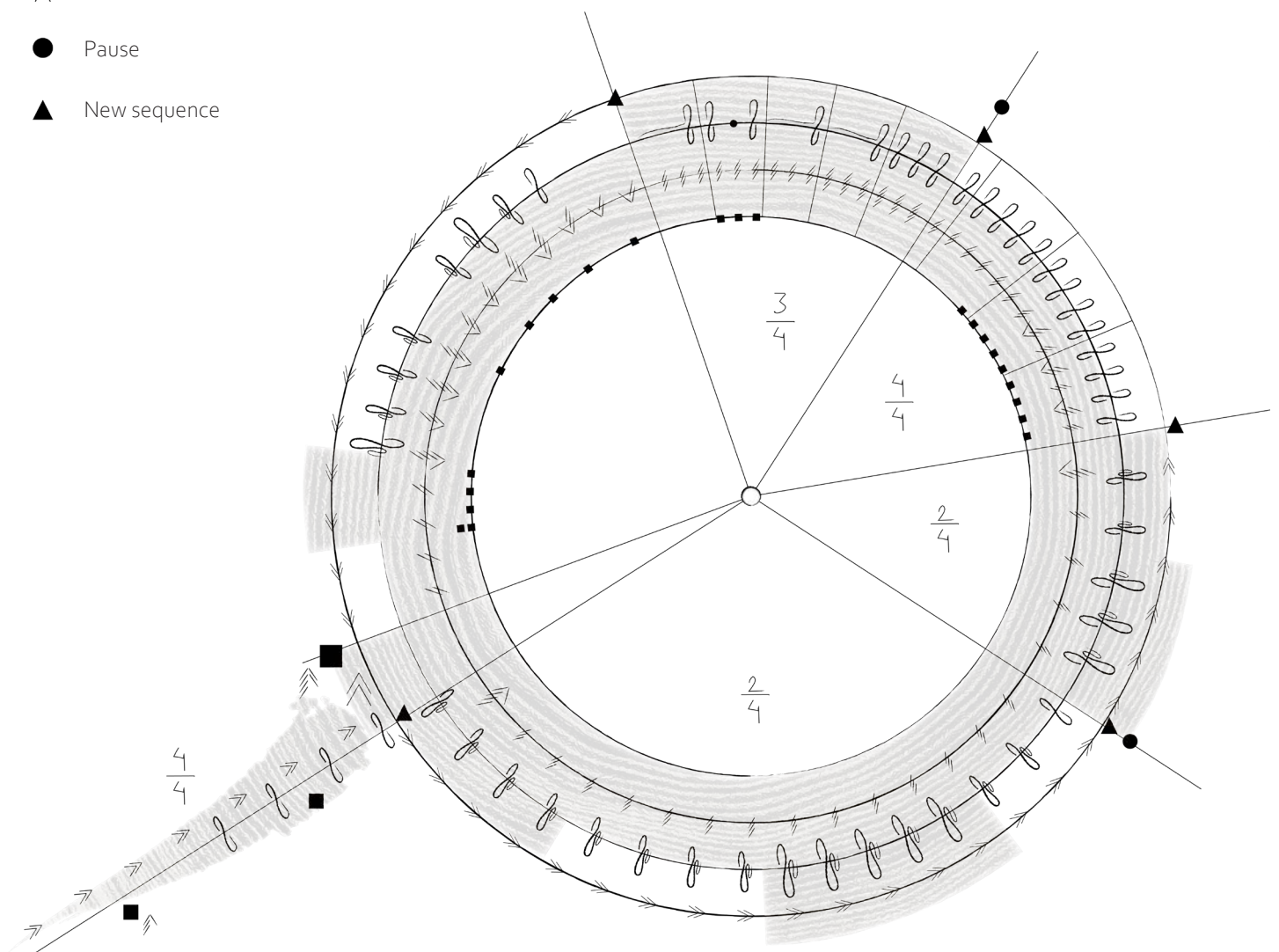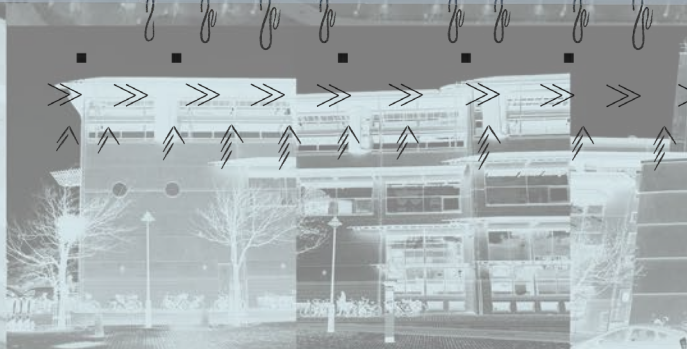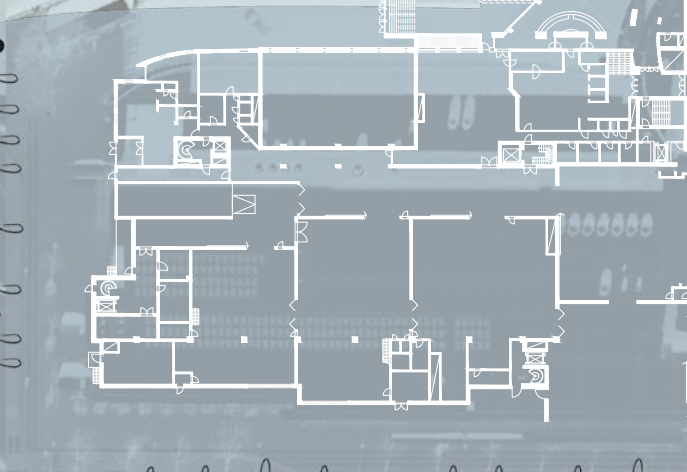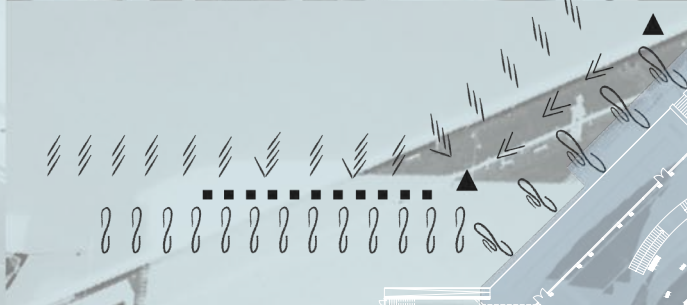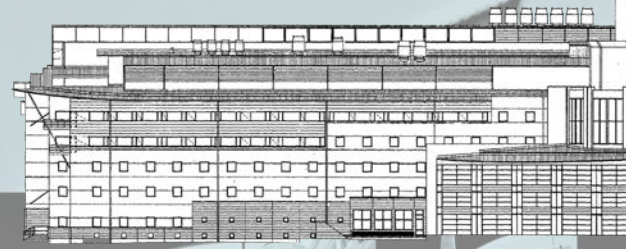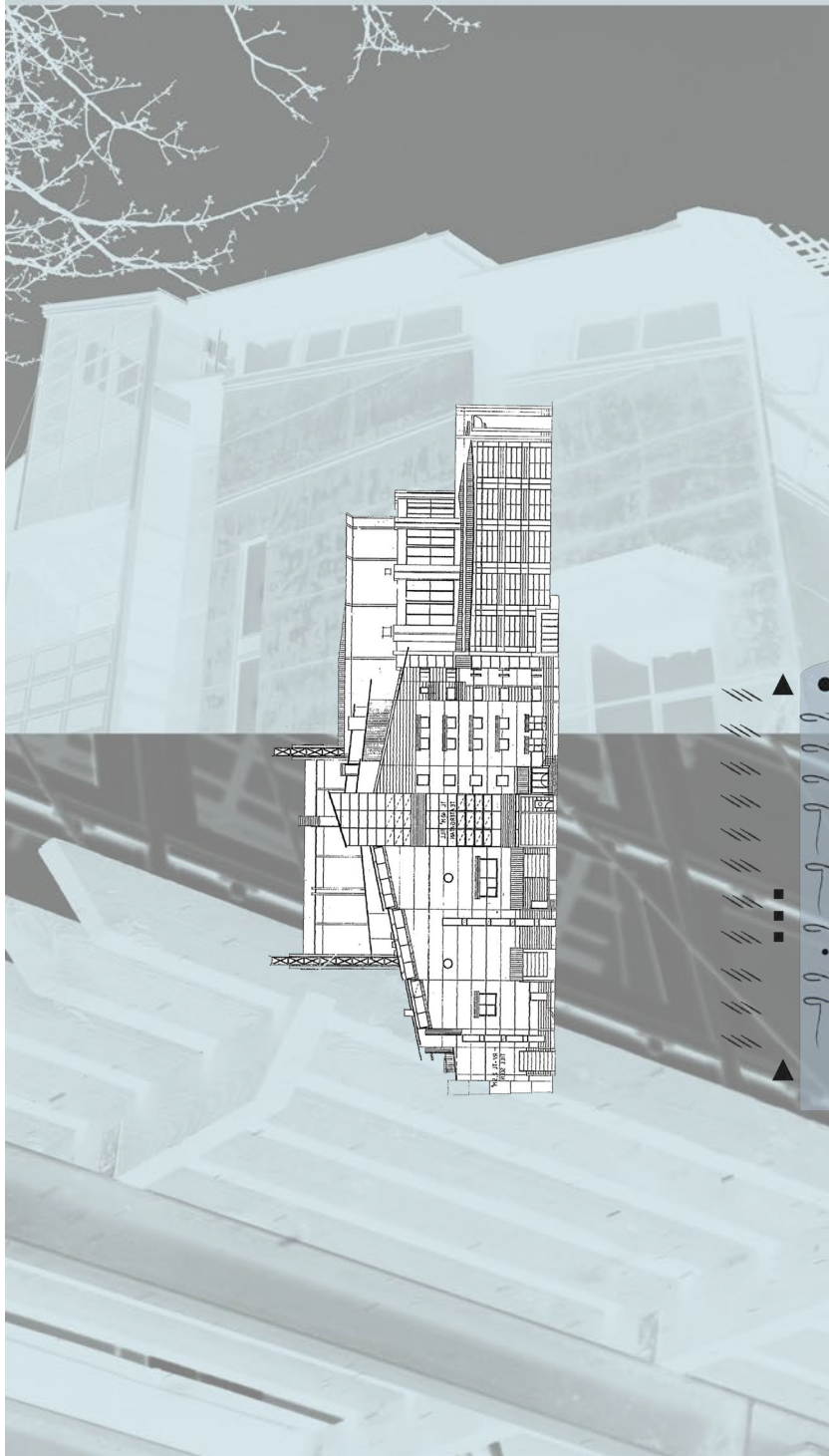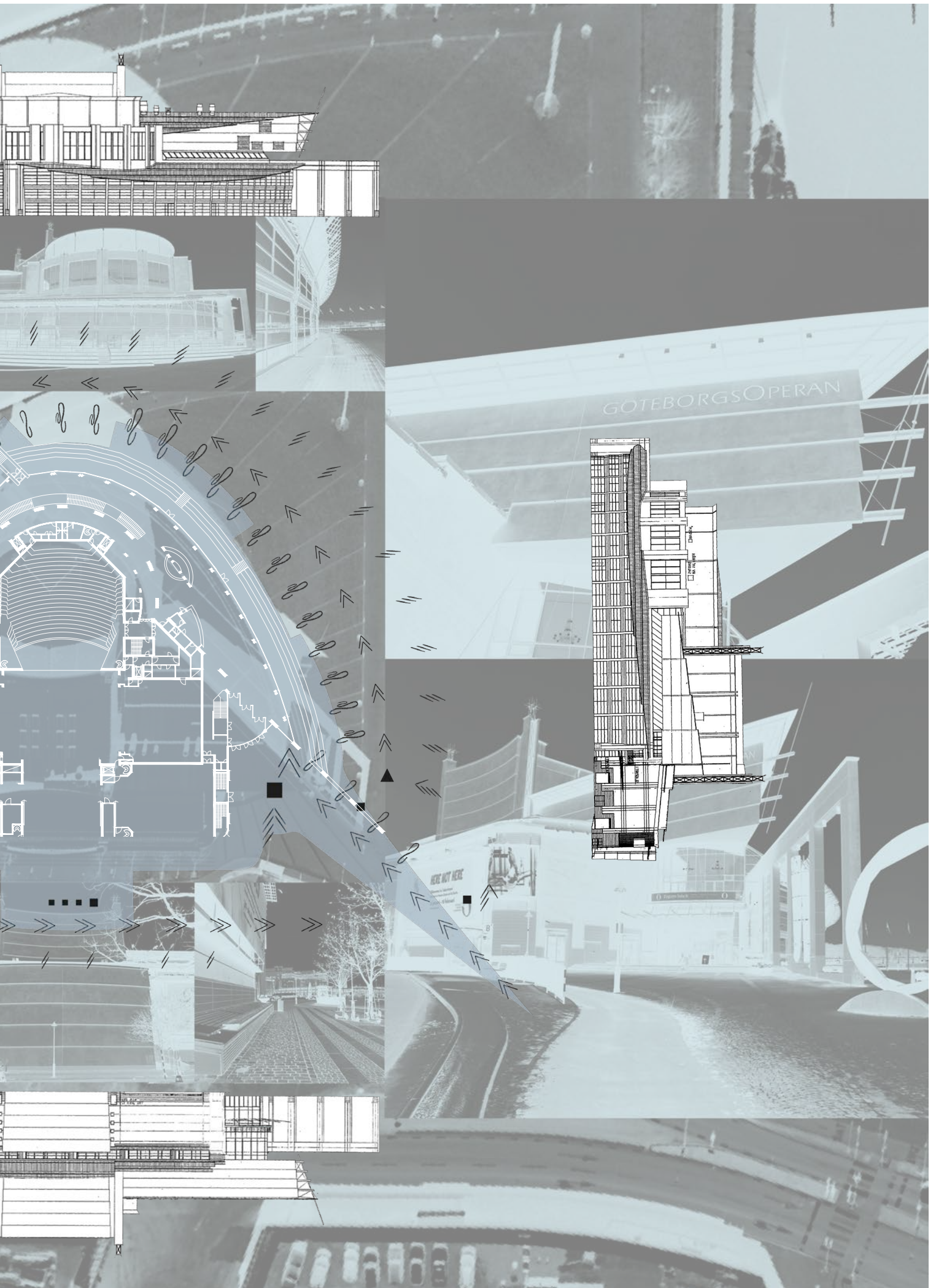
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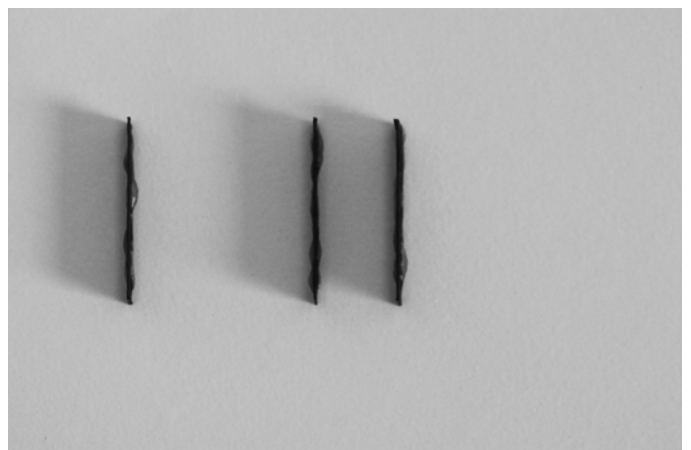
ÉTUDES

ÉTUDES | *rhythm*

Studying the concept of rhythm, one might ask when a rhythm occurs. What is needed for us to experience a rhythm in time or space? Is there a difference between the single black object placed in the centre of a surface and the single black object placed to the left on the surface?

Surely, the way we appreciate ryhytm is individually subjective, but for me, the rhytm occurs in the object's relation to the blank surface. When placed centrally on the paper, the object becomes a solitaire. There is nothing before and nothing after, and therefor I cannot sense a rhytm.

When placed to the side of the surface, I read the blank space as a pause. And a pause is something quite different than "nothing". In this case, I see three blank spaces where there could hace been an object. A rhythm with one beat and three beats of pause, where I find myself automatically repeating the rhythm.

I tried adding more objects to surfaces of the same size, without giving much thought to the placement other than keeping it linear, and immediately more intricate rhythmic patterns occurred. I can read one 4/4 rhythm and one 3/4 rhythm. What do you see?

Exploring further, I wanted to investigate a way to add layers of rhythm without adding layers of objects. In this étude I used the shape of the object to add another dimension in the rhythm. The rhythm is rigid in one dimension, the spacing between the objects, and moving more freely in the other dimension, created by the shape of each element.
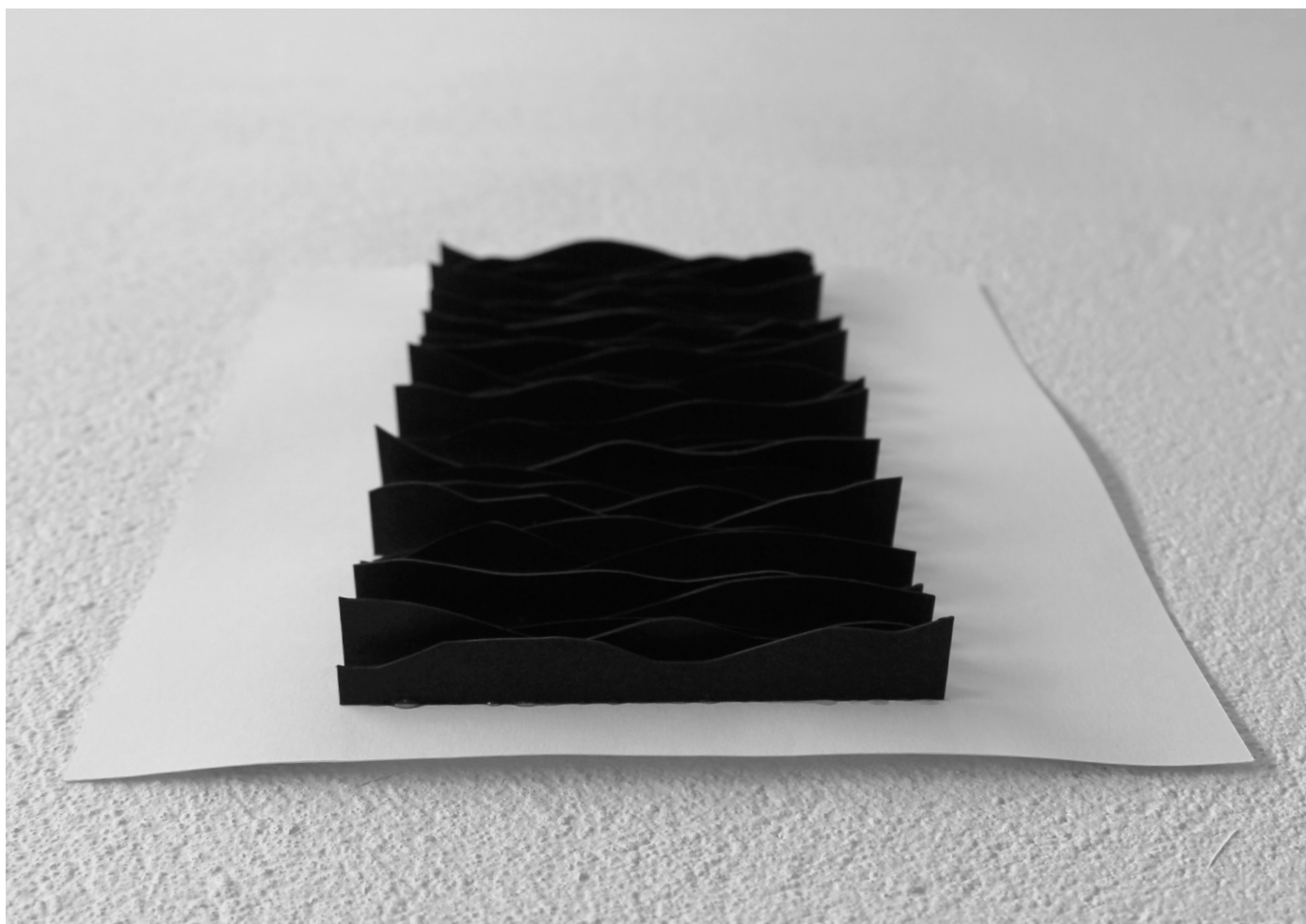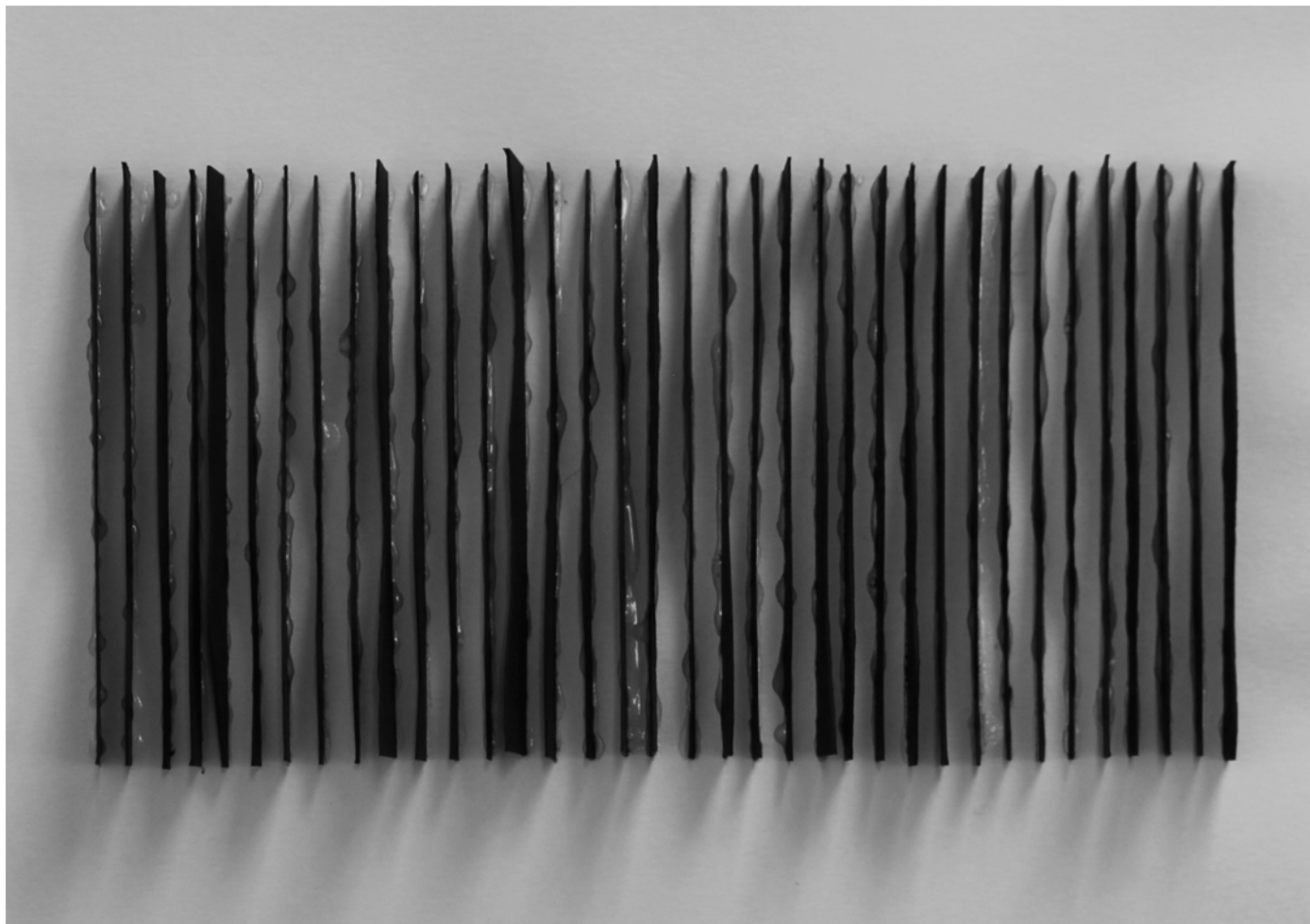
ÉTUDES | *harmony*

The study of harmony included a small workshop, firstly with myself, then in my tutoring group, and finally with Daniel Berg and Tobias Granmo within the framework of our collaboration. Drawings were made on small papers, using three black squares on each paper - inspired by the triad, wich is a basic musical harmony. The drawings were made quickliy without planning or excessive thinking. Some of them include "mistakes", where the square didn't end up where I tried to draw it.

After the drawing, I started to study and organise the papers. A number of questions came to mind.

- What is harmoniuos and what is dissonant?
- Who decides what is dissonant or harmoniuos?
- Can there be "good" dissonance and "bad" dissonance?
- Is intended dissonance more appreciated than unintended dissonance?
- Is it possible to identify where harmoniuos goes from something good to "boring" or "predictable"?

Asking my tutoring group to organise the papers into dissonant and harmonious brought to light that we all looked upon them differently. While I looked at the squares's relation to both each other and the paper, someone else looked only at their relation to each other. Someone called a paper harmoniously dissonant, appreciating the dissonance as something positive.

When bringing them to Daniel and Tobias, a whole new range of questions arose. They did not only notice the squares's relation to each other and the paper, but also how the papers related to each other as they were spread across the table. They noticed melodies and rhythm in the patterns that appeared.

How do you feel when looking at the photos of the papers and their black squares? Can you decide which feel harmoniuos and which feel dissonant?
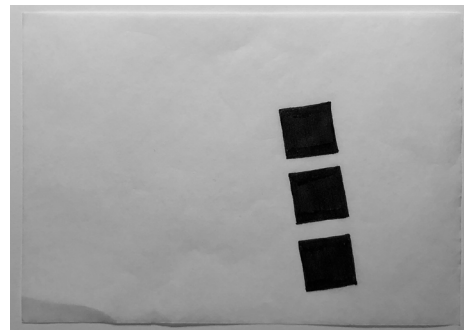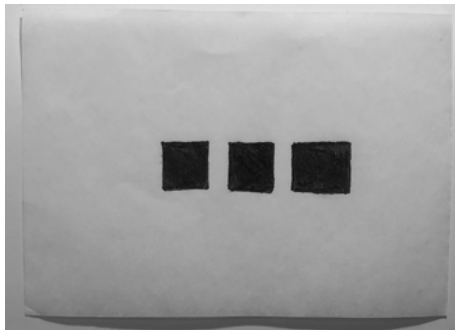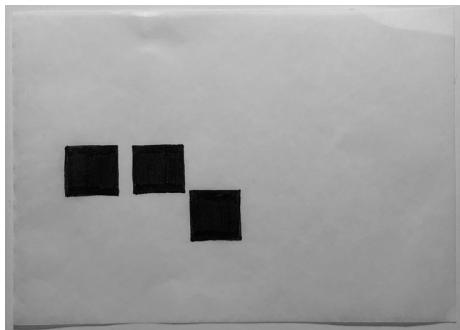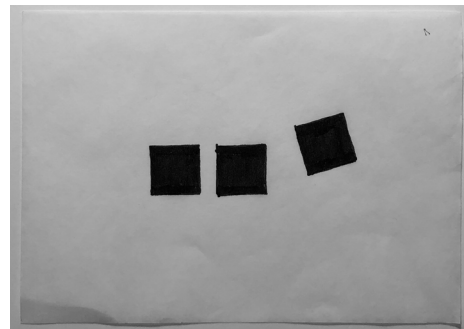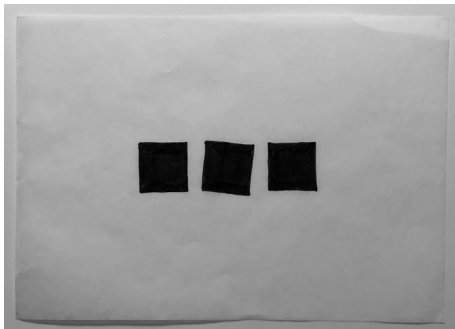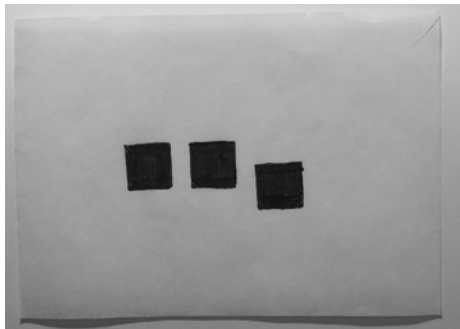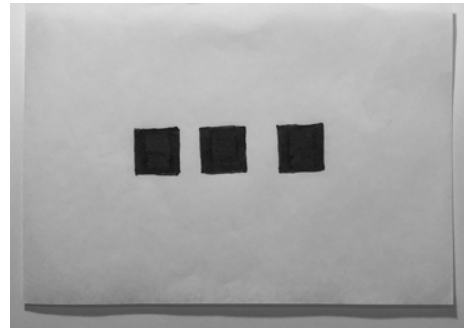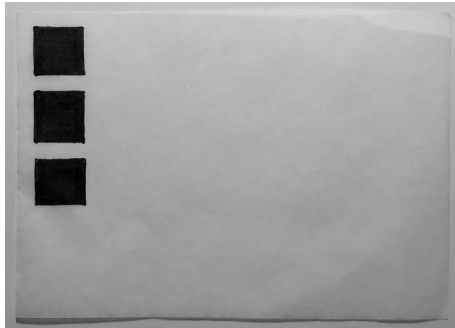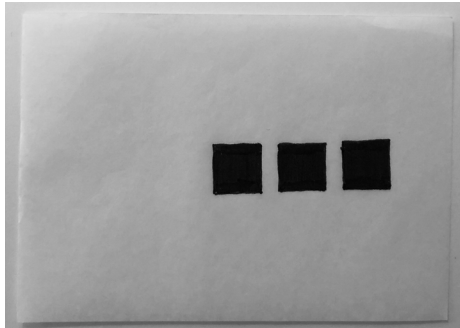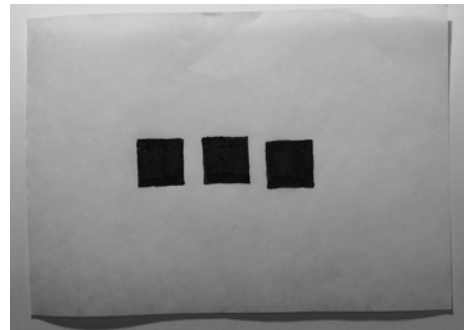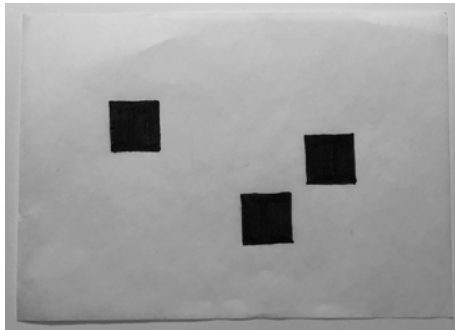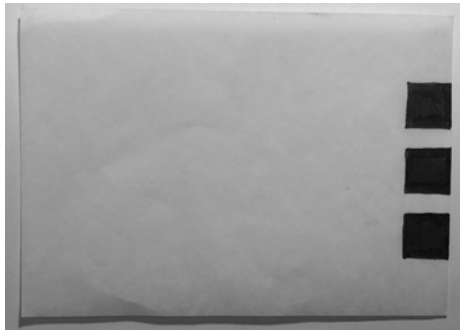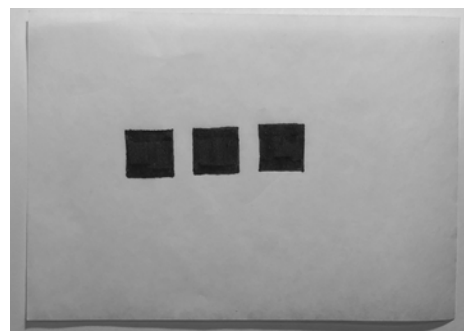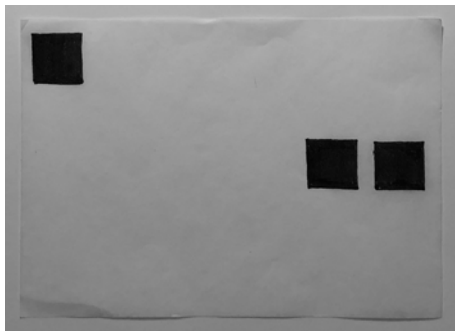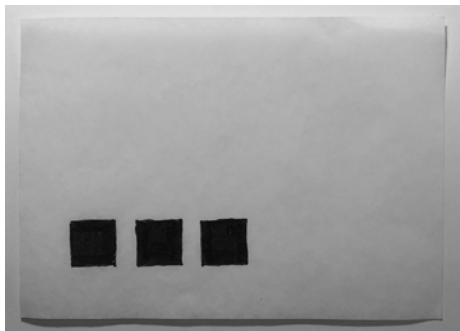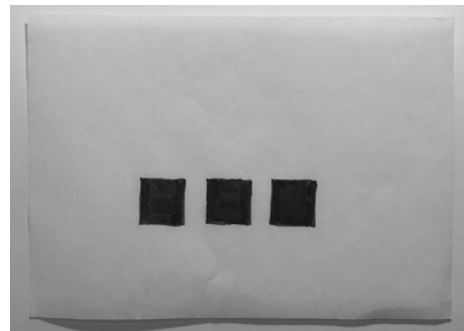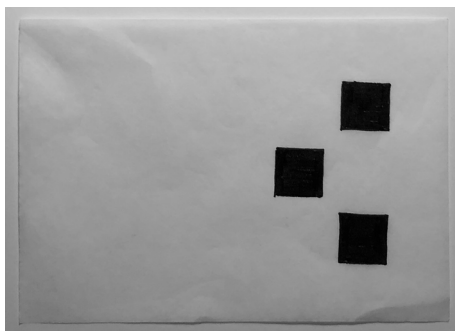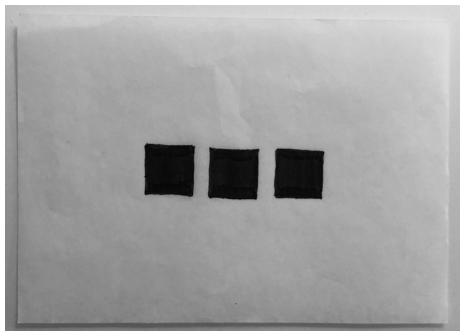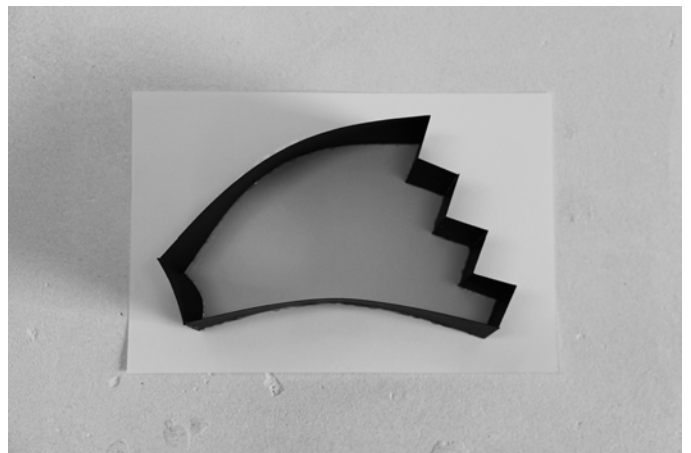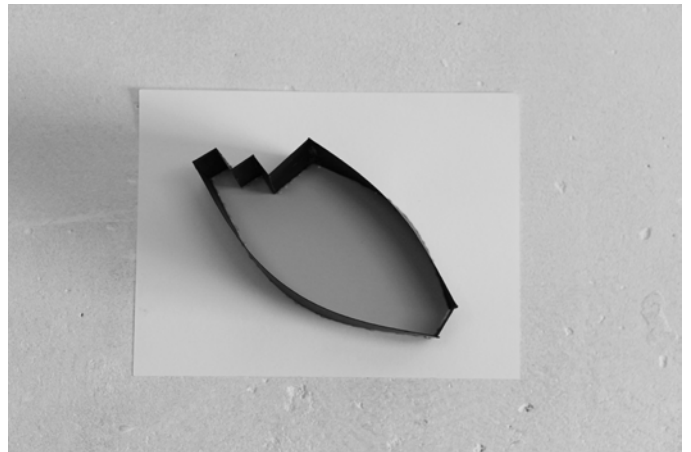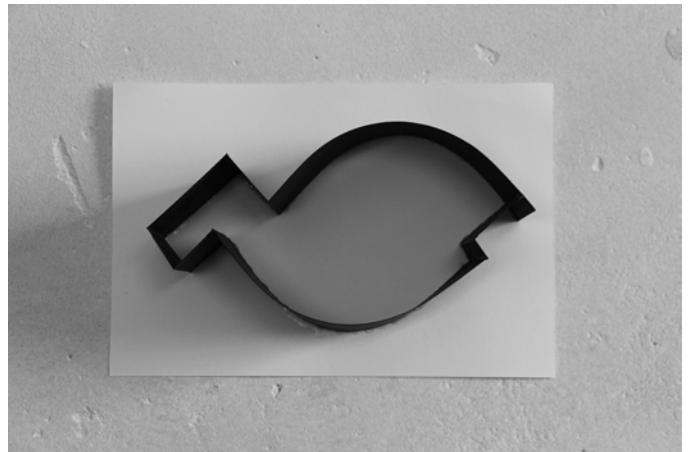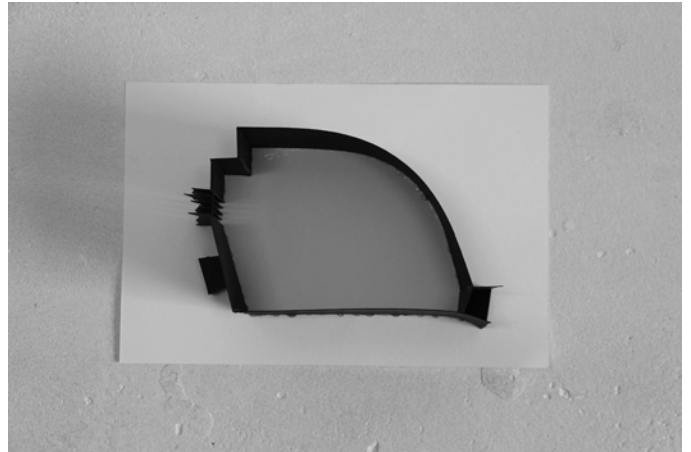
ÉTUDES | *movement*

Using the mapping of the opera, I started studying how the mapping of movement could be tranformed into a new shape. It was immediately evident that the exploration could not be conducted through 2-dimensional drawings. When moving through a space, the volumes around you are directing your movement more strongly than a line on the ground would.

The mapping was essentially used as a roadmap, starting from the mapped approach and then workign my way around. Thus, I did not know when I started a new exploration what the final result would be. In my studies, I found the shape to be important in directing the movement, but protruding elements, such as an entrance, or decorative elements can be equally influencial.

I did not know it at the time, but one of these simple études ended up being used for the final proposal.
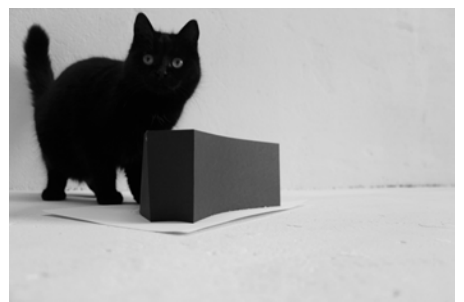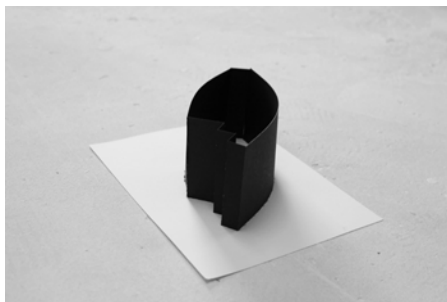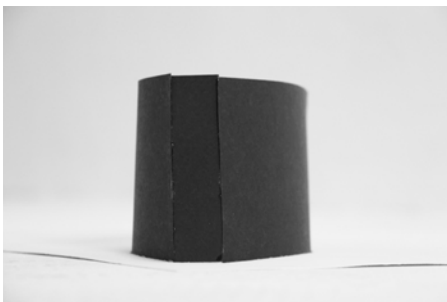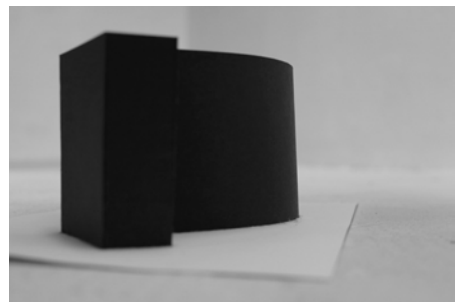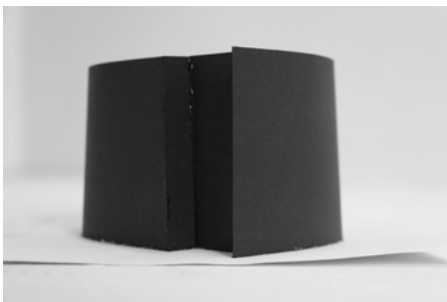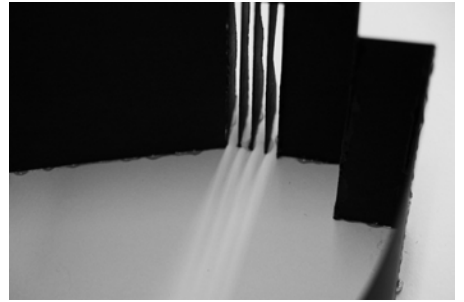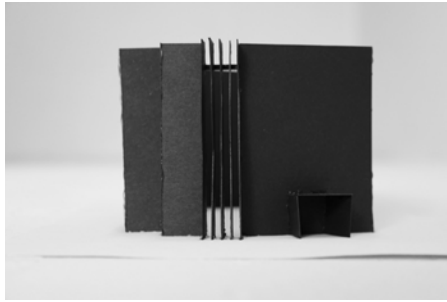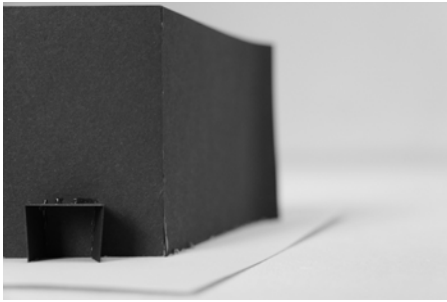
ÉTUDES | *volume*

Studying volume, I wanted to explore the sense of volumetric influence both in hight and in width. As I typically work with cubes and orthogonal shapes, cylinders were chosen this time. In this study, as in the previous, the mapping of the opera was guiding the organisation of the cylinders.

In this exploration, it appears that height more distinctly accentuates volume. When the cylinders are placed vertically, as buidling volumes, it is difficult to appreciate the smaller volumes as small volumes. Instead, the large cylinders impose on the space where the smaller volume is intended to be experienced.

As volume is only one of the layers, it was also eviden that this way of working with volume would collide with the movement, that wants to direct the shape of the buidling in other ways.

By placing the cylinders horisontally, they can be seen as a skeleton for a roof structure, where each cylinder influences the hight of the volume. The concept was moved into 3D-modelling in Rhino, and further explored through cylinders and cones , using the draping tool in several steps to arrive at a suitable level of detailing.
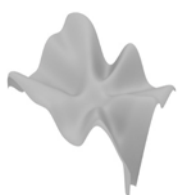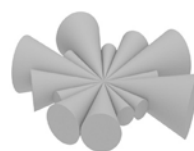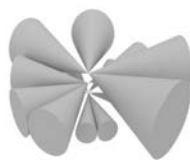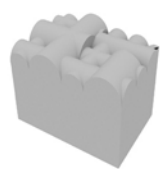
Part Four
THE LITTLE OPERA

Site plan | 1:1500

The extension of the Gothenburg Opera is situated southwest of the existing building, along the southern riverbank. The area southeast of the Opera is currently undergoing a grand transformation, with the intention of connecting the city centre with the water. A recreational area will be developed around Kanaltorget. The early plans show a new building enclosing the recreational area, creating a pedestrian street next to the Opera.

The Little Opera has been offset to the south, framing the pedestrian area and directing visitors towards the main entrance. The shape of the building allows a continued promenade in either direction to circle the building, which prevents the offset from becoming an obstacle in the pedestrian flow.

As the Gothenburg Opera is already a large building to circle, the two buildings are connected under ground to allow maintained access to the riverfront.

The Little Opera has been designed based on the music derived from the mapping of the Gothenburg Opera. The promenade starts with the approach along the existing building, and circles around the new extension counter clockwise.

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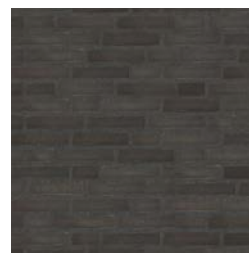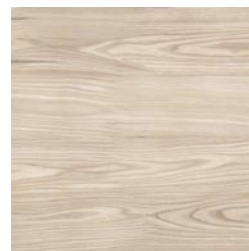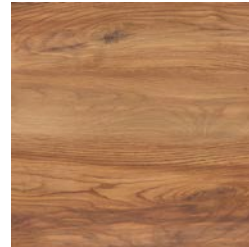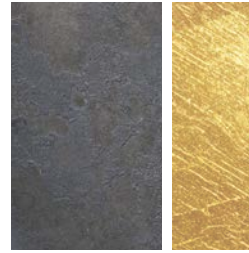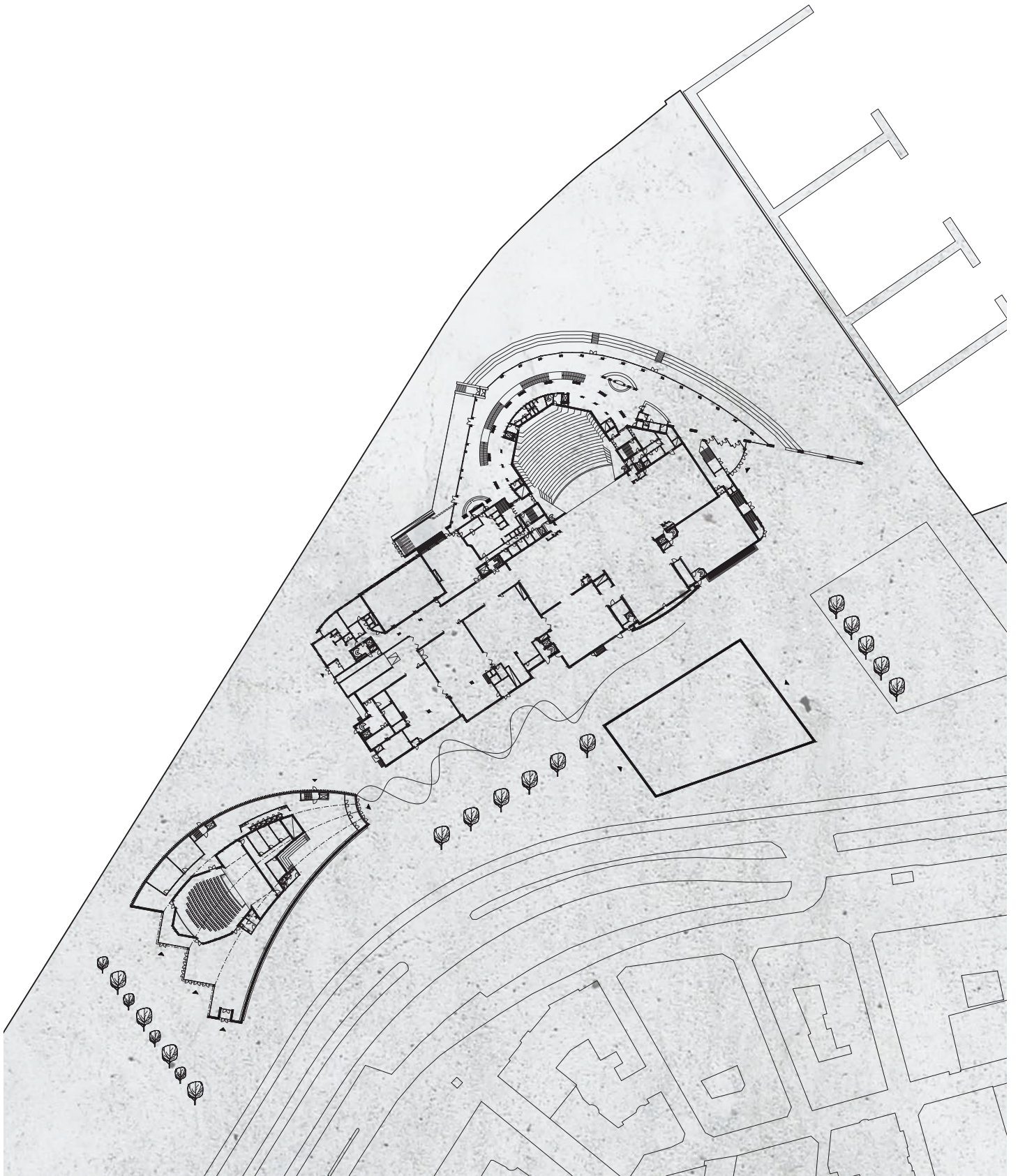
Approach

Approaching the new building from the city centre includes a walk along the existing opera. The Little Opera is offset towards the street to create a clear movement in direction of the main entrance. It also frames the former diffuse situation along the existing building.

The music chosen by Daniel and Tobias has strong movement both forward and upward, a steady but unaccentuated rhythm and melodious ornamentation. The driving force is the movement, with the intertwining of the instruments as dominant quality, accentuated with two winding metal elements, one iron and one brass. Recessed into the ground, they accompany the walk towards the building, and then continue the movement upwards on the facade.

Music   **Pillow Dance**
Composer   **Béla Bartók**
Performed by   **Duo Granmo-Berg**

Water walk

The music Daniel and Tobias chose for the next
sequence corresponds to the lightness and rhythm
of the curved glass facade of the existing opera,
with an overlapping layer of rhythm and lightness
stemming from the flagpoles at the site.

The movement is accentuated through the
curvation in the facade. To capture the overlapping
layers of rhythm and the musical connection to
water, the wave-shaped lamellas from the rhythm
étude has been used as facade feature. The roof
interprets the flowing volumetric changes in the
music using the samt type of wave shapes.

Music;   **Water**
Composer;   **Daniel Berg**
Performed by; **Duo Granmo-Berg**

Transition

The next sequence is initiated by a halt in the movement and a pause. The musical pause is not emptiness, but an anticipation equally important as the sounds surrounding it. The pause is interpreted through a closed facade section that features greenery, to further enhance the distinction from the movement before as well as to absorb sounds. The closed facade also shields the interior rehearsal studios from the afternoon sun.

The wall section following the pause is accompanied by a harmonious and rhythmic piece of music, directed upwards. Ornamentation is still low key, and movement is directed upwards rather than forward. The music is interpreted through strong verticality and a trifold rhythm, allowing the repetition of the lamellas in the Water walk to dissolve when seen from the river.

Music;   **Fotoner**
Composer;   **Daniel Berg**
Performed by;   **Duo Granmo-Berg**

Activity

The following three wall sections are framed by the same piece of music. There are dissonant harmonies, rhythm that overlaps and changes through the piece. Short pauses halt the sense of movement.

Keeping the design language from previous sequences, the facades are now further dissolved, and the window setting is used to reflect the irregularity of the music.

Music;	**Due Time**
Composer;	**Bengt Lundin**
Performed by;	**Duo Granmo-Berg**
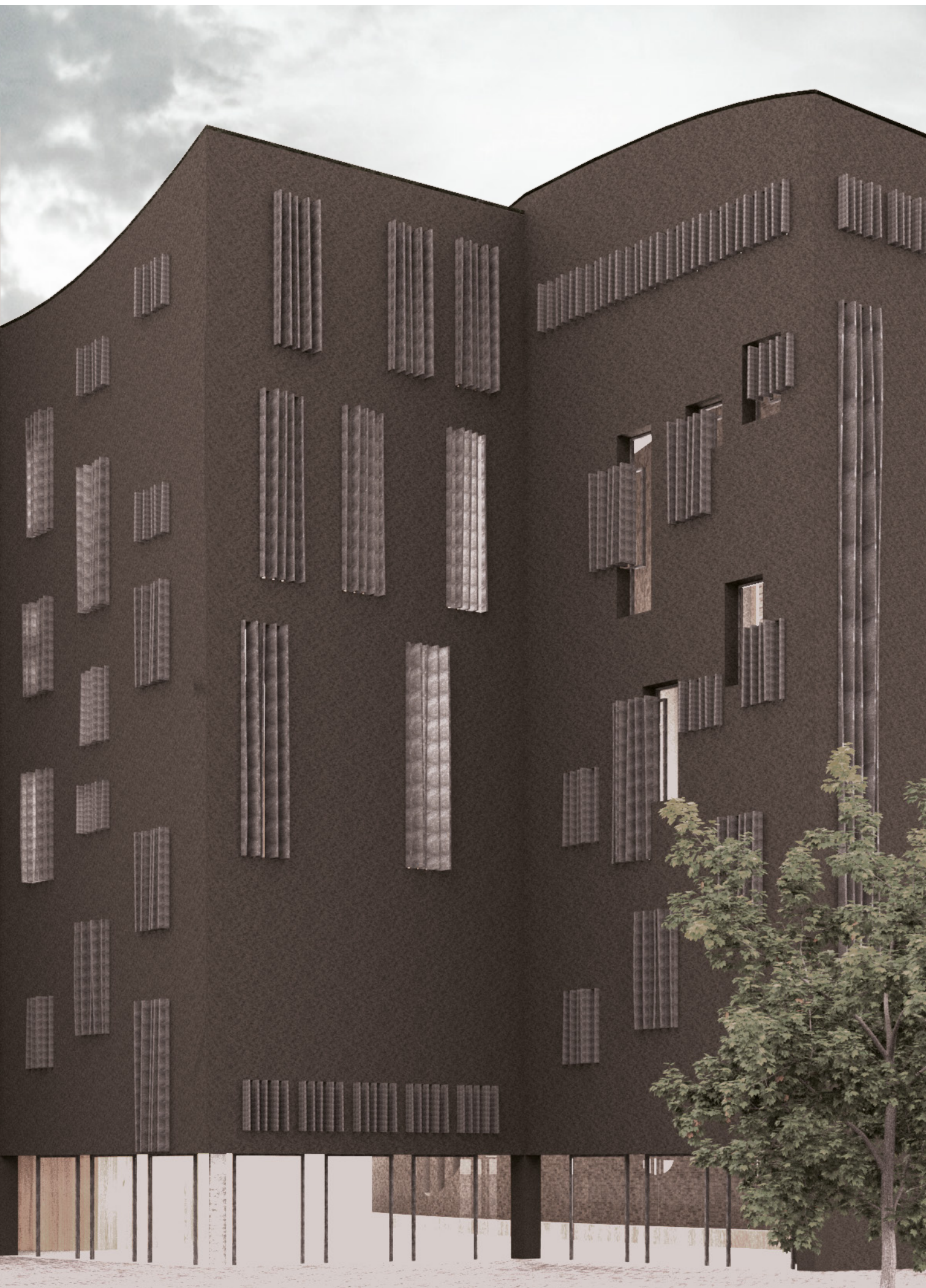
Mayhem and restraint

The last two wall sections of the southwest facade are incrporated in a piece of music that shifts in character. The first part is messy, clottered and dissonant, while the second part is more restrained and solitaire. Both echoes a displacement - a feeling of being in the wrong place - both regarding rhythm and harmony.

The design interprets the displacement by one organised row of windows as contrast to other openings that do not correspond to the pattern. Multiple in the first wall section and singular in the second.

Music;   **Bagatelle in A**
Composer;   **Ann-Sofie Söderqvist**
Performed by; **Duo Granmo-Berg**

Walk of unease

The title of this last sequence is undeserved, but has been kept as a reminder of its origin. The mapped sequence from the existing opera is a promenade of necessity rather than pleasure, one that some experience as eery.

There is a basic but non-accentueated rhythm in the music. A strong movement forward, picked up in the curvation of the wall. A fluctuation in dynamics represented in the waved roof. A recurring dissonance is present both in the music, the mapping and the existing building, but as one does not particularly wish to design a "walk of unease" in a public space of this character, the dissonance has been visualised through the absence of defined geometrical shapes. The iron and brass metal ornamentation connects the facade to that of the main entrance, again representing the two instruments and their interdependency.

Music;   **Bagatelle in A**
Composer;   **Ann-Sofie Söderqvist**
Performed by;   **Duo Granmo-Berg**
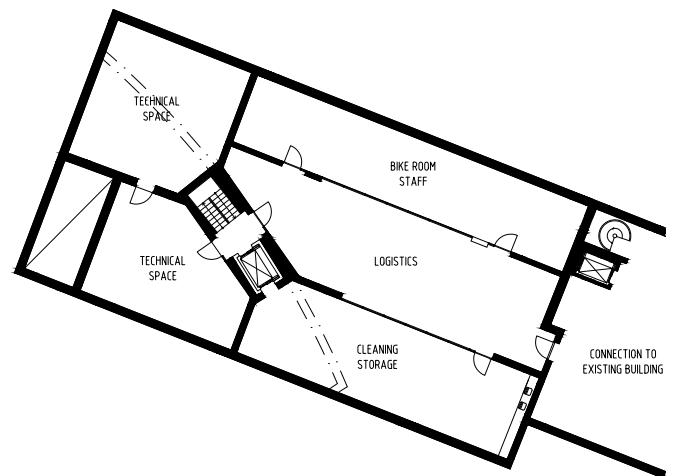
Plan drawings | 1:500

The Little Opera is connected to the main building underground, where central storages and housekeeping storages are situated, adding a bicycle storage room for the staff and technical spaces for the new building.

The street level houses a smaller stage (blue level) that can be used both for rehearsals and for smaller performances. A seating staircase in the foyer offers a possibility for more public concerts. The two rehearsal rooms are intended for workshops and classes with participants not belonging to the opera staff, for instance youth activities.
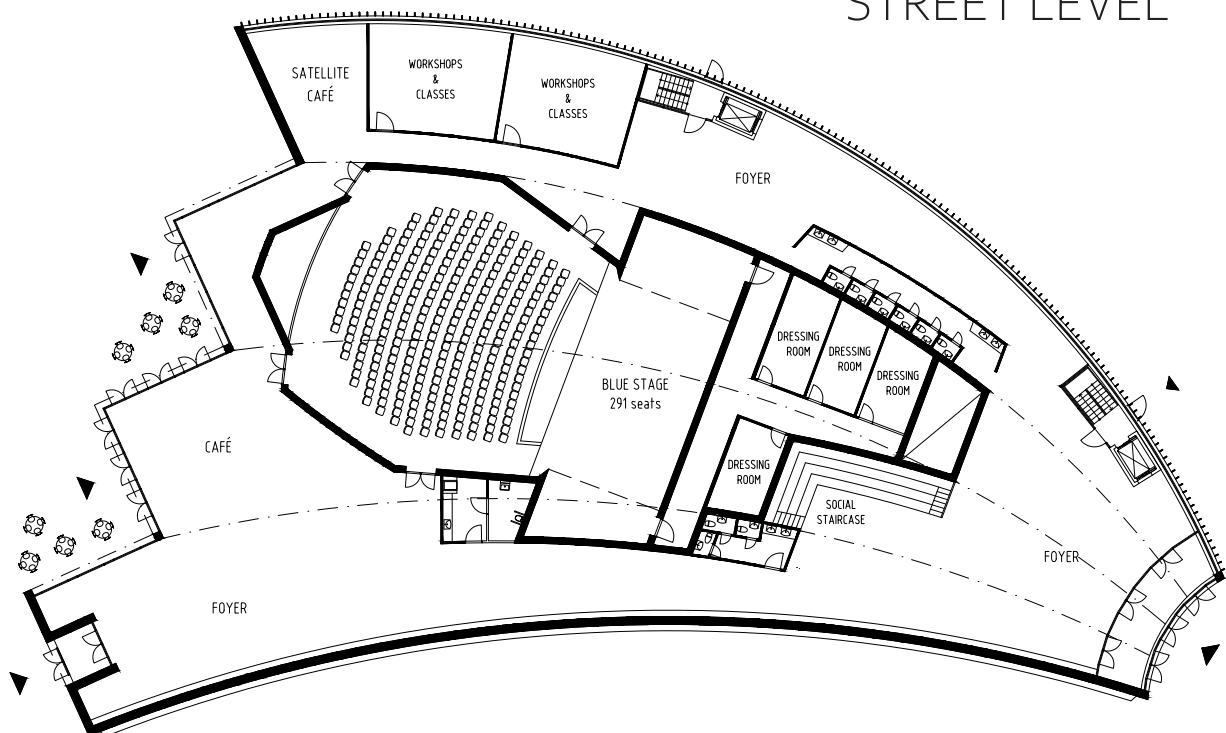
The foyer stretches along the southeast facade and opens up all the way to the top floor. A seating bench along the outer wall is mirrored by a bench on the outside.

Levels two and three add rehearsal rooms of different sizes, lunch room and offices. Level four is not programmed within the frame of this proposal, due to the complexity of room heights, but can house magnificent rehearsal rooms under the waved rooftop.

LEVEL ZERO

- TECHNICAL SPACE
- TECHNICAL SPACE
- BIKE ROOM STAFF
- LOGISTICS
- CLEANING STORAGE
- CONNECTION TO EXISTING BUILDING

STREET LEVEL

- SATELLITE CAFÉ
- WORKSHOPS & CLASSES
- WORKSHOPS & CLASSES
- FOYER
- DRESSING ROOM
- DRESSING ROOM
- DRESSING ROOM
- BLUE STAGE 291 seats
- CAFÉ
- DRESSING ROOM
- SOCIAL STAIRCASE
- FOYER
- FOYER

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0    10    20    30    40
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LEVEL THREE

REHEARSE M

REHEARSE M

OFFICE

OFFICE

REHEARSE L

PRINT & SUPPLY

OFFICE

REHEARSE M

CHANGE

CHANGE

REHEARSE M

REHEARSE M

REHEARSE S

REHEARSE S

REHEARSE S

REHEARSE S

REHEARSE S

OFFICE

OFFICE

OFFICE

LEVEL TWO

REHEARSE L

REHEARSE L

REHEARSE M

REHEARSE M

MEET & PAUSE

REHEARSE M

CHANGE

REHEARSE M

REHEARSE L

PRINT & SUPPLY

CHANGE

MEET & EAT

MEET & RELAX

OFFICE

REHEARSE S

REHEARSE S

REHEARSE S

REHEARSE S

FACADE NORTHEAST

FACADE NORHTWEST

| 0 | 10 | 20 | 30 | 40 |
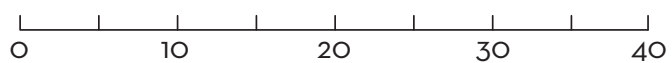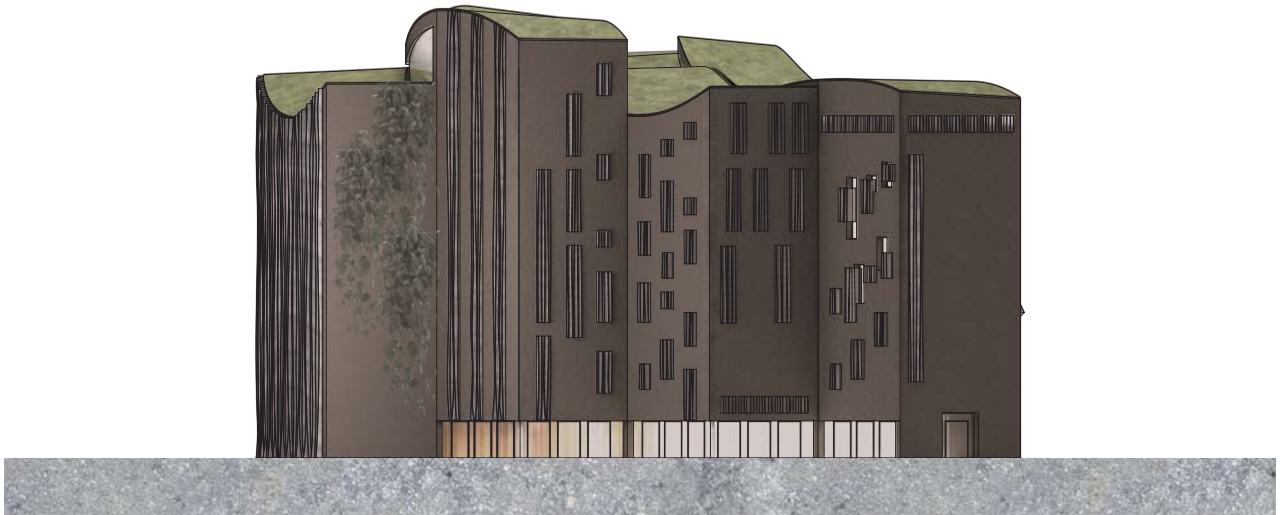
FACADE SOUTHWEST

FACADE SOUTHEAST

Part Five
WORKFLOW

Figure 8 | **Tobias Granmo & Daniel Berg**

Musical collaboration

An important part of the project is the collaboration with Daniel Berg and Tobias Granmo, both professors at the Academy of Music and Drama in Gothenburg.

The original aim at the early stages of the thesis process was to compose music as an complement to the architectural design proposal. Both the music and the design proposal was to be based on the mapping of the Gothenburg Opera.

As the collaboration with Daniel and Tobias has moved forward, the conversations we have had on the analogies between music and architecture has become more in focus. Discussing ideas and thoughts regarding the concepts in the shared vocabulary, how a movement along a particular stretch outside the Opera might sound, whether a window placement is harmonious or dissonant and what that would in turn mean in a musical setting - these conversations have been much more fruitful in my process than a solitary composing endeavour would have been.

Therefor, the idea of expressing the map and my final design proposal through music has been attained in another format than originally intended. In dialogue with me, Daniel and Tobias have chosen pieces of music from their own rich library of recordings, pieces that correspond to the different sequences in the mapping. Shorter sections from each piece of music has been extracted, forming a musical composition that has been used together with the map as the foundation for the design process. Thus, the collaboration has been of great importance in the process.

A live performance was included at the open seminar that finalised the thesis semester. Daniel and Tobias played a selection of the music chosen for the design process, as well as a short improvisation using one of the facade sections in the new design as a graphical score.

PASSIONS

MUSIC

ARCHITECTURE
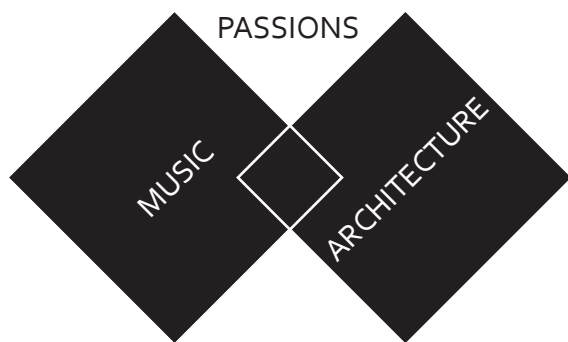
EXPLORING
OVERLAP

MAPPING

CONVERSATIONS

Process

My process started in the search for my passions, and ultimately the decision to venture into the exploration of the interface where I discovered they overlap. The exploration was made through readings and early studies of how the interface could be conceptualised, organised and mapped.

When the site and program had been established, the procces moved forward by mapping the site, and from that mapping conducting studies of the different layers in the mapping. These études were uncoreographed and exploratory, both physical and digital.

From the mapping phase and onwards, conversations with Tobias Granmo and Daniel Berg has been essential in both vocalising and deepening the work. Based on the mapping and our talks about the map, Daniel and Tobias have matched the architectural promenade with pieces of music for each sequence.

The music in combination with the map has been essential in the final design phase.

ÉTUDES

MUSIC MATCH

DESIGN
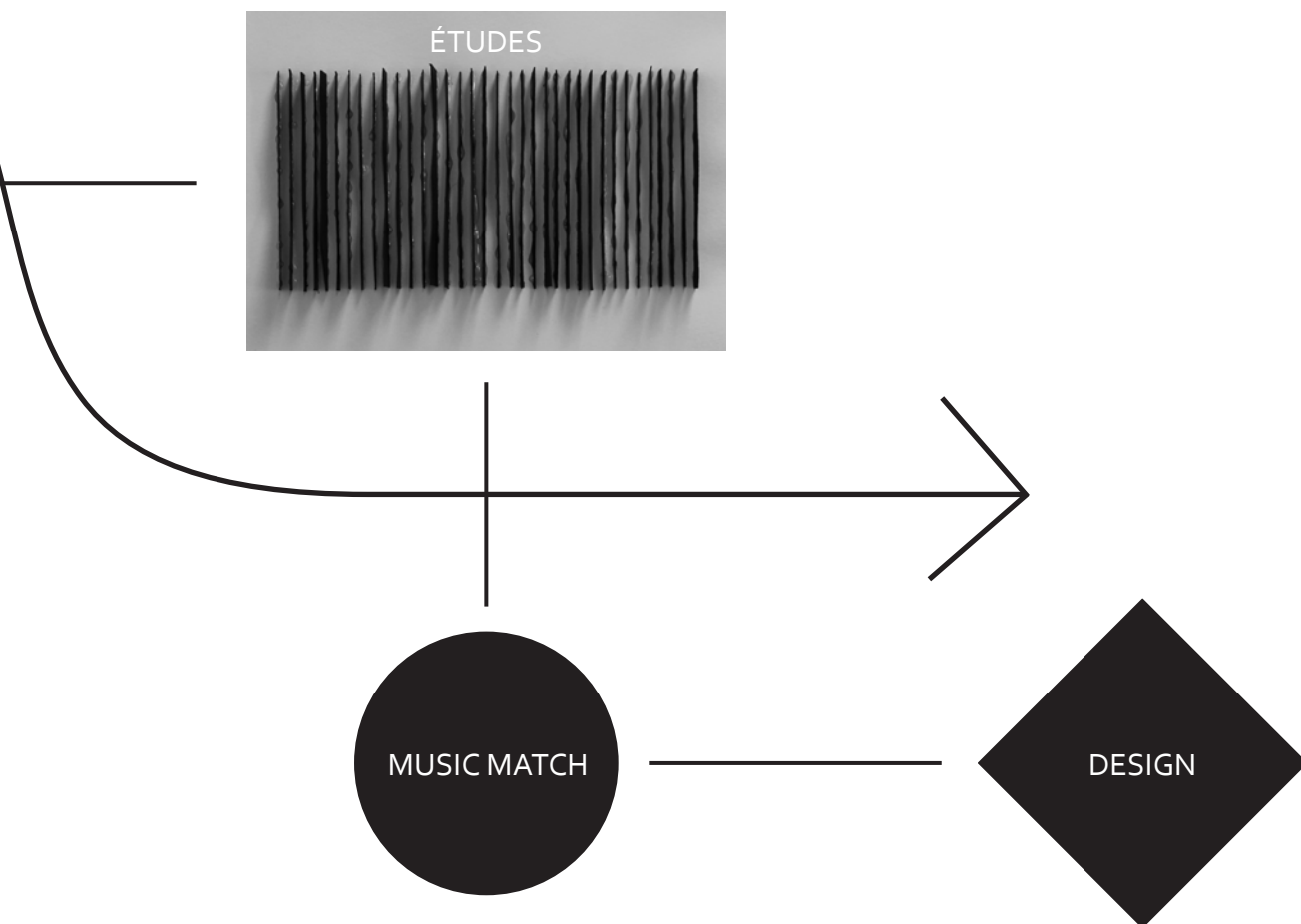
Part Six

REFLECTION & FORMALITIES

Reflection

At the very beginning of this process, I asked myself "Can this be done? I mean, can it be done in a way that matters? That isn't just fulfilling for me?". As the process has progressed, these questions have become less and less imprtant.

Architecture has through history been closely linked to the arts, even included as one of the artforms. Most architects have an artistic side, many practise as artists side by side with their architectural profession. For me, it was always a struggle to get the ideas in my head realised - or for that matter to believe that the ideas in my head were original enough. Hand sketching, paper models, painting, sculpting - it has all been connected more with achievement than with lust, more with duty than with inspiration.

In this process I have found that music is my artistic foundation. This is where I draw inspiration, this is how I express myself, this is where my lust awakens. And suddenly I found myself making paper models, because I just had to in order to make sense of my thoughts. I found myself sketching, because I couldn'd not - shapes needed to come out. Digital tools became just that - tools to realise what I created in my mind rather than exploratory environments to play around in.

So, going back to the questions I asked myself. Can this be done? Definitely, the method I created can be used as a tool for site analysis, as design tool without a specific musical reference, as a design tool with a specific musical reference, as a way of communicating with clients, and so on.

But does it matter? Well, at least I convinced myself that it does. Within architecture, we put great emphasis in the image. We need the image to both make sense of reality and to represent reality as a means of communication. But this process has shown me that our minds work differently, and that this additional means of communication and representation can speak to minds that work like mine. Where others see a pattern, I hear a rhythm. When I touch a surface, it sings to me. And every colour in the world is a unique harmony that resonates in my chest.

So was it fulfilling for me? More than I could have imagined. This process has unlocked doors I did not dare to look behind. I may not be ready to call myself an artist just yet, and maybe that is not the most important thing in the world. But I have discovered that an artist lives inside me.

INTERIOR PERSPECTIVE | *foyer*

INTERIOR PERSPECTIVE | *rehearsal room*

Student background

ARCHITECTURE STUDIES

Bachelor studies, Chalmers University, 2017-2020

Master studios year 4, 2020-2021

> Healthcare Architecture, ARK263
> Housing Inventions, ARK137
> Design & Communication Tools, ARK442 (crash course)
> The Hybrid Practice of Architecture, ARK595 (theory)

Master studio year 5, 2021-2022

> Masters thesis preparation courses 1 & 2, ARK636 & ARK641
> Matter Space Structure 3, ARK258
> Masters thesis in Architecture, ACEX35

PREVIOUS STUDIES

Business Economy, Halmstad University & University of Gothenburg, 2001/2002
National Economy, University of Stockholm, 2000
Political Science, University of Stockholm, 1998/1999
French, Mälardalen University, 1997
Hotel Management, IHTTI School of Hotel Management, Neuchatel, 1996/1997

WORK & INTERNSHIP

Business Advisor, 2002-2017
    - last 5 years as executive director at NyföretagarCentrum Halland
Sköld Forsberg Byggkonsult, summer internship, 2018
Tornet, summer internship working for Sten Jonsson, 2020 & 2021

INTERESTS & OTHER COMMITMENTS

Music and theatre
Gymnastics coach
Board member of Länsförsäkringar Halland

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Images

All photos of the Gothenburg Opera and process material are the author's own.