NAVIGATING NOISE

Randomness, Chaos, and Cross-Pollination in Interdisciplinary Performance

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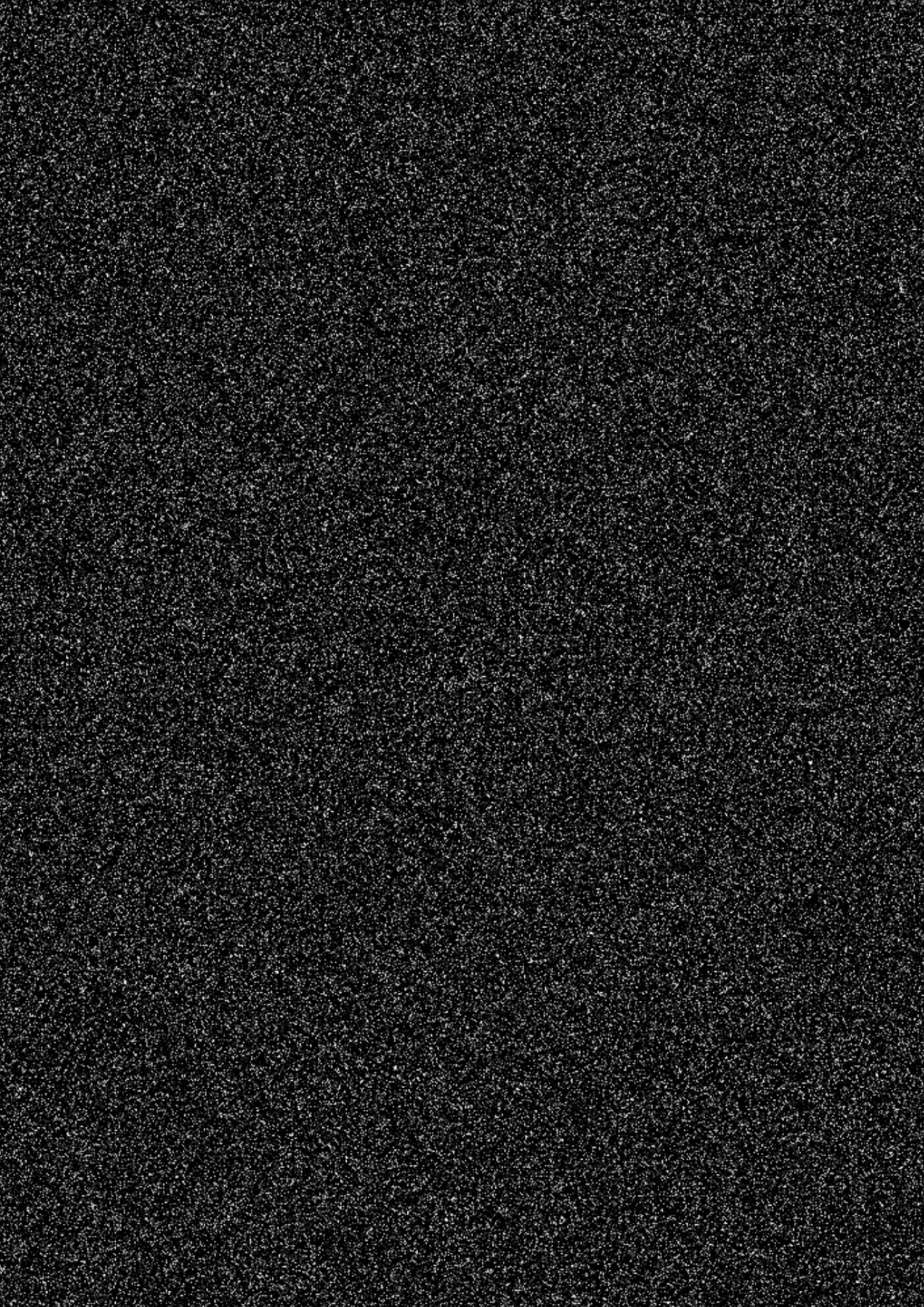
INTRODUCTION

This project explored how different art practices from different fields cross-pollinate in the process of making interdisciplinary art. I want to trace how the process of exploration and thinking in different mediums create a dynamic interchange of ideas that leads to the development of new ways of relating to practices.

I used different approaches and techniques, from somatic practices to experimenting with digital tools, to understand how different practices interact with and inform each other. The process becomes an intricate system of similarities and feedback loops, where one can reflect and interpret in many different mediums.

Referenced documentation can be found in Research Catalogue.
https://www.researchcatalogue.net/view/2145583/2183542

Thinking in different mediums

My method involves thinking, reflecting, and imagining in the mediums. Writing – using text – has not been one of these mediums. Therefore, I will not write extensively about thoughts on the artistic content of these explorations; these thoughts are embedded in the process, documentation, and final product. The writing is meant to figure out how thinking in different mediums influence and shape each other and, to some extent, to put words to insights and thoughts that appeared while working.

In this notion of thinking in different mediums, I believe that there is overlap with Andy Clark and David Chalmers concept of *The Extended Mind.*[1] They describe a scrabble player that rearranges tiles to find words. Here, Clark and Chalmers say that this "In a very real sense, the re-arrangement of tiles on the tray is not part of action; it is part of thought." (p.10) They argue for the notion of thinking as something we do both internally and externally. "That Cognitive processes ain't (all) in the head!" (p.8)

As artists, we work, reflect, and think through mediums as we confront the task of of thinking about a theme, we don't do that thinking in the head. We think, imagine, and reflect with the tools we use - if that is our body, a modular synthesizer, actions on a stage, through costumes, text, or colors on a canvas. The particularities of this medium affect the limitations and possibilities of how we can think. I believe that more research could be done in this area to figure out how we, as artists, can talk and write about the thought process that we engage with in the material.

In this text, I will not argue whether reflection in external mediums is possible; through engaging with different mediums, it appears self-evident to me – I will take it for granted. However, I will try to find out how working in one medium affects and pushes the boundary of how I can think in another medium. I call this process cross-pollination. Cross-pollination occurs when a plant is pollinated with genetic material from another plant. I use it to refer to when a concept or experience from working in one medium changes my approach when working with another.

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[1] Clark, A. and Chalmers, D. (1998) 'The extended mind', *Analysis*, 58(1), pp. 7–19. doi:10.1093/analys/58.1.7.

On the content of the explorations

Throughout this process, I found myself leaning more and more into aleatoric practices. The content of the project became an exploration of noise, randomness, chaos, and the meaning-making process of interpreting and making sense of it. This project explored different ways of relating to aleatoric practices in dance, music, and light. Aleatoric is a term I have borrowed from music. It is used to describe the practices of composition where the structure is determined, but the details are left to chance, randomness, or the choice of the performer. The most notable who experimented with this among dancers is Merce Cunningham who together with John Cage developed compositional games where they would decide on a framework, but randomise the particularities. The term has also been used to describe any form of performance that embraces indeterminacy, which can include improvisation or chance operations.

I use the term aleatoric, because it is vague enough to allow for some flexibility. I see this as an investigation into unpredictability. And while I stand on Cunninghams shoulders, I think that my approach is quite different. I use chance and randomness as the input, early in the process of movement generation. I then put this random input through repetition, reflection, and modulation, and interpretation to let it grow and develop. This is to create something that resembles a chaotic process rather than a random pattern.

The concept of noise is central to aleatoric and generative art. I use it broadly in this text, with three general meanings. The visual and auditory phenomena–here, I refer to the sound of white noise. The buzzing sound. The visual relative to white noise is television static – myrornas krig, ant wars, as we call it in Swedish. If you were to sample white noise and measure it at regular intervals, you would end up with a list of random numbers. Therefore, I also call this randomness noise. This can be a set of thrown dice or a string of random numbers. Noise can also refer to a disturbance in communication – the signal is the message that wants to be communicated, and the noise degrades and interrupts it.

A chaotic pattern is a term I am borrowing from mathematics although I am using it in a more metaphorical sense. An example of a chaotic pattern is the movement of a double-rod pendulum or Lorenz attractor. What characterizes a chaotic pattern, as opposed to a random pattern, is that it follows a completely determined path. However, owing to the complexity of the system of feedback loops, dependencies, and self-similarity, the outcomes from different initial conditions vary so drastically that the behavior has a

horizon of predictability. Here, one can think of weather patterns or turbulence as an image.

I wanted to explore thinking of chaos and randomness as the content of the explorations. Something that can be explored in different mediums of sound, movement, and imagery. But I also wanted to explore what emerges between these mediums - how thinking in one medium can cross-pollinate and affect practices in other mediums.

Difficulties

Structuring this text was difficult because text is a medium that runs in only one chronological direction. Writing has its own way of thinking. Experiments in different mediums occurred simultaneously, and cross-pollination did not occur as a chain. Influences and ideas across practices unfolded at the same time. There is an inherent struggle to write about non-text-based performances. In the art, I want to speak about things that I can't put into words. If I could, I would write about it instead of making abstract art.
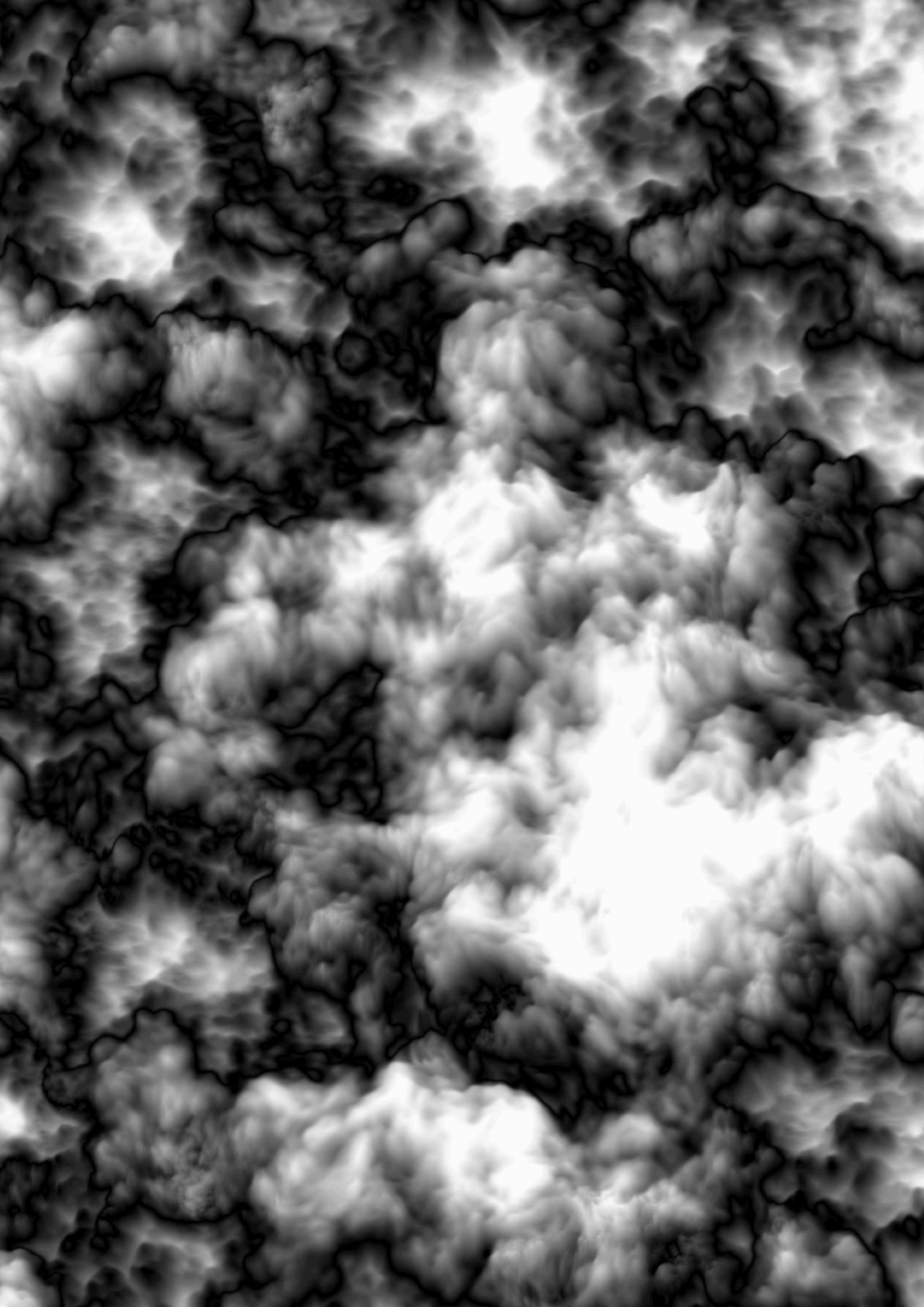
Explorations and new tools

In this segment, I will write about and share the documentation of various experiments, practices, and ideas that I have done to think and reflect on ideas of noise and chaos.

I write about experimentations with sound, modular synthesis, somatic practices, and chance operations. I will try to trace how the different practices cross-pollinate and shape each other. Next to each of the explorations is a number in parenthesis (#X), which refers to the content in Research Catalogue.

Shaping a soundscape

(#1 and #2)

This was an experiment tested as a way to meet a space with sound. This stems from the practice of listening to soundscapes – deep listening over a longer period of time. Trying to separate the layers. I wanted to capture the intricacies and music present in soundscapes. The movement of the wind through trees, the background hum of cars, and human sounds are scattered across a vast space.

This idea comes from a rudimentary sound design idea. I set up a live microphone somewhere in various forests. The microphone was fed into Ableton, where several filters (MEqualiser) shaped the sounds. The bands in the EQ are very narrow so that they almost produce a sine wave sound, but are not so amplified that they start to self-oscillate. I tuned several of these filters to produce different chords. The processed audio is sent to my headphones, or the headphones of the audience.
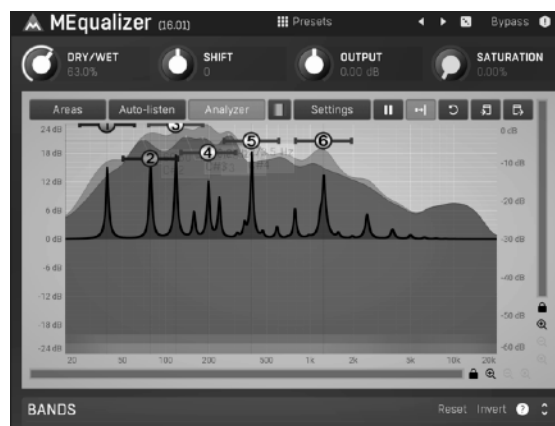
Screenshot of the EQ

The instrument does not produce any sound on its own. This amplifies the frequencies that are already in the soundscape. The amplitude of the frequencies is controlled by the soundscape, and tuning is controlled by me.

As any practice that makes you sit down for a long period of time and pay attention to subtle changes, this is a meditative experience. It is engaging with the environment, not as a backdrop but as a co-creator–a partner. It is attunement to sounds near and far and the possibility of exploring the musicality of soundscapes. This becomes a practice in listening. Letting the sounds appear as they are and come in the ear without deciding what is is.

It was also a way to explore the aleatoric process of engaging with the soundscape as a co-creator. It is not a random input, but is also not controllable. For a while I had been thinking of composition as "making an instrument" rather than "arranging events in time." The composition is a series of possibilities, relationships, and structures. The composition then unfolds through a dance in the meeting between the performer, me in this case, and the soundscape.

However, it would be interesting to explore a more chaotic approach to this project. Now, the performer responds to the environment. The line of communication only goes one way. It would be interesting to find a way to give the soundscape a chance to respond to the performers' input. If this is by using speakers to send out the audio signal or finding another way to speak to the environment. Thus, it responds more to the presence of performers.

At one point, I was sitting in what I thought was a fairly remote part of the countryside on Gotland a few miles east of Visby; I was sitting with the sounds. I was tuning into the wind, and there is a sense of connection that runs through me. I am hearing the soundscape and have the agency to respond to and shape it. A gunshot rings through the air. I am realizing that I am sitting close to a military practice facility. There are a few more reverberating cracks as my memory of all human affairs runs through me. There is a war going on. People are practicing their aim. And so on. It disrupted the landscape as the sound moved through the filters. (#2, around 9:15)

Feedback lights

(#3)

This was a small experiment with limited documentation. I wanted to see if an environment that uses feedback could be created with light. How would it feel to inhabit such an environment? Although the result was so janky and jarring that it was difficult to share with an audience, the experience of inhabiting the space affected how I thought of inhabiting a responsive space. The memory of the experience has stayed with me.

This was also a rudimentary setup. Two DMX-controlled LED lights, a webcam, and a computer in a blacked out room. One LED light was set up to illuminate half of the room, and the other illuminated the other half. The webcam captures the entire room and the image from the webcam is fed into the computer.

The computer calculates the average RGB value of the image from the webcam and outputs that color to one of the led-lights as a DMX signal. It also inverts the average color and outputs that to the other light as a DMX signal with a 10 second time delay.

This, in theory, creates ever-changing combinations of colors in the room. It wasn't always pretty to look at. But it was an interesting experience.

I quickly understood the value of noise and time in the feedback structure. The web camera and the room introduce noise and disturbances in the signal. It does not pick up exactly what is put out by the light. It interprets the data with inconsistencies and therefore creates variation in the structure that leads to more development. Without a time delay in the inverted signal, the structure quickly finds an equilibrium. A middle between the colors that it did not want to move away from. This delay created a temporal imbalance that led to continuous development.

This rudimentary environment had the feeling of a living organism. The colors did not change randomly, but it was difficult to predict movements. This almost gave it a sense of having a will of its own. It had a tempo, a preferred pace, but there were also rhythms in the timing. The image that came to mind was that of an enchanted forest, a space that is alive.

When I entered the space, color information from my body was fed into the camera. I have slight control over the environment. The space reacted to my presence. I could feel that my position in the room changed the space. As interesting as this was for me, I think I am proposing to qualified light designers and people with more knowledge to experiment with unpredictability and feedback loops in light.

New Tools

Part of the project involved learning new tools, exploring new mediums, and seeing how that changed my understanding of composition, performance, and other practices.

Digital Modular Synthesis

(#4)

To learn this tool, I engaged in experimentation, exploration, and watching many free tutorials on the internet. Omri Cohen is a composer that teaches the fundamentals of working in modular that has been a great help to get started in this medium. While the products of these explorations were not directly related to my main project, I included recordings of my patches and jams in the documentation.

I used VCV Rack 2, an open source digital emulation of Eurorack modules. One of the advantages of working with open-source software is the price tag. These tools are free to use and learn. Modular synthesizers, when working in hardware, can be expensive, but this software provides the opportunity to create and play without a large monetary investment.

Operating within a modular environment means that any module can be connected to almost any parameter. The focus shifts from working with pitch, timbre, and tempo to working with voltage, waveform, and randomness. Rather than composing sequential events, my focus is on constructing an ecosystem of possibilities. A degree of unpredictability is inherent in the modular setup. I do not dictate what the system should do; instead, I offer suggestions and machinery responds.

This approach differs from the conventional timeline-based approach to composition. While timeline-based compositions unfold linearly over time, the modular system operates in multiple dimensions, relying on relationships and entanglements as well as phases, loops, and combinations. For example, I might use a slow low-frequency oscillator, gradually increasing and decreasing the amplitude of white noise over two minutes, following the shape of a sine wave. Additionally, over a duration of 1.2 minutes, I may manipulate the frequency cutoff of a filter, opening and closing it. This approach generates phases and novel combinations, resulting in varying timbres over time. Although not random, this method places greater emphasis on the causal relationships between elements, rather than organizing events by intentionally manipulating them along a timeline.

By Timeline I'm referring to two things. Both literal timeline editors can be found in DAWs and video-editing software. This is a way to visualize and organize events in a composition along a timeline. In my explorations with modular synthesis and, to a certain extent, somatic and aleatoric practices, I started to move away from the notion of thinking of composition as a timeline. Into what – I am not certain. Into something resembling a network of causal relationship. Of course, this manifests in a timeline; I have not transcended linear time in this project. But I have started focusing more on the relationships, rather than organising events along a timeline.

The modular environment lends itself to an iterative approach characterized by trial and error. It is difficult to envision a specific sound and reproduce it accurately within the medium, which may be a skill issue. Instead, the creative process feels like a dialogue, where I propose ideas and machinery responds, unfolding the composition and sonic image over time through dialogue.

An ecological metaphor is lives in this approach. It feels like building an ecosystem, where each module operates predictably, but as the system grows in complexity, its behavior becomes increasingly unpredictable. Feedback loops can emerge, where one part of the system influences another, and changes propagate exponentially, either multiplying or dividing. As a performer, I become another node within this system, processing sound and providing input based on my interpretation and understanding, without complete control. As performers, we contribute to the chaotic machinery, but we are only nodes in it.

Working in a modular environment has also reshaped my understanding of composition. I now perceive it as a process of instrument creation and creating connections. Through learning and playing with this tool, I have developed new modes of thinking that are influenced by the particularities of this medium.

Generative imagery

(#5)

I hesitate to write extensively about generative imagery since it is the medium I have worked with the least. I started playing with Touchdesigner to generate audio-reactive imagery. Here too, many online tutorials were of great help in learning ropes. Those that

had the largest impact on my project are Paketa12, Simon Alexander Adams, and bileam tschepe. I have liberally used and synthesized techniques from them and have not invented much in the medium independently. Touchdesigner is not an open source program.

One practice from the medium that I want to discuss is the use of noise as an input. The first image in the network-chain, the only input sometimes, is usually a noise map – a two dimensional image with randomised values. This noise can then be shaped, modulated, displaced, placed into feedback loops, and tweaked. Larger and more complex patterns can emerge from the initial noise. It can be hypnotic to look at this constantly evolving and changing imagery.

Dice Games

(#6)

In my exploration of VCV Rack and working with generative imagery, I had become used to be able to randomize events. In modular systems, a sample-and-hold module can be utilized to create melodic sequences or introduce randomness to various parameters. When working with generative visuals, starting with a noise map, such as Perlin or Simplex noise, often proves beneficial. Computers can efficiently randomize events - it is a little more cumbersome as a dancer, but I wanted the distance from the material that these processes create—the sensation of not being fully in control.

Merce Cunningham, known for incorporating chance operations into his performances, implemented a similar approach. According to my teacher, Jean Freebury, who worked with Cunningham's company for many years, dancers were never present during the dice rolls. Cunningham would enter the studio and teach choreography as if it were predetermined. While I draw some inspiration from Cunningham's methods of movement generation, much of my conceptualization of movement stems from William Forsythe's modalities.

Forsythe and the dancers in The Forsythe Company conceived of space as a cube with nine points on each face, including one point in the middle, resulting in a total of 27 points. Each corner of the squares, midpoint of each line, and center of each square has a point. Each of these points create lines of movement between them. If three or more points are connected, there is a plane. There are nine planes in total (that intersects the middle) I have illustrated these below.

To determine the sequence of movements, I settled on a total of 16 movements. Assigning a number to each plane, a random number generator was employed to produce a string of 16 integers ranging from 1 to 9. I then determined the shape of the movement for each plane—whether it would be a curve, circle, or line. This process was repeated using random numbers between one and three to designate the shape. I then determined the scale of the movement – small, medium, or large, and randomised those as well.

As for the choice of body part for each movement and the timing, I left these decisions for myself to figure out. Ultimately, I had a list that looked something like this:

Strings
1153312492558868
3132133233131213
2131212213133323

Size
Small:1
Medium:2
Large:3

Shape
Line:1
Curve:2
Circle:3

1	Large	Curve
1	Small	Line
5	Large	Circle
3	Medium	Line
3	Small	Curve
1	Large	Line
2	Large	Curve
4	Medium	Curve
9	Large	Line
2	Large	Circle
5	Small	Line
5	Large	Circle
8	Small	Circle
8	Medium	Circle
6	Small	Curve
8	Large	Circle

Planes

(This is not the original list, but the concepts are the same)

This is a randomized input and an abstracted movement phrase. By engaging in this systematic yet chance-driven process, I aimed to remove my own input from the beginning of the process to get distance to the material.

When visiting the realm of randomized movement, I am confronted with and awareness of what feels like an infinite regression of arbitrary choices. How I decide to structure the space is a choice. The planes that I use are chosen. One could imagine randomizing a score based on emotions as another choice. Why did I choose to separate the movements and their planes? One could imagine a core to movement, a natural state, that is neutral and not a choice, but I cannot seem to find it. The ways in which I choose to imagine space or separate the parameters of movement stem from my training. Both in classical dance and probably from the fact that I am used to dancing in square rooms. I wonder how I would see the space if most of my training had happened outdoors. I grapple with these questions and find myself consistently facing the realization that arbitrary choices must be made at every stage of the process.

The concepts of space, as complex as they may seem when put into words, manifest intuitively in the body. It is through embodied exploration that the complexities of these spatial concepts find resonance and utility. The cube, with its nine points on each face and the intersecting plane at the center, is a valuable framework for my improvisation and choreographic practices. It provides a structured yet flexible backbone for movement exploration. However, there are many other ways to conceptualize space and its relationship with the body. The Laban icosahedron, for example, I have also heard of dance companies that think of directions as a clock with 12 directions, rather than 8. These offer alternative perspectives. To me, these spatial concepts operate like musical scales, depending on how you imagine the space, it will render different movements. Personally, I find utility and prefer to work with the cube, but this is just a choice.

I find it useful when improvising and choreographing. To stick to the musical metaphor, within each scale, there are chords that all have different qualities. Movement along the sagittal plane, which intersects the nose and divides the body into bilateral symmetries, has direct and action-oriented energy. On the other hand, movement along the frontal plane, which separates the body into front and back sides, carries a playful quality. The rotational plane introduces an element of uncertainty, evoking a searching quality, and a

16

sense of unresolved potential. By incorporating diagonal planes, even more intriguing and nuanced "chords" can be created. These associations are in no way prescriptive; rather, they provide a framework for exploration and offer a foundation upon which performers can develop their own synesthetic understanding. The notion of chords serves as a metaphorical lens through which to view the harmonies that underlie the melody of movement, while offering a framework to play with.

Cunningham, when working with chance operations would randomize the entire performances. All movements throughout. In that work, the framework is rigid, but all detail, all particularities are left to chance. This differs from how I used chance operations. I am using it as one would use a noise-map when generating imagery – it is the input. It is then, through a process of repetition, interpretation, modulation, and experimentation reshaped and developed by me. I apply my tastes, ideas, interpretations, habits, and meaning-making onto the material as I am developing it. It finds home in my body. However, its starting point, the genesis, is noise.
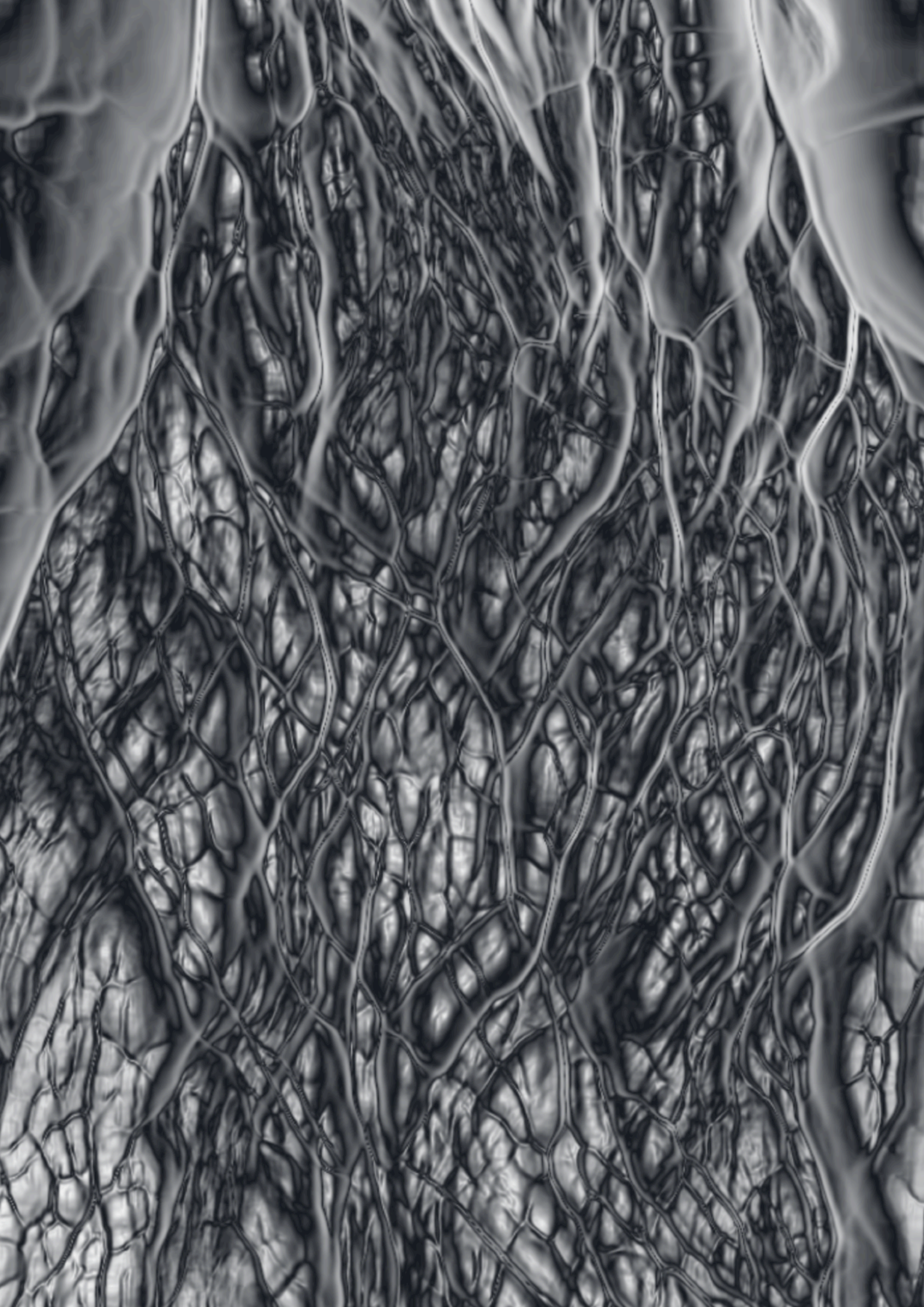
Somatics

Somatic practices became an integral part of this project. I came to this project from a background in dance and movement. I wanted to work with the movement of lights and the movement of sound; it was important to me to dig into the movement of the body, or to use a more precise language, the movement of the soma.

Somatic practices are an umbrella term that relates to dance practices that turn the gaze inward. It focuses on the soma, the body as experienced from the inside.

Below is a list of examples of exercises that I appropriated, adopted, and used in this project. It starts with exercises in listening to the body, and moves through different types of imagery and concepts.

There were many references in this part of the project, there is also tacit knowledge that I bring from previous training. I will try to give credit where it is due. The main practices that I borrow from are those of Feldenkrais[2], my experience with Gaga[3], Alexander Technique[4] and Experiential Anatomy.[5]

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[2] Awareness Through Movement classes at Movement Research in New York, and recorded sessions found on Spotify by user feldenkraisATM@evalaser

[3] Mainly classes with Bobbi Jene Smith, Shamel Pitts, and Ohad Naharin

[4] Through classes with Jane Kosminsky

[5] Through classes with Irene Dowd

Exercises in Listening

Begin by standing with your feet hip-width apart and your arms relaxed at your sides.

Take a moment to notice your breath, and allow it to deepen and find its pace.

Pay special attention to the moment that the breath changes direction.

What is the image of your breath? A circle? A point on a line moving up and down? A balloon inflating and deflating?*

Start to notice the sensation in your hands. Notice the space between your fingers.

What is the distance between your fingers? What is the distance between the top of your head and your tailbone? The knees? How does the space inside you feel different from the space outside you? Can you, without looking, know where one ends and the other begins?

Stay in this exploration for several minutes, allowing yourself to sense, in whatever way feels right in the moment, what these spaces feel like. The one inside and outside.

What images occur? What is the density of the space?

1

Begin, with your dominant hand, gently rubbing your non-dominant hand.

Do it gently but with some vigour and speed.

The goal here is to wake up the nerve endings of the body.

Let this movement travel up the arm - gently rubbing, squeezing, and tapping.

The elbow – the armpit - the neck

Let this movement travel down the side of the body.

It should be quite energetic at this point.

Down to the feet

Stop there for a moment to notice the difference between the two lateral sides of the body.

After having treated both sides and noticed the sensations that arise

Use both hands to gently but energetically rub, tap and squeeze the whole body.

The back of the head - face - feet - hands, etc.

Shake out your body and walk around the space.

2

Stand with eyes open.

Both feet planted firmly on the ground. Relaxed knees. Take a few deep breaths.

Pay attention to 5 objects that you can see in the space. Count them in your mind and try to notice their specificity.

Pay attention to 5 things that you can hear in the space Count the layers in your mind and notice their specificity.

Pay attention to 5 things that you can sense. Either inside the body (the tingling in the hands, the pressure on the feet, etc.) or outside. (The feeling of the air against the skin, the sensation of the clothes touching your skin, etc.)

Repeat this process with four new things

Repeat with three new things and then two and the last time only one.

Try to notice all of these things at the same time.

Can you notice all the layers of sensation together?

3

Bones, Joints, and Connections
medical imagery and loose qualities

The Clavicle and the Scapula

* Begin by standing with your feet hip-width apart and bring your thumb to the opposite clavicle to feel the point where your clavicle meets the sternum. Place your long finger where the clavicle meets the scapula (all the way to the shoulder)

* Begin slowly moving your scapula around. Up and down. Sideways and inwards. Let it slide it across the ribcage.

Bring attention to the **clavicle**

How does it move? Is it sliding? Sinking? Rotating? Can you find ease in the movement? Where is the jank? Can you get rid of it?

How does attention to the clavicle change how you move the shoulders? Is there a softening? Can you move your shoulders without affecting the clavicle?

How does this attention change your movement?

5

Ankles knees and the Sacro-Illiac Joint

* Begin by standing with your feet hip-width apart and your arms relaxed at your sides.

What is your connection to the floor? Is it stable? Can you feel the heel, and each of the five foot-pads (lunas) connected to the floor?

* Start slowly bending and stretching the knees?

Bring attention to the **ankles**

Can you sense the movement of the ankle? Is it a hinging movement? Or can you feel it like a sheering motion? The heel sliding backwards and the ankle-bump (fotknöl) sliding forward as the foot flexes?

Bring attention to the **knees**.

Can you feel the distance between the kneecap and top of the shin bone? What is the shape of this movement? Is it just a hinge? Is there rotation happening? Is there any sheering? What are all the complexities?

Bring attention to the **Pelvis**

Notice the nutation and counter-nutation of the SI-joint. Imagine, as you are bending your knees, your sit bones moving away from each other. As you stretch your legs sense them moving together. Can you feel the movement of the sacroiliac joint?

Bring attention to the **complete movement**

How does the movement feel different now? Did your attention change the movement? Try walking. Does it feel different?

4

The Atlas and Neck

On the very top your spine there is a bone holding up the cranium. We call it Atlas. Picture Atlas, the god, carrying the globe in his arms. We want to make his job a little easier.

* Start finding small movements in the top of the neck.

How does it move? Is it sliding? Sinking? Rotating? Can you find ease in the movement? Where is the jank? Can you get rid of it?

Can you feel the cranium floating backwards and upwards? Can you get rid of the parasitic tension?*

* Trace the **sternocleidomastoid** with your fingers starting at the clavicle.

What is the shape of the muscle? Does it curve? Does it move backwards?

* Feel the muscle going backwards, around, and upwards.

Does this ease the burden on Atlas?

How does this attention change your movement?

6

Muscles and The Flesh

The Jellyfish

*Do a Jellyfish movement with your hand

*Find the free texture first.

Space between the joints. Sense the air passing between your fingers.

*Start introducing a dense texture. Boundness and tension in your knuckles - wrist - lower arm - elbow - upper arm - all the way through your shoulder and chest. But carry on the movement. This wouldn't be sustainable for more than a few minutes.

*Return to the free texture.

*Go through the motions one by one. Bound in the knuckles, free everywhere else. Dense wrist, free everywhere else. Tension in the lower arm, free every where else. Continue through the upper arm. The shoulder. And the chest.

How did the boundness feel? How did the movement in the free parts change? How was the overall movement affected? How would you describe the qualities?

7

Movement from the muscles

*While moving around the room start paying attention to the movement of the joints. You can use any joint, I will use the elbow to demonstrate.

Try to pay attention to the particularities of the movement.

Is there a slight rotation? Is it hinging? I can notice a slight external rotation as im moving my arm toward my shoulder.

Bring attention to the muscles necessary to produce the movement. In both directions. The bicep and the tricep.

Attempt to, without using the bones as you normally move them, recreate the movement by contracting the muscle that you use.

let the rest of the muscles be relaxed. Try to send a signal to right muscle and tell it to contract.

*How does this change the movement? How does this change the quality?**

8

Far away engines and secondary movement

Using **movement from the muscle** is a way to create **Secondary movement** (or far-away engines)

Here is another way to find it

*Lay on your back on the floor
*have your feet planted a comfortable distance away from four pelvis.
*Create space for your neck to relax.

Release the jaw, let the tongue rest behind the bottom row of your teeth.

*Begin gently tilting your pelvis forward. Extending the lumbar spine until you can feel the weight on your tailbone.
*did you notice that?
*How your chin moved toward your throat.
*Try it again.

This is what I call a secondary movement. Notice how performing the secondary movement on its own doesn't necessarily create the primary movement.

The primary movement creates the secondary. The primary movement, in this case, is the tilting of the pelvis…

Or actually, the primary movement is probably the contraction of the quadratus lumborum. So the tilting pelvis is the secondary, and the head nod is the tertiary movement…

Or actually, the primary movement here is probably your breath or a nerve impulse…

One could go on forever….

But attempt in you movement to - whatever movement you want to produce - try to find a source that is as far away as possible.

How does this change the movement?

9

Slightly More Fantastical Imagery

Imaginary Connections
The Rope of the Arms

Picture a rope. As long as you are tall. Picture the tension as you stretch it out, and the way it loosens and crumbles when you move the ends together.

Sense one of the ends of this rope in your right middle finger. Right by the nail.

Picture it moving through your arm. The knuckle. The wrist. The elbow. The shoulder. Over the clavicle and through the heart.

Through your left clavicle. Shoulder. Elbow. Wrist. Knuckle. All the way to the top of your left middle finger.

It is all connected. As the ends move further away from each other. The tension increases. As you move them closer. It folds and softens.

How does this image change the movement? What qualities emerge? How does rotation in one end affect the other?

10

Imaginary connections outside the skin
Many Elastic Bands

Picture your centre. The size of a tennisball, between your bellybutton and tailbone.

Now imagine elastic bands connected between that tennisball and each of your fingers.

The further away you move the more the tension there is.

Play with this for a while.

Can you see these strings with your minds eye? Can you feel them in space?

Feel that these elastic bands also connect to your toes and to the top of the head.

Can you feel this connection outside the body as vividly as the imagery inside the body? As real as the rope of the arms?

How does this change your movement?

11

A Completely Fabricated Image

THE TREE

In whatever position you find your body, pay attention to all the parts connected to the ground. Feel the pressure of the floor and allow all of those parts to press down ever so slightly into the floor slowly. These are your grounding points.

Sense, at the grounding points, how small roots are curiously beginning to dig their way into the ground.

First tentatively, slight and searching movements are finding comfort in the earth.

See, in your mind's eye, how the roots are finding their place. They are still spreading.

As deep as you are tall.

And as wide as the room you are in. Hear them crackling in the ground.

Feel the connection to the other roots in the ground.

They are deep and wide, both thick like the branches of a tree and thin threads.

Try to move the grounding points. Feel how all of the roots are accommodating the movement. They are growing and restructuring for you.

Play with the sense of time. A movement might take ten seconds in the room, but let yourself imagine that it takes days to accomplish the slightest shift of weight.

Let your body become the trunk of the tree. How firm is it? How tall is it? How does it accommodate the movement?

Play with the image of the roots and the trunk for a while. Until the image is clear in your body.

Now consider the points of your body that are the furthest away from the grounding points.

Allow leaves to grow there. Or better, a flower.

Sense the lightness of the leaves and the contrast with the roots.

*Allow a gust of wind to move the leaves. How do they move?*

Play with the sense of time. Allow seasons to change and leaves to fall. Allow yourself to grow again. Keep the image of the movement of the tree as vivid as possible in your body.

As if all of this was a dream, wake sees yourself from the outside, shake your limbs and walk rapidly through the space.

Let the image of the tree disappear quickly.

THE PLANES OF THE BODY

Rotational

Frontal

Sagital
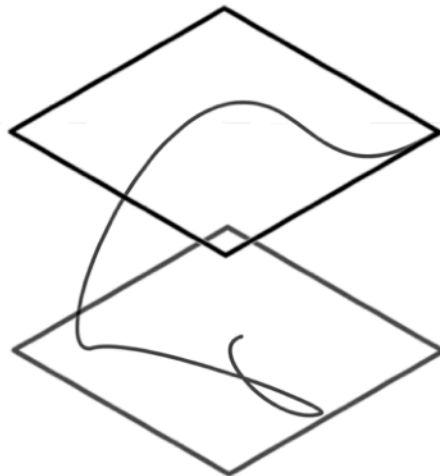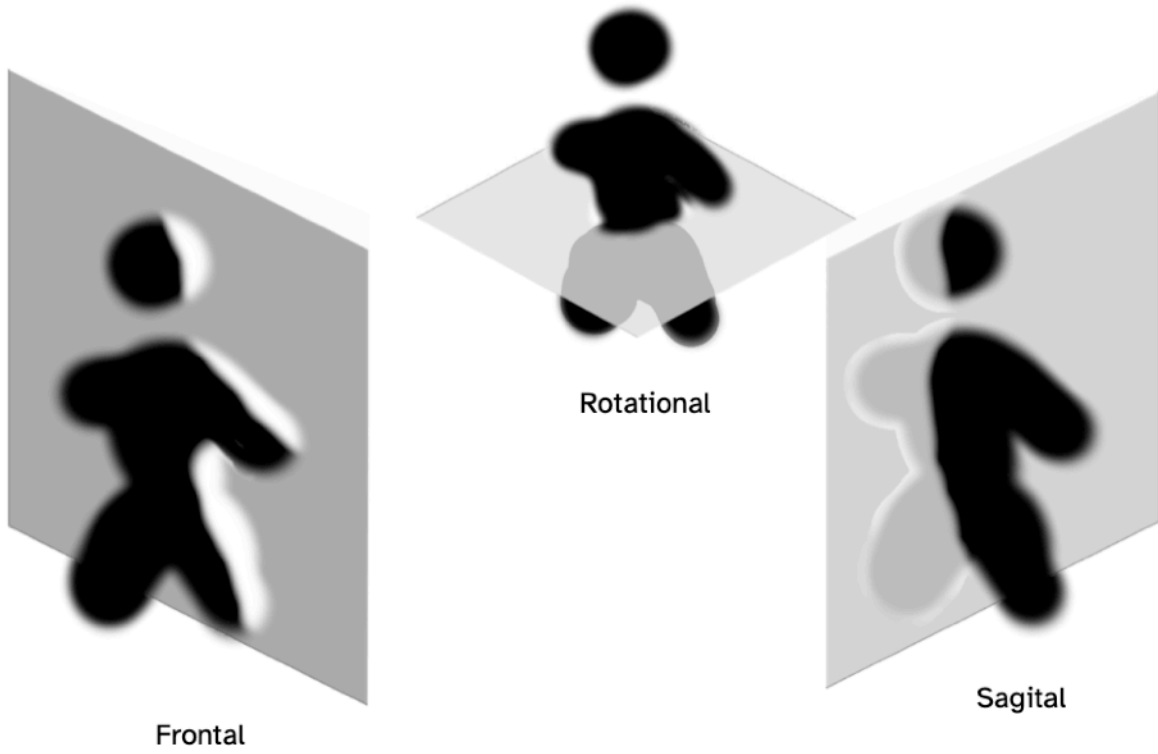
Notes on the exercises:

1. One pedagogical concept that I borrowed from Feldenkrais is *asking questions*.
To ask questions to the body and search for an answer without needing to find one. Questions like what is the distance between x and y. How do you experience this now? Has it changed from how you experienced it before?

2. I was introduced to this exercise by Eric Franklin during a seminar for Franklin Method. He described this as a way to wake up the nerve endings of the body. Gaga uses a similar method, sometimes with an emphasis on slapping. It is done with a partner and is called Drumming. The point of this exercise is to wake up and get in touch with the body's sensory experience. To better be able to be present with the sensations that arise.

3. This is an exercise that I have appropriated from various meditative and mindfulness practices.

4. I came in contact with these ideas through anatomy classes with Irene Dowd

5. Same as 4

6. These are concepts that I have appropriated from Alexander Technique that I came into contact with through lessons with Jane Kochinsky

7. An original idea.

8. The notion of dancing with the muscles rather than the joints is probably best developed in various Hip-Hop practices Popping in particular uses pops, muscle contractions as a central technique.

9. The term *Far-Away Engines* is borrowed from Gaga. However the term secondary movement is something that I have borrowed from animation.

10. *The Rope of the Arms* is also borrowed from Gaga. I came into contact with this concept through a class with Danielle Agami.

11. This is an exercise similar to an exercise that Hofesh Schechter's company uses.

Insights

In *On the Spiritual in Art*,[6] Wassily Kandinsky delves into the connections between art and spirituality. Kandinsky's notion of spirituality is not about the representation of religious or mystical subjects. Instead, he searches for a way that art can evoke responses and resonances within the spirit of the viewer. When seeing the color blue, there is a "corresponding vibration of the human soul" in the viewer. The soul resonates with the object. He believed that this interaction between the viewer and abstract forms and colors could transcend the physical world, opening a gateway to the transcendental. His goal was to bypass intellect and speak directly to the soul.

Although I do not claim that my art is transcendental, I find Kandinsky's perspective useful. I do not see it as speaking to the soul, but as speaking to the body of the viewer. There is knowledge in my body. Lines, shapes, qualities, and speeds have their own stories, which I want to tell them. Through somatic practices, I can attune to these stories to find and understand how they resonate with me.

This perspective can also be extended to interdisciplinary practices. I often find myself considering sound in embodied and spatial terms. "Want the sound to feel lighter" or "The sound need rest on a more stable foundation." "This sound cuts through the space in a curling and floating manner." For me, the interpretation of sound comes from my knowledge of movement. I often compose sounds with how they resonate with my body.

Therefore, somatic practices have played a central role in this project. As a continuation of this research, it would be interesting to try these practices with people who have backgrounds in other disciplines. For me, it is evident that the connective tissue in an interdisciplinary project is the embodied and somatic resonance in the mediums. However, this is probably not evident for people from other backgrounds, and it would be interesting to hear what their understanding is.

By engaging with these practices, I have noticed aesthetic shifts in my work. My relationship with time has changed. I notice myself wanting to linger longer in one image and pay attention to changes over longer periods of time.

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6 6 Kandinsky, W. and Rebay, H. (1946) in *On the spiritual in art*. New York: Pub. by the Solomon R. Guggenheim Foundation, for the Museum of Non-objective Painting, p. 43.

Working with chance operations and generative art changed how I thought about somatic practices, since I had the experience that there are choices everywhere. The main notion that I started working with was that the soma is invented. There are connections that are easy to feel. Imagery that is easy to embody. However, there are infinite ways to interpret the noise of the body. The noise of the soma, the primitive experience of the body from the inside, is the Real. It is impossible to comprehend this in full. Instead, we use imagery to make sense and shape it. This can be fantastical imagery – smoke, liquid, or trees–or it can be medical imagery of bones, muscles, and joints. These ways of seeing the body create different types of movement.

What I found in my practice was that I wanted to maintain a playful relationship to these interpretations and imagery. I did not search for a natural body or the source of movement. I am with a playful mind, searching for possibilities. Rather than asking, "What is?" "I'm occupied with the question "what can this be?" Somatics becomes a way of making sense of noise.

att titta på moln

(#9)

A case study

In this section, I describe the process of using these explorations as a background to create a cohesive interdisciplinary performance.

Movement First

As I stepped into the studio, my aim was to create a few phrases throughout the day. By phrase, I mean a series of movements that are repeatable and recognizable with consistent form, spacing, and timing. However, this aspect of dance-making is one of the more gruelling parts. It is difficult to maintain creative momentum because one needs to simultaneously invent and commit these phrases to the memory. In the absence of a specific context, it is easy to become entangled in detail and make endless micro-decisions. "Do I like this?" or "Is this good?" is seemingly the only questions that the material evokes. Nevertheless, as an improviser and choreographer, I enjoy the opportunity to have movement-based phrases that can later be shaped and integrated into a broader context. However, at this stage, the process of making phrases feels like a Sisuphusian task.

In an attempt to remove myself from the creative process and avoid becoming overwhelmed by decision making, I turned to Cunningham for inspiration and embraced chanse operations. I allowed randomness to guide the patterns in space, shape of the movements, and scale. These elements were left to chance, while I maintained control over the timing and the specific body parts involved. Although this process was still unintuitive and slow, I found more flow in the process, and I felt like I had distance from the material.

In *The Moving Body* [7]Jacques Lecoq writes about the distance between the mask and the performer. To perform with a mask, the mask can sit too flush onto the face. The performer needs air – some breathing room. In this case, the movement material was the mask. To find material with which I can work, I need a distance to the movement. It needs to feel something outside myself. This can be difficult when working with your own body. I found that chance operations gave me that needed space.

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[7] [7] Lecoq, J. and Bradby, D. (2020) in *The moving body: Teaching creative theatre*. London: Bloomsbury Methuen Drama, p. 55.

The phrases had a slightly awkward, stilted quality. There were also many curves and circular movements. I probably tilted the randomness toward curved movements because circles and curves were two of the three options. The image of the phrase was something like water struggling to move through stones in a creek. These phrases (modulated and combined with other phrases) is the phrase that opens and serves as the backbone to all movement material in *att titta på moln*.

Sound

(#7)

I wanted to have music while working. As I took a break from phrase-making, I moved over to the computer to make some background sounds. Inspired by my previous experimentation with chance operations, I opened a patch using VCV Rack 2, incorporating a lot of randomness. Chance dictated which chords to play, when to trigger the opening of an envelope, the frequency of these triggers, gliding between notes, and even the octaves in which they played, among other parameters. Although this initial iteration was rudimentary, it eventually found its place within the final performance. While the live patch continued to play, I delved back into working on the movements.

It is difficult to articulate exactly what the sound did to the movement. The music had a suggestive and dense atmosphere with an unpredictable rhythm, but a steady tempo. It suggested a space. I found myself wanting to move more rapidly. To go against the slowness of the music. To find the smallest subdivision and use it as the pulse. Envisioning the movement as a melody line weaving through the dense auditory landscape.

The suggestive quality of sound is linked to its role in rehearsal. It must be a sound that endures and is capable of resonating with me for prolonged periods, sometimes hours. I gravitate towards sounds that offer subtle variations over longer stretches of time.

I continued to fine-tune the patch while working on choreography. A dynamic relationship between sound and movement has emerged as a product of this process. As musical composition underwent transformation, the movement responded. The movements need space to live in - the sound finds it. There is a dialogue of needs and possibilities between the mediums.

Light

(#8)

Some time later, a month or so, As I was doing somatic practices one day, I found myself laying on the floor of my bedroom, gently rotating my wrists—an exercise inspired by Feldenkrais. A memory resurfaced, inspired by Bonnie Bainbridge Cohen's writings[8] She is discussing the fundamental movement of the soma – vibration. The minuscule movements that always are present. Small oscillations. Cohen extends this concept, perceiving it as the fundamental movement of the cosmos. On that day, I felt this movement and perceived it more intensely than usual. It resonated through my hands, arms, legs, and through my entire body. The imagery that emerged was reminiscent of white noise, the static that flickers across old television screens. I wanted to amplify this sensation. I imagined a projection of white noise, a wall that gradually transforms into intricate patterns. To me, this metaphor served as a representation of the embodied experience, the feeling of having a body.

Throughout its development, the imagery was iterated. Ultimately, it took the form of a 400 × 400 grid composed of small white dots with a small degree of randomness in their initial spacing. These dots, in turn, were displaced with a Perlin noise pattern that gradually expanded in size (period). Additionally, the noise map is translated in various directions depending on the amplitude of the specific frequencies present in the music. For a long time, these movements were just dots on my computer screen, and I had not had a chance to test it as light in the room.

With each iteration, I discovered new movements that resonated with me at different levels. Since it uses randomness as a source, rather than thinking of the specific movements that I wanted to create, I started thinking in terms of parameters. "It needs to respond faster to the music" or "It needs more detail." There was also an interesting relationship with music. As a dancer, we are both reacting to sound, as well as anticipating. In this interplay, we co-created with music. This setup on the computer cannot anticipate events in music. It is only responding. And it is always responding.

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[8] [8] Cohen, B.B. (2018) 'Ch. 4, Vibration', in Basic neurocellular patterns: Exploring developmental movement. El Sobrante, CA: Burchfield Rose Publishers, pp. 7–19.

Entering the Black Box

Stepping into the black box, I wanted to create an ambiance where movement, sound, and light could live with their independent logic, yet have strong cohesion. I wanted to use the projector as the sole source of illumination to flood the room with only one shifting image.

As I saw the projections covering the space and the sound emanating from the powerful speaker system, one question struck me: "Am I really needed in this space?" The lights were speaking a language with music shaping the space into their atmosphere. The presence of my physical body felt redundant. To adapt to this realization, I explored various ideas. Lying on the floor while the lights moved around me. I spent considerable time sitting in the auditorium, listening to and observing the space, and attempting to see what it needed. No definitive answers emerged. I also tested the concept of entering and exiting the space, allowing it to develop autonomously for extended periods.

It was through a process of trial and error, as well as conversations with Ellen Lindhagen, who acted as dramaturg and conversation partner in this project, that I eventually discovered a dynamic relationship. I began to perceive movement as an interruption in the space, a force that wanted to cut through its flow rather than merge with it. Throughout the performance, I gradually became more responsive to the environment, allowing myself to react to the music and light following their movements.

Throughout the process, I deliberately embraced a state of flux of interpretation and meaning-making. I refrained from extending a single interpretation to become the point at which it dictated the entire piece, forcing the material to conform. Instead, I placed the material at the forefront, allowing it to speak. Interpretations and associated imagery naturally emerged, guiding my next step. But only the very next step. I found it important to remain open to the material's response, which often defied initial expectations, giving rise to new and unexpected imagery. This approach created an ongoing dialogue in the process, a co-creative dance between myself and the material.

I also imagine that this makes the audience active participants in the meaning-making conversation. It is not my intention to convey a definitive narrative to the audience. Rather, I offer them a malleable lump of clay, something that they can shape to create personal meaning.

Moving forward

It would be interesting to continue exploring technologies to increase the dependancies in the performance. It would be interesting, for example, to have something wearable, for example, an accelerometer or a motion capture device that controls different parameters in music. Then, to have the lights respond and react to the music and I, as a performer, respond, react, and dance with the lights. This would make the system more closed, and I imagine that interesting patterns, dramaturgies, and movements would appear.

I have not yet explored wearable technologies or motion capture. It would also be interesting to invite members of the audience into that space as an interactive experience. To share the experience of participating in this responsive but unpredictable environment.

As it is now, the lights and sounds are prerecorded. The choreography also has a fairly rigid score. Although there is a lot of randomness in the creative process, the actual performance lives in the realm of the predetermined. The reason for this is that my computer was not capable of generating both sound and imagery live without crashing. I would, in the future, I would like to conduct experiments using live patches and imagery created in real time.
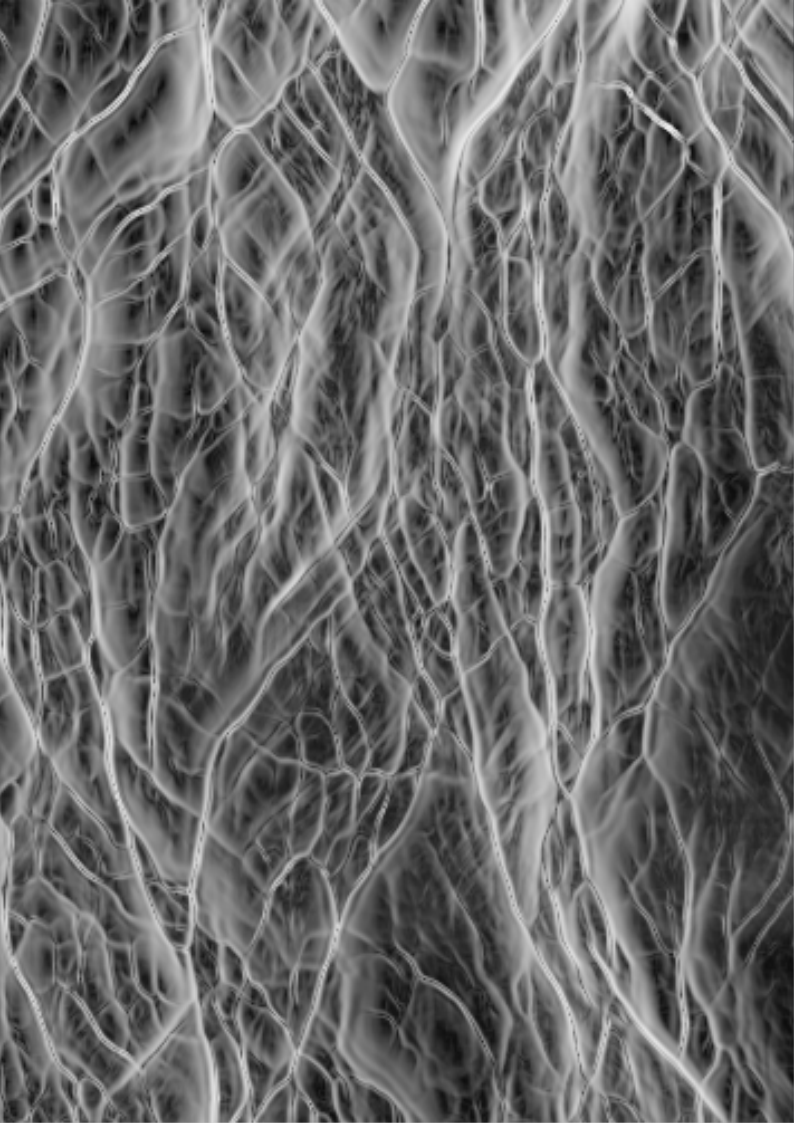
On finding cohesion

I have tried to pinpoint the specific ways in which working in different mediums influences each other. However, there is also a sense of working in a synesthetic soup that is difficult to write about. There is communication between the mediums, in how they overlap, speak to each other, and create meanings that cross-pollinate in subtle ways. It is difficult to talk about it without waving my hands around in the air.

Engaging with diverse artistic mediums compels us to think beyond individual perceptual modalities, such as hearing, seeing, and sensing. Instead, it encourages us to explore the "common currency" that underlies these modalities. When discussing an infant's developmental process and ability to comprehend the world and learn to understand language, Daniel Stern[9] introduced the concept of this common currency. He claims that there are "some qualities or properties that are held in common by most or all of the modalities of perception. These include intensity, shape, time, motion, and number. Such qualities of perception can be abstracted by any sensory mode from the invariant properties of the stimulus world and then translated into other modalities of perception." (p.152) He calls this amodal perception – the perception that is independent of (or mutual to) the senses.

It is through the existence of these abstract representations of amodal properties that we can perceive and experience a unified world. Working interdisciplinarily, particularly in more abstract and non-text-based forms, requires attunement to this amodal form of thinking, allowing the material to speak in the language of metaphor. And to listen to it in the language of other senses. This notion invites us to place trust in the ineffable and intangible connections between materials in different mediums.

This does not mean that every medium needs to say the same thing. In dance we would call that "Mickey Mousing" – to follow the music to so closely that every detail of the sound is expressed in the body. Instead, we engage in conversation. We listen the input from one medium and respond in another. Things will be lost in translation, but new things will appear. It is important to embrace the soupy vibes of it all.

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[9] [9] Stern, D.N. (1998) The Interpersonal World of the Infant - A View from Psychoanalysis and Developmental Psychology. London: Karnac Books.

Moving forward

The main thing moving forward is that I want to involve more people, who have different backgrounds, in this project. This project was a solo project, but it should not be read as if I do not appreciate expertise in different mediums – that I believe that a singular artist should fill all of the roles in an artistic process. It would be interesting to work with practitioners from different backgrounds. However, I propose that when working with practitioners in different mediums to allow cross-pollinating dialog to take place. To not think of the mediums in an hierarchical order. in which one supports or interprets the other. Rather, they are all thinking together, engaging in conversation, and affecting and interpreting each other's input.

More work can also be conducted to understand the notion of thinking in a medium. There is much writing in the field of phenomenology and cognitive science that aims to understand our relationship with tools, how technology becomes transparent, and what changes when we think and act with different tools.

How this research contributes to the field

I have struggled to determine how this research contributes to the field. The first question is – which field? I do not feel like I am breaking any major ground in dance or somatics; I am not inventing new ways to make or relate to music, nor am I in any way inventing new techniques for making generative art. The novelty lies in the interplay between these mediums in the process. Allowing yourself to use many different tools to grapple with an idea Through engaging with a diverse set of practices be able to find new ways of thinking and imagining. To allow oneself to think and reflect with the medium. I hope that these explorations will serve as a guide for navigating the chaos of working interdisciplinarily. As an invitation to artists from all fields to find cross-pollinating practices in other fields. And to embrace those soupy vibes.