Johan Keilig

ISOLATE. THE SOUND

The making of an audio record with a signature sound: Creating a sonic narrative.

Written text about Independent Project

The documentation includes this recording
Preface

I would like to thank my classmates and supervisors for two exciting and inspiring years at the Royal College of Music in Stockholm. It has been an incredible journey and I have learned so much from all of you!

Special thanks to Gary Bromham for all the rewarding discussions about sound, music, and life in general, for inspiration and ideas, and for all your time and effort for my project!

Last but not least, I want to thank Paul and Niklas for still making music with me. Here’s to new adventures!

Johan Keilig
Abstract

With this master’s project, I have been aiming for a record consisting of twelve tracks with the purpose of creating a coherent sound for my band project “isolate”. The process of making this record has been a method to gain deeper knowledge on how to create a signature sound, limit myself in possibilities to gather inspiration and capture creativity. This thesis is a documentation of the writing process, pre-production, recording, and sound design, which investigates the main question: What brings me to the sound? The research has been done through an auto-ethnographic observation. By emphasising the main instrument roles on the record, I have been exploring how their sound defines the signature of the album and creates a sonic narrative. Both digital and analogue sound-shaping has been utilised during the recording stage and I have been focusing on how the technical tools facilitate emotions in the songs. This thesis also brings my leadership as a music producer, as well as musician in the band context, to the table.

Keywords: music production, signature sound, recording, self observation, sound design, songwriting
Abstract [Sv]


Nyckelord: musikproduktion, signature sound, inspelning, självstudie, ljuddesign, låtskrivande
# TABLE OF CONTENT

1. **INTRODUCTION** ................................................................................................................................. 1

1.1 Aim .......................................................................................................................................................... 1
   - *Research questions* ........................................................................................................................... 2
   - *Delimitations* .................................................................................................................................... 2
   - *Ethical considerations* ..................................................................................................................... 2

1.2 Inspiration: Signature sound .................................................................................................................. 3
   - 1.2.1 What defines a signature sound in popular music? ................................................................. 3
   - 1.2.2 What defines a signature sound for me? ................................................................................... 4
   - 1.2.3 The importance of Iceland ........................................................................................................ 6
   - 1.2.4 The importance of finding a niche sound ................................................................................. 6
   - 1.2.5 My band “isolate” ..................................................................................................................... 7

2. **AUTO-ETHNOGRAPHIC REFLECTION ON THE PROCESS** ............................................................ 8

2.1 The writing process ............................................................................................................................... 8
   - 2.1.1 Producer vs. artist ................................................................................................................... 8
   - 2.1.2 Capturing creativity ................................................................................................................ 9
   - 2.1.3 Limitation ................................................................................................................................ 10
   - 2.1.4 Working on the songs remotely ............................................................................................. 10
   - 2.1.5 The idea folders-sanctuary .................................................................................................... 11
   - 2.1.6 Pre-productions ..................................................................................................................... 12
   - 2.1.7 The instrument main roles ..................................................................................................... 13
   - 2.1.8 The voice .................................................................................................................................. 13

2.2 The recording ........................................................................................................................................ 14
   - 2.2.1 Where the technical meets the aesthetic ................................................................................. 15
   - 2.2.2 The environment ................................................................................................................... 17

3. **FINAL REFLECTION AND DISCUSSION** ......................................................................................... 19

3.1 Final conclusion .................................................................................................................................... 19

3.2 Discussion .......................................................................................................................................... 20

3.3 Future outlook ..................................................................................................................................... 22

3.4 How can others benefit from my research? ....................................................................................... 23

**Resources:** .......................................................................................................................................... 24

**Appendix** ............................................................................................................................................ 25
1. INTRODUCTION

Since I can remember I have been into great sounding records. I have never really listened attentively to the lyrics in songs but focused more on the sonic aesthetics of the music. I could sit for hours and enjoy the same album over and over again just because of the way it resonates with me emotionally. Even if I didn’t have any knowledge about composing and music production, I have always been fascinated by the artist’s identity I find in certain records. Bands like Sigur Rós and Agent Fresco from Iceland have inspired my musical development to a large extent. Their unique songwriting and very distinctive approach to the sound made me want to start making my own music.

With my band ”isolate” I have been on a long musical journey - always reinventing our sound through different influences and trying to find our personal signature. I have been dedicating most of my studies during the Master’s Programme in Music Production at the Royal College of Music in Stockholm to this band project. This degree project, the making of my band’s first full-length album, has been an attempt to pull out an identity in our music: a sonic narrative.

1.1 Aim

The main aim of this master’s project has been to create an audio record consisting of twelve tracks for my band project ”isolate”. This process has been functioning as research on how to develop a signature in my music and pull out an artistic identity which I describe as a sonic narrative. I also have been investigating the importance of coherency in the sound of my band. The making of the record is described through a critical auto-ethnographic observation. With the research, I have been looking for reflectivity on my work as a music producer within the band context. Furthermore, I have been wanting to gain knowledge about where my work is situated in the context of others to establish a new approach on how to work creatively with future projects.
Research questions

- Why is it important for me as a music producer?
- How do I pull out an artistic identity in my music?
- How do I communicate emotions with production techniques and technical tools?
- Where does my work situate in the context of others?

Delimitations

This thesis focuses on the making of the record. The research has been based on practice and includes aspects of the production and recording process under my leadership as a music producer. It is meant to be an auto-ethnographic reflection on what I have learned for future projects.

Due to the effects of the coronavirus pandemic and because the band has been working from both Sweden and Germany, the album is still in progress in spring of 2022. Therefore I have not been able to talk about the final mixing or mastering of the music. Also, without going beyond the scope of the work, the lyrical part of the record is not included in this thesis.

Ethical considerations

My project has been completed in consideration of the ethics guidelines put forth by the Swedish Research Council (VR, 2017). I have requested permission from all people involved in the project to include their names in this thesis and use photographs of the recording process.
1.2 Inspiration: Signature sound

The motivation for doing research on how to craft a signature sound has come from my background of playing music with my band, which has been drawing a lot of inspiration from different artists who, in my opinion, have managed to form a strong identity in their music. I have been driven by the idea of adopting a personal sound narrative since I first realised the potential of what the band’s musical path could lead to. The special characteristics of sound and how they are closely linked to emotions and perception, have always been my main musical inspiration.

1.2.1 What defines a signature sound in popular music?

The term signature sound is often used to describe the particular characteristics of the music of not only individual artists and single records, but also of musical eras, famous recording studios, producers, and mixing engineers. Simon Zagorski-Thomas describes “sonic cartoons” by comparing recorded music to visual art (Zagorski-Thomas, 2014, pp.49-69). By emphasising the characteristics of sound, a musical concept is specified to the listener. Different microphone techniques, distortion types, and reverberation or delay are used to what Zagorski-Thomas calls a metaphorical relationship between the sound sources (p.56). The signature is also defined by the different ways how instruments, recording gear, and technology are used. Albin Zak gives another perspective by categorising the sonic signature of a record by dividing it into the sound phenomena of musical performance, timbre, echo, ambience, and texture (Zak, 2001, p.49). According to Zak, it is the configuration of relationships among these elements that pulls out the meaning and identity in the music. The combination of the way in that music is performed, and the special technical features of the recording form the sonic character of a record. Zak also points out that the spatial qualities of the room are determining the sound’s aural identity (p.76).

Simon Zagorski-Thomas and Albin Zak give similar answers to what defines a signature sound. Both of them are describing the timbre and ambience of a recording as crucial aspects of the musical identity, especially their relationship with each other. Where Zagorski-Thomas mentions different types of distortion, Zak uses the term texture and I think he refers to the same sonic criterion. It can be concluded that a signature sound is achieved through both the
playing style of musicians and the capturing with distinct recording methods and their musical
manipulation with the help of technique.

1.2.2 What defines a signature sound for me?

A good question I got from my mentor Gary Bromham was where the difference lies between
a great song and a great production and what I would prefer. I probably would prefer a good
song with a bad production over vice versa because emotions are expressed through the song
at first. But it is the sonic qualities of a song that really can enhance these emotions.

To me, a characteristic sound comes from the interplay of different elements. Noticeably, the
main instruments of a record are crafted in a particular way to fill a role within the context of
the music. I will take a closer look on what these main roles are in my music in the chapter
2.1.7. Besides the instrumentation and arrangement, the way that sounds are moving and
interacting with another, to me is an important part of a characteristic sound image. As
described by Eric Clarke (2012, pp.73-76), a virtual environment in music is defined by its
motion and gestures, coming from a produced sound.

What really defines the musical personality of a record for me is colour. An intimate and
sibilant vocal, a distorted drum kit, or a guitar with a high amount of fuzz can be decisive
elements that make up the whole sound image. To be specific, the semantics of audio (warm,
muddy, airy, harsh, …) are the essential criteria I search for when producing music. Also the
timbre (woody, glassy, girth, …) and aura (spacious, wide, narrow, …) in the context of
colour are determining for sonic qualities. I often find it hard to articulate them because each
of them can have such different meanings in the context and many people would probably
explain them differently.

I think everyone who is making music has a sound ideal, probably taken from a key
experience in one’s musical career. The musical meaning of the semantics and how they
translate into emotions is what defines a signature sound for me.

To give an example of where I get a lot of inspiration from, I will talk about two records that
have had a crucial influence on my own life as a musician.
SIGUR RÓS - KVEIKUR

I think the music of Sigur Rós is one of the main reasons why I wanted to start making my own music with a band. Their unmistakable sound has influenced me like no other band or musician has. The characteristic sound comes from an electric guitar, played with a cello bow, and the fragile falsetto voice of singer and guitarist Jón Þór Birgisson. He also sings in his own fictional language, that he calls "hopelandic". Big, deep drums as well as a pretty overdriven bass round off their sonic image. "Kveikur" from 2013 clarifies what I would describe as a profound sonic narrative. It is a very intensive and dark-sounding record with a high amount of distortion and noisy elements. But I would also describe it as very wide and spacious. The way these instruments are shaped here creates a very special atmosphere where the listener is easily drawn in emotionally. Of course, it is primarily the arrangement of the music itself that builds a strong emotional connection, but the fairly drastic sound design of all these elements supports the feeling that is created and is a perfect example for me on how emotions are communicated with technique.

AGENT FRESCO - DESTRIER

This album by progressive rock band Agent Fresco points out how sound can intensify musical storytelling in sonic terms. "Destrier" is about anger and fear (Maloney, 2015), which is communicated through very complex rhythms, aggressive guitar riffs and dramatic string arrangements, that all together carry the expressive vocal of Arnór Dan Arnarson. It is especially the guitar sound that, to me, has a very unique character. In many of the songs, it is played with a harmoniser pedal, which in my opinion adds a severe power to the overall sound of the record. What also draws me to this album is the fact that Agent Fresco is blending complex and progressive songwriting with very melodic pop music in such an interesting way. In modern progressive rock music I often find that virtuosity is overplayed with a show-off-purpose. With "Destrier", Agent Fresco manages to avoid that by veiling their very technical and virtuous playing behind aesthetically written songs.
1.2.3 The importance of Iceland

It is not coincidental that both bands I described are from Iceland. Since I explored Sigur Rós as a teenager, I have been a connoisseur of a variety of Icelandic artists and bands. A small country of barely 350,000 inhabitants with such a big output of music, lots of it with big global success, has always been fascinating to me. There is this special sound in the music of Icelandic artists which I would describe as quite unconventional and surprising. In an Interview from Christian Henson of Spitfire Audio with the composer Ólafur Arnalds, Arnalds talks about how Icelandic musicians are more influenced internally, rather than from outside of Iceland. He also mentions the fact that there is not really a music industry in Iceland and people are not striving to be competitive.¹ In another Interview from Henson with composer Valgeir Sigurðsson, it is stated that because of the small community, the same musicians are shared across different projects in different genres, which leads to a specific sound.² I have found the Icelandic sound really appealing to me because in a unique way it is always very honest and emotionally easy to be drawn in. There are hardly two bands found in Iceland that sound the same, which is probably the reason why they get a lot of international recognition.

1.2.4 The importance of finding a niche sound

Dom Morley says in his article on why niche matters in music production: "Perhaps the most overwhelming aspect of modern life is the abundance of choice.” (Morley, 2021). I can relate to this as a music producer with almost every possibility of a modern studio on my laptop. It can be overwhelming to be able to do everything imaginable with just some mouse clicks. For almost fifteen years since I started producing music, I have been struggling with actual creative output because I always got distracted by all the tools we have in a DAW.³ Finding my own sound has always been an abyss for me.

¹ Creative Cribs - Ólafur Arnalds 1.0 (Broadchurch). Retrieved at https://www.youtube.com/watch?v=2jTHNuvuQC0 (35:22)
³ Digital Audio Workstation, a software to record and produce music with
Since there is a lot of music created every day and countless artists are striving for getting heard by an audience, it is of high importance to find a niche and stick out with a certain degree of recognition. In my own experience, when I remember an artist or a band for a long amount of time, it is mostly because they got something outstanding to them which draws my attention. It is exactly what I have been missing from a lot of modern music played on the popular playlists on streaming services where I sometimes cannot tell a real difference between several artists. The lack of identity simply makes it uninteresting for me to listen to it more than once.

1.2.5 My band "isolate"

In terms of songwriting, we have always had equal roles in the band whereas other bands have a dedicated frontman or bandleader. That is an important fact for our musical work which has always been very collaborative. Sometimes our songs are developed during jam sessions in a rehearsal room but most of the time we have been writing songs independently. When one of us has got a song idea, we play it for each other and discuss whether it could fit the band’s catalog or not. If the idea is relevant, we usually spend some time working on it independently, recording our instruments, editing and replacing different parts, and sharing the new versions. With that kind of democratic approach, major disagreements are mostly non-existent and we manage to pursue common goals.

Since we started the band, our musical style has been influenced by a variety of different artists and genres. From instrumental Post Rock and Math Rock to Progressive Rock with electronic Pop elements, we now have come to a point where we have settled our sound ideal within a combination of all these influences. During the last years, the band has been trying to bring this complex sound image to the stage. Even if we have been agreeing that different songs with different sound influences can be very refreshing in terms of a broader sonic experience, there has always been a strong desire for more coherency in our music. Making individually sounding songs more cohesive and overlapping within a live set is an important goal for the future work of my band.

With this master’s project, I have been trying to establish a manifesto about the music of my band - a theory to sort out what is important for working within our own sonic framework.
2. AUTO-ETHNOGRAPHIC REFLECTION ON THE PROCESS

In this chapter, I will take a detailed look at the phenomenology of writing and producing the record. As an observer of myself, I reflect on all my different methods to manifest a theory about my music and adopt a sonic narrative to it.

2.1 The writing process

There are different methods on how to make an album. Playing together in a room and jamming on song ideas, spending a day at home with an instrument, or taking a walk and suddenly a melody appears and makes its way into an imaginary arrangement. I have not found my personal way of writing individual, yet cohesive songs. Rather than searching for the one and only method, I have been trying to reinvent myself all the time when it comes to the creative process of composing music.

2.1.1 Producer vs. artist

The division between producers and artists have changed a lot during the last years, mainly due to technology and the ongoing democratisation of music. It is a different negotiation of who is who in today’s field of music. This fact applies also to my role in the band. Being not only the producer of my band but also the guitarist and singer, I often have found myself confronted with certain struggles. It has been a balancing act of performing one instrument and at the same time having all the other instruments and their role in the context of the song in mind. Not only has it been important to set myself boundaries on the guitar but also to find strategies to inspire what I can do with the instrument. During the process of writing, I have learned that the guitar as my first instrument does not work as a satisfying composing tool. Most of the time I have been ending up striving for complex lines and lose myself in playing way too technical and virtuous riffs and licks. After realisation, I have been feeling uninspired and simply stop writing. I have experienced that I gain more creative influence from experimentation with sound than just playing harmonies and melodies. In that same manner, I have been feeling much more comfortable when I start a song without the guitar. Playing
around with virtual drums, a synthesiser, a piano, or a sampler have brought me closer into a creative workflow and easier embarks on an actual arrangement.

2.1.2 Capturing creativity

During the writing process, I have realised that it is hard for me to force myself to write something within a time frame. Rather than planning to write something, creativity strikes when I am not aiming for a result. I randomly have come up with several ideas when I am trying out new software instruments or effects and these ideas tend to be the ones I am the most pleased with. As I mentioned above, sitting down and playing the guitar almost never leads to any creative output. When I was in Reykjavík, I met the composer and guitarist of Agent Fresco, Þórarinn Guðnason, and asked him about how he is writing his guitar parts for the band. He told me that he oftentimes has the same problem of a lack of inspiration on the guitar. His approach to finding that inspiration is to sample the DI signal\(^4\) and then play the notes with a Midi controller.\(^5\) By that, he overcomes the limitation of the instrument and so he is able to write more interesting parts.

As a case study, I tried his technique on several of my song ideas. It has been easy to transfer ideas out of my head directly into the DAW without first learning them on the guitar and I have found that very refreshing. I have been experiencing that this composing strategy, not only helps me to write more efficiently, but also more context orientated and without thinking too much about my actual playing. Apart from writing guitar sections in that specific way, I have found a lot of inspiration in experimenting with effect pedals and software effects. Recording a software synth with an analog delay or recording analog instruments with plugin effects like distortion or tremolos has led to some surprising results that ended up on the record.

---

\(^4\) Dry guitar signal without processing through an guitar amplifier

\(^5\) Controller to record Midi data, for example with virtual software instruments
2.1.3 Limitation

Limitation is a fundamental part of creative output. I have learned that after years of struggling with too many possibilities at the same time. Rather than finishing music, I got lost in the overwhelming possibilities of virtual instruments and plugins. Then I figured out that limiting these options can embark creative decision making and force myself to appreciate what I have and what is not needed. For a coherent sounding album, the limitation of elements has also been a very important aspect. Early in the process, it was clear that I wanted to have one drum kit, one guitar, the same synths and the same processing chains to create a signature across the record. In his article ”Revenge of the Intuitive”, Brian Eno talks about the emotional meaning and the intimacy that is achieved by using the same tools, utilising their limits (Eno, 1999). I have been experiencing that even if the song material has been quite different, I could accomplish the desired coherency and sonic characteristics through my approach of isolating the same elements on every song in the pre-productions, which I later translated into the real recordings.

Limitation on the instruments in technical-playing terms has also been a big aspect for the sound of the band. As an educated guitarist, I tend to like virtuous guitar licks and riffs. Sometimes while writing, I forgot about the musical qualities and ended up figuring out some pretty advanced guitar parts. After rehearsing them I realised that they simply do not fit in the context of the music. As a music producer, I have also been trying to communicate this aspect to my bandmates and their playing. To me, trying to hide the technical in terms of ”beauty before virtuosity”, has been an important part of the aesthetics of the band's songwriting.

2.1.4 Working on the songs remotely

While I have been working from Stockholm, my two bandmates Paul Riemer and Niklas Ciecior have been working from my hometown Dresden in Germany. This long-distance collaboration is something we have been doing since 2020, when I started my studies at the Royal College of Music in Stockholm. The outbreak of the coronavirus pandemic at this time has led to the need for more flexible online communication possibilities, in our case, sharing
audio in real time and high quality. Luckily, this was possible with Zoom\textsuperscript{6} and Audiomovers.\textsuperscript{7} I set up weekly online meetings to organise my work on the songs together with Paul and Niklas. Zoom also makes it possible to share the screen while working in Logic Pro\textsuperscript{8} so we could work on the individual song projects almost in the same way as if we would sit together in front of a screen in the same room. In every meeting we worked on different parts of a song, talked about the arrangement and shared ideas. I got into a very productive workflow by setting tasks for the next week and by doing so, deadlines were determined for my bandmates as well. Even if the meetings were first of all meant to create a consistent workflow, they also have had quite a big impact on the sound of the record by discussing the different instrument roles and their specific sonic character. A lot of sound shaping also happened during these meetings.

This working routine together as a band comes with some pros and cons. The online environment definitely makes it hard to communicate in the same way as being together in one room. I was not only confronted with technical issues like latency and a bad internet connection, but there was also another layer in the communication due to the screen and the sharing of sound which made spontaneous interaction a bit more difficult. On the other hand, I have noticed that working from distance also comes with some advantages. Due to the limited meeting time, I was forced to make faster decisions. The weekly deadlines functioned as a productive guideline to work more efficiently and the amount of distraction during the meetings was at a minimum level, compared to former band meetings in a rehearsal room.

2.1.5 The idea folders-sanctuary

The song material was picked out of many ideas that I organised in an online cloud space that was shared with my bandmates. In that way we were able to upload the latest versions and work with them independently. Some of the project folders were split into different project alternatives so we could compare different versions of the songs, different instrument arrangements, and various sound experiments. This structure allowed for a very organised and

\textsuperscript{6} An online video conferencing platform that became popular during the pandemic in 2020
\textsuperscript{7} An online streaming application to share high quality audio
\textsuperscript{8} My Digital Audio Workstation of choice
up-to-date workflow that helped me to focus on what would be the next steps, but also to have the context of the album in mind with every decision. Out of sixteen song ideas, we decided to choose twelve which we agreed made the most sense for forming a record. Some of these ideas were as old as four years, and others were written completely from scratch.

2.1.6 Pre-productions

The pre-production process was very collaborative. I brought all of the recordings of Niklas, Paul, and me together in one new Logic project per song. For this, I built a new template in Logic Pro with instrument groups and effect sends, that I shared on the online cloud. With some exceptions, I tried to only use stock plugins,\(^9\) so everyone could access the projects equally. This turned out to be a great limitation in opportunities as well. Niklas recorded his drum parts at home with an electronic drum kit, using Toontrack EZ Drummer,\(^{10}\) and uploaded the midi files. Paul recorded his synth parts, as well as other instruments, and also worked on some sound design. For the guitars I used both my amplifier with a load box,\(^{11}\) and virtual amplifier plugins. Using the template with the same effect chains and instruments, quickly united the different sounding songs in terms of their characteristics. Influenced by the status of well known hardware, I mainly used plugin emulations of SSL\(^ {12}\) and Neve\(^ {13}\) consoles, as well as compressors and preamps, to commit to the classic analogue sound without being distracted by graphical analysis, that many modern digital tools offer. Very early in the process I realised that the distortion that comes from these tools, would be quite a central element on the album. In some songs, over-exaggerating the amount of distortion, for example on the virtual drums, helped to find a sonic quality that I wanted to strive for in the real recordings.

---

\(^9\) Built-in plugins from the DAW

\(^{10}\) A virtual drum instrument software

\(^{11}\) An attenuator that allows recording a guitar amplifier directly to the DAW without a guitar cab

\(^{12}\) Abbr. for Solid State Logic, a famous British analogue recording desk

\(^{13}\) AMS Neve, a famous British-American analogue recording desk
2.1.7 The instrument main roles

The most important part of the arrangement has been applying the main roles to the instruments of the different songs. The band’s setup usually consists of drums (an acoustic drum kit with some electronic drum elements from a drum machine), a mono bass synth (a Korg MS20 or a Novation Bass Station II), a poly-synth (a Dave Smith Instruments Prophet 8), an electric guitar (a Fender Telecaster 72 Custom) and my voice. Being a three-piece band, it has been quite challenging to bring a bigger setup to a stage and perform all the instruments in a plausible way without backing tracks. In contrast to previous releases, with this album, the plan has been to primarily focus on the instruments that are possible to play in a live situation as well. In order to make room for everything, the different instruments had to be shaped in a certain way to not interfere with each other and emphasise the main roles in different parts of the arrangement. On one hand, I had to find a midrange balance between the full register sound of the synth pads and the guitars, while leaving space for the vocals. On the other hand, I had to figure out how to shape the low end, which is mainly generated by the sub-bass synths, together with the kick, toms, and snare of the drums, where I have been aiming for a darker sound as well.

2.1.8 The voice

During the process, I was recording a lot of demo vocals for the songs. My workflow has always been to write the lyrics after I finish the music. To be able to write vocal melodies without a finished text, I have been using a mixture of actual English words and a fantasy language to find sibilances and fitting phrases. With that approach, I know how my voice will sound in the context of the music even if the lyrical topic of the song is not yet set. I usually stumble across interesting song-lines when randomly recording vocal melodies with the fantasy language that I find inspiring to base the lyrics on later.

In a lot of the songs, I have been singing in falsetto. I like to capture the intimacy and fragility of my voice, while still retaining a good amount of lower mids. For that, I experimented with both a single and a dual-microphone setup. The single microphone was a Neumann U47 FET which I found very pleasing, but sometimes a bit too warm sounding. With the dual setup, I recorded a Neumann TLM102 or TLM103 large diaphragm condenser microphone together
with a Coles 4038 ribbon microphone. I have found an interesting blend of the clarity from
the condenser microphones and the warmth and roughness from the ribbon microphones. All
vocals went through a Neve 1073-style preamp emulation and some optical compression in
the pre-productions. To give the vocal some depth, I usually applied a mono plate or spring
reverb. Also, I sent the vocals to an Aux track\textsuperscript{14} with Soundtoys Microshift,\textsuperscript{15} to give them
some width. I have found this microphone setup together with the processing chain very
appealing to all the tracks on the album.

\subsection*{2.2 The recording}

Even if a live recording would have been very interesting in terms of a different outcome,
maybe even more valuable for my project of finding a signature sound, I stuck to the usual
studio recording where each instrument is recorded one at a time. Apart from the
circumstances of the still ongoing coronavirus pandemic, we would not have been able to
rehearse together and prepare a successful live recording because of working from two
different countries. Also, we had just finished the songwriting in time for the actual recording
in Stockholm.

The main recording process took place both at my home and in the studios of the Royal
College of Music in Stockholm for two weeks in March of 2022. The order was set as
follows:

1. Strings (1 day)
2. Drums (2 days)
3. Guitars (2 days)
4. Synths and bass (3 days)
5. Additional instruments (4 days)

\textsuperscript{14} An insert track without audio on it that is used to apply parallel processing to an audio
track

\textsuperscript{15} A virtual pitch shifting and delay effect
2.2.1 Where the technical meets the aesthetic

One of the main questions of this research has been how the technical considerations can facilitate emotion and feeling in my music. During the writing and pre-production process, I experimented with different production techniques to get closer to my wanted result. With the help of the practical knowledge gained from the pre-productions, I had quite a clear vision of how I wanted to record the different instruments. That led me to the question of how I could achieve the sonic characteristics of the instruments to integrate with the context of the music as intended.

The drums were recorded in the big studio of the Royal College of Music in Stockholm. This has been the microphone and preamp setup:

<table>
<thead>
<tr>
<th>Drum</th>
<th>Microphone</th>
<th>Preamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick In</td>
<td>AKG D12</td>
<td>API 3124V</td>
</tr>
<tr>
<td>Kick Out</td>
<td>Neumann U47 FET</td>
<td>API 3124V</td>
</tr>
<tr>
<td>Snare Top</td>
<td>Beyerdynamic M201</td>
<td>API 3124V</td>
</tr>
<tr>
<td></td>
<td>Neumann KM84</td>
<td>API 3124V</td>
</tr>
<tr>
<td>Snare Bottom</td>
<td>Neumann KM184</td>
<td>API 3124V</td>
</tr>
<tr>
<td>Hihat</td>
<td>Neumann KM84</td>
<td>API 3124V</td>
</tr>
<tr>
<td>Tom High</td>
<td>Neumann TLM107</td>
<td>API 3124V</td>
</tr>
<tr>
<td>Tom Low</td>
<td>Neumann TLM107</td>
<td>API 3124V</td>
</tr>
<tr>
<td>OH A (stereo)</td>
<td>Coles 4038</td>
<td>Neve 1073 OPX</td>
</tr>
<tr>
<td>OH B (stereo)</td>
<td>Sennheiser MKH 8040</td>
<td>Neve 1073 OPX</td>
</tr>
<tr>
<td>Kit (mono)</td>
<td>Neumann U47</td>
<td>Neve 1073 OPX</td>
</tr>
<tr>
<td>Kit Mic (Knee Mic)</td>
<td>Sennheiser MD21</td>
<td>Rupert Neve Designs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shelford Channel</td>
</tr>
<tr>
<td>Close Room (stereo)</td>
<td>Coles 4038</td>
<td>Grace Design M108</td>
</tr>
<tr>
<td>Far Room (stereo)</td>
<td>DPA 4006A</td>
<td>Grace Design M108</td>
</tr>
<tr>
<td>Reverb (stereo)</td>
<td>Bricasti Design M7</td>
<td></td>
</tr>
</tbody>
</table>
The choices of microphones were made to capture the different parts of the drum kit with intention. Aiming for an overall darker sound, I used Coles ribbon microphones for the overheads and close rooms in combination with a Neumann vintage U47 condenser microphone in front, and a vintage Sennheiser MD21 in the center of the kit, drastically driven through the Neve Shelford preamp channel. There is a lot of focus on the toms in several songs, so I went for Neumann TLM107 condensers to achieve more bottom end. Recording the kick, snare and toms with the API preamp added a great punch to the sound. With the Neve 1073 preamp, I achieved a silky top-end for the overheads. With this very high-end sounding setup, I also wanted to leave the option of later distorting the drums in a more pleasing way than I did in the pre-productions.

I recorded all of the guitars with my Victory Amplification VX “the Kraken” head, which is a dual-channel high gain amplifier, into a Marshall 1960 cabinet. Before that, I intended to record a Fender Bassman amplifier and a Fender ’65 Princeton amplifier for cleaner parts. But in the end, the idea of using only one amplifier for all the recordings has turned out to be a great decision for the concept of a cohesive sounding record. Also, the compromising fact of using the high gain amplifier for clean parts as well, added an interesting nuance of saturation to the cleaner guitar parts. I only used the volume knobs of my guitar to manage the gain of the amplifier. Otherwise, the settings were kept the same during both days of recording. In front of the amplifier, I used a chorus effect pedal for some harmonic overtone colorisation, and an analog delay pedal that was always manually timed. For some more aggressive riffs, I used a Whammy pedal, usually with the octave-down setting and some doublings with the fifth-up setting. The amplifier was recorded with a dual microphone setup of a Shure SM57 and a Sennheiser MD421 into a SSL Origin console. With both microphones in different level ratios, it has been possible to shape the character of the guitar in different parts. I have been experiencing that the MD421 as the main microphone works very well on heavier riffs, especially played with the Whammy pedal. For cleaner parts with picking, the SM57 has been the better choice. The combination of a Fender Telecaster guitar with vintage pickups, plucked into a modern high gain amplifier, might be confusing. But this special gritty sound

---

16 Digitech Whammy, a pitch shifting and harmoniser pedal
works really well together with the warm and rich synth pads and bass lines and helps the
guitar to stick out when needed.

For the synth pads, I wanted to capture the warmth and richness to achieve a strong contrast
to the guitars. Their fundamental role on the record has been to build the harmonic
accompaniment for the vocals and guitar melodies. The main synth on the album is a Prophet
12 into UADs\textsuperscript{17} Neve 1084 strip, where I added some saturation and low mids, and the Space
Echo\textsuperscript{18} emulation. For the bass synth, primarily a Moog Sub 37 and a Novation Bass Station
II, I used the UAD Pultec\textsuperscript{19} emulation, where I consistently added some 30Hz.

We also recorded a Behringer VC340 string machine, mainly for some pad layers and
melodies. Later I also recorded a Roland Juno-106 synth, mainly to replace software synth
parts. For a lively synth sound feel, all the main parts were recorded by hand, not with the
help of quantised midi tracks. There is a quality in this slight deviation, coming from actual
human playing, that adds movement to the sound which I had been missing in the pre-
productions.

For one song I recorded a classic string ensemble for adding a big layer to the guitars that are
played with an E-bow.\textsuperscript{20} The recording was part of a project within the music production
course.

2.2.2 The environment

Because recording technique has been democratised through the possibilities of working on a
laptop in a home studio, the role of the recording studio has changed quite a lot during the last
years. Musicians and producers are no longer dependant on large recording studios. To refer
to Paul Théberge, studios today are more used as composition tools than actual recording
facilities (Théberge, 2012). For my project, the studio as a creative space has had a huge

\textsuperscript{17} Abbr. for Universal Audio, a software plugin developer
\textsuperscript{18} A famous tape echo and reverb unit from 1974, manufactured by the Roland Corporation
\textsuperscript{19} A famous passive transformer and tube equalizer
\textsuperscript{20} An electronic device with an inductive string driver feedback circuit to play electric guitar
strings with endless sustain, manufactured by Heat Sound Products
impact on the sound because of the recording possibilities I have not had earlier. Being able to choose between various microphones, record through an analogue desk and in a great sounding room, has changed my perspective of how important the environment is for the intimate moment of recording music.

During the writing process, I changed my working space quite a lot to find inspiration. I have learned, that moving around during writing sessions changes not only my perception but also how I approach creative music making. I have mostly worked in the box\textsuperscript{21} and inside rehearsal rooms. But apart from all its advantages, which among others are the quality of recordings, the large variety of great microphones, the haptic experience of outboard gear and working with a real mixing console, there have also been some disadvantages in the studio, especially when working together as a band. I have experienced that I am more focused when I record alone at home. The intimacy of being in my own space is helping me to be more focused and probably also more productive. The dynamic of the band, situated together in the control room, not only has had an influence on the quality of my playing during the recording - which I think is worse - but also my self confidence. The pressure of performing the instrument in the best way, Simon Zagorski-Thomas aptly describes this as "red light fear" (Zagorski-Thomas, 2014 pp.42-43), was intensified through the fact that I was not alone in the room. The fact that there are a lot of agreements but also disagreements with creative and technical decisions can be quite challenging for me as a music producer because there is an ambivalence of being a member of the band on one hand, and being responsible for the technical aspects on the other hand. To trust each other is the fundamental aspect of making music together. I have learned that even more during these two weeks of recording together. There have been ups and downs in the recording process, but we have always found a common ground and I am more than happy to be able to still work with these two people after all those years.

\textsuperscript{21} Music producer term for working digitally within a computer instead of inside an analogue recording studio
3. FINAL REFLECTION AND DISCUSSION

The aim of this master’s project has been to create a record with a signature sound. I wanted to find methods on how to make individual songs cohesive and how to adopt a sonic narrative with a high recognition value throughout the whole record. In this chapter, I want to focus on the result of the process.

Even if the album has not been finished yet (as of June 2022), I have fulfilled my purpose and accomplished what I was aiming for: a record with twelve songs that are featuring a characteristic sonic quality. Mostly during the pre-production period, I was able to find an identity in the music and communicate emotions, utilising technical tools and different production methods, that have been based on creative experimentation and reflection on my work. In close collaboration with my band colleagues, I have shaped the sound of the individual instruments and applied independent roles to them with the intention to place them in the context of the music.

The next step will be to finish the album with the final recording of the vocals and finally mixing and mastering. The expected release of the album is around summer 2023.

3.1 Final conclusion

I have learned a lot about myself, my work in the band, and my role as a music producer. Making an album is a big process and quite an intense journey that definitely comes with a lot of compromises. Before working on the project, I think I was not realising the potential that would evolve during the last year. Approaching the difficult task of finding a signature sound has probably been one of the most instructive procedures of my musical career. It has been very difficult to explain in language what in practical terms is quite explicable. Also, not a lot has been written about that specific topic, and so I had to figure out almost everything by myself. When I was in Iceland and visited Þórarinn Guðnason of Agent Fresco in his studio, I presented my research questions to him. I was not surprised that he found it quite difficult to answer them, just like me.
The most rewarding result for me has been a noticeable change in my perception. Realising when something is good, is an important insight and I feel more sophisticated in making this decision now after all the time I have spent with these songs. With earlier projects, I haven’t been really aware of what I was aiming for and most of the time I have accepted a surprise of the final result, which of course also can be a great thing, but to me hasn’t been really satisfying with goal-oriented projects. Before working on this album, I found it hard to articulate what I am doing and I repeatedly got lost in a writer’s block. This master’s project has brought me closer to the sound ideal I have been striving for so long. I think I feel more confident than ever to translate a vision into an actual musical outcome.

I am really happy how the sound of the band has changed in comparison with our previous music. People have always been describing our music as very deep, unpredictable, rich, and diverse. While retaining our musical diversity, it has become more rounded and coherent with the help of this project. I would say that I have managed to form an identity for "isolate" on this record that points out where we are coming from and where we are heading to. Our musical storytelling has become more significant and meaningful and I am looking forward to building further on that.

The fact that I could work so productively with my bandmates, even if most of the interaction happened online in times of the coronavirus pandemic, motivates me to break the boundaries of being limited to the local music industry and also work remotely in the future.

The process has had quite a positive impact on my creativity. I have learned to embrace the room and how crucial the working environment is for my output. Above all, I have found the reflectivity in my work that I was hoping to find. It will be interesting to see how the process feeds back into my future work as a music producer.

3.2 Discussion

Lastly, I want to discuss applying a signature sound to my band by answering my research questions. I also want to compare my points of view with the research of Albin Zak and Simon Zagorski-Thomas.
-Why is it important for me as a music producer?

As I described in chapter 1.2, the characteristics of sound and how that is a major element in how music is perceived emotionally have always been fascinating to me. Music is all about transporting emotions and I wanted to gain knowledge on how to create a signature sound that pulls out emotions on a record with a strong artistic identity. For me as a music producer, this is a very important aspect not only for my work with my own band but also for future work with other artists. I feel like there is a big interest in making records with a personal sonic quality. With the help of this research, I will be able to bring my experience to other projects. Being very mindful of a characteristic sound for an artist makes my work quite attractive to potential clients.

-How do I pull out an artistic identity in my music?

Through my research, I have learned that there are different elements that determine an artistic identity. The relationship between instruments, texture, distortion, and reverberation, but also how recording technique is used differently, form an identity on a record. Apart from that, artistic individuality is also achieved through limitations. Making consequent decisions on which elements are important and which elements should fall away to make space for what really matters is essential for a strong sonic character.

-How do I communicate emotions with production techniques and technical tools?

I have made all my decisions on how to produce the different instruments on the record with two questions in mind: what is the role of this instrument in the context of the song and how do I want it to be perceived emotionally? Based on these questions I chose different recording and production methods to communicate a sonic narrative. Some examples will clarify how this has worked practically. When I wanted to bring a sound forward and make it intimate for the listener, for example, vocals or a guitar melody, I compressed it with a slow attack and a fast release and applied a very short reverb or slap delay\(^{22}\) to it. I did the opposite when I wanted to place a sound source further away in the mix. With a fast attack and a slow release time on a compressor, the transients are softened and the sound source is perceived as more

\(^{22}\) Delay with a very short delay time of 30-120 milliseconds
distant. This effect can be intensified with a long reverb and some pre-delay. With a tube equalizer or tube distortion, I made instruments warmer sounding. I perceive that as very pleasing and grounded. A significant amount of distortion helps to make elements more noticeable, sometimes even aggressive. I definitely favour analog-modeled equalization, like from an SSL, Neve, or API strip, over graphical equalization, to enhance interesting frequencies. The synth pads and leads were recorded with manual pitch bend modulation where several chords or notes are slightly detuned. Hereby they immediately become more alive and feel more organic. By overdoing this effect, it can even be perceived as otherworldly.

-Where does my work situate in the context of others?

I will answer this question in the chapter 3.4.

In comparison with Albin Zak (2001) and Simon Zigorski-Thomas (2014), my view on what defines a signature sound in popular music is quite like their opinions. Timbre, reverb, delay, and the specific use of technical tools, to form and enhance a musical performance, are definitely the relevant aspects that translate into a signature. I have been using the word colour, and within the context of colour: the semantics of sound define the character of a record to me. Within my project, I have been thinking a lot about all these elements and their role in my music, even before the actual writing process started. With a further understanding of how to illustrate a musical concept, pull out an identity, and facilitate emotions with the technical tools of the studio and the DAW, I am not only able to apply a sonic signature to my music, I also have become more confident in articulating to others what I have in mind.

3.3 Future outlook

Based on the knowledge I have gained throughout the process, I want to further investigate how to make my music even more individual and find different perspectives on how to achieve a recognition value. With my experience from the work in the studio, I am interested in finding a personal way of applying these techniques into my workflow in the box in a
similar way. With the help of an inspiring creative environment, I hope to be able to focus even more on what is so important to me: creating music with a sonic narrative.

Collaborating with others, discussing their personal workflow, and learning new methods in how to achieve a musical signature will be a big part of my career after my examination. Also, I want to learn how recording live with a band affects all these aspects and changes the creative process from early on when writing music together.

3.4 How can others benefit from my research?

In a time where almost everyone has access to affordable tools, that are needed to create great-sounding music, I hope I could clarify the importance of a strong commitment to sound sources and inspire people to a deliberate limitation of possibilities to find their personal way of artistic expression. In my opinion, more people should think about their signature sound to put their identity in the music and create their own narrative.

With my research, I also want to encourage people to work remotely whenever working in the same place is not possible. There are no longer boundaries to make music together and this opens up new possibilities.
Resources:


Spitfire Audio. (2016, April 20). *Creative Cribs - Olafur Arnalds 1.0 (Broadchurch)*. [Video file]. Retrieved from https://www.youtube.com/watch?v=2jTHNuvuQC0 (2022, April 28)


## Gantt Chart of the process

<table>
<thead>
<tr>
<th>Workflow</th>
<th>Year</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Month</td>
<td>May</td>
<td>Jun</td>
</tr>
<tr>
<td>Planing the album</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composing Music</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing Camp Germany</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing Camp Sweden</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound Experimentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iceland Trip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-recording</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>String Recording</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Recording</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing Thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit Thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Logic Pro Mixing Template 2022
Pictorial Appendix