Using self-recording as a tool for songwriting and production in Pop Music

The writing and production of an album project

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Abstract

This thesis is a major project with a research question of what kind of new possibilities does *self-recording* process offer to the songwriting and production in pop music. Self-recording in this context means more than just recording oneself. It includes having access to a *space* and having the *time* to explore the technical possibilities of the recording process. The thesis has been done mainly through producing an album where self-recording and different experimental production techniques are used starting from the writing process to arranging and mixing the album. We have been creating an album, *Calling The Waters*, with *Kaspar* (John McGregor and writer) that aims to be unique in its soundscape and is of a high standard with its writing, production and overall sound and where the songwriting and production processes have been done in a way that's new to us.

Tiivistelmä

Tämä opinnäytetyö on suurprojekti, jonka tutkimuskysymyksenä on ollut millaisia uusia mahdollisuuksia *itse äänittäminen* tuo prosessina popmusiikin sävellyksessä ja tuotannossa. Itse äänittämisellä on tässä kontekstissa laajempi merkitys kuin vain itsensä tallentaminen. Se sisältää pääsyn sellaiseen *tilaan* ja *aikaan*, joka mahdollistaa äänitysprosessin teknisten mahdollisuuksien tutkimisen. Tämä työ on tehty pääosin tuottamalla albumi, jossa itse äänittäminen ja erilaiset kokeelliset tuotantotekniikat ovat olleet käytössä aina musiikin sävellysvaiheesta, tuotanto- ja miksausvaiheisiin. Olemme tehneet *Calling the Waters* -nimisen albumin Kasparin (John McGregor ja kirjoittaja) kanssa, joka pyrkii olemaan ainutlaatuinen äänimaisemaltaan ja korkealaatuinen sävellyksiltään, tuotannoltaan ja yleiseltä äänenlaadultaan ja missä sävellys- ja tuotantoprosessit on tehty meille uudella tavalla.

Keywords
Self-recording, music production, experimental techniques, songwriting

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1 INTRODUCTION

Self-recording has become an increasingly popular method of songwriting and music production in the pop music industry. The advancements in technology have enabled musicians to record and produce music independently, without the need for expensive studio sessions. This thesis will explore the practice of self-recording in pop music. It is examining its benefits, challenges, and impacts on the creative process through a major project, which is the making of an album for *Kaspar.* We have been exploring different production techniques and equipment by using the self-recording method, letting technology to lead the way. I have also been studying the history of experimentation in music recording and production and researching artists and producers who use self-recording as part of their music creation and have also been analyzing pop music recordings as productions.

21st century has seen big technological advancements in the field of music production. What used to require a professional recording studio can now be fitted into a laptop. This notion does not mean there isn't need for professional recording studios as well, one was used while working on this thesis too, but it is not required and the things that a laptop with a digital audio workstation can do make a 1990s recording studio look somewhat limited. One example of music produced in a bedroom that has been successful in recent years, is Billie Eilish's *When We All Fall Asleep, Where Do We Go?* Like Eilish's brother and producer, Finneas, proclaimed in the Grammy-winning speech: "We just make music in a bedroom together. (Tweedy & Azerrad, 2020, p. 8)

According to Samantha Bennett, there are four cornerstones of record production study well established in phonomusicological discourse:

1. The recording and production workplace
2. Sound recording and production technology
3. Sound recordists
4. Processes and techniques (Bennett, 2019, p. 135)

Although this analysis method is not used in this thesis, it is good to mention the cornerstones of this production. It was mainly recorded in the studios of the Sibelius Academy, but some recordings were also done at home. The production technology was Pro Tools and various software used within it (plugins). A lot of this production

work was not very location bound, as it was happening on a laptop. The writer of this thesis has been responsible for all the recording and processing of the audio. As for processes and techniques, the recording sessions were following a somewhat similar pattern, where there were a 5–6-hour sessions during which a song was written. Usually lyrics, the main production elements and a vocal take were also done during this session. The sessions for production and mixing were not this organized until closer to the finishing of the album, when the songs were listened to and handled more systematically.

2 ABOUT SELF-RECORDING

In this chapter I will examine the evolution of self-recording in pop music, from the early days of home recording to the current state of digital recording technology. It will also explore the reasons behind the growing trend of self-recording, including the accessibility of technology, the desire for creative control, and the cost-saving benefits. Self-recording in the widest meaning is pretty much self-explanatory; artist records him/herself without a separate recording engineer. However, recording has always also meant the possibility to experiment with the technology and create compositions and sounds that wouldn't have been possible or at least not very probable to have emerged with traditional instruments.

Although there has been experimentations with all audio devices, including recording equipment, throughout their history, the early 1960s are usually considered as a "turning point" when creativity started to arise in recording techniques and it became more than just capturing a performance. As Jamie Sexton suggests in Samantha Bennett's *Modern Records, Maverick Methods*:

> Avant-garde techniques were increasingly smuggled into pop productions, leading to more complex recording techniques and the rise of the producer as a creative figure (as opposed to a functional engineer): George Martin, Joe Meek, Phil Spector and Brian Wilson all gained reputations as sonic alchemists, capable of using the studio in a creative and constructive manner. (Bennett, 2019, p. 82)

In 1970s, one could already spot several *production-aware* artists, Pink Floyd being a good example. They were involved in the whole production process of their Dark Side of the Moon -album and the studio became one of their instruments. (Bennett 2019, 98). The reason for artists to get into the production side of things is the search for uniqueness. JJ Cale is another example from the 1970s but in a smaller scale as he was often his own producer, audio engineer or session player:

> I think it goes back to me being a recording mixer and engineer…Because of all the technology now you can make music yourself and a lot of people are doing that now. I started

> out doing that a long time ago and I found when I did that I came up with a unique sound. (Talbott, 2013)

Brian Eno, who's more known for his solo ambient music and art, created the production techniques for some of the biggest selling pop albums of the 1980s, like U2's Joshua Tree. This combination of the 1980s new audio technology, Eno's self-created techniques (which are very similar to the self-recording techniques) and straightforward pop music became one of the defining sounds of that decade. (Bennett, 2019, p. 98) In today's music production, self-recording means the divisions between songwriting, performing and engineering disappear. There is also no order in the process. I found the perfect description for this in Spencer Tweedy's book, *Mirror Sound*:

> With no pre-written parts, the recording process becomes the composition process. And the line between "music" (e.g., playing guitar or sequencing virtual drum parts) and "sonics" (e.g., twisting knobs and setting up microphones), which is usually pretty stark if not actively enforced in traditional studios, is blurred. So "recording" is writing is engineering is mixing. And it's rewriting, retracting, remixing. (Tweedy & Azerrad, 2020, pp. 24-25)

When my 12 year-old child heard the song, "Clear" from this master thesis and asked what I played on it, I couldn't really answer. In a traditional sense I didn't play anything, but being familiar with hip hop productions he did understand that I had programmed the rhythm track. Still, he was also wondering what I did "most of the time", which was "this recording thing", as Yuka Honda puts it:

> People ask you, "What do you play?" and the I always say, "I play keyboards", because that's how you're supposed to answer, with an instrument. But I do feel that my main instrument is this recording thing, which doesn't have a name- or production, which sounds grander that what it is. But that's where my musicality began and that's still where it is. (Tweedy & Azerrad, 2020, p. 59)

2.1 The influence of the technological development and economics on self-recording

Popular music production has gone through massive technological changes in the past 40 years, which has changed drastically the ways it is performed, produced, and consumed. The technological tools are more powerful, cheaper and less space consuming than ever before, which means a recording studio can now be fitted into a bedroom. The change hasn't happened overnight but rather the new technologies have been integrated into existing work methods. (Bennett, 2019, pp. 8-9; Tweedy & Azerrad, 2020)

For the entrepreneurial side of recording business this has meant more flexibility and less expenses but also a total remodeling of the business plan. The modern audio production tools enable for quite perfect music production, but the standardization of these tools also means they usually must be used, thus making the job of

music producer/engineer more time consuming. Although here lies a contradiction; the lack of money usually means that time is also limited.
The economic restructuring that has followed the technological development has meant that music producers expand their skillset. As Smudits states according to Schwetter:

> ”A realistic picture of music producers in future developments is as small business owners, as “artrepreneurs” with diverse skills, mainly technical, commercial and artistic, but also with activities oriented towards diverse professional fields, as composers of ‘art music’ as well as applied music, as sound designers, disc jockeys, producers etc. Nor is it unlikely that (unsaleable) artistically ambitious work will be consciously produced and regarded as a ‘creative business card’, in order to acquire commissions from the business world (and less and less from public authorities)”. (Schwetter, 2018)

Music producers today need to be ”Swiss army knives”, who can do it all and have entrepreneurial skills on top of the musical ones. The more creative, artistic work can also be regarded as a ”business card”, although it probably also is crucial to maintain the artistic focus when the work is so spread out. Technological development in the audio realm has always affected greatly, not only the business side of music, but also aesthetic and musical approaches. Already Thomas Edison, inventor of the mechanically recorded music, believed that:” a perfect recording could provide music that was truer, purer, realer than the music event it documented” (Pras, Guastavino, & Lavoie, 2013, p. 613). All in all, recorded music has had a huge influence on how music has developed as an art form as much as it has also influenced how music is enjoyed or consumed (Pras, Guastavino, & Lavoie, 2013, p. 613).

While in the 1980s home recording was a choice affected by having artistic control and affordability, the economic reasons for not using a professional studio rose massively after streaming platforms became the standard. Although the global revenues from online distribution in music companies increased between 2004 and 2011, overall musical sales fell around 31 %. At the same time, consumers don’t care about sound quality as much as before and major labels don’t want to invest in artist’s careers. All this affects the role of the music producer (Pras, Guastavino, & Lavoie, 2013, p. 617). Until the 1980s, the recordists were really pushing the audio technology and techniques. The technological leaps taken in the 1980s democratized the field massively and made the audio technology available for more people (Bennett, 2019, p. 176). The learning curve for the early digital technology was still quite steep and in the 2010s this has changed completely. Almost every smartphone or laptop has tools to make music. Also today, the sound fidelity is so good with the devices that the existence of noise or distortion is more of an aesthetic choice than a technological barrier. (Tweedy & Azerrad, 2020, p. 40)

2.2 Spatial environment in pop music production

With all the development in audio equipment described, the recording space could practically be any space in today's music production. Also, the sense of space in the production can be manipulated and created virtually. The recording space still influences the recording process however, as it brings together the musical, aesthetic, social and navigational aspects. As music creation is work to its creators, the space used is also a workplace. There is a certain feeling that the space gives, through its physical surroundings and the people working there and it can be argued that atmosphere, location, and community are even more important qualities than reputation and acoustic properties of the space. (Minchella, 2017, p. 47)

This makes an interesting link to self-recording, and spaces used for that process. Although self-recording can take place in a professional studio setting too, it is more often related to a self-built space. Having an own space brings certain amount of comfort and for many, it brings another level of freedom, as Lætitia Tamko declares:

> "there's no one at the board looking at me, waiting for me to figure out how I'm going to sing that song….There's just a comfort of having time and space to explore". (Tweedy & Azerrad, 2020, p. 22)

Bedrooms of course have their own acoustic character and probably result in an intimate sound, but self-recording can also happen in professional studios or other spaces than bedrooms. If there's a certain sound to self-recording, it is mostly due to the cohesion of the process: all areas of music production from the writing to recording to mixing, is usually handled by a single person. As Tweedy and Azerrad put it:

> "The work they put into the sonic qualities of the song informs the way they play the parts (and vice versa) so that it becomes a tightly glued super-expression of their musical identity" (Tweedy & Azerrad, 2020, p. 22).

2.3 Temporal dimension in pop music production

The amount of time available for a recording session, plays a crucial part in pop music production, or any music production for that matter. It on one hand, affects the atmosphere (feel of rush or pressure) of the sessions and secondly, goes hand in hand with the spatial environment: different spaces offer different time frames. At a home studio setting, there's usually no deadline, whereas a professional recording studio will set time limitations. According to producer Blake Mills, these different time frames don't make anything better or worse, but they will affect the decision-making and ultimately the sound of the recording. (Tweedy & Azerrad, 2020, p. 153)

Producer Rick Rubin, who is a known example of a consultative music producer, according to Burgess (Burgess, 2013, p. 17), and thus doesn't spend much time in the recording studio himself, doesn't think the calendar can decide when a project is finished. The maker should trust the 'feeling' of something being ready. Therefore, it could take hours or five minutes to finish a project as there's something else than the amount of time that defines the readiness of the art. Of course, in a professional studio setting, the budget of the recording sessions will usually set time limitations and could make it hard to follow Rubin's guidelines. Rubin does not eschew deadlines, however, and thinks they can bring focus to the work, especially towards the end of completion. (Rubin, 2023, pp. 194,199)

3 INSPIRATIONS TO THE PROJECT, ARTISTS WHO USE SELF-RECORDING METHOD

In this chapter I will introduce artists and producers who use self-recording as a part of their songwriting and production method. I have delimited the genre and era of the self-recording artists in this section to some indie artists' work from the last 5 years, who have been an inspiration to the making of the *Kaspar* album. What is interesting is that after I had picked these artists and producers, some of them ended up working together. Sylvan Esso's Amelia Meath having recorded a single "*Neon Blue*" with Blake Mills in 2021 and Ethan Gruska and Bon Iver releasing a song, "*So Unimportant*" in 2022. Both recordings were even released on the same record label. This means the cohesion of working methods and similar musical interests exist between these artists and they could be placed in the same sub-genre.

3.1 Sylvan Esso

Sylvan Esso is an electronic duo from Durham, North Carolina, consisting of Amelia Meath and Nick Sanborn. They have released four studio albums since 2014. Their writing and production is based on synthesizers and samples and on the technical side relies on Ableton Live software and modular synths. In their writing Sylvan Esso avoids certain methods and repetition of same patterns, which is also audible in their production. Meath, who is the singer in the duo and writes the lead melodies, has often stated that she's "writing in the air", meaning she doesn't write with an instrument. This method makes her find "melodic structures or time signatures that are strange". (Johnson, 2022)

They made their album "No Rules Sandy", when being trapped in Los Angeles during Covid-19 restrictions, which meant they were in weird surroundings. They created all the music within a three week period without a real intention of

making an album. This reveals that in their record production, the space is less relevant than processes and techniques. As a technique, the element of surprise is important in their work. This is how Meath comments on surprise:

> ” Usually whenever I do a vocal take, I do melody and lyrics at the same time, and I write them out in my notebook. And then when I do a vocal take, it's the first time that Nick has heard the words that I've written or the melody that I created. So to me, that's always present”. (Summers, Contreras, & Jarenwattananon, 2022)

The simultaneous creation of melody and lyrics is probably common to some extent, but it is rarer to create this without any other instrument. In this thesis project, same kind of writing of melodies and lyrics often happened on top of soundscapes that didn’t really resemble any traditional instrument. The experience was that the melodies and rhythms became ”strange” like Meath stated. (Summers, Contreras, & Jarenwattananon, 2022)

The writing process of Sylvan Esso includes self-recording in form of having samples as basis for their songs. Technically, Sanborn uses Make Noise's Phonogene and Morphogene modulars and Teenage Engineering’s OP-1 for sampling. The modulars shape samples in unpredictable ways so it’s another element of surprise in their production. They also often have the final vocal done when the song is sung for the first time, something that was also discovered while making this thesis. As Meath states:

> ”the scratch vocals tend to become the main vocals just because nothing else is as honest or interesting-sounding as those.” (Future Music, 2020)

3.2 Blake Mills

Blake Mills is known as a producer, session guitarist, and also an artist. He’s played guitar on many albums by famed artists like Bob Dylan, Joni Mitchell or The Killers and produced artists including Alabama Shakes, Jack Johnson and Feist. As a guitarist/producer, Mills sounds are perhaps more guitar-oriented than other examples in this thesis. He has taken the sounds of the guitar to another level though, utilizing guitar synths and strange recording techniques so that often the guitar doesn’t really sound like a guitar at all. Mills recognizes the importance of rather not having too many ideas before a recording session but to stay open in the moment, stating:

> ” If I show up and have this preconceived idea of what I’m gonna do that day in the studio, I’m afraid of putting too much faith in that idea and then having it disappear. I know that if everybody is responding in the moment, and everybody’s listening with an open mind – especially myself – that we’ll have found something really special and honest by the end of the day …it’s a conversation – that’s what I always say. It’s like you have your vocabulary, and you have your point of view; but when you go in to have a conversation with somebody, it’s really hard to plan it past the opening statement. You’re at the whim of the flow.” (Baccigaluppi, 2016, p. 51)

One interesting thought from Mills is how the recording environment can keep one on their toes in a positive way, as referred to in this thesis, the spatial aspect of the recording has effects on many levels. Here Mills is referring to his engineer, Shawn Everett, in recording sessions with Alabama Shakes' *Sound and Color*:

> "It's more exciting to me than doing it all in a place where he feels comfortable, or I feel comfortable. If I were by myself in these rooms that we're talking about, I would not know how to get the results that I'm after. I really do rely on the engineers I work with. I like them to be on their toes as well" (Baccigaluppi, 2016, p. 52).

This notion from Mills on the spatial aspect is a reflection to the first statement of not bringing too many big ideas into a session. An environment that keeps one on their toes, without being uncomfortable, supports everyone's openness to the moment.

Mills sees that self-recording brought an awareness of arrangement into his songwriting. He now sees his demos, recorded as a teenager, as more interesting than the possible versions done in a professional studio setting because the studio brought a seriousness to everything. Yet he has still chosen to work in a professional studio (Sound City Studio B, which he runs together with Tony Berg) because, in his words:

> "The dream is having a space like this and having the influence it can have over a session available as a tool". (Tweedy & Azerrad, 2020, p. 153)

To Mills, all recording is manipulation, and he doesn't feel there are any rules concerning what is allowed or not in the studio. He recognizes the certain sound that is created when technology and the tools lead the way, so this is a clear aesthetic choice for him. It comes through as a preference for the artist to lead the way, whatever technology or tools are used (Tweedy & Azerrad, 2020, p. 153). In this thesis this was also realized. The songwriting and production were utilizing technology, but it was all artist lead, meaning it wasn't really aiming for the musical perfection that modern technology can offer.

3.3 Bon Iver

Bon Iver, the artist name for American singer-songwriter Justin Vernon, became largely known for its debut album, "For Emma, Forever Ago", back in 2008. This album is a stripped-down, acoustic folk-album and for many artists it would have made sense to stick to this formula. Vernon has kept looking for new sounds though. Already the second, self-titled album had more electric and bigger sound. The bigger departure, sound wise, happened with the third album where the guitar as a songwriting tool was left altogether and the writing became more sound-based. As Chris Messina, one of the engineers of the album, explains:

> "The thing is that this entire record is a huge departure from the previous album, which was gorgeous and pure and lush, and a beautiful record to live in. This time Justin wanted something else, and to use sounds that he was intrigued by, and it wouldn't be a guitar or a violin. Many of these jam sessions began with a sound that came from the OP-1, which Justin had fallen in love with and which pushed things into a whole new territory. Because of the way the OP-1 pushes Justin to think about sound, we tended to build songs around cruddy-sounding samples. There was a lot of massaging to get weird samples to fit with a song. Mangling things to make them fit was something we felt strongly about. Justin said that he wanted the whole thing to feel and sound like a found compact cassette. You're walking down the street and you find a cassette in the gutter that has been rained and stepped on, and you pop it in and listen to it. That was something we were constantly working towards." (Tingen, 2017)

A contrast from writing on a guitar to writing on the Teenage Engineering's OP-1 sampler/synth can really be heard if one compares Bon Iver's first album to the third. It could be two different artists if not for Vernon's recognizable singing voice. Writing on guitar or another acoustic instrument, usually aims at having an idea of a song, whereas instantly creating sounds at the composition stage brings something concrete from the production perspective, you are already recording something that with a great probability will be on the final mix of the piece. The biggest motivation for such a change in songwriting methods is the inspiration it brings, as Vernon states:

> "The best stories are always those that allow you to suspend disbelief as much as possible, and I felt that it was important to make it sound new. There used to be the G chord on the guitar, and it was like, 'wow, listen to that!' and then a song came. But the longer I have done that, the more interested I became in other sounds too. This time we just went looking for different sparks, and over the last few years we were putting these moments together to see how they coexist, and how they can make something new. And if they sounded new to me, then that made me excited…Overall the process of creating the album involved using the OP-1 a lot, doing many improvisations with whomever I wanted to make music with, also sampling parts of these sessions in the OP-1, and hooking things up to other tools in the studio to mess them up." (Tingen, 2017)

With all the differences the self-recording brings, compared to more traditional composing techniques, the experience of having a portable recording device can feel similar to carrying a guitar around. Bon Iver being one inspiration to this thesis, we also used the OP-1 to write some of the songs in the project. After experiencing its capabilities it is easier to relate to Vernon's statement of the device:

> "…I think the thing I'm working with the most is the OP-1. It's a sampler-based synthesizer, and I honestly think it's the most important instrument that's come into my life since I first picked up a guitar when I was 12 years old. I'm not exaggerating at all. I never leave the house without it. I don't travel with the guitar anymore. I travel with just my OP-1. It's been a big deal living with this thing. I love making music with it. I love traveling with it. I like using it as a writing extension. It's a really special technology, essentially what a guitar is to me." (Hyden, 2015)

3.4 Ethan Gruska

Ethan Gruska is another artist and songwriter turned producer who first performed in duo Belle Brigade with his sister. His most known production work has been made with Phoebe Bridgers and boygenius. Gruska has a strong compositional perspective to production. This also comes from his family ties as his father, Jay Gruska, is a movie and television composer, and his grandfather is movie composer John Williams. A method that Gruska uses, that was also part of the process in this thesis, is creating a mass of material and then cutting and reorganizing it later. Here he explains how he uses Pro Tools in his compositional or production work:

> ”I love going through 30 playlists of nonsense. I love the four milliseconds that I find. Those define everything for me. It originally came from the early session playing where I didn’t know exactly what I was doing, “I’m going to play and then come back and fix it.” Now it’s, “I’m going to get out all these different ideas, and then I’m going to see what a collage of them would look like.” (Berry, 2021, p. 48)

Gruska is using a lot of different devices capable of self-recording, like the OP-1 (mentioned earlier in the thesis) and the Kaleidoloop by Gritter & Guitari, which is a battery-operating sampler. The portability of these devices makes it also possible to collect sounds from any environment. (Berry, 2021, p. 48)

The idea of the recording environment as a workplace, mentioned in section 2.2, is also reflected in Gruska’s thoughts about having the right people to work with. If the musicians are trusted, they can play pretty much anything, even their mistakes are embraced:

> ”It’s about getting musicians who I love how they think, and then the art of the choice afterwards and making sure that I serve their voice. I think that most of those people, when they hear the comp, they say, “Sweet! I did that!” But also, “I didn’t realize that I did that!” I like a lot of the mistakes – they don’t sound like mistakes”. (Berry, 2021, p. 48)

4 MAKING OF THE *KASPAR* ALBUM

In this chapter I will go through a brief history of Kaspar as well as the songwriting and the production of the new album in a more detailed fashion.

4.1 About *Kaspar*

Kaspar was started as a duo with the writer of this thesis and John McGregor back in 2007. Back then the songwriting process was based on improvising with acoustic guitars and voices. The writing process for the first album took about a year before it was recorded, produced, and mixed over nine days by Malcolm Burn in Kingston, New York. In these sessions, the songwriting part took a long time, which was not so much to do with tweaking individual songs, but just having time to have enough songs to appear. During the recording sessions, there was one more song written during a small break, which shows that it really wasn't necessarily a slow process to get an individual song written. The writing and production method was significantly different from what was used creating this thesis from both spatial and temporal perspective.

The recording sessions for the first album were mostly live, with lead vocals, guitars and drums recorded during the same take. Recording the basic tracks with some overdubs took five days. More overdubs were done on two more days and mixing was done by Burn in two days. The first five days were used for capturing the live performance of the songs, which had been practiced for 6 - 12 months. Of course, the way it was captured already included some production decisions, like both singer singing in the same microphone and thus being in the same room and having drums isolated in another room. The main production happened during the two days dedicated for the overdubs and decisions over the overall sound of each song. Using Richard James Burgess' functional typologies for producers, these sessions for the first

Kaspar album were a combination of enablative (for the first five days) and auteur -type (the last four days), whereas the production for the second album and the subject of this thesis would fall into artist producer -category. (Burgess, 2013, p. 9)

4.2 Songwriting

This section goes through the songwriting process and production of the 10 songs that made the second Kaspar -album. The songs were mostly created in the studio during 4–5-hour sessions, apart from one song that is based on an old demo recording. Using the self-recording method meant that the songwriting started with recording improvisations, often utilizing technological devices that were new to us. After these improvisations were recorded, we did edits within Pro Tools and created a structure for the song. Often this stage also included pitch shifting or stretching of the audio or looping. When we had a tentative structure for a song, I would usually work on rhythmic elements and John McGregor would write melody and lyrics to the song. Sometimes some parts of the melody already appeared with the improvisation. Sometimes also a bass and some other additional instruments were added in these first sessions. Quite often these versions would have the major elements of the finalized song but sometimes radical editing or added instruments would lead the arrangement to a new direction. We were working with a method but never limiting ourselves with strict set of rules.

4.2.1 Clear

Clear was one the fastest songs including composing and producing and mixing the song. The writing process started with theremin experimentations. We quite soon noticed however, that playing theremin requires a lot of practice and to write any valid piece of music with the instrument might be too time consuming (Ex 1). For these reasons the theremin experiments ended up being a slightly processed, three second repeating sample in the song, as shown in Figure 1 (Ex 2). The actual composition

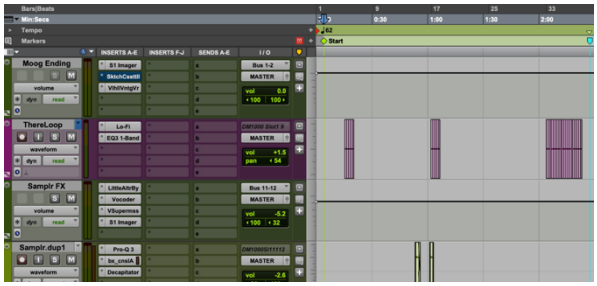

Figure 1 Theremin edits in Pro Tools software

started with improvisations with the Moog Voyager (Ex 3). There were also long takes of improvisations on the Moog's octave knobs (Ex 4). These octave experiments ended up being the song's middle part by layering two of the takes (Ex 5). That section got its final harmonic form, when violin sounds were added by musician Samuli Kosminen, who also played the percussion and drums on the song (Ex 6). Kosminen's drums were recorded by him at his own studio and imported to our session.

Lyrics and melody were written at the same time as the beat was being created. The beat was made of Moog noises and experimentations with the iPad Samplr –

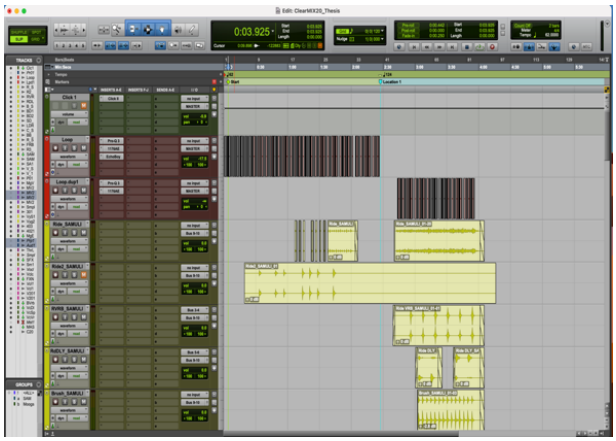

Figure 2 Samuli Kosminen's drum tracks in Pro Tools

Figure 3 Samplr -application for iPad

application (Ex 7). The bass drum was a result of some Moog noise being pitch shifted an octave lower (Ex 8). Noise was brought up by volume adjustments for snare like sounds (Ex 9) and the rhythm was a result of just improvising with these sounds on the tempo grid of the Pro Tools software (Ex 10).

Some Prophet '08 was added for the ending part, mainly to add bass frequencies. The Moog tracks were treated with Aberrant dsp's Sketch Cassette II (Image 4) in the end part, to bring additional character (Ex 11) to the whole synth layer of four

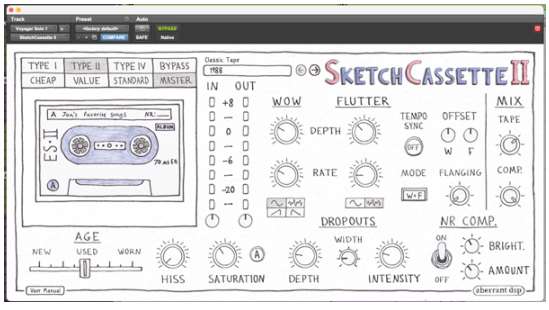

Figure 4 Aberrant dsp's Sketch Cassette II plugin
Figure 5 Softube Vocoder plugin

Moog tracks and the bass part played with Voyager '08 (Ex 12). The vocal track ended up being the first take, which was also the first time the song was sung. In the end part, the Softube Vocoder plugin (Image 5) was added to the vocals, bringing synthesized harmony to the lead vocal. There are also two sung harmonies throughout most of the song.

The song is simple in its harmonic structure, which applies to a lot of the songs in the project. It is mainly two chords. As for most of the songs, however, no instrument really plays chords. In this way it is maybe more related to classical music, where different musical components and melody lines together create the harmony. It's the soundscapes and character of the sounds that really make it unique. Of course, as in any pop music, the vocalist's voice is also a bit factor in this.

4.2.2 Ain't It Strange

Ain't it strange was composed with an organ and live drums (Ex 13). Not much of these original recordings were left in the final mix, only a drum break from the b section of the song (Ex 14). The biggest finding production-wise, was finding an arpeggio from Prophet 6, which created a new foundation for the song (Ex 15). Linn drum samples were used to create the rhythm that goes along with the arpeggio (Ex 16, Image 6).

Figure 6 Linn drum sample edit in Pro Tools software

After this rhythm of Prophet and Linn drums was created, it marked a sort of a second beginning for the song, or at least production (Ex 17). Electric bass and guitars were added for certain parts and especially at the end of the song, they lift the production to more of an anthem feel. A snare drum that appears towards the end of the song was edited from the original drum takes, which underlines the recycling aspect towards sound and recordings that was always present during the writing and production:

any take that was ‘deleted’ at any point was not truly gone, it could always find its place at a later point.

In the C -section, the Prophet arpeggio didn’t really work with the vocal melody, so it was put through the Vocoder plugin, and the notes were automated with Pro Tools automation (Image 7).

Figure 7 Softube’s Vocoder with Pro Tools automation

In the same section, the vocal was sent to an Antares Talkbox plugin, which was controlling the Softube Model 84 software instrument (Image 8 A & B).

Figure 8 Antares Talkbox plugin
Figure 9 Softube Model 84 software instrument

The main vocal was triple tracked so that there is one main take in the middle and two other vocal takes panned more to the side to give width and a certain effect to the vocal. New lyrics and melodies were also created for the ending, which gave a musical lift for it. Listener's attention in pop music is often mostly on vocals so putting energy and space (reverb, delay) into that area, gives instant boost.

4.2.3 Let Go

Let Go is another Moog Voyager (Image 9) exploration. It is based on a simple pattern that was mostly looped (Ex 20). A lot of the original Moog improvisation was left in,

Figure 10 Moog voyager

however, to bring liveness to the track, making it a hybrid of looped and improvised synth (Ex 21). The drumbeat was made of noises of the Moog that were increased in volume and edited but cutting and splicing the audio file (Ex 22). An 808 sample was added to some parts to give more bass for the kick drum. Shaker and tambourine were played by a percussionist Tuomas Hakkarainen to bring liveliness to the rhythm tracks.

At one session, there was an improvisation with bass and guitar, which resulted in a bass track that is present for most of the song and guitars fills that were copied also to other places in the song (Ex 23). The song didn't need much else production-wise.

Layers of vocals were done and one finding was to distort some of them with a Neve 1073 preamp.

Figure 11 Neve 1073LB preamp

This distortion blended nicely with other tracks and made clean tracks sound distorted (Ex 24). This contrast of distorted and non-distorted is often mentioned by mixer Tchad Blake, who says that before the existence of sound systems, distortion meant danger to people, like an erupting volcano or thunder. That feeling of danger gives people adrenaline. The feeling of danger, however, only rises through contrast.

If everything has audible distortion, the effect is lost. This is why Blake likes the combination of distorted and clean sounds. (Mix with the Masters, 2017)

A late arrangement idea was to add some of the end chorus to the beginning of the song. The so called 'hook melody' comes first instead of having to wait for it, which is a nice structural change from lot of the other songs and makes an already compact song more impactful.

4.2.4 Who am I

Who Am I started with a simple demo made with the OP-1 sampler/synthesizer with a drum loop, bass heavy synth and a synth melody (Ex 25). Already when transferring the song to Pro tools, we noticed some interesting noise the OP-1 had made and turned that up by 15 dB (Ex 26).

Although the song really is in 6/8-time signature, we felt it as a reggae or ska track. So, a dub-like bass was added (Ex 27) and to add to the ska feel, we felt like a backbeat guitar, or something similar, was needed. We chose an acoustic guitar that was recorded through its own pickup and straight into a preamp. From the start, we knew this was not going to be the final sound, but some material to work with (Ex 28). I tried several plugins on it, starting with Soundtoys' Filter freak, but that brought a comical effect, which didn't really fit the song. In the end, Fabfilter Pro-Q 3, Soundtoys' Little Alterboy, Soundtoys' Tremolator and Softube's Dirty tape plugins created something that was considered interesting (Ex 29).

Figure 12 Fabfilter Pro-Q 3, Soundtoys' Little Alterboy, Soundtoys' Tremolator and Softube's Dirty tape plugins

The song structure is a bit unusual in that the second chorus is basically half the song, with an additional verse sung on top of it. So, this section needed some more instrumentation and preferably something interesting sounding. We tried some electric guitar with reggae feel. With Pitch II pitch shift, the sound became more interesting. An UAD Delay Mod was used to spread the sound and bring chorus-like effect (Ex 30). We also wanted something spacious to this section and found a sound from

Sequential Prophet 6 synthesizer, that created a great texture with the guitars (Ex 31). The final synthesizer added to the song was a Roland Juno 60, which has a distinctive

Figure 13 Sequential Prophet 6

sound. The Juno was added mainly to the choruses of the song.

The drums were played with a click track and went through several edits. In the beginning, the drums were muted in the first chorus when we found out that an arrangement with only Juno 60 synths and an 808 bass drum sample worked well. In the verses, the room mics weren't used at all to give more momentum to the part where they finally come in, in the last chorus. A delay was added to the rim shot to give a dub feel to the rhythm (Ex 32).

This piece is one of songs that in the end, had lot of arranging and sound experimentations happening until very late stages of the production. Compared to lot of the songs, this one had lots of processing happening within the recording software. Still, the initial loop done with the OP-1 is still the basis it was all laid upon.

4.2.5 Weight

Weight was originally an improvisation on a Serge modular synth that didn't result in much more than static noise (Ex 33). Still, that noise stayed in the whole process and affected the other aesthetic decisions. A major moment in the arrangement is the first drum fill with the live drums, when the static noise disappears. Also, the rhythm loop was partially constructed of that noise, edited and pitch shifted (Ex 34). A software instrument called *Slammer* by Klevgränd was also used to create the rhythm track (Ex 35). The main harmonies and chords were composed with a Moog Voyager and there were layers of improvisation that the vocal melody was added to.

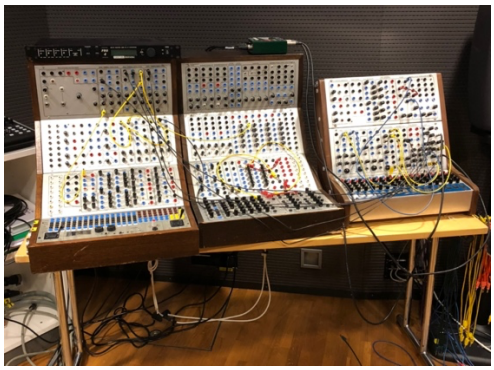

Figure 14 Serge modular synthesizer

The song has a 6/8 rhythm, but this doesn't really stand out until it is marked with the live drums (heavily distorted when recorded through overdriven Neve preamps) and percussion later in the piece (Ex 36). The feel of the rhythm gives the song its heavy feel and space and makes an uplifting end possible, since multiple elements, like the percussion and lighter sounding synths, appear. The synth used for the ending was a Casiotone MT-45 (Figure 15), which was played through Universal Audio EMT 250 Reverb plugin (Image 15).

Figure 15 Casiotone MT-45
Figure 16 Universal Audio EMT 250 Reverb plugin

There is a more traditional bass guitar track recorded in the end part of the song but there are some bass melodies, played higher on the instrument, that were added to the last verse and the end chorus. The only guitar on the song is played on the choruses and is a heavily effected, repetitive acoustic guitar.

4.2.6 All I Believe

All I believe started out in a more traditional songwriting session with two acoustic guitars improvising and trying to find something worth a song. A demo of the original

song idea was recorded with iPhone's Voice Memos application, using the phone's own internal microphone (Ex 37).

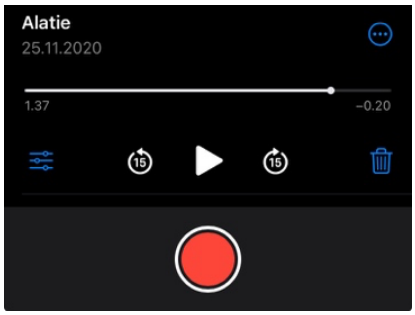

Figure 17 iPhone's Voice Memos application

An audio file of the demo was then imported into Pro tools in a studio session and turned into a loop. Waves doubler and Soundtoys' Microshift plugins were also added to spread the loop (Ex 38). When creating the loop, we realized that both composers were placing the first beat on a different location. There was an interesting syncopation between the guitars in the demo, although the other guitar was hardly audible and was therefore replayed with a bass guitar. Bass was then doubled and then also tripled by playing one bass an octave lower (Ex 39).

When a click track was created, we realized that the "four on the floor" type of rhythm track would actually be suitable for the song, and we pitch shifted the original click down by two octaves to get a bass drum-like sound. This was however, later replaced by a Linn drum kick sample.

Later, Tuomas Hakkarainen added a real drum track with some drum fills. Only the drum fills were left from these takes. The fills have a weird chorus or phaser effect on them, which was created by accident. Samuli Kosminen added synths to the drop parts before the instrumental chorus part. He also added drums to the end part. When he sent his drum takes, they also included Tuomas' drum fills but for some reason they were some milliseconds off with the original, creating the effect. There was also a piano part with Xfer Records OTT compressor plugin and Valhalla DSP's Supermassive Reverb plugin that added some more dance music atmosphere (Ex 40).

Figure 18 Xfer Records OTT compressor plugin

We realized after some vocal takes that the key of the song was too high. as a result, all tracks (mainly the guitar sample, basses and the piano) were pitch shifted with Pro Tools' elastic audio. This created a nice effect on the bass, as they sound like they were played in dropped c -tuning, two whole notes lower than a bass guitar normally can play (Ex 41). A Sequential Prophet 6 synthesizer was also added to the end part with an organ -like sound. This was again fully improvised playing with few takes, which were then combined (Ex 42). It's interesting how in the mix the Prophet blends with everything and by itself it doesn't seem to follow the song.

4.2.7 Midst of men

Midst of men is an old song, from 2010. We relearned the main parts from the original demo, which was the improvisation were the song was created. It was first played to a fixed time with a Viscount organ (Ex 43, Figure 19) and then the bass was added. The bass was sent through the Softube Vocoder as an experiment (Ex 44). There was then an improvisational piano track played after this, where a grand piano was recorded with dynamic Shure SM57 microphones straight from the soundboard's sound holes (Figure 20)

Figure 19 Viscount organ, recorded with Neumann KU100

and put through an Eventide H3000S harmonizer (Ex 45, Figure 21). A small sample of this track was turned into a loop that is repeating in the verses.

Figure 20 A grand piano recorded with dynamic Shure SM57 microphones straight from the soundboard's sound holes

Figure 21 Eventide H3000S harmonizer

The drum tracks were done so, that each part was recorded separately. So, bass drum, snare drum, rim shots and the hihat were recorded during different takes. This made some experimentations with mic placements possible, and the separation gave more options during mixing and editing and all the experiments that were happening during those stages. For instance, an Arturia Reverb Spring-636 and panning delay from Soundtoys' EchoBoy plugins were added to the rim shot, which gave it its moving character (Ex 46).

The lead vocal was sung with the effect on. The sound consists of several plugin effects, two Soundtoys' EchoBoy delay plugins and a Valhalla Vintage Verb. The effect really affected the way John sang the song, which was an important observation production wise. Harmonies were added to the choruses, and they were the original harmonies from the demo recording.

The song came together with its production when parts were played with a Roland Juno 60. The unit had a faulty chorus section, which gave it an unique sound in the verses of the song (Ex 47).

4.2.8 Horizon

A long, almost half an hour in length, collage of piano loops was made with a grand piano and an Electro Harmonix 22500 Dual Stereo Looper (Ex 48). John McGregor played the piano and used the looper at the same time as everything was recorded to

Pro Tools. We listened back to this looping improvisation and picked the most inspiring parts and arranged them into a tentative song structure. The most interesting parts were the ones that also were inspiring to sing melodies to. The piano sounds went through several edits, and effects to reach their end form (Ex 49).

Figure 22 Electro Harmonix 22500 Dual Stereo Looper

In the second verse, there's a drum machine that is a Native instrument software emulation and was played with fingers and then quantized by hand. The sound was heavily distorted with the SketchCassette II and Soundtoys' Decapitator plugins (Ex 50). Live drums come in in the last part, where the song gets more dense arrangement wise. There was a drum take for the whole song, but drums, or any other instrument really, seemed to take away from the intimacy of the looped and reversed pianos.

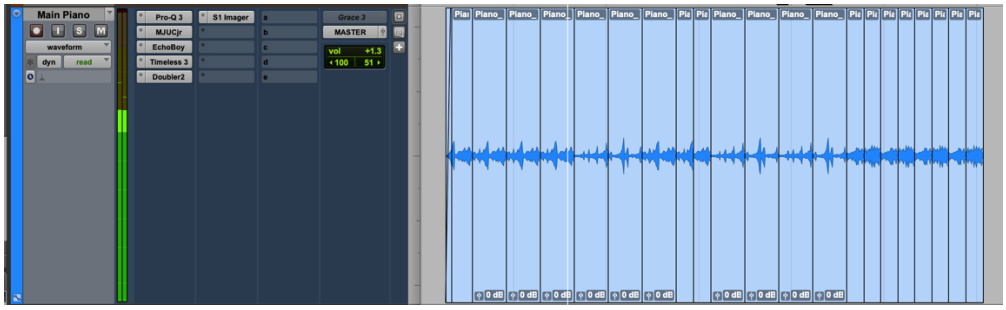

Figure 23 Main Piano track with its plugins and edits

The melody for the vocal parts in the end part came from a line that was heard in one of the reversed piano tracks (Ex 51). Strummed and picked acoustic guitars were also added as the choir singing pointed towards a more folk music aesthetic. Sequential Prophet 6 synthesizers were then added to move a little bit away from that aesthetic.

4.2.9 Calling

"Calling" was the first song we wrote using the Teenage Engineering's OP-1 sampler/synthesizer, which we knew was a tool a lot of the songwriters and producers we were inspired by, used. There was an idea to sample an older *Kaspar* song and we chose the song "My Only Cage" from our first album. A short sample from the intro was played with a smart phone on its own speakers, and then recorded with the OP-1. The sample was then cropped within the OP-1 and later recorded onto Pro Tools (Ex 52).

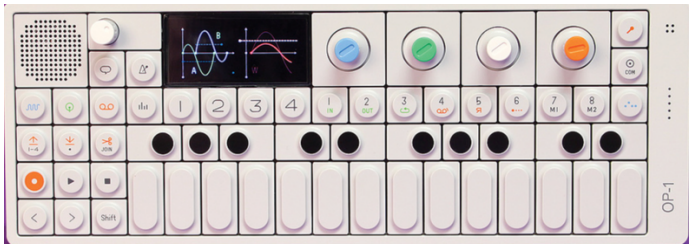

Figure 24 Teenage Engineering's OP-1 sampler/synthesizer

The sample was then heavily equalized to get rid of any low frequency that there was and to smoothen the very bright high frequency build from a smart phone speaker and the OP-1's microphone. We decided to alter the melody in the sample, that was originally played on an acoustic guitar and did so with the Melodyne software within Pro Tools (Ex 53). The sample was then repeated and the melody on the last sample was yet once changed with Melodyne. This melody became the intro and a riff that plays through the verses (Ex 54). The actual event of composing was a mixture of using a sampler, equalizer and Melodyne software. After this, piano chords were sampled and played with the OP-1. After some time, a chord cycle was found and recorded onto Pro Tools. This is how the song chorus was created (Ex 55). The melody for the vocal was created listening to these two parts (verse and chorus).

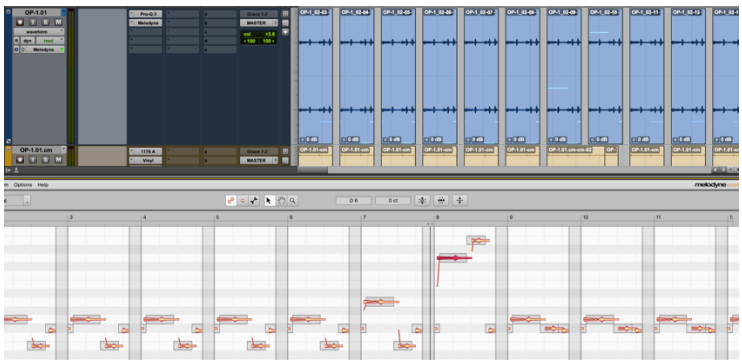

Figure 25 OP-1 sample with Melodyne pitch correction

There were drum and synth sounds played from the OP-1 sound library on top of these tracks to create the demo version (Ex 56). Tuomas Hakkarainen later played live drums that are present in most of the song. The drums in the verse were distorted (Ex 57) whereas the playing is very tom-heavy in the choruses. A sample of a 808 drum machine was also present in the choruses and a snare track was added to the end from one of the unused takes (Ex 58).

We felt like the song would need acoustic guitars and recorded several takes with them. Most of that playing was deleted and only left in the choruses. Some of them had several effects on them to create a more electric guitar type of sound. The song also got a new ending through some of the improvisation with the acoustic guitars (Ex 59).

4.2.10 Waters

The Waters was another song that started as experimentations with the Electro Harmonix 22500 looper. There were originally loops made with a metal plate. They had some treatment also in the looper itself but mainly distortion due to too loud incoming signal (Ex 60). These loops were not really creating much harmonic content, so they were used as a percussive loop after some pitch shifting and editing (Ex 61). There was also some noise in these loops that was cut and looped and had to be turned up by 30 decibels. This loop created a church bell like mood that was quite important in the end although it started as some random noise (Ex 62).

We then created loops by whistling. The first one was pitch shifted in the looper and it had severe feedback from the monitoring, which created an interesting short delay in the sound (Ex 63). This effect was only enhanced by adding Soundtoys' Little Alterboy and Microshift plugins (Ex 64).

Figure 26 Metal plate used on *Waters*

Then synth lines were played with Sequential Prophet '08 synthesizer. Another whistle sample came after this that was more like a little riff (Ex 65). It had a longing mood to it, so it was treated with the SketchCassette II plugin to make it more lo-fi and with Arturia's Rev Spring-636 for reverb (Ex 66). The bridge section in the song was composed and played with a grand piano and some of the original plate loops were pitch shifted and used there also (Ex 67). A beat made with Native Instruments' Kontakt drum machine samples was made in the end to create a more straightforward feel on top of the plate loop rhythms. Another Prophet track plays a melody in the outro of the song. It was treated with Baby Audio's Super VHS plugin to give it some space and to add some 1980s aesthetics to the production.

5 SUMMARY

The process of making an album has been very eye opening and truly inspirational. Although I have been self-recording from quite a young age, there has never been such a deliberate aim to employ it all the way from the writing stage. It became a method to capture something, no matter how insignificant it appeared, to start with and build on that. This process was fruitful every time we entered the studio. It was such an exploration each time to start a new song, that the inspiration didn't seem to run out. It is good to mention that more songs than the ones that made the album and this thesis, were written. The reasons they were left out varied from what made sense aesthetically to how many songs we include in this altogether. But nothing was left out because the quality wouldn't have been sufficient.

Like the artists in the field of music, also producers and engineers have had to adapt to massive changes in the business infrastructure, mainly due to the technological changes. The creation and production have been affected but so has the distribution and consumption parts of the chain. When thinking of the life span of recorded music it is obviously not so long, and it is full of technological advancement, so in a way this field is used to changes. It is anyhow dramatic for anyone who started 20 years ago. When not thinking too much about the past, there are massive positive effects that the technological advancement has brought. One can create fully professional recordings in one's bedroom. For our project, self-recording was mostly present in our use of time and attitude towards the writing and production process. Time wise, we were very effective and wasteful at the same time. We usually planned for a 6 - 7-hour session or sometimes shorter. However, out of those hours I would approximate that 2-3 hours were actual music making where we played or sang or did edits or arrangements. Most of the time went to thinking about the approaches, looking for sounds or just drinking coffee and having lunch. Having enough breaks and setting a good tone for a session really is the single event that I would point out as crucial. In self-recording, especially when there's no prewritten material like in our case, creating a good space for recording, experimentation and improvisation and trust is very

important. There were several moments, which could have felt a bit hopeless in some company. This reminds of the recording space as a workspace idea that Minchella has brought up. We did the recordings mostly in professional studio spaces of Sibelius Academy but still the atmosphere and community were more important than the acoustics of the space.

The way Anna Tsing sees assemblages, as "patterns of unintentional coordination", reminds me of the work environment we created. As Tsing declares:

> Thinking through assemblage urges us to ask: How do gatherings sometimes become "happenings", that is, greater than the sum of their parts? (Tsing, 2015, p. 23)

Interestingly, Tsing explains her concept of assemblage through music and polyphony. In polyphony, where autonomous melodies intertwine, she experienced having to follow several simultaneous melodies and pick out the moments of harmony and dissonance. I find it interesting that her musical experience of polyphony (and assemblage) comes so close to what we experienced while writing the music of this project. A lot of the time there were just multiple autonomous melodies and no instrument playing a chord base and these moments of harmony and dissonance happened. The interesting part is that also the way Tsing sees assemblages, reminds of the way we came to together in our workspace. It shows to me how our way of working, where a lot of the musical elements came as surprises for its creators and superseded the individual talent, is reflected in the music. (Tsing, 2015, pp. 23-24)

The artists and producers mentioned in this work have originally caught my attention through their music. In the process of this project, we weren't systematically copying their work or their methods. A lot of the similarities in our approaches were unintentional and were discovered after the work. Studying their working methods, even down to the equipment they used, brought an affirmation that we are at the heart of a certain style of music making and a certain philosophical approach to making art in general. With Justin Vernon (of Bon Iver), the common factor was using self-recording in the composition process. Although Vernon singles out the OP-1 as a device he uses, the closer examination revealed there was a lot of experimentation happening within the digital audio workstation, in this case Pro Tools. This was very similar to our process, where we looked for inspiration in different technological tools, including the OP-1, and brought these experimentations into the edit stage to create the structure we wanted. This is also related to Ethan Gruska's method of creating a collage of sound and then finding the interesting moments from that to develop further. The approach of 'embracing the mistakes' was also something that Gruska, and Blake Mills, have brought up. The unintentionality of a mistake is a surprise also for the creator and therefore has a lot of potential if there's an attitude towards being open to surprises. Amelia Meath, of Sylvan Esso, stated that surprises are always present in their writing and production process. It is a process that requires a lot of bravery. There is less certainty when the songwriting is open to everything and is waiting for

the surprises to happen. It could bring a lot of stress and maybe is not suitable for everyone psychologically. In our work, it felt like there was very little awareness of musical theory present when we were in the writing stage. There was an openness for anything to happen. Of course, having decades of experience in creating and playing music, meant that unconsciously there some basics of musical harmony present. This process allowed us to create melodies, harmonies, and soundscapes that we wouldn't have come up with if we had used our old songwriting methods of using a certain musical instrument, creating a harmonic structure, and then writing melody to that. At the end there was great satisfaction with our work, and it felt like we had really, and maybe for the first time, tested our limits as songwriters and music producers. Above all the methodological and technical approaches, there was an atmosphere of patience that allowed for all the mistakes and surprises to happen, just like Rick Rubin has capsulized:

> "When it comes to the creative process, patience is accepting that the majority of the work we do is out of our control. We can't force greatness to happen. All we can do is invite it in and wait it actively" (Rubin, 2023).

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APPENDICES

APPENDIX 1

Master Thesis Audio Samples, Examples (Ex) 1-69, .mp3 and .m4a -files

https://drive.google.com/drive/folders/1Bm_IZd18NqCm9--h3JYFsDU1mxDMvLI4?usp=share_link

APPENDIX 2

The full album, *Calling The Waters* by Kaspar as 10 wave -files, 24 bit, 44.1 kHz

https://drive.google.com/drive/folders/1XOAe6dAyS08d_zuAOTD4HHcKd7-WbMQp?usp=share_link