Oh Mama, Mama, the Creation of Four Songs, from Start to Finish

by Onyedikachi Ben

Sibelius Academy, University of the Arts Helsinki

Large project written component submitted for examination for the degree of Master of Music in Music Technology

Helsinki, fall 2022

Abstract

There is no one way to create a song from start to finish, no set rules on how to proceed, but there are tested and tried methods, which have produced results and are shared every day on the Internet by teachers, scholars, and individuals. In this thesis, I looked at my artistic process of making a song from start to finish as the songwriter, singer, recording engineer, mixing, and mastering engineer. I will be analysing four songs that I have written, arranged, recorded, mixed, and mastered. Compared to my earliest musical works which I wrote, arranged mixed, and mastered, I will be looking at the new songs and what has changed – the sonic quality, the choice of instrumentation, arrangement, mixing, and mastering. This project aims to convert implicit knowledge into explicit one. It also aims to document tacit knowledge learned by experimenting with music technology tools and resources. Writing this thesis has inspired me to reflect on my future goals.

Keywords: Songwriter**,** Recording, mixing, Mastering, inspiration, song, Mastering, Lyrics

Table of Contents

Symbols and Abbreviations

dB   Decibels

LUFS Loudness Unit Full Scale

EQ   Equaliser

Hz   Hertz

Daw   Digital audio workstation

kHz   KiloHertz

1 Introduction

As an avid listener of the radio back in the early 2000s and growing up in Nigeria, I often wondered what it takes to make a song. This is a question I tried to answer back in 2015 when I self-produced my first EP, in a bedroom I shared with my five siblings. I released my EP in 2016, but I was not happy with the outcome.

When I made my first recording, I had no idea how to use music-making tools properly. When I mixed, I just played the final mix on my phone and used my ears to measure the loudness and compared it to the loudness of other songs. When the songs were played back on various streaming platforms, they were quiet and lacked energy. They also had issues such as phase problems. I knew something was wrong at that time but did not know what to do to fix it. Over the years, I have developed a style of mixing and reflecting on the process as I create.

I have also developed a way to document the steps I took to achieve particular effects and distortion. This enables me to follow the same steps when I attempt to change something or correct a mistake – and also to remember in the future the steps taken to achieve specific effects, because some processes are complex.

This year I have attempted to answer the question "What does it take to make a song that plays on the radio or on the Internet?" I am reflecting on my process as a songwriter, a recording, mix, and mastering engineer. I am also reflecting on my artistic identity.

During the recording phase of the songs in this thesis, I had access to equipment and recording space to try out and to record in. I documented my process and learned to listen to my body to find the best time of the day suitable for recording, especially vocals.

During the mixing stage, I experimented with and used a varied number of processors. The mixing phases were often interrupted by my re-recording of sections like vocals or piano in the songs.

For the mastering phase, I followed the instructions by my teacher Miikka Huttunen and iZotope's online mastering resource by their director of education, Jonathan Wyner.

This thesis is divided into two sections. In the first section, I will talk about the songs, one by one, by discussing my philosophies of song writing, conceptualization, and inspiration. I am also detailing the recording, mixing, and mastering process.

In the second section I will discuss my older songs and reflect on what I know now. The key points of this thesis are to detail my process and compare the new songs with the old ones and to reflect on my artistic identity. What has changed? What did I do better?

Find the music files of the thesis here:

https://drive.google.com/drive/folders/1FgSuBJikBc9f2153HqLPSIcbzprEKiXs

2 On the philosophies of song writing: the case of Joni Mitchell

Joni Mitchell is a Canadian American singer-songwriter born and raised in Canada. Stacy Luftig in her book *The Joni Mitchell Companion,* highlights how Joni Mitchell's personality is reflected in the kind of songs she writes and how her songs are a commentary about the happenings around and inside her. For example, Luftig (2000) wrote:

> Talking to Joni Mitchell about her songs is rather like talking to someone you just met about the most intimate secrets of her life. Like peeping in the window on someone and then discussing with her what you have seen. Her songs are so personal. (p.7)

In addition to describing how personal Joni Mitchell's songs are, Tom Gerry in his article *I sing my sorrow, I paint my joy,* describes Joni Mitchell's songwriting and paintings as "predominantly self-expressive". "Her paintings are full of self-portraits, and her songs are dominated by personal stories, moods, feelings, opinions, and observations" (Gerry, 2011, para. 15).

Joni Mitchell also expresses her opinion on why writing from the first-person point of view is important. According to an interview Joni Mitchell had with Jeffrey Rogers, Joni Mitchell said: "I believe to this day that if you are writing that which you know first-hand, it'll have greater vitality than if you're writing from other people's writing or second-hand information." (Luftig, 2000, p. 256). I agree here with Joni Mitchell on the importance and significance of sometimes writing what I know about.

2.1 Why I write

Reflecting on why I write my own songs and the inspiration for my lyrics, I realized that my experiences, moods, feelings, and environment influence why I write and the words that I write. My songwriting process also documents significant life events, listed below, enclosed in brackets are my songs and the topics I sung about:

- The insecurity crisis in Nigeria has affected families and friends (**Oh Mama, Mama**).
- The end of a relationship and the realization that the social fabric of Helsinki compared to Nigeria where I grew up was cruel. (**Never Be a Clown**).
- My opinion about the Nigerian political class and the spread of propaganda to control the narrative even when the truth is evident (**Your Big Mouth**).
- A memory of sudden loss and mourning (**The Sun Don't Shine No More**).

2.2 Why dare to be vulnerable?

Why should a songwriter dare to be vulnerable and put personal stories out there in a song? In my case, the need to express myself and to say how I feel or felt far exceeds shame. Being vulnerable in a song is an avenue to let the listener in – to close the distance between the singer and the listener.

"I believe to this day that if you are writing that which you know first-hand, it'll have greater vitality than if you're writing from other people's writing or second-hand information" (Luftig, 2000, p. 256).

2.3 Social commentary

My songs are also commentary about the issues in the society I live in or have lived in. Since I do not have any political power except voting and mobilizing my friends to do the same, I can affect people's minds by writing my opinions in a song. I believe one must look around to see that there are many things one could be singing about. The will to change things often inspires one to write a song or invent something. Just like Joni Mitchell said:

"I'm too hung up about what's going on in America politically, I keep thinking, how can I sing 'night in the city looks pretty to me' when I

know it's not pretty at all, with people living in slums and being beaten up by the police?" (Luftig, 200, p.7).

On the social impact of her song 'Big Yellow Taxi', Mitchell explains that the song was about throwing open her hotel curtains the morning after riding a big yellow taxi, only to be greeted by a beautiful green scenery and a parking lot, which she says was a 'blight on paradise'. When the song was released in 1970, it tugged at the social consciousness of the people in Hawaii and became a regional hit. It took another 20 years for the song have an effect across the United States and people began to tear down parking lots to turn them into parks (Luftig, 2000. p. 253).

According to Luftig (2000), there is a relation between the words of a song and the actions and behaviour of the listeners. The lyrics of songs can inspire listeners to change their vision of the world.

In my opinion, a song can inspire positive change. When people are exposed to positive messages in a world full of negative news, it opens a door for new thoughts. I am hoping 'Oh Mama, Mama' tugs at the social consciousness of the people, and awakens their consciousness to the devastating effects of prolonged insecurity.

2.4 My style of song writing is informed by personal experiences, moods, feelings, and opinions

Although fictional characters or objects are added to the lyrics due to melodic or arrangement reasons, I write because I want to bring to light an opinion, feeling, or mood.

Commenting on her songwriting process, Joni Mitchell says she is more prolific with melodies than words, but she also often writes poems and sets them to music. Describing what it feels like to write songs, she said "It's like going into a trance; I sit down with a melody and reminisce, I find it easier to think about my feelings in retrospect" (Luftig, 2000, p.10).

In my case, to write a song, I usually come up with the melody on the guitar, then fill it up with words. When I do not have my guitar, I sing random words to any melody that comes to my head. Then I record the melody with my phone for later reference or to develop further. Recording the melody into my phone recorder has been a spontaneous way for me to capture my mood and feelings as they happen.

Expressing her views about what influenced some of her songs and lyrics, Joni Mitchell said of her song 'Both Sides Now':

> "I was reading Saul Bellow's *Henderson the Rain King* on a plane and early in the book Henderson the rain king is also up in a plane. He's on his way to Africa, he looks down and sees these clouds. I put down the book, looked out the window, and saw clouds too, and I immediately started writing the song" (Luftig, 2000. p. 252).

Personal events like reading a book while traveling on an airplane and looking out the window to see similarities between the words in the book and her environment inspired 'Both Sides Now'. The opening lyrics of 'Both sides now' describes clouds.

> *"Rows and flows of angel hair*
> *And ice cream castles in the air*
> *And feather canyons everywhere*
> *Looked at clouds that way"* (Mitchell, 1966)

2.5 Other singer-songwriter influences

My other singer-songwriter influences include Tracy Chapman and Bob Marley. I am drawn to Tracy Chapman because of the stories she tells in her songs are interesting. I often picture scenes and put myself in the place of the characters she sings about. While discussing Tracy Chapman's songs in a 1988 interview, Spin magazine described them as follows: "she sings her songs—songs about people in trouble, songs about people trying to find themselves, songs that look straight at you, open and forthright" (Spin, 2019. Para.2).

Although Tracy Chapman has a catalogue full of songs on various topics that are not political, her notable songs are about societal issues. For example, her 1988 song 'Across the line' is about the race riots in America, which up to this day is still an issue in the American society.

"Across the lines
Who would dare to go
Under the bridge
Over the tracks
That separates whites from blacks

Choose sides
Run for your lives
Tonight the riots begin
On the back streets of America
They kill the dream of America"

Her acoustic guitar melody as heard in her song 'Fast Car' (1988) was also a turning point for me when I started learning to play the guitar. Still today I play guitar by combining the melody and harmony simultaneously.

Bob Marley is also a songwriter who has influenced me with the type of lyrics he writes. One of his notable songs, through which I gained interest in him, is *'Redemption song'* (1980). David Vlado Moskowitz writes in his dissertation *Robert Nesta "Bob" Marley: Music, text, and context* (2001) that:

> Redemption Song" is the most powerful and personal of the tracks on the 1980 Tuff Gong/Island Records release Uprising. Powerful due to its message and personal because it is the only track Marley released singing alone with only his acoustic guitar for accompaniment. (p. 57)

Chapman and Marley are and were heavily influenced by the societies they lived in and the events surrounding their lives. They tell stories rooted in their realities, and often put themselves in the place of various characters and personas in society. To me, they are relatable and have heavily influenced the way I write, which is telling stories from my point of view.

3 Oh Mama, Mama – a modern-day protest song against apathy

3.1 Inspiration

'Oh Mama, Mama' is based on a heavy topic of loss, death, and desensitization of the individual and the community to recurring tragic events.

I wrote this to alert the individual and society about their ongoing desensitization. I used this song to alert and persuade, to cause the individual to reflect on the current state of society. Inspired by protest songs like 'Talking About a Revolution' (1988) and 'Bang Bang Bang' (1992) by Tracy Chapman, 'Oh, Mama Mama' is my modern-day response to the death of consciousness of society, especially the consciousness of the Nigerian people. Written in the year 2020.

3.2 Conceptualization

The song came to me in the spring of 2020 when I was playing just the A note on my guitar alone in my room. I thought about the growing insecurity in Nigeria as seen in various news on the Internet. I felt helpless, and expressing my helplessness in a song felt just right.

When I conceptualized 'Oh Mama, Mama', I was not looking to make it political. I mostly relied on how I felt and on the melodies that came to me when I was playing my guitar. I am hoping by the time it is released, people will find it socially relevant, or even better – I hope the society has improved.

In the book *Music Production: For Producers, Composers, Arrangers, and Students,* Michael Zager writes about picking songs that are socially relevant. Zager (2011) maintained that:

> Socially relevant does not necessarily mean writing about political issues. Country-music lyrics generally reflect the everyday values and concerns of ordinary people. Many hip-hop lyrics are political in nature, while pop lyrics often deal with relationships that change with the evolving mores of society. (p.58)

3.3 'Oh Mama, Mama', lyrics and song structure

The structural arrangement of 'Oh Mama, Mama'

Intro

Aminor- Aminor - CMajor -CMajor

Verse 1

Oh mama mama
Oh mama mama
What's going on?

I can't stop the rain

I can't stop the rain
What's going on?

We used to be concerned,
and cried when someone died
Why don't we care anymore?

Pre-chorus

Oh we've come so far
We have built up high walls around our hearts
Ah ah ah ah ah ah ah
Ah ah ah, ah aaaah

Chorus
Where is your heart?
There should be some sounds left inside
Where is your heart?
We can fight for all
Where is your heart?
Don't just zombie along with them
Where is your heart?
Don't just zombie along with them

Verse 2

Oh mama mama
Oh mama mama what's going on?
We watch them take our lives
We leave them in God's hands
They bend us over and over again

Pre-chorus 2

Oh we've come so far
We've got used to not feeling anything
Ah ah ah ah ah ah ah

Ah ah ah, ah ah

Chorus
Where is your heart?
There should be some sounds left inside
Where is your heart?
We can fight for all
Where is your heart?
Don't just zombie along with them
Where is your heart?
Don't just zombie along with them

Bridge
We can't live like this, we can't live like this anymore
We cannot live like this, we can't live like this anymore!

Chorus
Where is your heart?
There should be some sounds left inside
Where is your heart?
We can fight for all
Where is your heart?
Don't just zombie along with them
Where is your heart?
Don't just zombie along with them

Outro
Oh mama, Oh mama
Oh mama, Oh mama

Oh Mama Mama — by Kacii Eleven

Intro: Am Am C C

Verse 1

Oh mama mama
Oh mama mama
what's going on?
I can't stop the rain
I can't stop the rain
what's going on?

We used to be concerned
and cried when someone died
Why don't we care anymore?

Pre Chorus
Oh we come so far
we have built up high walls
around our hearts
Ah Ah Ah Ah Ah ah Ah
Ah ah ah ah ah

Chorus
Where is your heart
There should be some love left inside
where is your heart?
we can fight for love
where is your heart?
Don't just zombie along with them
where is your heart?
Don't just zombie along with them

Verse 2
Oh mama mama
Oh mama mama what's going on?
we watch them take our lives, then
leave them in God's hands
we just live half alive

Pre Chorus
Oh we've come so far
we have built up high walls
walls around our hearts
Ah ah ah ah ah ah ah
Ah ah ah ah ah

Chorus
where is your heart?
there should be some love left
inside
where is your heart?
we can fight for love
where is your heart?
Don't just zombie along with
them
where is your heart?
Don't just zombie along with
them.

Bridge: Dm
we can't live like this
we can't live like this anymore
we can't live like this
we can't live like this
anymore!

Outro
Oh mama mama
Oh mama mama?
what's going on?

→ Oh mama mama
Oh mama mama what's going on?
To defeat the enemy
and stop the wicked men
one has to truly care

3.4 The recording process

3.4.1 The acoustic guitar

The first recording of the acoustic guitar was done at my home in Malminkartano, Helsinki, in a shared student apartment in 2020. I recorded my Fender FA 125CE electroacoustic guitar using a Rode NT1-A microphone by placing it a few meters away from the sound hole. I also treated the room by placing blankets on the floor, my curtains, and clothes on hangers around the wall. This makeshift recording space was used because it was during the Covid-19 lockdown period when we could not use the school studios.
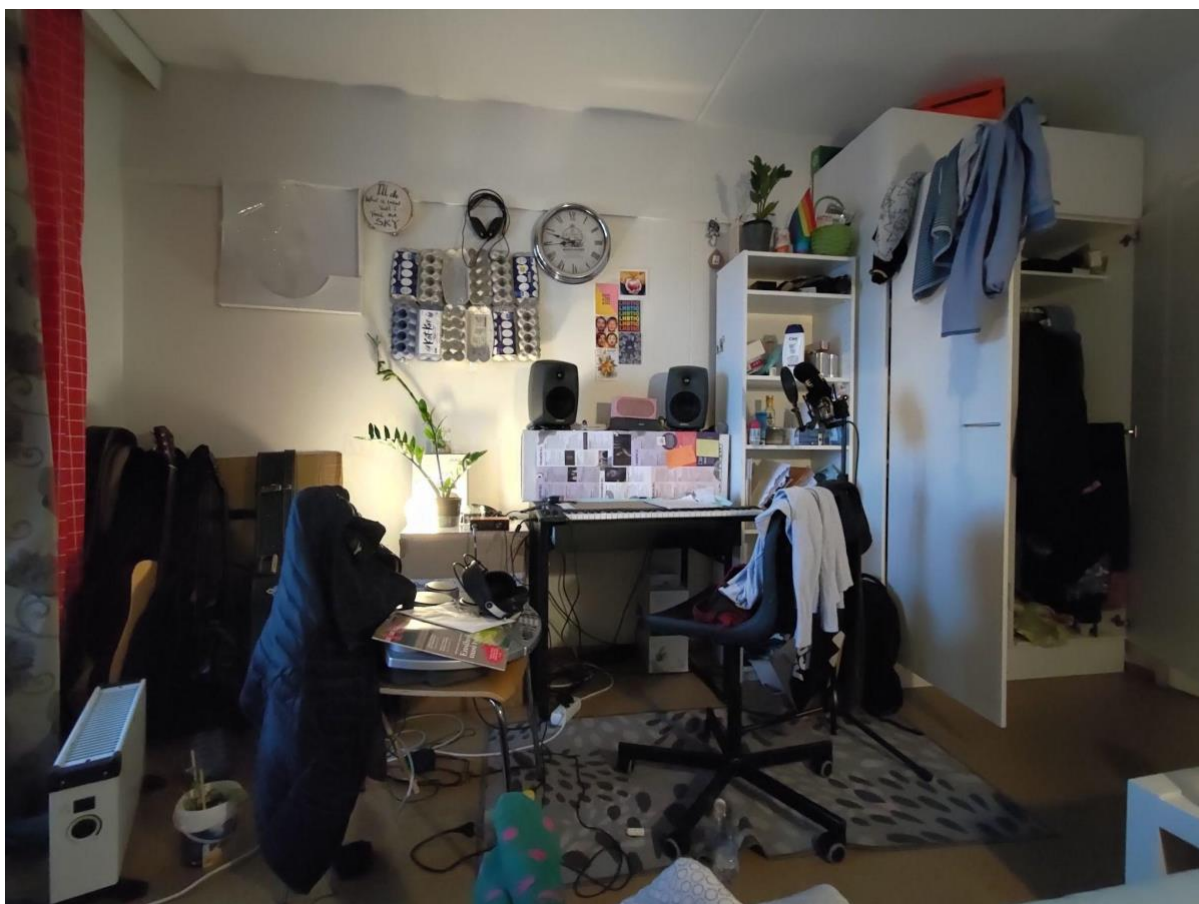
An image of my student room in Malminkartano in 2020

An image of my student room in Malminkartano in 2020

3.4.2 The second recording of the acoustic guitar

I re-recorded the acoustic guitar in the year 2021 because, the initial
recording did not align rhythmically with the drums. The second recording
was made by using two microphones (Neumann KM 184) positioned on the
Left and Right sides of the guitar as seen in the photo below. I experimented
with the positions of both mics in relation to the body of the guitar to get a
sound that was not boomy. I adjusted the gain on the microphone preamp to
around -32db. This was to make sure that the recording did not clip. The
recording of the acoustic guitar was a better sound than the first because it
was in tune and synchronized with the drums and other elements of the song.

Neumann KM 185Microphone placement for the second recording of 'Oh Mama, Mama' semi acoustic guitar

3.4.3 Recording vocals

Just like with the acoustic guitar, the initial vocal takes were recorded at home in my Malminkartano student apartment. I used the Rode NT1-A condenser microphone connected to M-Audio pre-amp.

Challenges of recording vocals at home:
● I only recorded at daytime when my roommate went to work. I also paused whenever there was a car or tractor roaring outside.
● The M-Audio audio USB audio interface became faulty, and vocals became noisy. I had to replace The M-Audio with Focusrite Scarlet solo.

3.4.4 The second recording of vocals and trying three different microphones

Image of Sennheiser e965 and Neumann TLM 102 Microphone placement for the vocal recording of 'oh Mama, Mama'

I re-recorded the lead vocal in Studio Max at the Sibelius Academy in Musiikkitalo. I used Neuman TLM 103 microphone connected into RME Fireface UCX II audio interface, and then into my computer. I also tried out Sennheiser e965. I was not sure what would be the best microphone for my voice. The Rode NT1-A translated my voice considerably well for me, but I wanted to try other microphones that might fit my vocal range.

The Sennheiser e965 is a condenser microphone that is intended for stage performance amplification. Recording with the Sennheiser e965 sounded fine, but I realized it was safer to record with a microphone made for a recording studio environment since those types of microphones were accessible to me. I needed a studio condenser microphone to capture a wider range of frequencies and the reflections of my voice within the acoustics of the studio.

I have an Alto voice, but I can also sing high notes. I also tend to sing loud and pronounce most words with the aim of audibility and clarity. The Neuman TLM 103 can withstand extreme sound levels without distorting the sound. According to its specification sheet, the Neuman TLM 103 has a wide dynamic range of 132dB. "The TLM 103 has a slightly more modern voicing with a wide presence boost for frequencies above 5 kHz. Its very direct yet

refined sound is perfect for vocals, and solo instruments that pop out of the mix without effort." (Neumann, 2022. Para 3).

The recording made with the Neuman TLM 103 sounded warm and bright. It sounded natural like how I hear my voice. I decided to stick with the Neuman Neuman TLM 103 because of that.
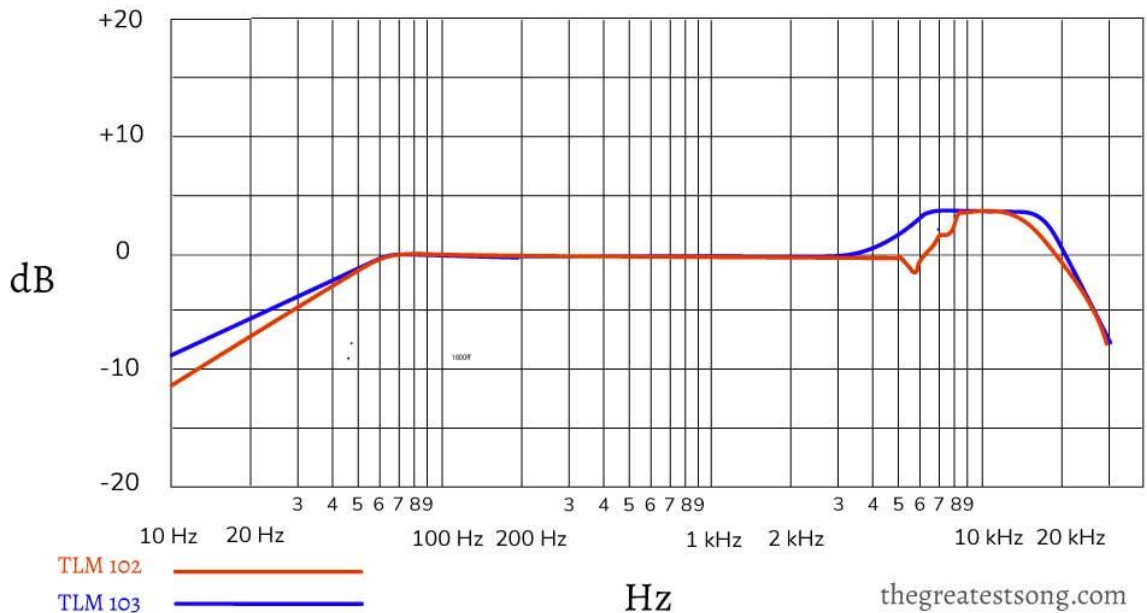
Image Frequency response of TLM 102 and 103 microphones (Schmitz, 2022)

3.4.5 Recording Plugin instruments

A big component of 'Oh Mama, Mama' contains plugin instruments. For the percussion, bass, and synthesizers, I recorded several plugin instruments, such as the stock plugins which come with Logic Pro X, and the third-party ones. I played the melodies and the rhythms on my Novation Launchkey keyboard connected via USB to my computer.

Picking what sound from the plugin synthesizer to record was the bulk of the work. Selecting sounds also continued during mixing as I discovered that some of the timbres and textures of the sound did not fit the music.

Logic pro x DAW showing most of the tracks in the 'Oh Mama, Mama' record.

3.5 Mixing

3.5.1 Sonic goal

My sonic goal for 'Oh Mama, Mama' was for the words that I sing to be audible, and for the music to be energetic. I also wanted to keep the emotions of the voice, even though the rhythms of the percussion were a sharp contrast to the sad words of the song.

To make my artistic intent clear, which is for the singing voice to be understood, I employed the knowledge of processing, interpretations of visual sound levels, and audio editing to bring about my artistic goal for the song.

3.5.2 Mixing 'Oh Mama, Mama' vocals

The question I tried to answer when mixing 'Oh Mama, Mama' were:

- Are the words in 'Oh Mama, Mama' audible?
- Did I mix the words in 'Oh Mama, Mama' to be audible in the mix?
- Did I retain the emotion in my voice?

3.5.3 Mixing 'Oh Mama, Mama' during S-MT7 Mixing workshop 2

'Oh Mama, Mama' was one of the songs chosen to by my Mixing course teacher, Risto Hemmi to be mixed during his mixing workshop in the winter of 2022. Risto, and my classmates Joel Ward, and Aapo Lankinen, and I mixed the song individually. From the feedback gotten about their various mixes, I realised that:

1. The vocals were not the main focus for the team. Risto, Joel, and Aapo were more interested in the sound of the drums and bass compared to my mix, in which I wanted the listener to understand the words and what I was saying in the song.
2. From Risto Hemmi, I learned that the bass would sound better if I moved the bassline one octave up (+12) in the Piano Roll. He stated that the tone of the bass should be balanced, powerful, and warm. He also added that since I want the bass to sometimes serve as a melody instrument in some sections, especially in the chorus, using only a bass tone that is within subbase frequencies did not bring out the melody in the bass, and did not make the bass sing.
3. From the mixing sessions, I realised that I also had to pay attention to the kick: in Risto's mix the kick was consistent throughout the mix.
4. I learned that I could ignore all the above and stick to what I want.

3.5.4 The lead vocal

The lead vocal sits on top of the mix in this song. The aim was to make it present at all times. The lead vocal is the caller, while the background vocals act as the responders.

To make the lead vocal sit on top of the mix, I panned it to the centre and increased the volume. Volume automation also played a big role in balancing the mix. I raised the volume of the lead vocal when most of the instruments are playing, for example, in the chorus section. In the verses, the volume is slightly lower by - 1 or 2 dB.
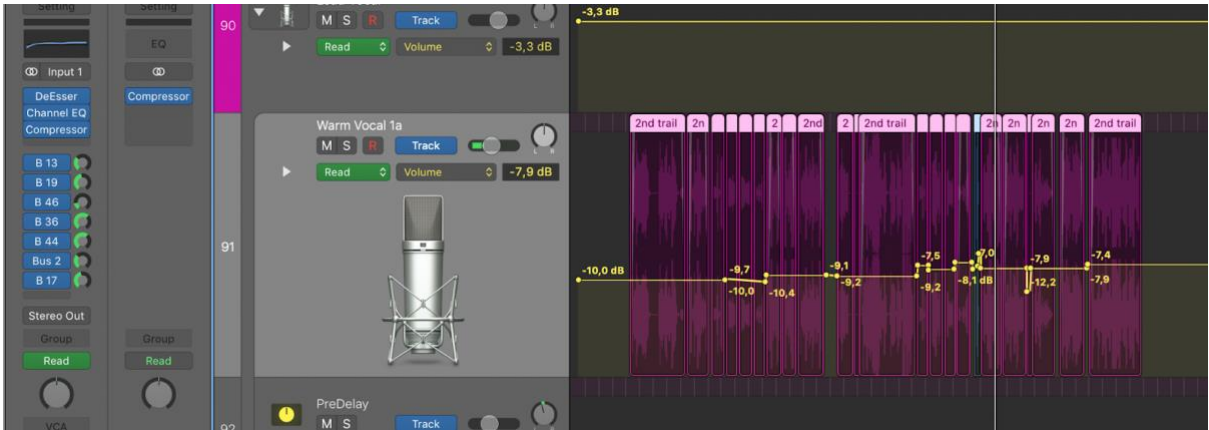
Image showing the volume automation in 'Oh Mama, Mama' lead vocals.

The Signal chain was for the lead vocals:
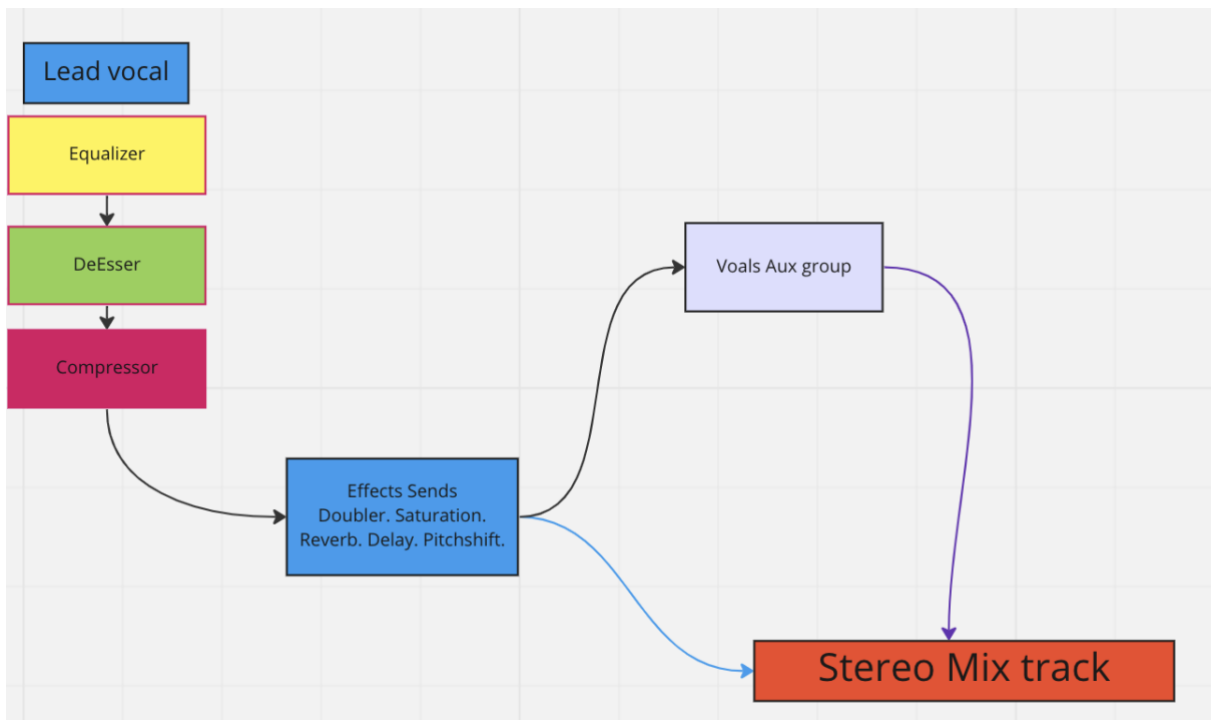
Diagram of my Lead vocal signal chain

Image of 'Oh Mama, Mama' lead vocal signal chain in Logic pro X

3.5.5 Background vocals in and 'Synth Choir' in 'Oh Mama, Mama'

'Oh Mama, Mama' contains 42 vocal tracks, all of which I sang. I was aiming for a choir effect with the numerous takes and layers of the backup vocals.

In addition to the background vocals, I recorded a plugin synthesizer that emulates the sound of a vocal ensemble. Since my voice cannot sing the bass or the low end of a full choir, I supplemented the background vocals with a plugin synthesizer ensemble (EXS24) and LAB's buy Spitfire Audio.

Image of Gospel Ensemble+ tracks in Logic pro x

To manage the 42 background vocals and make them coherent as one choir:

I sent them to an auxiliary group track, where I equalized and compressed them. This was done to make them sound like there were recorded at the same time and place. See the image attached below. Bus 10 is the backup voice (BVOC) channel:
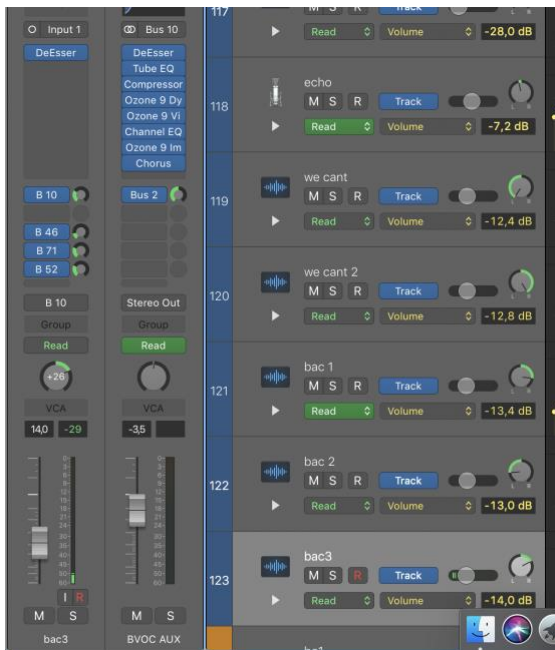
Image of the signal chain for the Background (BVOX) vocal effect group

To make both the artificial and natural vocals blend, the synth ensemble's volume was minimal, and I also sent the Synth choir tracks to the backup vocal aux channel. This is done to glue it together, and to hide the synth voice.

3.5.6 Bass

The midi notes for the bass tracks were played and recorded in the C1 range on the piano. This was arranged to provide the sub-bass frequency to the mix, but when I played it back to my teacher Risto Hemmi during our mixing classes, he suggested that the notes would sound better if they were raised to the C2 range on the piano roll. Risto said the melodic impact of the bass sound was missing.

Following the advice of Risto Hemmi, who also mixed his own version of 'Oh Mama, Mama', I edited the midi notes and made another arrangement where the bass was played on the C2 range on the piano roll. I also kept the C1 range arrangement so my mix would have a sub-base element. The result was a balanced mix where the bass was sometimes a melodic and harmonic instrument.

Picture of bass fingers and Minimoog plugin synths used to make the bass tracks

3.5.7 'Oh Mama, Mama' percussion

The mix of several drum sets, electronic drums, and synthesizers play a big role in this song. The fast rhythmic nature of the percussion arrangement is the element that makes the song sound alive like it is a party. Even though the lyrics are sad, the percussion serves as a sharp contrast to the warning cries of the singer. I drew inspiration from my Nigerian roots where funeral songs and church songs that should be sombre are often accompanied by percussion instruments such as drums, cowbells, shakers, and woodblocks.

The goal of the percussion in this mix was to create a sharp contrast from the lyrics.

3.5.8 The whole 'Oh Mama, Mama' mix

Individual tracks in the record are processed individually with plugins such as Equaliser, DeEssers, Compressors, and other processors according to taste.

Individual tracks were sent to effects groups where I applied compressors, equalizers, and suitable effects and processors to them. This is to glue them together. See the diagram below for my groupings.
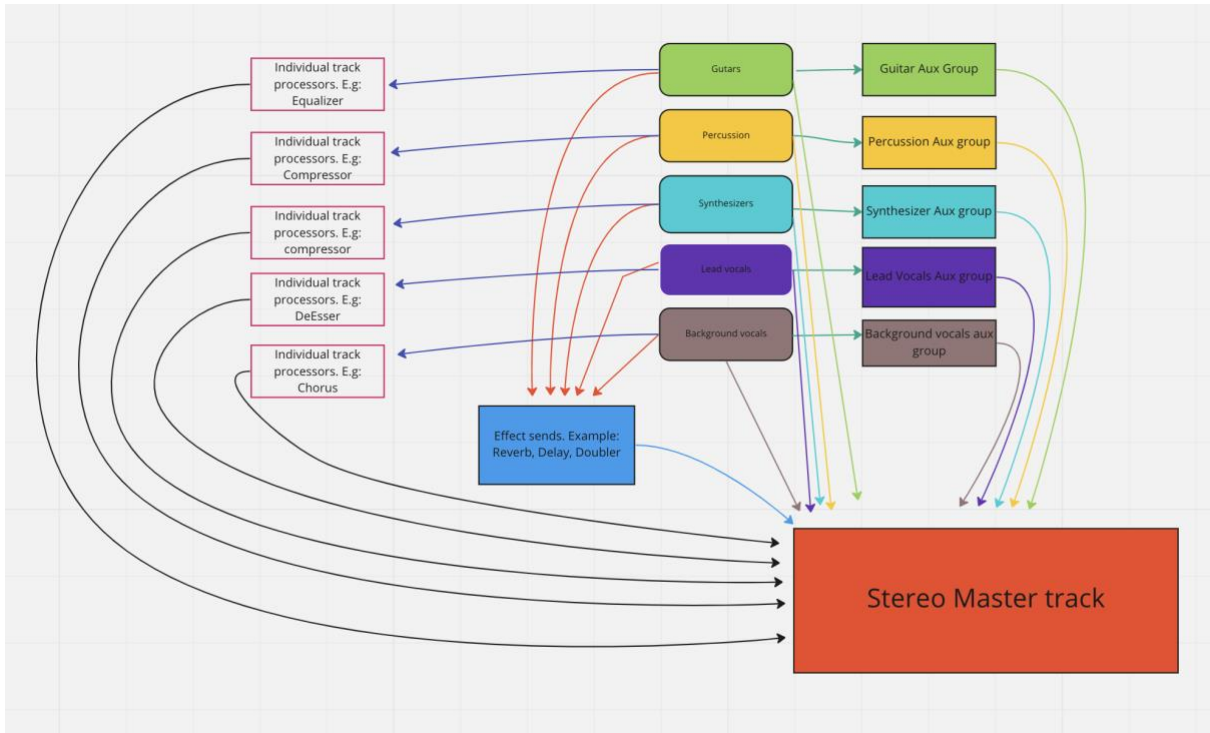
Diagram showing track routing of 'Oh Mama, Mama'

3.5.9 The final mix

After what seems like a hundredth iteration of tearing down and building back up, this thesis has forced me to stop tweaking the mix. Every time I listen to the song, I want to either raise the volume of the bass drum or adjust the reverb in the choir. For now, I am happy with the mix.
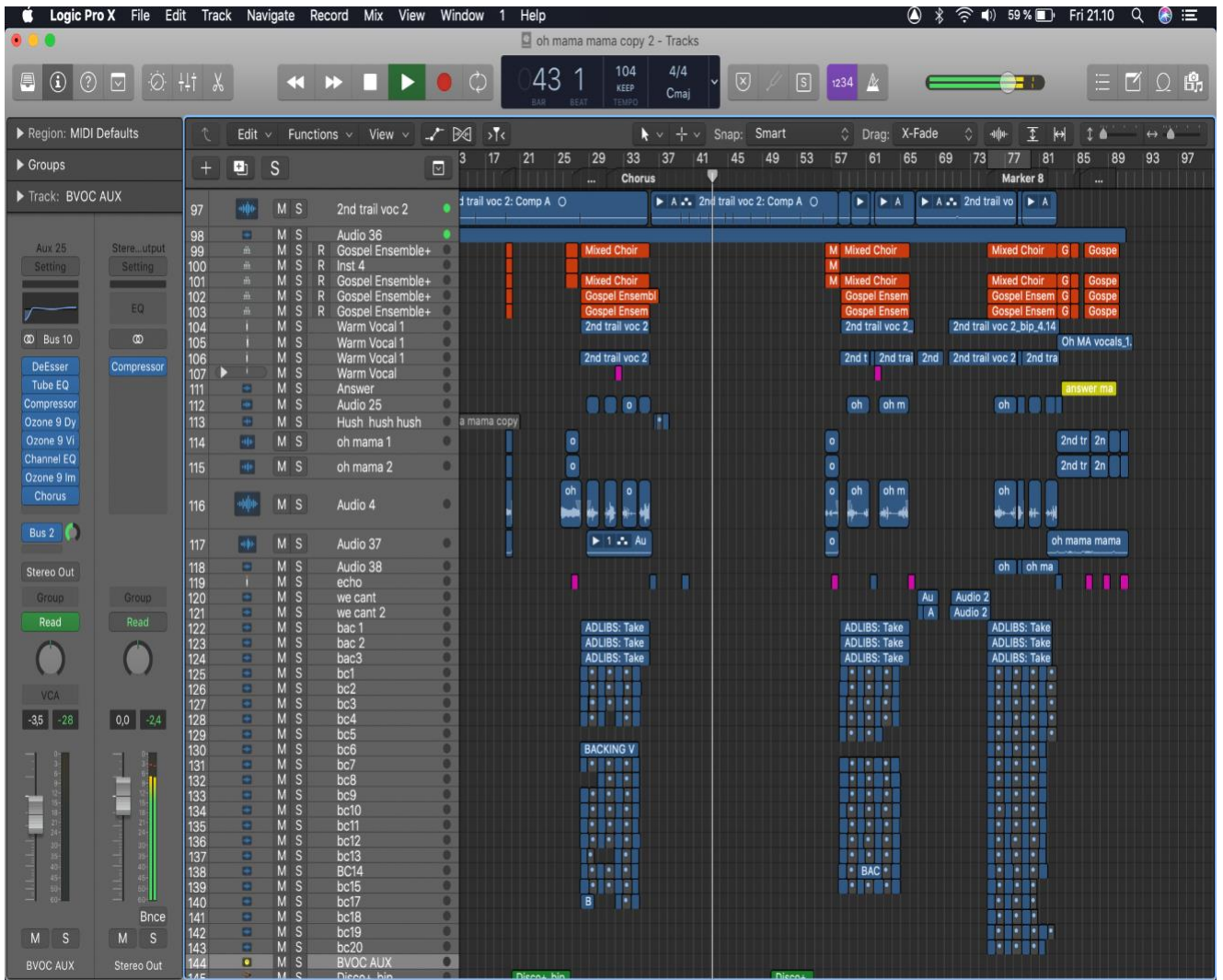
Image of the Edit window of 'Oh Mama, Mama' song in Logic Pro X, showing the
many the many lead and background vocals recorded and used.

4 The Sun Don't Shine No More

4.1 Inspiration

'The Sun Don't Shine No More' is a song I wrote in 2013. It is a memory of sudden loss and mourning.

I wrote this song when I experienced a hit-and-run involving a neighbour, and the realization of human mortality that followed afterwards.

4.2 Conceptualization

I wanted to express grief in a song because at the time of the hit-and run incident, everyone around was sad, and the victim seemed to have taken away the happiness and sunshine in the neighbourhood. The song was first penned down with the guitar accompanying it, but as years went by, I switched to piano whenever I practiced the song.

4.3 The arrangement

Notable in the vocal and instrument orchestration is the silence after the verses and before the choruses. This is used to signify a moment of silence for the departed and to also let the words sink in for emotional effect.

Lyrics:

BPM: intro 80, 65 verses and chorus

Key: F#m

[Instrumental and chordal progression, Intro]
A, A, A...A E F#m

Verse 1:

la, so, mi, fa
F#m , E, C#m , D
A , F#m C#m, D, Dm

Life was normal for you until that car made the wrongest move
Your family expected your return but were greeted with the saddest news
I don't know what it feels like to be dead but someday in time,
I will see you when I get there

Chorus:

A, E, A, E, D , A
But when I look around
And you can't be found
The sun don't shine no more, no more, no more
The sun don't shine no more

INSTRUMENTAL INTERLUDE
A, A, A, A, E F#

Verse 2:
Tears filled an ocean as your mother wailed for you
Friends filled your family home until there was no room
But I don't know what it feels like to be dead
Cause I'm still alive working for my daily bread

Chorus:
But when I look around, and you can't be found
The sun don't shine no more, no more no more
The sun don't shine no more

Bridge:

A, E, D, F#m, E, ...A , E, D, Dm   A
Things don't use to be like the way they use to be
Every day without you is so different, so bland
Where did you go we miss you so much
So much, so much, so much, the sun don't shine no... (piano falls) more....

4.4 The recording process

'The Sun Don't Shine No More' was recorded three times.

4.4.1 The first recording

The first recording of vocals and piano was recorded in the small piano room at Sibelius Academy. The recording was not used because the piano strings were buzzing in the final recording. This happened because the microphones were too close to the piano hammer and strings, and the piano lid was open. I used the Neumann TLM 103 on the right side and a Sennheiser MD 421 on the left-hand side. I made the decision to record the piano with a condenser and dynamic mic because my sound card only had one 48v input for one microphone. The second input was for an instrument, but I connected a dynamic microphone, nevertheless. The record had too much noise from the TLM 103, while the Sennheiser MD 421 produced a thin sound.

First Piano recording for 'The Sun Don't Shine No More'

4.4.2 The second recording

The second recording of vocals and piano was done in the big recording room at Sibelius Academy in Töölönlahdenkatu, Helsinki. This time I used two

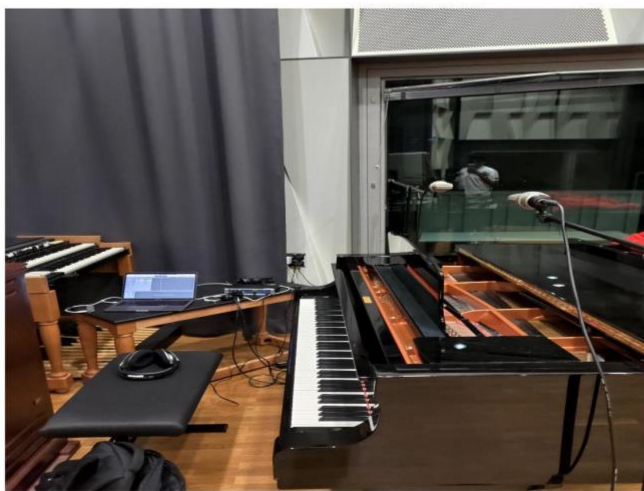Neuman TLM 103 microphones for the piano, placed above the top part of the piano, and the microphone stands were positioned on the Left and Right side of the piano. See the picture below.

Instrument: Yamaha grand piano
Microphone: TLM 103
Vocal Microphone: U87
Gain at -32db.
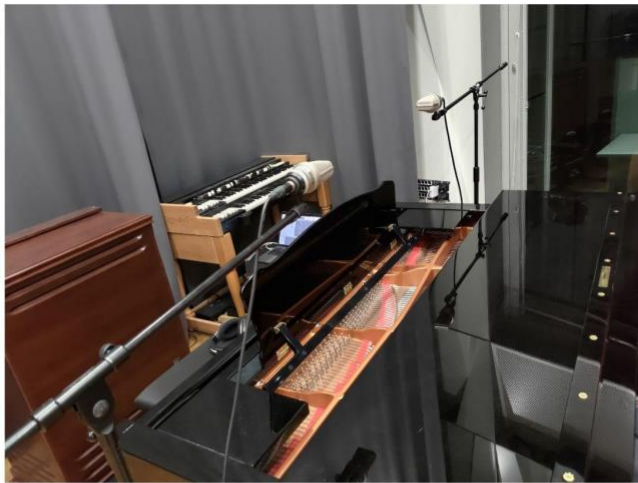
Images showing microphone placement on piano for the first piano take and the vocal recording of 'The Sun Don't Shine No More'

4.4.3 Open or close piano?

After trying the recording with the piano lid open, the outcome was close to the first recording because of the ringing and buzzing sound of the piano strings. I decided to record the piano with its lid closed. The quality of the sound was less noisy and without the annoying string buzz.

Image of TLM 103 microphone set up and closed piano recorded for 'The Sun Don't Shine No More'

4.4.4 Playing and recording plugin instruments – problem with out of tune notes and lag

In the Logic Pro X piano roll and midi engine, and depending on the plugin instrument, when you press a key too hard, on a plugin synthesizer it might sound out of tune. I found out a way to fix this by reducing the velocity, which controls the oscillation and gives you a controlled tone. I also had to manually drag and cut notes to fit the rhythm I had in mind.
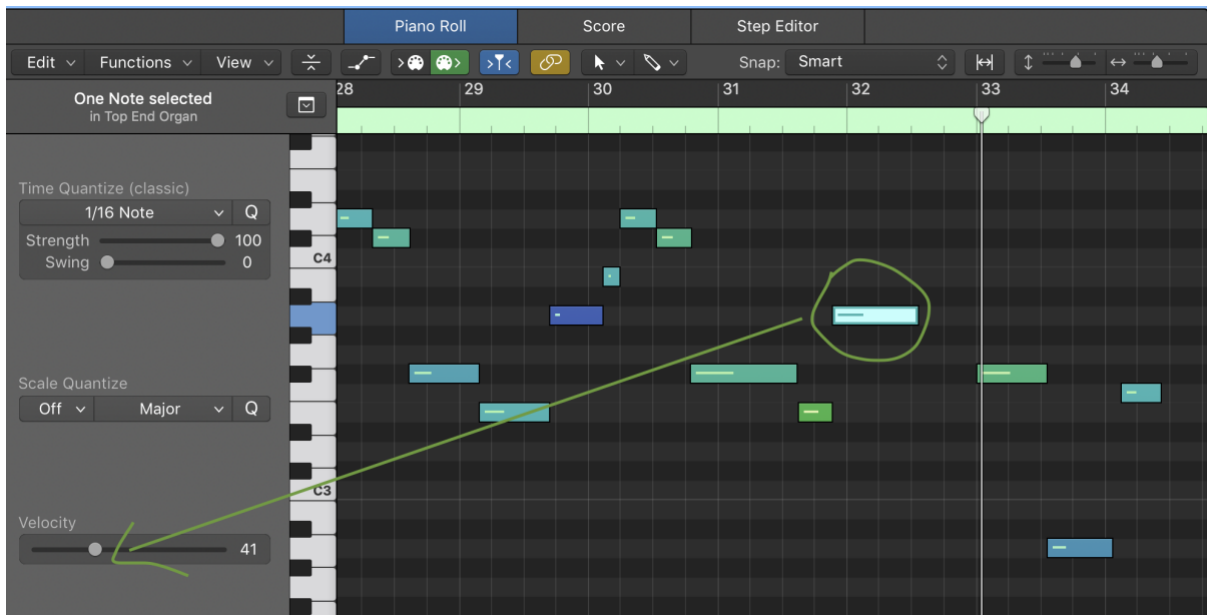
Image of Logic Pro X piano roll showing the velocity button

One big issue I faced when I played a plugin instrument through my midi controller was lagging. I noticed that when I increase the buffer size to less than 64 samples to reduce crackling and desynchronization, the notes were not recorded on time. This meant I had to select all the notes and move them to match the time and rhythm of the song. That was tiring to do all the time. To avoid the lagging problem, I made sure all the tracks were free of plugin processors like amps, compressors, and reverbs. My 8GB RAM computer and 256 Gigabyte storage space could not handle some of the instruments, especially when I recorded many tracks. Recording the plugin instruments first before other instruments like vocals, guitars, drums, and piano solved the lagging issues. With less tracks to contend with, I found out I could record with short buffer sizes like 32 samples and 64 samples.

4.4.5 Recording vocals

The first vocal recording was made with Rode M-Audio NT1-A, at my apartment in Harustie, Helsinki in the year 2021. The recording was of good quality, devoid of any unwanted noise. However, I did not use it for the final mix, because it did not express the solemn emotion the song required. I was not in a sad mood, and I could not react to the sadness of the lyrics.

4.4.5.1 Second vocal recording and tiredness

To get a vocal recording that expresses the solemn mood of 'The Sun Don't Shine No More', I recorded the vocals for the second time. I captured the vocals with a Neuman TLM 103 microphone, but there was a challenge: the recording sounded dull. Setting up, recording many takes of the piano first and then the vocals took a toll. I did not take enough breaks.

I ended up not using the second vocal recording. During the process of mixing 'The Sun Don't Shine No More' I noticed that I screamed too much in some sections of the song because I was trying to compensate for the low feelings I felt during my singing. I wanted my voice to sound brighter and light. The end-product was a sound of exasperation and clippings in sections where I held long notes. Sibilance was also abundant in the recording. In her article about recording vocals (Tornesaki, 2021. Para.1) wrote: "Recording vocals is especially stressful because the quality of the recording depends on many more factors such as vocal health, environment, mindset, being familiar with the sound of your external voice."

4.4.5.2 Effective voice recording in the studio, what to do

Emphasizing the importance of rest for a good vocal recording Tornesaki (2021) suggested that:

> Make sure you have a good night's sleep for at least two nights before your session. Maintaining good vocal health is also essential. I would recommend that you refrain from talking too much or practicing extensively two days before the session. Avoiding alcohol, coffee, and dairy products can be beneficial to your voice as they can cause dehydration, reflux, or excess mucus. And don't forget to drink plenty of water! (Para. 5).

In retrospect, I should have treated my body better because my voice is not a separate part of my body or another musical instrument I just pick up and play. This is something that the notable vocal scholar, Dayme Bunch

expounded in her book *The Performer's Voice: Realizing Your Vocal Potential,* which discusses best practices for vocal performers. Bunch (2005) writes: "As the singing voice emanates from the body of the singer, effective singing requires 'a coordinated integration of the whole body … the voice function is best when it is treated as part of the whole rather than isolated" (p.13).

I also should have limited my recording time to three hours because: "After three hours of singing, your voice will definitely be fatigued, and you may end up just wasting time and money trying to get a good take with a tired voice" (Tornesaki, 2021).

4.4.5.3 Recording vocals again for the third time

I re-recorded my vocals for the third time using the Nueman U87 microphone. There was no particular reason for switching to U87 microphone this time. I wanted to experiment and maybe get a different outcome. This recording was made in the big recording room at Sibelius Academy, right next to the piano. I did not use the vocal booth because it was convenient not to, and I already felt relaxed in the big open space. Moving my gear and setting up again would have disrupted that feeling.

In the third recording, I felt that I was able to sing better and control my mind from criticizing my own voice, so I created an atmosphere suitable for recording by learning from the first two recordings and planning ahead.

4.5 Mixing 'The Sun Don't Shine No More'

My desire for 'The Sun Don't Shine No More' is for it to carry a solemn emotion, for the vocals to be the centre and the piano an underlying, yet strong accompaniment.

My goal for the instruments were: A piano sound that was not thin or noisy, and a vocal that sounded powerful but not overwhelming.

Mixing references:

My mixing references include: 'Someone like you' and 'Hello' by Adele. 'That wasn't me' by Brandi Carlile.

4.5.1 Mixing piano

I approached the piano by not cutting off too many frequencies. See below a picture of my EQ on the introductory piano music and the piano bus. Controlling the low frequencies was what I aimed for.

I noticed that in Adele's song 'To Make You Feel My Love' (Adele, 2008) the piano was louder than the vocals. The piano carried the whole song, just like in 'The Sun Don't Shine No More'.

I decided not to cut the frequencies above 30.00 Hz and process as little as possible. When I experimented and cut frequencies above 30.00 Hz, the piano began to sound metallic and lifeless. With that in mind, I relied on volume automation and panning to draw attention to or away from the piano music.

Image of Piano EQ settings used for processing 'The Sun Don't Shine No More' piano tracks and bus

4.5.2 Panning and spacing of piano in the stereo field

My panning approach for the 'The sun don't shine no more' was:
For the verse and bridge where there were fewer vocal phrases, I panned the piano at -45 and +45 degrees to draw attention to the piano.

In the chorus where I have the lead vocals and backup vocals playing at the same time, I spread the pans to hard left and hard right to create more space for the vocals.

Image of piano tracks with the pan buttons showing my pan positions in 'The Sun Don't Shine No More'

4.5.3 Mixing Vocals

4.5.3.1 Lots of sss and ssh

When I mixed 'The Sun Don't Shine No More', I noticed the "ss" and "ssh" where very strong because of the words *sun* and *shine*. The "shh" sound bothered me, and it was challenging to get rid of it. Reading about how sibilance is formed in the vocal tract, I found out that consonants are pronounced forcefully, and one should avoid screaming into the microphone when recording. Also processing the vocals with DeEsser filter can reduce Sibilance. Cook (1996) describes how consonants like /f/ is formed. "The consonant /f / ("shh"), where the "source" is not the vocal folds, but turbulence noise formed by forcing air through a constriction" (Para. 2).

To control the "ss" and "sh" consonants, I used the inbuilt DeEsser in Logic Pro, but that did not control it. Instead, it made the word sun sound like "*un*", and the word shine sound like *"tchine"*.

I employed the use of a Waves Audio DeEsser, I also added Sibilance, which is an advanced DeEsser by the same company. Then I added RVOX, a special compressor made specifically for vocals, which made an improvement.

See the lead vocal chain below:

After the DeEsser, the "ss" sounds were reduced, but I still wanted them subdued. When I applied the second compressor, the "ss" resurfaced, so I used the Sibilance to smoothen it out, mostly focusing on just the "ssh".

4.5.3.2 The background vocals

The background vocals are a series of "uuhs" and "aahs" in a drone-like manner. I sang and recorded two vocals, one high-pitched and one low-pitched. The harmony complemented each other and served as adlibs for the lead vocal.

4.5.3.3 Mixing background vocals and the case of using four reverbs plugin

To produce a choir effect, I used four reverbs, a mix of long and short reverbs. In the reverbs, I turned down the pre-delay to 0ms. This was done to avoid tempo and rhythm issues.

In the process of mixing, I found out that some notes were out of tune, and this was audible in the whole song. Through Flex pitch in Logic Pro X, I corrected the out of tune notes. According to the Logic Pro user guide by Apple, "Flex Pitch allows you to quantize and edit the pitch of audio material. You edit the pitch of audio material by choosing the Flex Pitch algorithm. The contents of the audio track are analysed for pitch using a pitch detection process, and the results are plotted on a pitch curve" (Apple, 2022).

To edit my and correct a pitch, I dragged the notes which appear as horizontal blocks up or down the interface. I right click and move the mouse up to increase pitch, or right click and move the mouse down to move pitch downwards.
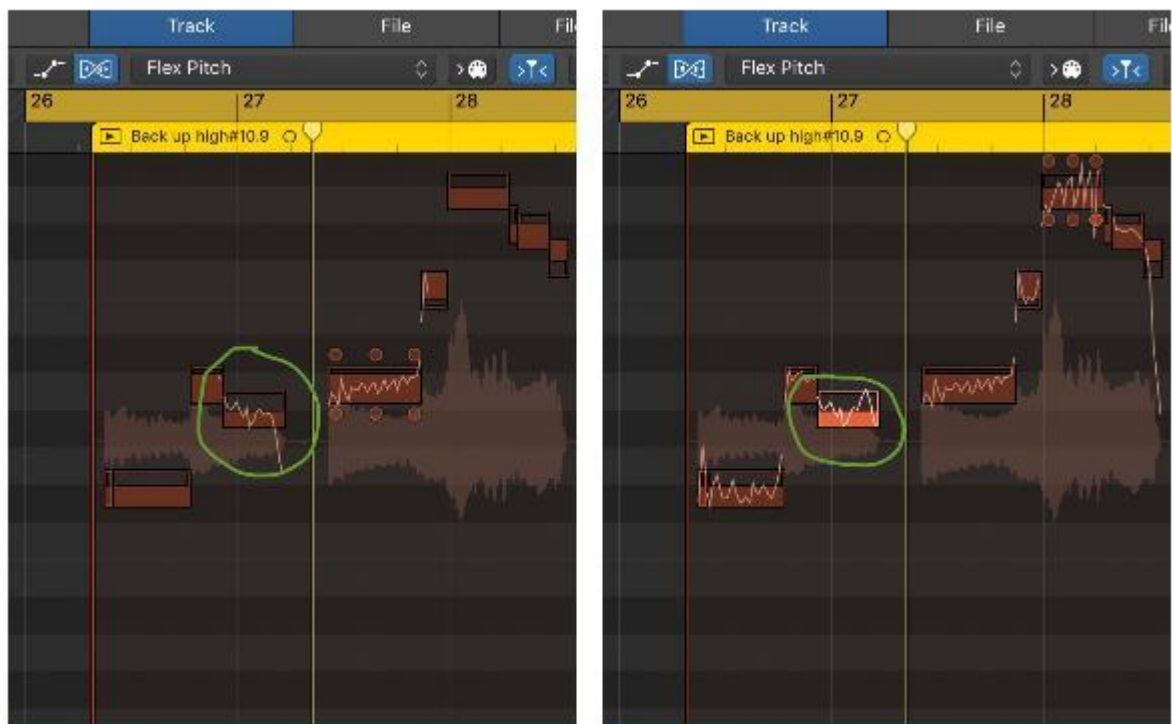
Before and after using flex pitch on a problematic note on the background vocals

4.5.4 The whole mix

The goal of the mix was for the emotions in the vocals to draw the listener in and put themselves in the situation of the loved ones left behind.
Did it sound like what I had in mind? Is the vocal the centre and is attention drawn to the piano when the vocal tracks are silent? I would say so.

5 Never Be a Clown

5.1 Conceptualization of 'Never Be a Clown'

In early 2020, I wrote a song called 'Never Be a Clown'. It was inspired by the ending of relationship I was in. The ending left me feeling like a joke, and to manage my anger and unusual feelings I wrote down all the less than pleasant thoughts that crossed my mind.

At first, the lyrics I wrote did not fit the melody I played on my guitar, which I had begun to associate with the song "Never Be a Clown". I spent days changing the words so they could be synchronized with the rhythm and chord progression of my guitar accompaniment. However, I made no progress.

According to Albert Einstein, insanity is "doing the same thing over and over again and expecting different results". Maybe I was insane at that time because I wanted words to fit desperately to the one melody I had been humming in my head.

Tired of trying to fit square pegs in round holes, I decided to change the chordal arrangement. I felt like I was making headway, but some words did not rhyme or make musical sense in the funeral pop style I wanted the song to be. I rewrote the lyrics while trying not to lose the original emotion that made me write the song.

The finished product has an upbeat tempo in the chorus but melancholic lyrics and slow tempo in the verses. The chorus echoes the song title "Never Be a Clown" repeatedly, and the verses clearly show that I was sad. The first verse is strongly worded, "You were a coward who wasted my time/ you made loving you feel like a crime".

5.2 Lyrics, chord progression and arrangement

Capo on fret 1 (Guitar, standard tunning)

Verse 1:

C
You were a coward who wasted my time
Em
    you made loving you feel like a crime
Am   **F**
I was a fool who made excuses for you
C
I walked around, around and around
     Em
On a cold autumn night, with tears in my eyes
Am
I kicked leaves, I kicked leaves
F
I was extra sad

Pre-chrorus:

G   **F**
I guess I got used to the cold baby
G   **F**
Got tired of trying to belong, baby,
 G   **F**
Too old for playing hot and cold baby
G   **F**
Too old for playing hot and cold

Whatever...

Chorus:

C
Down down down in my heart

       G
I have made a plan to never get back

          Am   F
With someone like you, with someone like you, with someone like you you
you
C
Down down down in this ditch

         G   Am
I have made a plan to never be a clown, to never be a clown, to never be a
clown, to never
F
Be a clown

Verse 2:
I looked for you in crowded places
And searched and searched strangers' faces
I still miss you, the tears are here to prove it

I sometimes wonder if you're doing all right
Sid you finally see the light?
Did you finally realize that we shouldn't have to lick love off of knives?

Pre-chorus:
The streets are not paved with gold baby
Got tired of trying to belong baby
Too old for playing hot and cold baby
Too old for playing hot and cold baby

Whatever!

Chorus:

Down down down in my heart
I have made a plan to never get back
With someone like you, with someone like you, with someone like you you you
you you

Down down down in this ditch
I have made a plan to never be a clown, to never be a clown, to never be a clown, to never be a clown....

Bridge:

   Dm   **Em**
Don't worry, I have lost faith in people long ago
   Dm   **C**
Don't worry, you're not special
   Dm   **C**
Don't worry, it's a give and take thing you know
     F
And I'm never gonna be a clown, never gonna be a clown, never gonna be

5.3 Recording of Never Be a Clown

The first recording of 'Never Be a clown' was done during the Covid-19 lockdown period of 2020, I felt relaxed and my creativity flowed at my makeshift home studio in a shared student apartment in Malminkartano, Helsinki, Finland.

5.3.1 Recording vocals

The vocals for 'Never Be a Clown' were recorded at my apartment in Malminkartano, Helsinki, using the rode NT1-A microphone. To reduce the echo of my room, I hung blankets and curtains around the wall, opened my cloth wardrobe, had a carpet and blankets on the floor, and Suitcases around. This was done so the room is not empty to reduce reverberations.
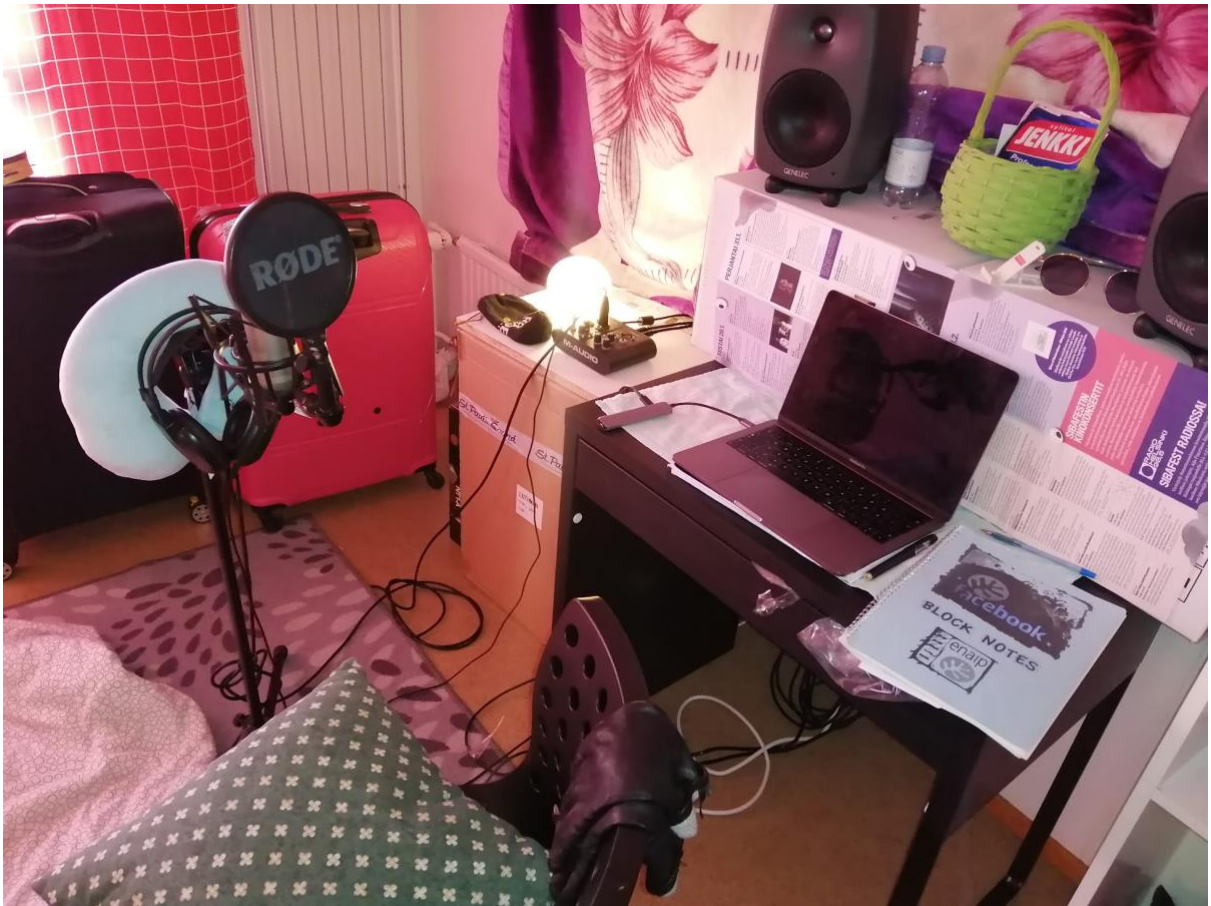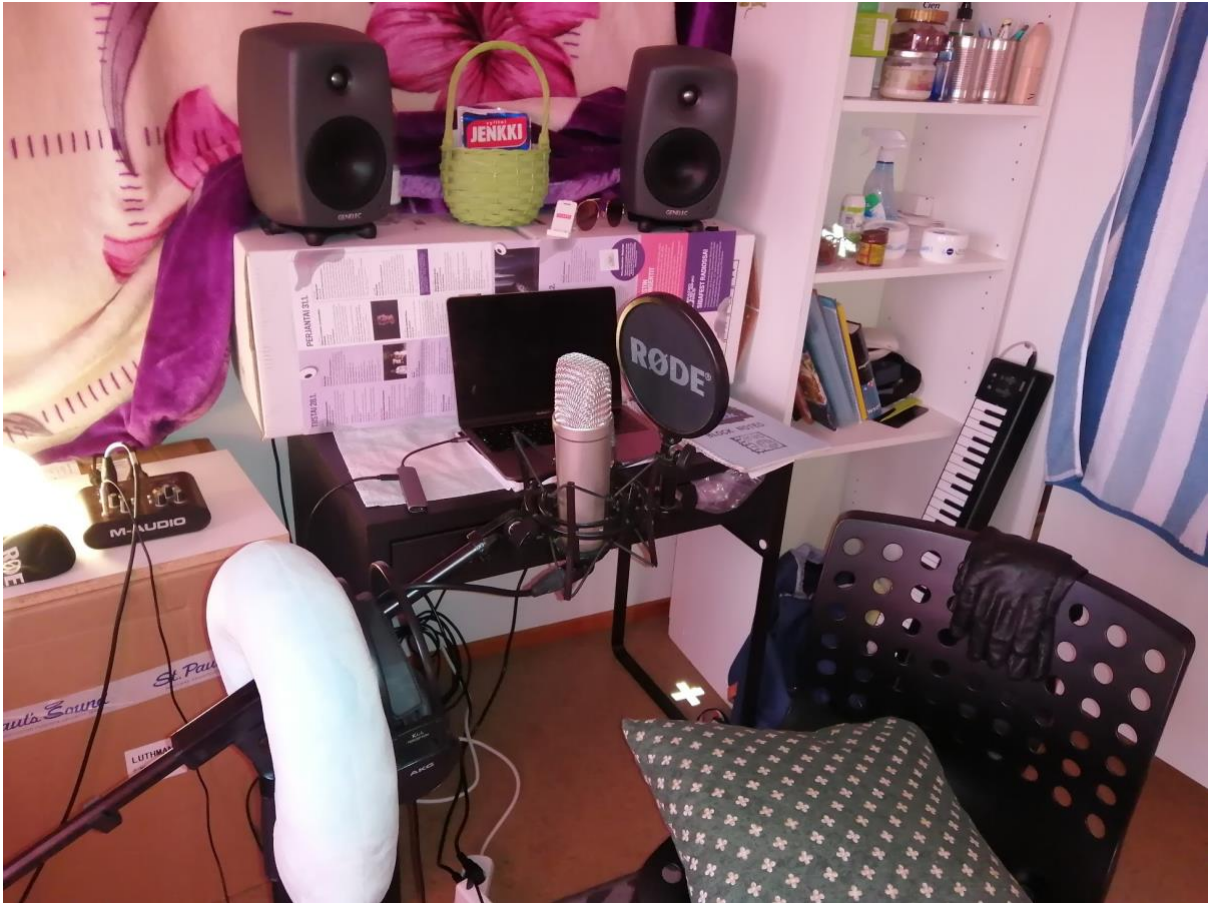
Pictured below:

Image of my vocal recording set up in my apartment in Malminkartano

My old apartment in Malminkartano

5.3.2 Electroacoustic guitar recording

I recorded the Fender FA series electro-acoustic guitar with rode NT-1A microphone, placed at about 25cm away from the guitar and the player (myself).
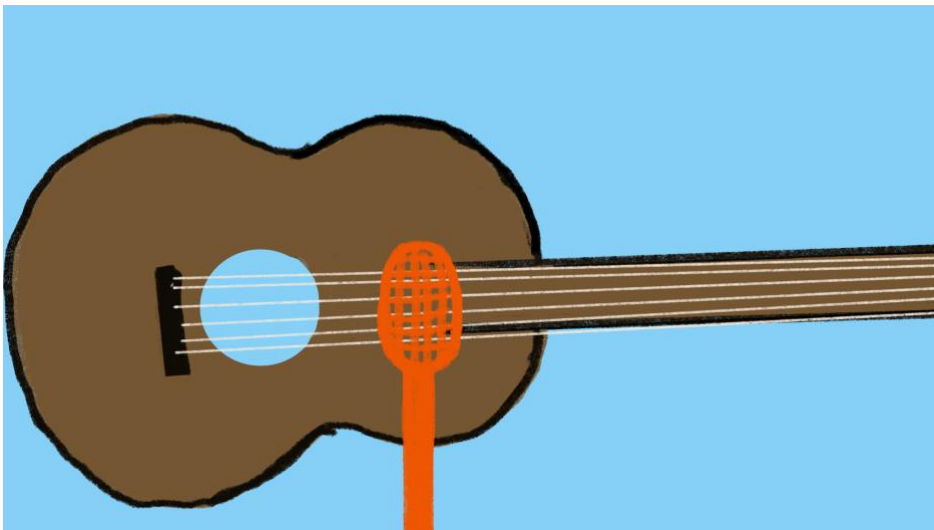

Image showing my microphone placement when I recorded the acoustic guitar

I also recorded the direct guitar sound using the Fender Fishman pre-amp pick up that came with the guitar.

So why did I record acoustic sound and direct sound? I wanted to capture the guitar sound without the environment sound or room reverb. I also wanted to capture the air, ambiance, and room sound too. Mike Duffy in his article '*Decoding the fender/fishman preamp*' (2022), explained that: "Having an acoustic/electric guitar gives the player the best of both worlds: The ability to get the most out of the instrument no matter the situation, opening up more avenues of creativity" (para. 5).

5.3.3 Recording drum set

At first, I played and recorded and arranged midi drum set instruments in Logic Pro X to build drum section of the song up. On the advice of my teacher Miika Huttunen to try out real drum sets, I employed the help of my classmate Mikko Saarinen to play the drums. I recorded Mikko playing the drums in the big recording room studio at Sibelius Academy, Helsinki. I recorded into a ProTools session in Studio Thomas, Sibelius Academy, Helsinki.

After about 15 takes and two songs later, Mikko and I were done for the day.

Image showing two C414 microphones to capture the room in stereo

Two Neumann U87 microphones positioned to capture the overhead sound in stereo
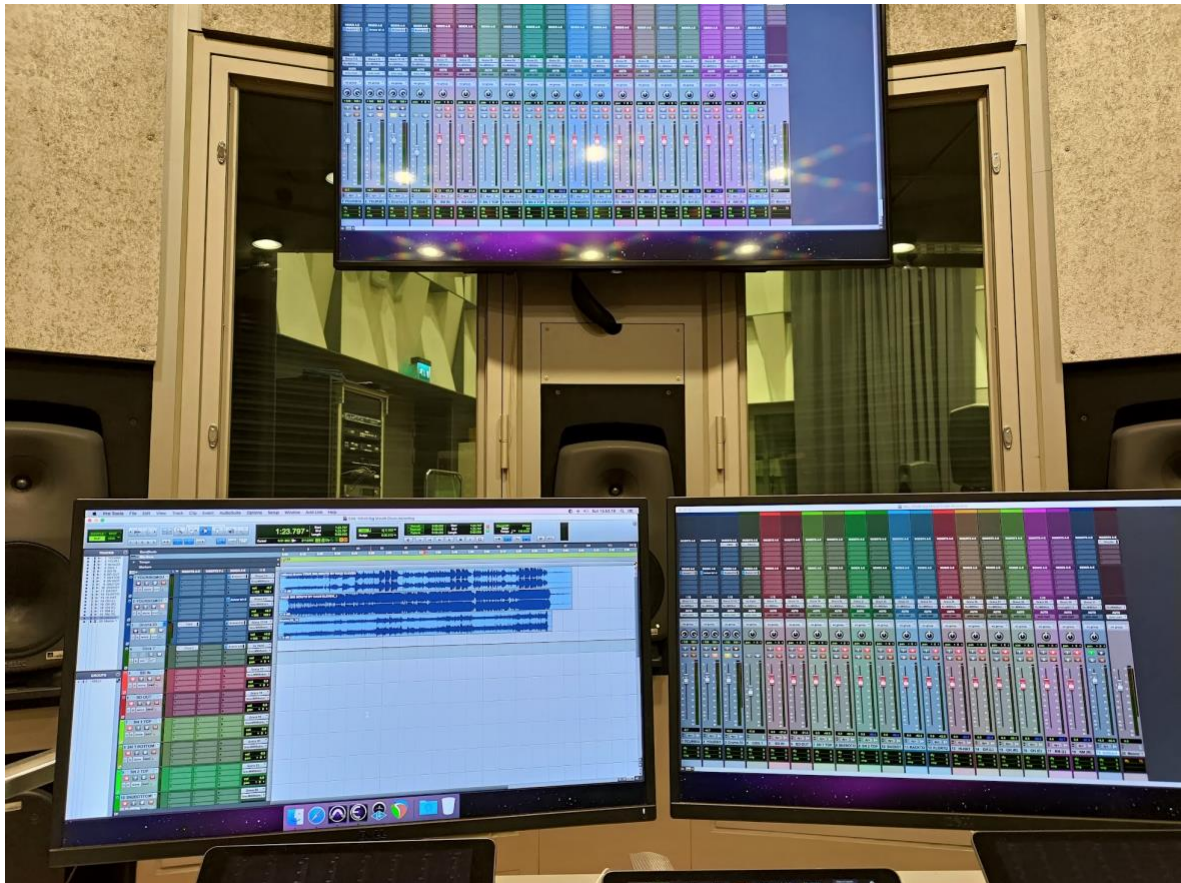
Mikko Taking Photos of the drum set up

Snare drum with Shure SM 57 Microphone placement on the side

Image from the drum recording session at big recording room, Sibelius Academy, Helsinki. Featuring: Dynamic microphone close to the drum to capture the hard kick drum hit, a condenser microphone placed a little bit away from the kick drum to capture the whole sound.

ProTools session for the recording of 'Never Be a Clown'

5.4 Mixing of 'Never Be a Clown'

Before and during the mixing stage, I listened to several music references such as 'Lost on You' by LP and 'Don't Stop Now' by Dua Lipa.

Edit window of 'Never be a Clown' in Logic Pro X

5.4.1 My goal

Never be a clown came with many challenges: many busy sections and 79 tracks in total. My goal was to get a coherent mix. What parts do I let go off, or reduce the volume of? How do I make it less overwhelming? These were the pertinent questions.

5.4.2 First listen

At the first listen after recording the drums and every other instrument, I noticed the overall mix was boxy and big. The tone of the song sounded like live acoustic music. The cause of the boxiness was the acoustic guitar recording and the live drums.

5.4.3 Turning an acoustic guitar into an electric guitar

I did not want the tone of the music to sound like live acoustic music. I passed the guitar sounds, both the NT1-A microphone recording, and the direct preamp versions through a plugin Amp designer plugin in Logic Pro x.

To turn the acoustic guitar into an electric guitar sound, and make it less boxy, and more controlled. I also cut some of the high frequencies from 2kHz.
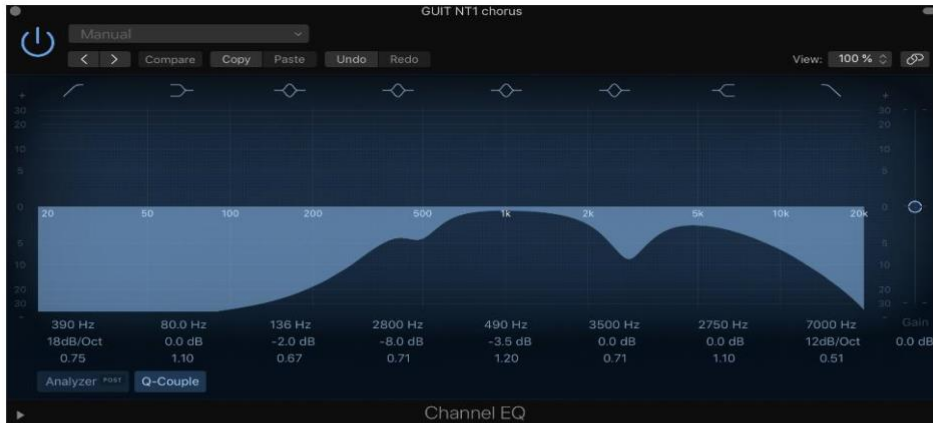
See the diagram below:

Image of acoustic guitar sound equalised and
passed through an Amp Designer plugin in Logic Pro x

5.4.4 Synchronizing background vocals with lead vocals

After a careful listen of the vocals, I noticed that in some sections the last syllable of some of the background vocals was not in synch with the lead vocals. Some background vocal parts had beginnings and endings which were ahead and after the lead vocal. This affected the harmony of the entire song.

The background vocal plosives were also not in synchronization with the lead vocal. Removing the plosive sounds in the background vocals helped with the general coherence of the song. In her journal article *"Technologized and automized vocals in contemporary popular music"*, Hughes (2015) pointed out that: "Although popping noises can be used effectively and purposefully as expressive techniques in some styles (e.g. beatboxing), plosive sounds also have the potential to interrupt the flow of lyrics and melody" (p.167). In this song, I did not need popping noises.

I had to pay attention to the tail ends. Using volume automation, I hid the "ss" and "shh" and tail ends or beginnings of problematic background vocals.

Image showing where a lead vocal ended before a background vocal.

To solve the problem of plosives, I used volume automation to gradually fade the background vocals before the lead vocal ends.

5.4.5 Editing drums

During the recording of the drums, I listened and adjusted the gains for each drum, especially the snares and hi-hat. We recorded many takes, and I had in mind which take was the best take – the one I was going to use in the song. Listening in-depth during the mixing stage revealed rhythm problems. Some drum hits were not in synch with the guitars. The guitars were easier to re-record, so I re-recorded the guitars.

Drum set up for recording "Never Be a Clown"

Choosing what drum takes to use from the multitrack drum recording was a challenge. After listening in-depth to all the takes, I decided to go with the take that has the least rhythm, attack, or hit problems. When I finally chose my takes, I paid attention to the beat of the drum. I employed the use of:

● A group in order to control the dynamics of the drums
● The metronome to count and edit the drums
● Cutting and joining parts to form a whole section
● Volume automation to hide out of synch notes
● Flex pitch to drag and move out of synch parts.
● I also introduced sample drums to make up for cut-out sections of out-of-synch drum plays.

5.4.6 The tone of the bass is an existential crisis

In 'Never Be a Clown' I played and recorded three plugin synthesizer produced bass tracks, each one with a different sounding tone. Their characteristics were: a bass sound that does not sound overwhelming but heavy. A bass sound that can be felt by the listener, a melodic bass that sings, and a bass with the natural string slap sound.

Based on the above deliberations, I chose three different sounds:
● A low sub bass sound;
● a synthesizer high pitched bass sound;
● and a slap bass sound where the sound of the swish and slaps on the strings can be heard.

A combination of all three produced a result that covered the low, middle and low-high frequencies.

5.4.7 Timbral Modifiers (vocoder effects plugin and vocal synthesizers)

In 'Never Be a Clown', synthesized vocals play a big part in the outro of the song. I manipulated my vocals to create a variation and a deviation from the same chorus, which is repeated twice in the song. I decided to distort the outro chorus. I did all this bearing in mind that to bring a fresh perspective to the listener, one must call their attention to different elements of the song. In my case, using vocal effects is a way to call attention of the listener. To create a different timbre and variation from my usual natural singing voice, I processed and synthesized my vocals. I employed the use of harmony and vocal synthesis using vocal transformers, synthesizers, and amplifier plugins.

The manipulation I carried out in the outro was aimed to give my vocals the vocoder effect and create a different timbre and texture for the sole purpose of distortion and variety. Hughes (2015) pointed out some objectives of applied effects on vocals:

> Looping and applied effects, for example, may combine to enable the
> contemporaneous transmission of multiple vocalizations and vocal

colours. In an instant, audiences may observe several musicalities in a seemingly complex and layered vocal delivery and yet one that emanates from and through a single voice. (p. 177)

(Liuni & Röbel, 2013, p. 73) defined a Vocoder as: "The coding of a voice's features in order to reproduce it synthetically." There are a variety of options to choose from when it comes to plugins created to simulate the sound produced by the vocoder. In my process of using the Alchemy plugin in Logic pro x, I set out to study how the vocoder works, and the similarities with the Alchemy plugin I used.

Describing how a vocoder works, Dickinson (2017) wrote in a journal article *'Believe'? Vocoders, Digitalised Female Identity and Camp* that:

> A vocoder will divide the vocal source signal (which gets called the 'modulator') into various frequency bands which can then be used to process a 'carrier' signal–the keyboard or guitar track–and render it more sonically complex. The result is an overlap where the instrument takes on the timbre and articulation of the vocals–including the coherence of the lyrics–whilst superimposing some of its own texture and a more emphatic sense of its tempered pitch, and thus its melodic priorities. (p. 334)

Relying on the vocoder simulation plugin, I set out to manipulate a version of the vocals in the ending chorus by feeding it into Alchemy. To achieve a robotic vocal sound in my ending chorus in 'Never Be a Clown', I brought a duplicate of the ending chorus into Alchemy, a stock plugin in Logic Pro x. See my process below:

To manipulate a version of my vocals, I created a software instrument track > chose Alchemy as the instrument > opened Alchemy > clicked on Advance > clicked on file > initialized preset (This is to bring the plugin back to a setting with empty oscillators) > clicked on oscillator or source A > Imported audio > clicked on keyboard controller, played the voice as an instrument on the keyboard. I used the sampled vocals as the main part to harmonise the lead vocal.
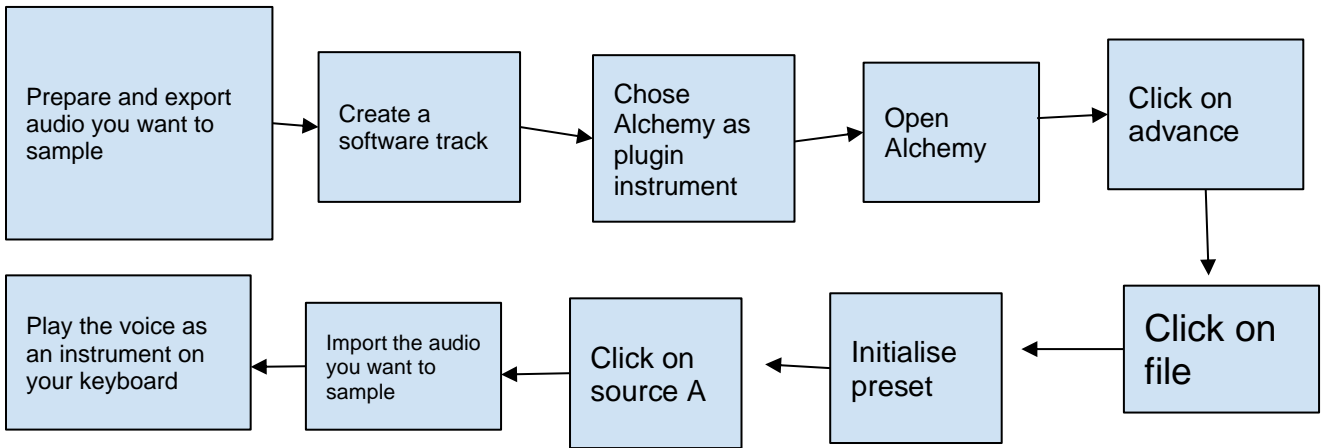
Diagram showing steps taken to produce a vocoder effect on my vocals

The end product of this process was a robotic sounding vocal similar to what a vocoder would produce.
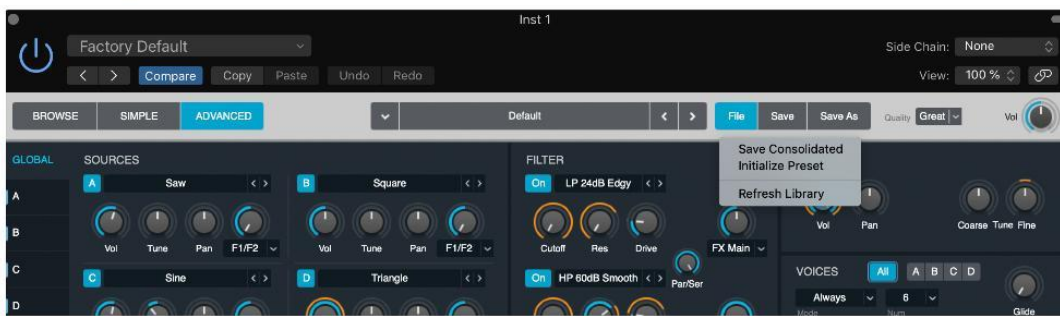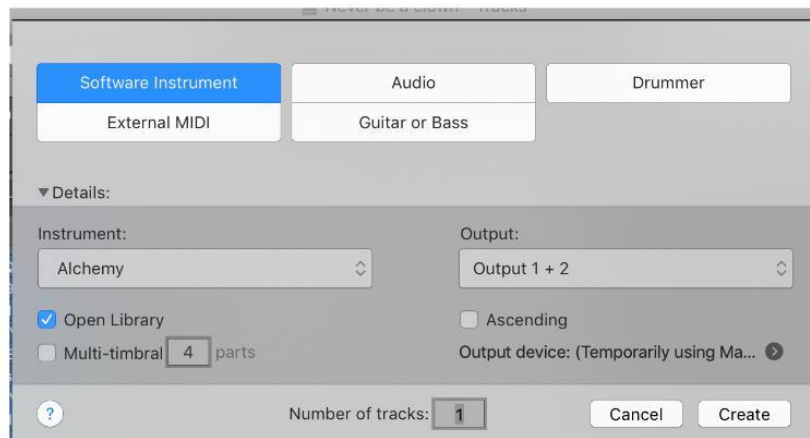

Image of Logic Pro x Alchemy and highlighted steps taken to produce a robotic sounding vocal

6 Your Big Mouth

Here is an excerpt score of 'Your big Mouth'

Score of 'Your Big Mouth'

6.1 Conceptualization of 'Your Big Mouth'

The idea to notate 'Your Big Mouth' and export the midi notes into a digital audio workstation was conceived nine years ago. My first foray into playing with midi was instigated by my thoughts of a fusion of Afrobeat and Electronic Dance Music. I explored a different way of writing music by first notating my instrumental parts into the Sibelius notation software. My reason for this was that I would be able to manipulate the midi notes and replace the Sibelius software low quality audio sound with higher quality sounds in any midi compatible digital audio workstation. I also did not have the opportunity to record a whole band or hire them. I imagined I could get a high-quality sound if I replaced the Sibelius midi sound a higher quality sound in a digital audio workstation.

6.1.1 The lyrics

The song was initially written about the effects of gossip, but nine years later, I felt that the lyrics did not match the type of stories I wanted to tell, and I should not be writing about gossip. I felt that the song could be more and could tell the stories of now.

6.1.1.1 The language of the lyrics

The words in 'Your Big Mouth' are a mix of Pidgin English and English. I borrowed from the Afrobeat style popularised by the Afrobeat legend Fela Anikulapo Kuti and the Nigerian way of speaking, which is often a mix of Pidgin English and standard English.

I was also inspired by the Afrobeat rhythm, as heard in the saxophones and congas and the 'Four on the floor' bass drum rhythm of electronic dance music.

When I wrote your 'Your Big Mouth' in 2013, the lyrics were as follows:

Idle man siddon, e come dey talk nonsense
Lazy girl siddon, na so she dey gossip
You no get work oga, wetin you dey find,
Trouble o, trouble

Your big mouth go show you one day
Your big mouth go disgrace you one day
One day

6.1.1.3 Rewriting the lyrics

In the year 2021, while experimenting with midi again, I recalled that I had notated a few songs from way back. Comparing digital audio workstation audio engine like fruity loops from the early 2000s to what is obtainable today, I realised that the sound engines and sound quality have improved a lot. It was a good time to try again.

I rewrote the lyrics of 'Your Big Mouth' because when I first wrote them, I was trying to sound more Afrobeat-like and the lyrics did not resonate with me. I was finding it hard to sing the song.

When I wrote a new version of the lyrics, I decided to keep the chorus, but I changed the verses, and the bridge. I shifted from talking about gossip to Nigerian politicians.

6.1.1.4 Lyrics of 'Your Big Mouth'

Verse 1:
Oh politician, you've got blood on your hands, all talks, no action just lies
Your words smell like something crawled inside you and died

Pre-chorus:

What are we gonna do with you
Gonna do with you and your big mouth, big mouth, big mouth

Chorus:
Your big mouth go wound you one day
Your big mouth go show you one day
Your big mouth go disgrace you one day one day, one day

Verse 2:
Nice house, big cars but the road looks like a dustbin, no shame
Killing, looting, stealing, diverting public funds while screaming in God's name

Pre-chorus:
You talk so loud and big
With nothing to show for it but
Your big mouth, big mouth, big mouth

Chorus:
Your big mouth go wound you one day
Your big mouth go show you one day
Your big mouth go disgrace you one day
One day, one day

Bridge:
Who is in the garden? A useless president
May I come and see him?
No, no, no, no
If you live in London, you may come and see him
Who is in the garden?
A useless governor
May I come and see him?
No, no, no, no,
If you rig elections, you may come and see him

Chorus :
Your big mouth go wound you one day

Your big mouth go show you one day
Your big mouth go disgrace you one day
One day, one day
Outro

6.2 Recording 'Your Big Mouth'

Apart from notating all the music parts/instruments first in Sibelius and exporting the midi files into the digital workstation Logic Pro x, I recorded live drums and vocals.

6.2.1 From notation to audio

The process of notating notes in Sibelius to exporting instruments parts to midi is outlined below:
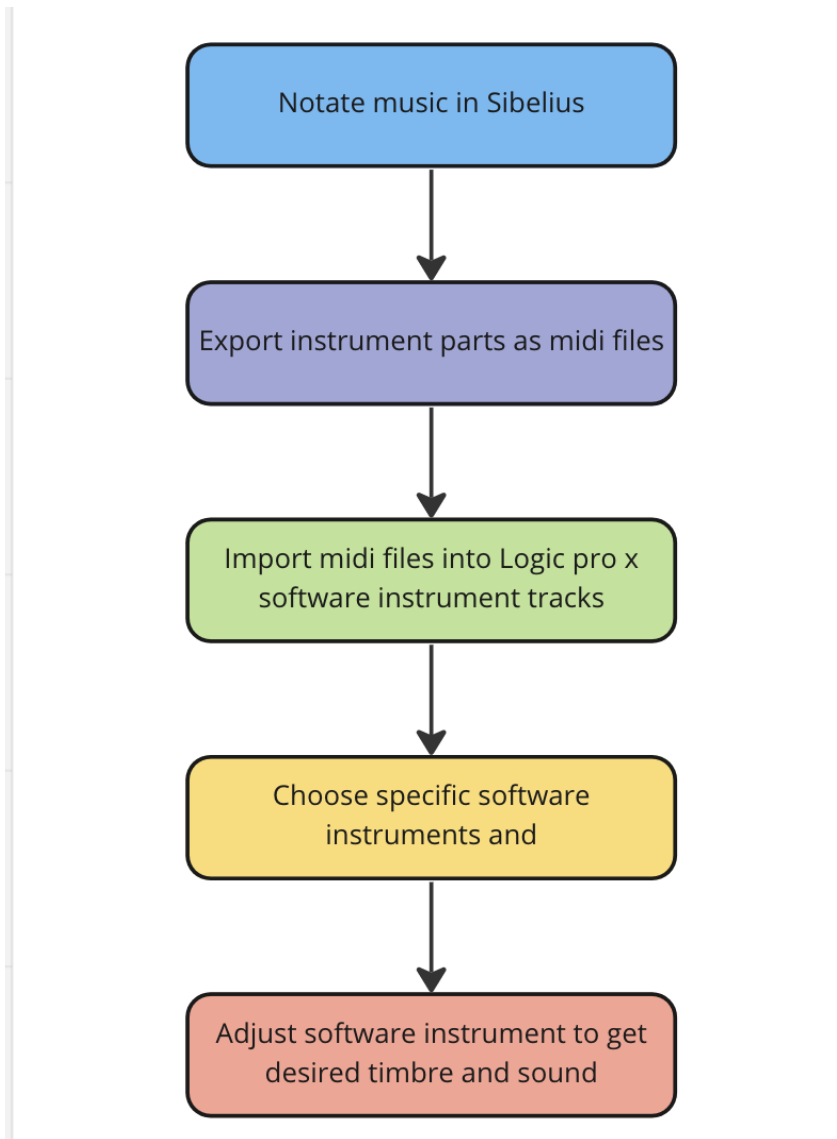
Diagram of my process from notation to audio

6.2.2 Recording 'Your Big Mouth' vocals: Trying out three microphones

Final vocal recording of 'Your Big Mouth' using the AKGC414

The final vocals in 'Your Big Mouth' were captured with the AKG C414 microphone. Initially, I recorded the vocals with Rode NT1-A, then I recorded another version with the Neuman TLM 102. The quality of both the Rode NT1-A and TLM 102 were good, but I realised that the mood of the vocals was dull and my pronunciation of some words was not coherent. To experiment with another microphone, I chose the AKG C414. For my voice, The AKG C414 was too bright in the high end at around 14800HZ. I fixed that with a DeEsser during the mixing stage.

6.2.3 Recording live drums to humanise the song

The midi instruments sounded robotic when they were unedited, and computer generated. To humanise 'Your Big Mouth' and make it less robotic, I recorded live drums and vocals to introduce the human element into the song because the midi drums were right on the beat and sounded perfect. Variations and a little imperfection were needed to humanise the song.

The drums were played by Mikko Saarinen using the same microphones and drum set-up as with 'Never Be a Clown'. Both drum recordings were made the same day in the big recording room at Sibelius Academy, Helsinki, Finland.

Mikko Saarinen Posing for a photo before we started the drum recording session for 'Your Big Mouth'

6.3 Afrobeat EDM? 'Mixing Your Big Mouth'

My objectives for the song were:

- The Four on the floor beat of the drums
- A heavy bass
- A syncopated Afro-beat vocals
- Call and response synthesizers

I envisioned a mix that had elements of electronic dance music and Afrobeat fused together.

To get a coherent and high-quality mix, I began by changing the timbre of the original Sibelius midi import tracks. For example, I replaced the midi

saxophone sound, which is the lead instrument heard in the bridge section of the song, an arpeggio plugin nsynthesizer generated sound, which was then bounced to audio.

Image of the Alto saxophone track in 'Your Big Mouth' project in Logic Pro X

6.3.1 The AKG C414 and the sibilance in my voice

The AKG C414 highlighted the sibilance in my voice. To remove excess sibilance, I processed the vocals with a DeEsser and equalised the high frequencies by making a reduction of -4db at 6400Hz and -0.2db at 12200Hz. This reduced the sibilance and harshness in the vocals.
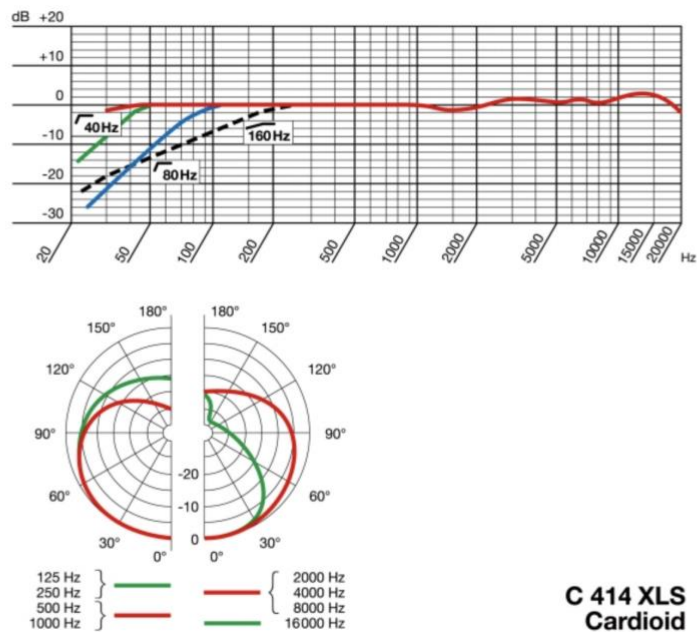
Polar pattern of C414XLS, from AKG website

6.3.2 Waves Harmony in my backing vocals

User interface of Waves harmonizer plugin as used in a Your Big Mouth' backing vocals

To create a variation and employ another element of electronic dance music, I applied Waves Harmony effects plugin to an edited copy of my lead vocals. The first element was the Four on the floor drumbeat pattern, the second was Lead synthesizers, and the third was computer-generated vocals or manipulated vocals. According to Waves (n.d), Waves Harmony enables one to create:

● Real-time vocal harmony
● Instant generation of up to eight voices from a single vocal
● A way to adjust pitch, formant, panning, delay, filtering, modulation of each voice

Creating harmony with a duplicate of the lead vocal was done for the purpose of introducing an electronic dance music element and to create a timbre variation different from the lead vocal.

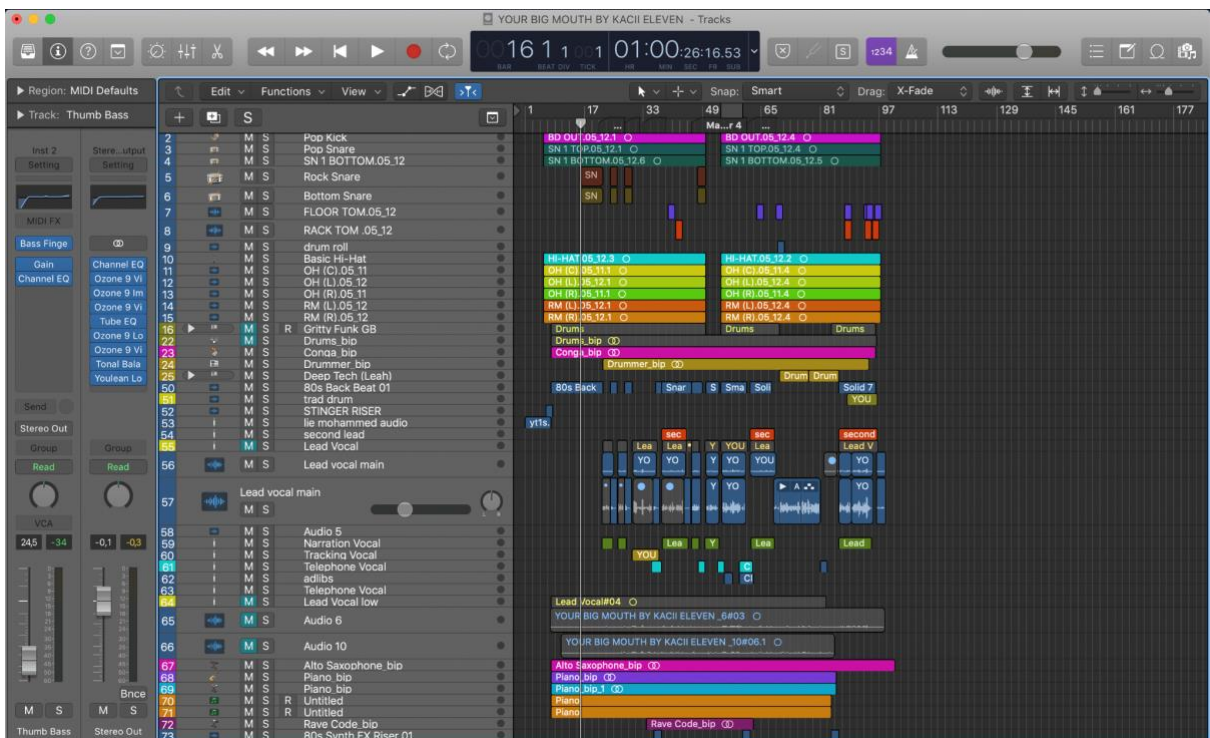Image of the lead vocal and the edited duplicate that was processed with Waves Harmony

Image of the edit window for 'Your Big Mouth' in Logic Pro X

The Final mix
The heavy four on the floor drumbeat and big bass hold sway in the mix. I tried to balance all the instruments so one could still hear the vocals.

7 Older works, and what I know now

Find the link to my older works on Spotify here:

https://open.spotify.com/artist/7Eahgv9EQjWg4VjTeNbdk7

Looking back at my older works, for example, 'This Christmas, I don't want to Miss You', many questions come to mind, questions like:
● Why did the final mix on the streaming platforms sound dull?
● Is there a plan in the future to rewrite the songs?

7.1 What I know now

The arrangement of a song has a big impact on the outcome of the final mix. Apart from focusing on the words which make up the song, the instrumentals are also important. The texture, how thick or thin the mix is, plays a big role in making a song louder and bigger. 'This Christmas I don't Want to Miss You' (recorded in 2015) had an arrangement problem in the instrumentals. I could have layered my drums and guitars and made the bass and the lead synthesizer louder. Two similar acoustics serving as rhythm and lead instrument was not enough. A piano or organ in the background would have also thickened the mix.

Listening to 'This Christmas I don't Want to Miss You', I observed that there was no sense of urgency in the song arrangement, no diversity or instrument to draw attention of the listener. However, the vocal quality is great, and the singing is just right. The song orchestration could have been fuller. Paul Tigen in his Sound on Sound magazine article wrote that the songwriter Benny Blanco compared a song to an hour long DJ set. He writes:

> A song today is like an hour-long DJ set condensed into three minutes. You start, you build things up, you bring them back down, you build them up again. There continuously must be something exciting to the ear, and that has to keep changing throughout the song. The structure of the

song, every time it changes – i.e.. intro, verse, pre-chorus, chorus – has to be signposted. (Tigen, 2012, para 4)

In retrospect, instrument layering, using more instruments with different timbre, and musical arrangement would have made 'This Christmas I Don't Want to Miss You' an even more interesting song.

7.2 Rewriting my old songs, especially 'This Christmas I Don't Want to Miss You' in the future

In the future, I am hoping to rewrite and remake some of the songs in my 'Acoustic Dreams EP'. I would like to apply all the knowledge I have gained and also a remake my vision for the songs. In his book *The Art of Music Production: The Theory and Practice,* Burges (2013, p. 93), explained that: "Many writers have difficulty rewriting and reworking their songs. They would rather write a new one, but the iterative process refines and perfects every aspect so that it works the way it should." In my opinion, it was never too late to rewrite 'This Christmas I don't want to miss you' because reworking the song will give me a chance to fix all the deficiencies I have noticed.

In comparison to my older works in terms of quality, creating newer music has enabled me to learn to use many tools. I have acquired new concepts and learned how to process instruments. I was not happy about my older songs, but now, I can say why.

8 Mastering

My ideology for a quality master is one that translates well on a variety of playback mediums like phone speakers, headphones, earplugs, radios, television, and car radios. I usually test my masters by comparing them with a chosen reference track, as well as playing them on various playback devices in several locations.

For the mastering phase, I followed the instructions of my teacher Miikka Huttunen, by mixing and mastering to standardize measurements of loudness using the LUFS measurement of -14db LUFS for music streaming services. I set the compression set at not more than the ratio of "1:3:1".

> LUFS stands for Loudness Units relative to Full Scale. It's a standardized measurement of audio loudness that factors human perception and electrical signal intensity together. LUFS are used to set targets for audio normalization in broadcast systems for cinema, TV, radio, and music streaming. (Hahn, 2022)

8.1 Loudness Targets

For the four songs in this thesis, I targeted a loudness of -10 to -14db LUFS. The dynamic range in the four songs varies, but I made sure it was not too loud or clipping. I also wanted to have enough headroom since most people these days listen to music with their headphones.

8.2 Components of my mastering signal chain

After I have mixed a song and I am satisfied with the balance of the mix, I bounce and export my mix in the Wav format at 24-bit resolution and 44.1 kHz sample rate. This is the same sample rate I recorded the tracks with. If I should record at a higher bit and sample rate, I will bounce and export accordingly.

To begin mastering, I create a new project in my digital audio workstation (DAW), then I import the mix and the reference tracks. After that I set up my mastering chain.

Prior to using any processors, I listen and make notes.

My go-to mastering signal chain setup includes plugins for balance, dynamics, and width control.

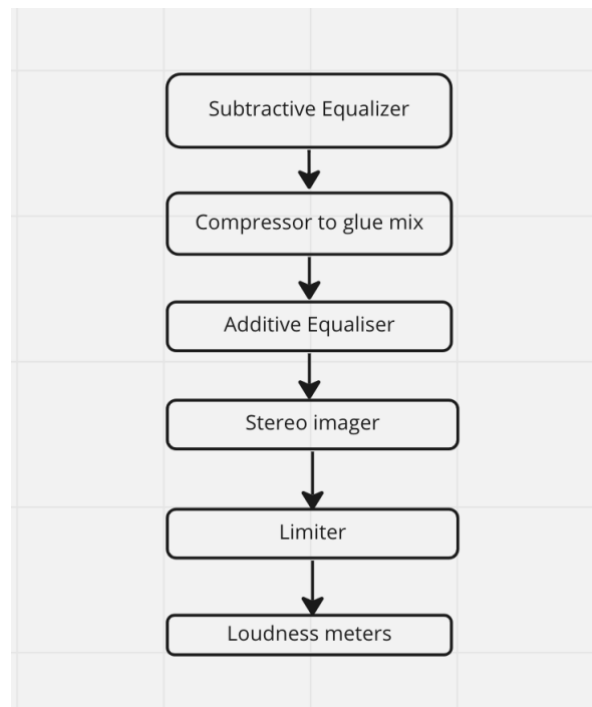Diagram of my mastering chain and workflow

In my mastering chain signal I use the processors below:

8.2.1 Subtractive Equalizer

To shape the tone and balance of the song, I use my subtractive EQ to remove muddy, boomy frequencies around 20 - 300 Hz if this is needed. I also tame problematic frequencies, which cause sibilance in the high end between 5k - 20k. All cuts and boosts are not more than - or + 3db.

8.2.2 Dynamic Compressor

I use compression to glue my mix together and to enhance the punch and rhythm of the song if needed. My mastering compression is often subtle, typically sitting at a ratio of 1:2:1. I adjust the threshold, attack, and release according to the goal of the song. Sometimes, I use two compressors in a roll. One compressor focuses on saturation and compression and the other works on rhythm and punch.

8.2.3 Additive Equaliser

When I use the additive EQ, my goal is to compare the spectral quality of my master to my reference music track and to adjust my equalizer accordingly. I boost frequencies that sweeten the mix.

8.2.4 Stereo Imager

I rarely use stereo widening but when I do, it is to make the mix enveloping and big. I also use a Stereo Imager to suppress bass frequencies, reducing their wideness for clarity's sake. For example, to get a punchier kick drum, I reduce the information of the kick in the Left and Right and keep it in the centre (Mono).

8.2.5 Limiter

Monitoring my Loudness Meter, I aim to limit my master to a ceiling of -0.3db to -1db. I turn the gain up to get a -2db to -3db of gain reduction. I also watch my Loudness meters. I use my eyes along with my ears.

I aimed for the loudness of -14db LUFS with a true peak of -0.2DBFS for the four song in this thesis 'The Sun Don't Shine No More' is a quieter song so I pushed it to -13db LUFS.

After applying the above processors, I listen and adjust accordingly on various playback systems. I also take breaks and come back to work on a song another day. When I am satisfied with the master, I bounce the file into Wav and MP3 format to listen to on my phone while walking and in the metro. If I am satisfied with the song, I distribute it to streaming platforms and publishers.

9 Conclusions

In this thesis, I have outlined my inspirations and conceptualization of four songs. I have discussed why I wrote the songs and specified my artistic vision for them. I have also outlined the recording, mixing and mastering steps taken to achieve the desired quality of the songs.

Writing this thesis has caused me to reflect on my artistic process and methodology as a music producer. Intertwining of the learning process and the creative process nourished both.

This thesis has also made me to look at singer-songwriters like Joni Mitchell, Tracy Chapman, and Bob Marley, and to read their stories and what makes their songs relatable. I have learned that a song that bring about positive change in society.

Using my song writing and music production methodology, as I have discussed in this thesis, I have been able to collaborate with a poet to turn one of her poems into a relaxation song. I also have applied the knowledge gained during my period of studies at Sibelius Academy to my role as a music and audio editor at the Openradio summer internship where I edited sound and music, I have also been able to compose songs in several student films.

In the future, I am hoping to work with musicians both in Finland and abroad in the capacity of a songwriter, music producer, or on a curatorial role as an Artist and Repertoire person. If I can analyse my own works and see what is missing, I should be able to point that out for others. To help other artists shape their song materials to be socially relevant, interesting, and relatable is a goal I aspire to.

As a singer-songwriter and producer, and after making this thesis, I am better able to understand the artist I am writing or producing for. The preparation process for recording a song has also taught me how to arrange for a recording session as a singer and as a recording engineer.

I am planning to distribute the four songs in thesis on music streaming platforms online and maybe turn them into Non-Fungible Tokens (NFTs) to be licenced for use in films, games, advertisements, and personal productions.

References

Burgess, R. J. (2013). *The Art of Music Production: The Theory and Practice* (Fourth ed.). Manhattan, New York: Oxford University Press.

Cook, P. R. (1996). Singing Voice Synthesis: History, Current Work, and Future Directions. *Computer music journal, 20*(3), 38-46.

Cortes, Z. (2022, April 29). How to master A song. Retrieved November 4, 2022, from https://www.izotope.com/en/learn/how-to-master-a-song-from-start-to-finish.html

Daine Huges (2015) Technologized and automized vocals in contemporary popular music. Journal of Music Technology & education Volume 8 Number 2. Page 164 - 167

Dickinson, K. (2017). 'believe'? vocoders, digitalised female identity, and camp. *Pop Music and Easy Listening,* 343-357. doi:10.4324/9781315089669-18

Douglas, A. (2021, March 07). From voder to ovox: A history of vocal synthesis. Retrieved November 6, 2022, from https://www.attackmagazine.com/features/long-read/from-voder-to-ovox-a-history-of-vocal-synthesis/

Duffy, M. (2022, August 29). Decoding the fender/fishman preamp. Retrieved November 6, 2022, from https://www.fender.com/articles/tech-talk/decoding-the-fender-fishman-preamp

Eyben, F., Salomao, G. L., Sundberg, J., Scherer, K. R. & Schuller, B. W. (2015). Emotion in the singing voice-a deeper look at acoustic features in the light of automatic classification. *EURASIP Journal on Audio, Speech, and Music Processing*.

Gerry, T. (2011). Joni Mitchell Library - I Sing My Sorrow and I Paint My Joy: Queen's Quarterly, June 2011. Retrieved 17 September 2022, from https://www.jonimitchell.com/library/view.cfm?id=2697

Hahn, M. (2022, May 12). What are LUFS? loudness metering explained. Retrieved November 8, 2022, from https://blog.landr.com/lufs-loudness-metering/

Hughes, D. (2015). Technologized and autonomized vocals in contemporary popular musics. *Journal Of Music, Technology and Education*, *8*(2), 163-182. doi: 10.1386/jmte.8.2.163_1

IZotope (Director). (2022, September 20). *How to Use Everything in iZotope Ozone 10 for Audio Mastering* [Video file]. Retrieved November 8, 2022, from https://www.youtube.com/watch?v=TMn3hKl_l6w&t=1s

LA, F. (2007). The Performer's Voice: Realizing Your Vocal Potential by Meribeth Bunch Dayme. New York: Norton, 2006. 212 pp. *British journal of music education, 24*(2), 235.

Liuni, M., & Röbel, A. (2013, January 4). (PDF) phase vocoder and beyond - researchgate. Retrieved November 3, 2022, from https://www.researchgate.net/publication/255696943_Phase_vocoder_and_beyond

Luftig, S. (2000). *The Joni Mitchell companion: Four decades of commentary*. Schirmer Books, Music Sales.

Mitchell, J. (n.d.). Both sides now - lyrics. Retrieved November 6, 2022, from https://jonimitchell.com/music/song.cfm?id=83

Overview of flex time and pitch in Logic Pro. (n.d.). Retrieved October 23, 2022, from https://support.apple.com/en-gb/guide/logicpro/lgcp15968647/mac#:~:text=Flex%20Pitch%20allows%20you%20to,plotted%20on%20a%20pitch%20curve.

Schmitz, T. (2022, October 10). Neumann TLM 102 vs 103: Two different beasts tested. Retrieved November 6, 2022, from https://thegreatestsong.com/neumann-tlm-102-vs-103/

Stengel, R. (1990). TRACY CHAPMAN: Singing for Herself. *Time (Chicago, Ill.), 135*(11), 70.

Tingen, P. (2012, June 01). Benny Blanco. Retrieved November 2, 2022, from https://www.soundonsound.com/people/benny-blanco

Tornesaki, E. (2021, July 15). Vocal recording: 10 tips for a successful studio session. Retrieved October 21, 2022, from https://online.berklee.edu/takenote/10-tips-for-a-successful-vocal-recording-session-in-a-studio/

Tracy Chapman: Our 1988 Interview (2022). Retrieved 18 October 2022, from https://www.spin.com/2019/08/tracy-chapman-self-titled-july-1988-interview/

Waves harmony – real-time Vocal Harmony Playground: Waves. (n.d.). Retrieved November 12, 2022, from https://www.waves.com/plugins/waves-harmony#introducing-waves-harmony-vocal-harmony-playground

Wyner, J. (2019). *Are you listening? Season 1* [Online]. Boston, Massachusetts. Retrieved from https://www.izotope.com/en/lp/are-you-listening.html

Zager, Michael. *Music Production: For Producers, Composers, Arrangers, and Students*, Scarecrow Press, 2011. *ProQuest Ebook Central*, https://ebookcentral.proquest.com/lib/uahelsinki/detail.action?docID=795622.