

Tónlistardeildin

NAIP

Music for a video game that doesn't exist

*An experiment in nostalgia and
8-bit chiptune music making*

Ritgerð til Mmus-prófs í NAIP

Sakaris Emil Joensen

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Abstract

In this Mmus paper, artist and musician Sakaris Emil Joensen explores the concept and recognition of the 8-bit chiptune music aesthetic. The paper describes the process of writing an original and authentic 8-bit soundtrack and performing it to a wider audience. Sakaris describes in detail the technical and compositional challenges that occur when writing in such a limited and primitive format. Parallel to this process, the paper delves into 8-bit chiptune music as a niche artform, that nevertheless gets recognized by all kinds of people when confronted by it. It deals with the concept of an unformulated and unconscious shared nostalgia for this type of music, along with the time it represents.

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Introduction

In this report, I will detail the proceedings and thoughts behind the art project “Music for a video game that doesn’t exist”. In short, the project will revolve around composing a set of 8-bit chiptune songs, and subsequently performing the music live at a concert venue in Reykjavík. The meaning and technical details behind the terms “8-bit” and “chiptune” will be explored and explained later on in this report.

In relation to this, I will explore themes of nostalgia and shared past, as well as delve into the concept of bringing this past back to an audience, by the means of performing 8-bit music in an accessible environment.

About me

I am a 33 years old musician from the Faroe Islands, currently residing in Reykjavík, Iceland. I have been working as a musician for about 15 years.

Like many, I started out in a rock band in my teens. I played bass, and we managed to get a fair bit of hype in the Faroe Islands. On the side, however, I was starting to experiment with my dad's recording equipment back home, learning the ins and outs of audio software, MIDI instruments,



Figure 1 Me in my studio in Reykjavík

microphones etc. I fell in love with the idea of being a one-man band and started messing around with MIDI video game music, taking part in online forums and competitions dedicated to MIDI composing. This later evolved into electronic dance music production.

Shortly after the rock band disbanded, I started taking on production jobs for other artists and quickly found my home in the producer's chair. In addition to this, I formed my solo project SAKARIS and released my debut EP in 2010. The project – still active to this day - combined my love for video game music, 80s boogie, electronic dance music and mainstream pop, and served as an uncompromised outlet for the music I wanted to make. SAKARIS continues to be an ever-evolving platform for my personal artistic expression.

Since then, I have been juggling these two roles; composing, arranging and producing for other artists and projects of varying nature, and writing, producing and performing under my own name.

In 2017, I relocated from the Faroe Islands to Reykjavík, Iceland, looking to expand my reach and fulfil my ambitions in a bigger and more connected environment. I quickly got a footing in Iceland, landing projects with a series of prominent Icelandic acts, such as Arnór Dan, Kiasmos, Hildur, GDRN, Árstíðir and Janus Rasmussen.

In 2018, I joined the New Audience and Innovative Practice (NAIP) programme at the Icelandic Academy of Arts in hopes of expanding my artistic horizon. Throughout the 2 years programme, I studied and gained experience on the topics of artistic process, artistic reflection and collaboration, and spent a lot of time stepping outside of my artistic "safe zone".

I am currently working on the final project for my Ma. Music., which consists of this report and the aforementioned project “Music for a video game that doesn’t exist”.

See appendix (p. 27) for a list of previous projects.

Project analysis

My 8-bit upbringing

Sometime in 1991, when I was 4 years old, my mom came back from a business trip in Norway, bringing with her one of the greatest gifts I have ever received. It was a Nintendo Entertainment System (NES), and it was a piece of technology that would have a great impact on my life.

The NES was a video game console released by Japanese electronics company Nintendo in 1985. It went on to sell over 60 million units through its lifespan and set the stage for a blooming video game industry; an industry, which today is the biggest entertainment industry in the world. The NES owed its success to a wide range of powerful franchises established on the system, such as Super Mario Bros., The Legend of Zelda, Kirby, Megaman, Castlevania, Contra and countless others.

My brother and I spent endless hours in front of the TV, playing these amazing games over and over again. Though very limited in technological prowess by today's standards, the graphics and music of the games completely captivated us and captured our imaginations.



Figure 2 The original Nintendo Entertainment System

The passion for video games grew and followed me into my adult life. As the years went by, technology evolved, and consoles and video games grew increasingly more sophisticated and powerful, and I followed the evolution of this new media with great enthusiasm. There was something exciting and charming about following a very niche medium from its crawling stages, and seeing it blossom and grow exponentially over the course of 30 years, eventually surpassing the music and movie industry.

Music has always played a very big role in video games. Because early video game technology was so limited, video games had to express their aesthetic using very limited methods. The graphics consisted of rough pixelated shapes, trying their best to represent objects, landscapes and characters, leaving most of the work to the imagination of the player. The same principles applied for the audio side.

The NES wasn't very capable of replicating human voices or realistic sound effects of any kind, but it was capable of playing back synthesized notes and noises. This led to the music becoming the main actor on the audio front; there were no voices or ambient sound effects, so the music had to do all the talking. This established a tradition, in which video game music would always be very busy, explicit, clear and emotional; a tradition that stuck around, even as video game technology and audio capabilities grew more sophisticated. Comparisons to the silent movie era are very much in place, as they faced similar limitations on the audio side, making the music the "voice" of the films. The movies did, however, have the luxury of real human faces and expressions, so the early video games were arguably in some ways even more limited than the silent films.

I think this "pure" musicality is what has resonated with me so much through the years. The music had to do very much with very little, leading to a heavy emphasis on articulate and clear melodies. There was also the fact, that because of storage limitations of the time, most of the music consisted of less than 2 minutes loops playing over and over again as we played these games, firmly imprinting themselves into our minds.

Having spent such a big part of my life with these video games, naturally, they have played a big role in shaping me as a person and as a musician.

About the project

For this project, I decided to somehow pay tribute to this very niche artform that has influenced me so much. It was at once something I felt very passionate about, and something that could be thematically relevant to my studies (New Audiences and Innovative Practice). It was interesting to me, that the sound of 8-bit video game music was so recognizable to most anyone, regardless of whether they were gamers or musicians or none of these things. Most people have an idea of what "video game music" sounds like, and in most cases, the sound of 8-bit chiptune music seems to be representative of video game music. I felt there were a lot of interesting aspects to the idea of the shared nostalgia for this style of music and the times and circumstances surrounding it. In short, I was interested in the idea of this artform, that was at once very niche and alternative, and at the same time so widely recognizable by all kinds of people. I will go into greater detail on these themes and ideas later on in this paper.

I wanted to do something related to 8-bit NES music. There were many ways of doing this, but in the end, I settled on utilizing my strengths as an electronic music producer and former video game composer to share a very niche artform with a broader audience. Firstly, I wanted to compose a set of authentic 8-bit chiptune songs, adhering strictly to the technical limitations of the Nintendo Entertainment System. Secondly, I wanted to bring this music to a broader audience by the way of performing it in a relaxed and open environment, i.e. an average sized venue or bar that regularly hosts concerts. This, as opposed to a more artist oriented and closed off venue, like a gallery, culture house or museum. In other words, I wanted to bring the project to an audience, instead of having an audience seek out the project. I predicted that if I held the event at a dedicated art venue, there was a chance of mostly attracting people already familiar with, conscious of and interested in the chiptune scene. This would contradict my main interest, which was creating a spark of familiarity and nostalgia in people, who weren't explicitly conscious of the chiptune scene, but had an unformulated familiarity with this kind of music, due to being exposed to it in some form or another in their upbringing.

This project consisted of multiple stages:

- Research on the technical specs of the NES and the technology required to emulate it
- Research on the compositional techniques and technical maneuvers used by NES composers to combat the very limited hardware
- Composing and producing the music
- Rehearsing and arranging the music for live performance
- Performing the music at a “regular” music venue in order to reach a broader audience (i.e. no gallery or other “closed off” venue for a limited audience)
- Releasing the music on an online platform (SoundCloud, Bandcamp, Spotify etc.)

First, let's dive into the NES and the technical aspects of composing for the system.

The technology and the limitations

There is no shortage of info on the NES' audio hardware on the web. For gathering the necessary knowledge required to make my own 8-bit music, I consulted a website/blog by anonymous chiptune aficionado Ozzed¹. The site provides a host of useful information on the subject of 8-bit audio hardware, with a part of the site specifically dedicated to the NES. From this site, I learned the following.

The Nintendo Entertainment System is powered by an 8-bit microprocessor called RP2A03. In addition to handling the graphics of the system, it also houses the console's audio engine.

The RP2A03 provides 5 different channels of sound, almost all of them having different functions and purposes. Think of these voices as 5 different instruments or musicians, that are able to play simultaneously. I will give a brief explanation of the different voices and how they are commonly used. First a list of the voices:

- pulse wave generator
- pulse wave generator
- triangle wave generator
- noise generator
- DMC playback (low quality sampler)

First off, we have 2 identical channels consisting of pulse wave generators. The word “pulse wave” (also called “square wave”) refers to the shape of the waveform. A



Figure 3 A typical square/pulse waveform

A pulse wave is known for having a clear and hollow sound. Because of its sound, the pulse wave is ideal for lead voices that need to be loud and clear. Many would recognize this waveform as the quintessential sharp and raw “video game” sound. The NES has 2 of these voices, normally used for lead and secondary voices.

¹ “How to Make 8-Bit Music,” Ozzed.net, n.d., <https://ozzed.net/how-to-make-8-bit-music.shtml?fbclid=IwAR37cbtTu9gJ4PDhszz4W2LLCx7TgCxU0h60YdxooNhvBifvVPbEpsQaDU>.

Secondly, we have a single triangle wave channel. The triangle shape provides a softer, duller and more rounded sound than the pulse waves, making it ideal as a bass voice.



Figure 4 A typical triangle waveform

On the fourth voice, we have a white noise generator. White noise is normally recognized as sounding like static noise on a TV or radio. However, by manipulating the length of the noise and playing the white noise rhythmically, it is possible to emulate the sound of a high hat and a snare drum (albeit very primitive representations of these).

Lastly, we have the DMC playback voice. This is effectively a very basic sampler, capable of storing and playing back a tiny low-quality sound snippet of the composers choosing. This could be a snippet of a kick drum, marimba, guitar or whatever. This voice isn't used as frequently as the other voices, as it is a bit more complicated, with many composers choosing to omit it completely.²

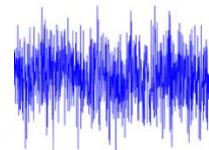


Figure 5 A typical white noise waveform

To sum it up:

2 pulse channels, normally used for lead and harmony lines.

1 triangle channel, normally used for bass or softer parts.

1 noise channel, normally used for high hat and snare.

1 DMC sample playback voice used for “other” custom instruments or sounds.

These are the limits of composing music for the NES system. These limitations play a huge part in how the music on the system is composed, and subsequently, how the music ends up sounding. Next up, I needed to research the actual music of the system and the techniques and manoeuvres used by composers to get the most out of these 5 voices.

² “NesDev Wiki,” n.d., <https://wiki.nesdev.com/w/index.php/APU>.

Learning from the masters

As stated previously, the NES's technological specifications are hugely intertwined with the manner of composition required to make music for the system. It is in many ways similar to writing music for a quartet of monophonic instruments, only more complex, as it – frustratingly – only allows for 3 melodic voices. This means, that if 1 voice is reserved for the lead melody, there are only 2 more voices to define the chords surrounding the melody.

Additionally, the NES is also very limited when it comes to timbre and expression. There is no filter to soften or open up the voices, meaning that the voices are always fully open, resulting in that iconic bright and raw video game sound.

The website Gamecrate.com has a nice article by Angelo M'Dargenio about 8-bit music, in which he sums up the essence of chiptune composing:

„Still, these limited voices weren't a lot to work with. NES fans are probably swearing that they heard more than four instruments in their favorite chiptune tracks. This was because early game composers were not just incredible musicians but masters of audio illusion. They used the limited tools the sound chip granted them to make their compositions seem more full and complex than they actually were.”³

The most experienced NES composers found ways to utilize this primitive technology to its fullest. Therefore, I decided to listen to and analyse the compositions of some of the biggest names in NES composing.

First off, I took a look at what may well be the most prominent 8-bit video game composition of all time; Koji Kondo's "Super Mario Bros Theme"⁴. This is a song that is well known among gamers and non-gamers alike, and has become a staple of video game music.

This composition is fairly straightforward, maximizing the usage of the 3 melodic voices with clever chord phrasings. The noise channel is played rhythmically to create a simple,

³ Angelo M. D'Argenio, "Gaming Literacy: An Introduction to NES Sound and 8-Bit Sound Illusions," GameCrate, January 15, 2018, https://www.gamecrate.com/gaming-literacy-introduction-nes-sound-and-8-bit-sound-illusions/17881?fbclid=IwAR2KR3hv3wIOB1N5h_oYnRYAuSOL6TUz-oB661hzvhDxnOtKmLfXEDTCiuA.

⁴ Koji Kondo, *Overworld Theme*, 1985, <https://www.youtube.com/watch?v=NTa6Xbzf1U&t=20s>.

scratchy drum pattern. As this was one of the earlier NES games, the composition does not employ any particularly advanced techniques, as was seen in later games. It is mostly dependant on good song writing, arrangement and phrasing, with a catchy melody and bouncy groove.

Next up, I took a look at another NES classic; “Dr. Wily Stage 1”⁵ by Takashi Tateishi. This is a fast paced and action-heavy track, reminiscent of a progressive metal song, with bleeps and bloops instead of distortion guitars and drums. This composition does use the 3 melodic voices in traditional fashion in parts, but also makes use of some tricks and workarounds to create interesting effects in others. One of these



Figure 6 Dr. Wily Stage from Megaman 2

effects, is creating the illusion of a spacious delay effect on the lead voice. This is done by dedicating voice 2 to playing the exact same line as voice 1, only slightly delayed and at lower volume, creating a bigger and grander doubled lead sound. This means that for these passages, the song only has 2 melodic voices; the bass and the doubled lead. This sort of compromise was very common with NES music and can arguably be described as a significant factor in the sound. A whole voice goes missing in these parts but is compensated by the dominance and insistence of the huge doubled lead sound.

In addition to this, the arrangement also uses the common trick of having the voices frenetically multitask as much as possible, jumping from duty to duty. For example, in this track, voice number 2 jumps from playing a traditional harmony voice to playing the delay of voice 1, to playing a quick arpeggio in between the main melody, to again playing delay voice etc., all within a couple of bars of music. This practice of never leaving a voice idle and squeezing as much usage as possible from the very limited number of voices is also something that contributes to the typical “video game sound”.

On the aforementioned website by Ozzed, the author notes a number of common tricks used in 8-bit arrangements.

⁵ Takashi Tateishi, *Dr. Wily Stage 1*, 1988, https://www.youtube.com/watch?v=as_ct9tgkZA.

Among these is the ultra-fast arpeggio, which enables one voice to quickly go up and down through a given scale, creating the illusion of a full chord.

Pitch bending and sliding is also a good trick for breathing more life into the voices. Having the voices quickly pitch up or down at the start or end of a note can emulate the behaviour of recognizable acoustic instruments, such as violins or lead guitar.

Pitch modulation – or vibrato – can be gradually introduced to prolonged notes in order to create expression in a voice, again similar to a violin.

Going through a number of the best NES compositions, it is clear to me that good chiptune composers employed not only good song writing and arrangement, but also masterful usage of these tricks and effects to create full and nuanced compositions.

Composing

Armed with the knowledge of the NES' technical specifications and the tricks and techniques of the most prominent 8-bit composers, I started preparations for making my own music.

First off, I had to find a means of recreating the NES sound hardware as authentically as possible. This would also have to fit in with my workflow and integrate into the software that I use. As a seasoned Ableton Live user, I quickly determined that I wanted to write and arrange the tracks in Ableton



Figure 7 Plogue Chipsounds user interface

Live and make the whole project doable in that environment. This meant that I had to find a software instrument that could run in Ableton. After some research, I settled on a software instrument called Plogue Chipsounds.

Created in 2009, Plogue Chipsounds is a collection of authentically emulated and sampled 8-bit sound chips, including the NES' RP2A03 chip. It is well known as the best and most detailed in this field, with some even likening it to a virtual museum and an important preservation effort.

The manual for the Plogue Chipsounds⁶ also proved to be a valuable source, enthusiastically explaining the deeper details and eccentricities of the chips. It also gave a good guide on how to authentically emulate and follow the limitations of the NES in a more advanced environment like Ableton Live, ensuring that the music would remain 100% true to the systems limitations.

I had two different working environments for creating the music, which I would alternate between, each serving its purpose.



Figure 8 Writing music at a café

For the initial stages of writing a song, I would use my mobile setup, consisting of a Macbook Pro, a tiny portable MIDI keyboard and headphones. I would go to a café, set up my stuff on a table there and work for a couple of hours. This served as a good and inspirational environment for getting ideas and starting work on a composition. However, I only used this setup to make quick outlines of the song, as a

13-inch screen and trackpad proved to be too small and inconvenient to make any sort of detailed work.

I would then take these projects to my studio at E7 in Grandi; a fully featured, acoustically treated professional space, with a large screen and a good, large MIDI keyboard. This environment was much better suited to making all the finer adjustments, like editing pitch curves, automating modulations and arranging the music in general.

As I went into the composing stage of the project, I had no clear idea of exactly what kind of music I was going to write. I had been listening to a lot of old NES music by the best composers, but aside from the 8-bit aesthetic, the music was incredibly varied in genre, feel and melody. I had no idea if I was going to compose according to video game logic or pop

⁶ David Viens, “A Complete Guide to Chipsounds by Plogue,” October 2009.

music logic. Would the songs be 3-4 minute pieces that went from A to B, or short 1-2 minute melodies that would loop, as they do in video games? Would it be hectic and action-packed music, or would it be soft and slow?

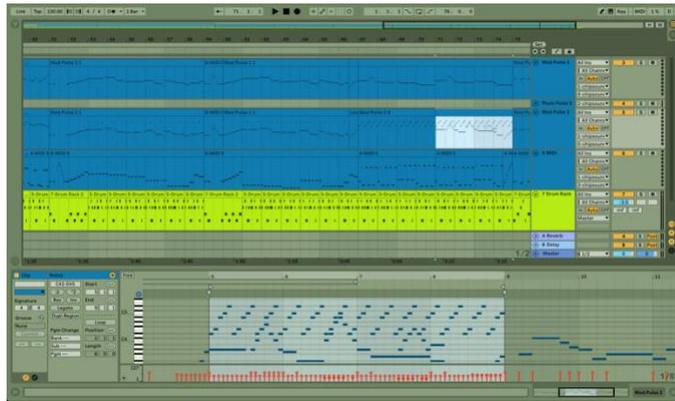


Figure 9 Ableton session with one of the songs

The direction quickly revealed

itself as I began writing, and I understood immediately why chiptune music very often sounds the way it does. As I began laying down a bass line, a drum pattern and a melody, as I traditionally would, I was struck by how empty and hollow everything sounded. The chords and the melody were well written, but the limited amount of voices and expressive options made it all sound very stiff and empty. Having only 3 melodic voices proved to be infinitely more difficult to work with than 4 or more voices, and having almost no timbre shaping options, left the compositions naked and exposed. It was quite discouraging, as I had not taken into account that the limitations would complicate matters so much. I had to try harder and fill out any empty space with little arpeggios, make the bass busier, add more details to the drums, make the harmony voice play around more etc. After writing in this manner for a while, my music completely unintentionally started to bear a strong resemblance to a lot of the video game music, I had been listening to. There was no way of making a standard pop arrangement sound convincing, and there was no option of being subtle, so the music became detailed, hectic and explicit.

The first couple of sessions were quite tough and discouraging. I would get an idea for a melody in my head, go to the computer and record it with the 8-bit sounds, and be quite let down by the result. Even the most powerful idea and melody became flat and lifeless when conveyed through the 8-bit machinery. I would then try to shine it up with all of the aforementioned tricks and techniques, after which it became way more hectic than I intended. This process would repeat a number of times in the early days, until I had around 4-5 ideas.

Having made an outline of the first batch of songs, I got quite pessimistic and disillusioned about the project. It was an uphill battle, and it got quite tiresome working and listening to the compositions. I even lost a great deal of the enthusiasm I had originally had for this kind

of music, as I struggled to make the songs sound presentable and interesting. The novelty and excitement of working with 8-bit sounds wore off, and it turned into just another project to get done. I decided to take a break from the project.

After leaving the songs for a while and taking some time off, I took a listen to what I had made so far. Listening to all the of the songs in sequence with fresh ears, I was struck by the cohesiveness and stylistic strength of the of the project, and I was impressed by how much good I had actually done, without realizing it in the process. I got excited by what was starting to sound like an actual soundtrack to some long-lost video game from the early 90s. It all made sense. Turns out, it was much better looking at it from a distance, and I enthusiastically wanted to dive right back in.

I noted that I had sub-consciously created a form of story and direction in the batch of songs. It was a direction similar to the soundtracks of Japanese roleplaying games (JRPG) which had inspired me so much in my early days, such as Dragon Quest, Chrono Trigger, Secret of Mana and – perhaps most prominently – the Final Fantasy games, whose soundtracks were composed by one of my biggest idols and greatest influences, Nobuo Uematsu.

These games would typically feature the same underlying structure, consisting of adventuring through large overworlds, visiting villages, engaging in battle and progressing through a storyline. And for each of these occasions, there would be a looping musical theme. I found that in my batch of music, the compositions were very reminiscent of battle themes, village themes and storytelling music.



Figure 10 Final Fantasy on the NES

There were hectic, action-heavy and progressive pieces of music, running at a high pace and filled with arpeggios and little details all over the place, giving them the urgency of a battle theme. Then there were solemn, slow and folky pieces, very melodic and innocent in nature, reminiscent of the village themes of aforementioned JRPGs. It was around this time that the title of the project popped into my head: *“Music for a video game that doesn’t exist”*.

I decided that the 6 short songs I had made would be enough. Firstly, because most video game soundtracks from this era rarely exceeded this amount of music because of data storage constraints, and secondly, because I figured that the sound and nature of 8-bit music was so

grating and intense, that the average listener would not be able to maintain interest in such music on its own for more than 15 minutes. And seeing as one of the main objectives of this project was to present this music to non-enthusiasts, I figured this would be a healthy compromise.

Having decided that the project would consist of these 6 songs, I started going over them again with more focus, giving them a second layer of polish. I would change little parts of the melodies that I was unhappy with, I would create more detail work in the individual voices, I would give every voice more to do instead of leaving them idle, I would set the levels of different voices, raising and lowering them where necessary, and in some cases, I would redo whole parts of the music.

After going back and forth between the songs numerous times, I finally reached a point in which I felt happy with the project. I felt comfortable with the songs, and I felt that they were now presentable to a broader audience.

Performing

During the preparation of this project, the Covid-19 situation arose and changed circumstances quite considerably. Most relevant to this project, all venues, bars and performing spaces shut down, making it next to impossible to find a physical venue for the performance as intended. This somewhat changed my intent with the project, and I had to rethink the whole performance part.

New opportunities arose, however, in the form of the internet and live streaming. As public space closings and gathering bans became the norm, there came a newfound interest and massive increase in online live concerts. Seeing as this was pretty much the only way to go in the foreseeable future, I – like many others - decided to embrace this platform, and I chose to incorporate it into my project.

On Friday May 1st, I spontaneously decided that I was done with the music, and that I would do a live stream performance on Instagram that night. I chose Instagram, because I find it less formal and easier to jump into than Facebook or YouTube. The stream is quick and easy to find and join, the comment section is very visible on the screen, and I've found in the past, that people are very active and engaged in providing feedback to a performance.

I went through the songs one last time, brushed up on some rough edges, made proper endings and did some light mixing, before I moved them over to my live setup.



Figure 11 Capture of the performance from an audience perspective

The performance took place in our studio at E7, Grandi. I placed a soft light on the floor, pointing up towards me from the front, creating an interesting shadow that towered behind me. The soft light was programmed to softly transition between different colours, creating some interesting (and somewhat tacky) visual variation. I placed myself in the middle of the room, making sure to get an awkward, but striking full body shot. I also plugged in a hand-held mic for me to use between songs for added comical effect, to make it seem like an awkward performance/presentation.

There was no directly intended relation between the tacky and humoristic aesthetic of the performance and the music. The purpose was to make it more accessible, relaxed and inviting for anyone who might stumble upon

the stream. I also figured that people would be more likely to stop a second in their Instagram scrolling, if they suddenly stumbled upon a guy standing awkwardly in the middle of a shot, surrounded by karaoke lighting, talking into a microphone and playing on his tiny keyboard.

The performance went well. I alternated between talking about the project and playing the music. I would play a song, and then I would take a couple of minutes to lightly explain some technical details or personal feelings to 8-bit music, after which I would play another song and repeat this pattern. I briefly touched upon what 8-bit music is, my personal relationship with this style of music, why I chose to embark on this project and other topics.

The performance was successful, without any major technical hitches, and the audience expressed their appreciation for the music, both in the comment section and in personal messages delivered to me. I proceeded to spread the music further, sharing the performance on Facebook and YouTube⁷, where it got further exposure and gained more response.

⁷ Sakaris Emil Joensen, "SAKARIS - Music for a Video Game That Doesn't Exist (8-Bit Chiptune Performance)," YouTube, May 8, 2020, https://www.youtube.com/watch?v=d_yEzHr5fk8&t=553s.

I was very pleased, because I had managed to share a very personal and beloved artform with an audience.

Definition of themes and concepts

As I lightly touched upon earlier in this report, the core purpose of this project was to bring into attention our shared history with 8-bit music and – by extension - retro video games in general.

The idea came to me when seeing the reaction of the average person being exposed to this kind of music and soundscape. When playing around with some 8-bit synthesizer back at my parents' place, my mom – who is not a gamer by any means - would walk by and tell me how it sounded like that old video game system me and my brother used play around with, and she would smile in recognition of those early 90s days. When I held my exhibition for the piece “Faroe Pixlands”⁸ – an 8-bit tourist film with chiptune music playing on an old CRT TV – I saw the same smile of recognition and familiarity among the audience, old and young alike.

I noticed this pretty much every time I exposed people to some form of 8-bit music, either my own or some well-known compositions, and it struck me just how powerful and recognizable the aesthetic of this music was. And the fact that it mostly encouraged smiles and laughs among the audience, indicated to me that it was promoting some feeling of joy and happiness. And most importantly, I saw, that in this niche and alternative artform, we were all somehow connected in a joyful way.

I decided to narrow it down to a case of shared nostalgia, and I started exploring this phenomenon from that angle.

In the article “The Psychology of Video Game Nostalgia”, Jamie Madigan has a talk with Dr. Fillippo Cordaro of the University of Cologne, who studies nostalgia and consumer decision. On the joyful aspects of nostalgia, it reads:

„So why does hearing the theme music of Super Mario Bros. or catching a whiff of something that smells like an old arcade bring us out of a funk and lift our spirits when we have no way to recapture the original experience? It's not just about the place or the thing. “On a basic level, recalling these positive memories simply puts us in a more positive

⁸ Sakaris Emil Joensen, “Faroe Pixlands Exhibiton,” YouTube, May 23, 2020, <https://www.youtube.com/watch?v=gecpXgREglk>.

mood,” continues Cordaro. “On a more complex level, recalling these experiences makes us feel a stronger sense of social connectedness with others. We’ve done some research looking at what people usually describe as a ‘typical nostalgic experience’ and find that people typically think about positive experiences in which the self is the protagonist, but they are surrounded and interacting with close others.” ⁹

As Dr. Cordaro points out, a large part of the joy of nostalgia consists of the social connections tied to these memories. I would like to expand upon this and propose that nostalgia reflects not only close social connections, but also one’s place in and relation to the whole world at some point in the past.

Video games and video game music are relatively new phenomena, that have arguably seen their most significant evolution from the mid-80s up until now, which means that most people born before and during this period have witnessed its steady evolution, either passively or actively. Having this evolution running parallel to our own life can make it seem that more personal, as our own development mirrors that of the video game industry’s, and we can pin-point various stages in our own lives in relation to the state and progress of video game technology at that time. The recognition of the early days of the NES by the way of 8-bit music presents to us a mutual meeting point, that we might not have been actively aware of, but which has been lurking in the back of our minds nonetheless. This awakening of a previously unformulated mutual interest among all kinds of people has been my prime objective with this project, and has served as the reason I wanted to share this music with as wide an audience as possible. Laurie M. Taylor and Zach Whalen touch upon the idea of the „Nintendo Generation“ in the introduction to the book „Playing the Past: History and Nostalgia in Video Games“:

„As the so-called “Nintendo Generation” has matured, we have grown to associate video games with our early childhood and adolescence, and our memories of the iconic characters of those early games become a way of activating nostalgia for that period. In

⁹ Jamie Madigan, “The Psychology of Video Game Nostalgia,” Psychology of Games, June 11, 2013, <http://www.psychologyofgames.com/2013/11/the-psychology-of-video-game-nostalgia/>.

this way, video games themselves have become quotations of our shared past, referencing their role in a general experience of youth. As game technology has improved and as daily life becomes more saturated with media technology, these early video games have also become objects of nostalgia in that their low-resolution aesthetics have come to be perceived as a retrospective ideal.”¹⁰

¹⁰ Laurie N. Taylor and Zach Whalen, “Playing the Past: An Introduction,” in *Playing the Past: History and Nostalgia in Video Games* (Nashville: Vanderbilt University Press, 2008), 1–16.

Reflection and continuation

This project has been a fun, challenging and liberating journey. My time in the NAIP programme has given me an opportunity to nourish an artistic passion of mine, that, up until now, had only been a distant and farfetched idea, that I thought would never come to fruition. I had always known that I wanted to dabble in chiptune music in some form, but I had never gotten any actual incentive or purpose to pursue this interest.

I must admit that I had underestimated the challenges involved in making chiptune music. The interesting thing about this sort of music, is that it sounds simplistic, primitive and straightforward upon first listen. But upon delving into the inner workings and technicalities and – especially – limitations of the format, it quickly becomes apparent that things are absolutely not as easy as they seem.

The 3 melodic voice limitation made it frustratingly hard to create full and interesting chords, the constant compromising in the name of technical authenticity made it very difficult to fulfil my visions, and working only with a thin snare and a scratchy high hat severely limited how bouncy and groovy the whole thing could get.

I did however get a hang of things, as I found out that this was very much a case of not seeing the wood because of the trees. Taking a step back and looking at the songs as a whole, the limitations suddenly became the strength of the project, creating a defined and cohesive style that transcended the individual songs.

Going through these struggles first-hand, I gained a newfound appreciation for the composers in this field. Having so little to work with in such an inflexible environment, yet still coming up with some of the most important music in my life, is a testament to their ability to adapt and use their imagination to take grand ideas and fit them into this very modest format.

I intend to continue this project and bring it to performance venues once the pandemic situation has calmed down. I am also looking into the possibility of creating music to actual video games, now that I've gotten a taste of this process.

What brings me most joy about this project, is that I got to share something meaningful, honest and different with an audience. I believe that when one is completely honest with themselves and expresses their art accordingly, there is a bigger chance of hitting the most

meaningful points in the audience. My hope and intention with this project is, that the audience rediscovers in themselves a forgotten but meaningful time in their life, or more than that, a meeting point in the past, we all share.

Appendix

Below is a list of selected works from the last 10 years.

SAKARIS – I Have Beautiful Eyes (LP, 2012)

Spotify link:

<https://open.spotify.com/album/3k6IRQT4gq8OitBubS5Sma?si=ui2OBx1iQVmGv55hvGgeyA>

SAKARIS – Music Is Never Gonna Make Me Rich (LP, 2016)

Spotify link:

<https://open.spotify.com/album/21NFM2Ajf9jgUbxV6uQrib?si=45OasSrMSDum-3TKm-cfBg>

SAKARIS – Cluster Bomb (single and video)

YouTube link:

<https://www.youtube.com/watch?v=FRQoGG9uIrc>

SAKARIS – Beach Bod (single and video)

YouTube link:

<https://www.youtube.com/watch?v=FJKAgId7sME>

Arnór Dan – Stone by Stone (single, songwriting and production)

YouTube link:

<https://www.youtube.com/watch?v=P1JpKb2yUUU>

Árstíðir – Nivalis (LP, production)

Spotify link:

<https://open.spotify.com/album/5xKXIIKS5G8mmRp0x7oO9h?si=MjK-1tyfRYultVapgvfdFQ>

FRUM – Beat (single, songwriting and production)

YouTube link:

<https://www.youtube.com/watch?v=UjuxPXtsKM0>

FRUM – Ocean (single, songwriting and production)

YouTube link:

<https://www.youtube.com/watch?v=TdfWNNRwToA>

Heidrik – Hope You’re Crying (single, production)

YouTube link:

<https://www.youtube.com/watch?v=xr5rPMiH5bE>

Visit Faroe Pixlands (8-bit installation)

YouTube link:

<https://www.youtube.com/watch?v=cyk2BcXYaF0&t=1s>

Soli Deo Gloria (Theater composition)

No documentation available

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Picture sources

Figure 1: personal photo

Figure 2: NES (Nintendo), online uncredited stock photo

Figure 3: illustration by author

Figure 4: illustration by author

Figure 5: illustration by author

Figure 6: Megaman 2 (Capcom, 1988), screen capture by author

Figure 7: Chipsounds (Plogue, 2009), screen capture by author

Figure 8: personal photo

Figure 9: Live 10 (Ableton, 2019), screen capture by author

Figure 10: Final Fantasy (Squaresoft, 1987), screen capture by author

Figure 11: taken from **elham.fakoory** Instagram story, 1. May 2020