Tampere University of Applied Sciences

The Importance of Soundtrack in World-Building of Fantasy Games and Movies

Project and Study Case – "Shimmering Land" Animation and Soundtracks

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ABSTRACT

The goal of this study was to discuss and determine the importance of soundtrack in fantasy games and movies. Specifically, the aspect of world-building is analysed. The stream of new games and movies is massive, and modern media presents numerous ways to optimize the soundtrack creation, which can be overwhelming for composers and media creators. This thesis aims to explore the purpose of the soundtrack, to examine the numerous ways music can be used in films and games, and to help composers and directors to create powerful, emotional, and immersive experiences for their audiences.

The musical works created by Joe Hisaishi for Hayao Miyazaki's movie "Spirited Away", Vangelis's compositions for Ridley Scott's movie "Blade Runner" and Daniel Rosenfeld's soundtracks for the game "Minecraft" were analysed as examples. Online sources, books, and articles were used to research various ways a soundtrack can enhance and influence the world of a game or a movie. Modern media tools such as online music libraries and AI music generation are also discussed.

In addition to the written part of the thesis, the short animation "Shimmering Land", along with three music tracks was made as a project part. The animation was paired with 3 different soundtracks and a survey was conducted as a study case. The survey aimed to determine how different audios affect participants' emotions and influence their opinions about the fictional world presented in the moving image. The results of the study case revealed that the soundtrack is a crucial part of the world-building of fantasy games and movies and affects how the audience perceives fictional worlds.

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GLOSSARY

Consonants	Letters representing certain speech sounds.
Nebulous	Vague or undefined concept.
Quidditch	A fictional sport in the Harry Potter books and movies.
Hobbit	A fictional creature in the Lord of the Rings and Hobbit books and movies.
Jizz	Upbeat, swinging genre of music.
Juxtapose	An act or an instance of placing two or more things side by side.
Dystopia	An imagined world or society in which people lead dehumanized and fearful lives.
Geisha	A Japanese hostess trained to sing, dance, and entertain with conversation.
MS-DOS	Microsoft disk operating system.
Prompt	Any form of text, question, information, or coding that communicates to AI what response you're looking for.
MIDI Instruments	Musical instrument with digital interface.
Modeling	The act of creating a 3D object.
Shading	The process of computing colour.
Rendering	The process of getting the final assembled animation scenes.
DAW	A digital audio workstation, an audio production software or platform designed for the recording, editing, mixing, and mastering of digital audio files.
VST	Virtual studio technology, an audio plug-in software interface that integrates software synthesizers and effects units into digital audio workstations.

1 INTRODUCTION

Ever since the prehistoric period, people have had an unrelenting desire to create fantastic worlds. For people living in the Stone Age, drawing a cave painting not only required a lot of energy and resources but could potentially end hazardously. Exiting a deep cave with various routes was difficult and sometimes impossible. However, the passion to create art was stronger than the fear. (Gray 2010.) Cave paintings, even though often depicting animals and real-life hunting experiences showed glimpses of fantasy. In the Leang Bulu' Sipong cave located in Indonesia's island Sulawesi researchers found artwork depicting small human-like figures with animal features, such as tails and snouts (Picture1). Scholars refer to these human-animal figures as therianthropes. The appearance of therianthropes indicates that humans of the prehistoric period imagined things that did not exist in reality and had a sense of the supernatural. (Rana 2021).

Picture 1. Leang Bulu' Sipong 4 cave art. Figures interpreted as therianthropes. (Journal of Archaeological Method and Theory 2022).

From cave drawings, to mythology, from mythology to fantasy literature, the desire to create and explore alternative magical universes was always leading us. Some scholars believe this fascination is attributed to our evolutionary

preferences rooted in the exploration of novel environments. According to researchers Dubourg and Nicolas (2021,10), humans are fascinated by fictional worlds for the very same reasons, and under the same circumstances, as they are interested in unknown environments in real life. Puthillam, a research assistant at the department of psychology also suggests (2018), that by indulging in fantasy worlds humans are in non-threatening ways training to survive in unexpected real-life situations. Others suggest that fantasy worlds on the contrary allow us to escape our everyday problems and worries, which can be unhealthy if done excessively (Subramanian 2023).

Along with our artistic abilities, music and sound also developed throughout our history as an alternative, and often even more accurate language to express our emotions and tell our stories. Music can connect and impact people in a fundamentally different way than any other form of communication. Humans often feel misunderstood and lonely with their inner experiences, and they turn to music to express their emotions and find a sense of being accepted. (Peralta 2021.) This deep-seated longing for fantasy and emotional connection with music enhanced our creativity. No surprise, that music and fantasy worlds we create go hand in hand.

Nowadays, with our powerful technological abilities, we can create hyper-realistic magical experiences through movies and games. This thesis explores the importance of music in fantastical world creation, specifically researching the impact of a soundtrack in the world-building of fantasy games and movies. World-building is a complicated but important process of constructing a fantasy world and the soundtrack plays a crucial role in it. This research explains the soundtrack's significance and the different ways it can impact the world of a film or a game.

2 WORLDBUILDING IN FANTASY GAMES AND MOVIES

2.1 The meaning of "world-building"

"With music and art, I can create the kind of world in which I wish to live" (Joseph Curiale). Fantasy games and movies show us worlds we could never live in. Thankfully, by using our modern technology, we can visit them. The screen becomes our second eyes, we see, hear, perceive, and experience those worlds almost as if they were reality. The reason for this immersive experience is strongly linked to world-building.

World-building is a process of constructing a new world or an alternative universe. The term itself is mostly used to describe the creation of science-fiction and fantasy-based narratives, but it could be used to talk about the creation process of a story, book, film, or game of any genre. The world-building sets a foundation for the fictional land. It establishes an atmosphere and rules of the place in which the script is developing, allowing the audience to fully submerge into the story.

World-building is an essential part of storytelling that is often unappreciated and disregarded. If world-building is done well, it isn't explicitly noticed, but rather felt. A lack of world-building causes a movie, game, or book to feel superficial. (Kench 2022.) World-building isn't as simple as it might seem at first glance. Author and poet Michelle Barker (2022) states that experts make fantasy world-building to seem effortless, however she asks us to consider Harry Potter and Quidditch. It's very difficult to make up a sport. Another example is The Hobbit and how much work it takes to create a convincing fantastic creature and its history. Creating Quidditch and hobbits might seem easy, but it requires a lot of thought. (Barker 2022.)

Even though world-building is a difficult process, it's crucial for the creation of a believable and fascinating fictional world and storyline. A detailed and nuanced fantasy universe intrigues us and sparks our interest. The storyline comes to life thanks to the richly developed world surrounding it. This immersive experience allows the audience to fully engage with the narrative, escaping the troubles of daily life. It invites them to explore something fresh, otherworldly, and magical.

2.2   Components needed to build a fantasy world

For the fantasy universe to be immersive it must be rich in its components. World-building elements often involve geographical, historical, technological, cultural, biological, physical, religious, mythological, economic, visual, and auditory aspects of the imaginary world. It's crucial to consider customs, values, politics, and relationships between cultures. Power dynamics between different groups of inhabitants play a big role. Major rulers, power figures, their values, and attitude towards different social classes are very significant to the story and the fantasy world. (Leyenaar 2023.)

In fantasy narratives a big part of the world-building process is the creation of magical abilities or futuristic technologies, shaping the fictional landscape. Laws of physics and technology are utterly important in science fiction. Technology must be used and developed for a reason considering the fictional world's history. Magic systems are more flexible. Magical elements can be explained to the smallest details or be nebulous and vague. Each decision affects the story significantly. (Leyenaar 2023.) These components create the "rules" of an alternative planet.

Editor Craig Leyenaar (2023) encourages creators to consider even the smallest details such as cuisine, fashion, and language, because these tiny nuances can bring realism to the fictional world. Some fantasy writers have invented a new imaginary language for their characters. Writer J.R.R. Tolkien first created a language called "Quenya" for the elves in his "Lord of The Rings" book series (Appendix 1), and only after that wrote the books. Tolkien also drew a detailed map of his fictional land called "Middle-Earth". George R.R. Martin is another writer who created a new language and extended map for his book series "A Song of Ice and Fire". In these books even the earth rotates differently than on our planet – a winter or a summer could last for years. Both works of literature were turned into cinematic experiences and these geographical, scientific, cultural, mythological, and even linguistic elements make those words truly immersive.

In a video game creation, maps, languages, historical elements, and rules of magic or science are even more important since the player experiences those elements firsthand. All these details are interconnected and create a wholesome

experience (Figure 1). Exploring the map, learning the history of the land, unlocking magical spells, or gathering futuristic weapons and submerging oneself in the time period of the game is a player's way of learning about the fictional setting and understanding the story.
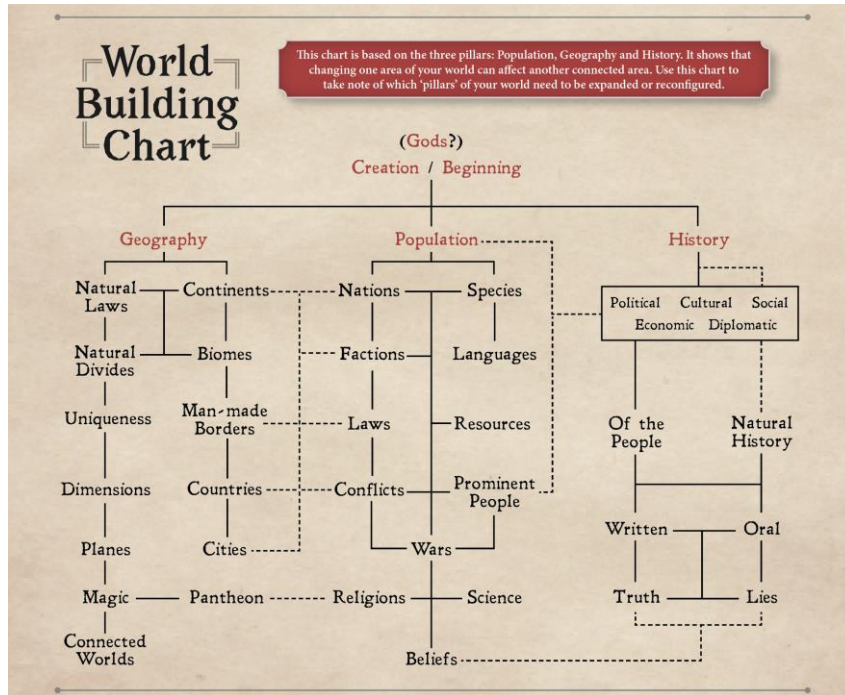
Figure 1. World Building Chart. (Jay Merritt 2020).

The inhabitants – humans, aliens, monsters, elves, fairies, mermaids - of a fantasy world might have different biology and physiognomy than humans have in the real world. These beings might exhibit heightened capacities for empathy and greater intellectual abilities. It's important to remember, that certain features, physical, physiological, and mental capabilities of these inhabitants are influenced by their cultural and physical environment (Timothy Hickson 2021, 207). For example, in an alternate historical novel, something might have happened to cause its people to evolve differently. In a post-dystopian book about the future, some past catastrophes could have influenced people of this world to develop alternate breathing mechanisms allowing them to process polluted air or an increased sensitivity to light as well as different sensory receptors. (Callaghan 2022.)

Such nuances apply not only to the main characters but all the inhabitants of the planet, including animals and plants. Species might develop differently

considering environmental pressures, competition with other species, and paths of evolution (Timothy Hickson 2021, 205). These tiny details and components gradually construct the fictional world layer by layer.

In the realm of fantasy, aesthetics and design serve as defining components. Visual elements are often the initial point of engagement for the audience, and they capture attention in mere seconds. Choices regarding colour schemes, architectural styles, depictions of nature, stylistic elements, and drawing styles carry immense significance. A visually captivating experience and beautiful scenery can single-handedly draw viewers to watch a movie or play a game. However, to truly bring the visuals to life, sound and music play a crucial role.

2.3   The significance of soundtrack in the building of fantasy games and movies

One of the essential, but often overlooked tools to bring liveness into a fantasy land is through sound and music. Music holds the power to shift our emotions, evoke forgotten memories, and even build landscapes inside our heads with only a couple of notes. Just as in real life music is a part of our culture, influenced by our traditions, religion, mythology, science, and historical events, music in a fantasy world is the same. Fantasy author Mary Fan (2022) states, that music plays a crucial role in creating fictional worlds. Fan (2022) gives examples of Lord of the Rings music because it reveals characteristics of its fantasy cultures and Star Wars soundtrack, which includes space bands playing in a style called jizz, which both derived from and rebels against contemporary music.

Music is one of the greatest ways to convey a message about a fictional world's time period, surroundings, mood, and atmosphere. The soundtrack evokes a sense of time and place, whether it's the futuristic atmosphere of Blade Runner or the magical land of Harry Potter (Darren 2023). Certain instruments, melodic harmonies, and musical styles can instantly tell us in what kind of world the story develops.

Also, impactful audio and music within a game or a movie increase audiences' engagement, fascination, and satisfaction. The study conducted by the Centre for Applied Internet Research (CAIR) reveals that players are more likely to buy

and play the game if they enjoy its soundtrack and sound effects (Figure 2 and Figure 3) This proves, that sound is an important component, that shouldn't be overlooked.
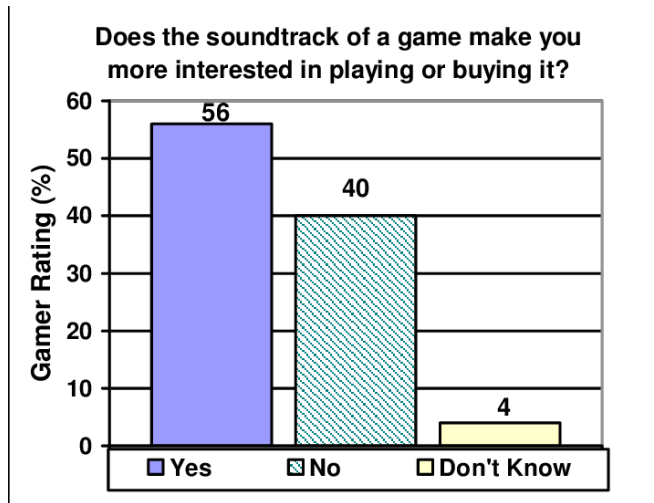
Figure 2. The study of soundtrack's importance for gamers (CAIR 2006).
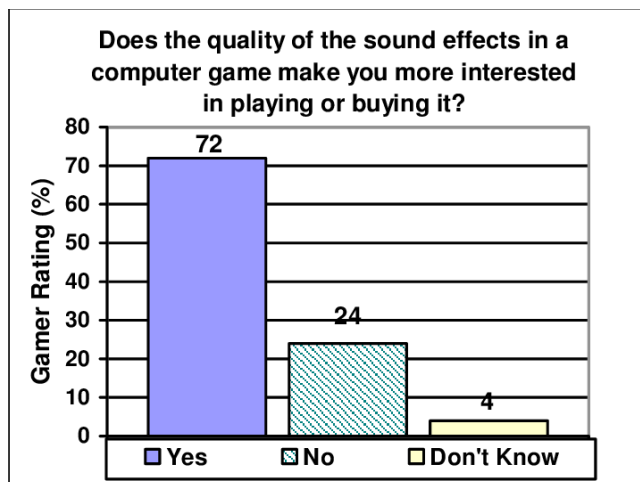
Figure 3. The study of sound effect's importance for gamers (CAIR 2006).

In addition to players' satisfaction with the game, the soundtrack itself can conquer the hearts of listeners. Nowadays the fascination with video game music is increasing and new trends are observed. Video game companies are releasing records with their original music, which raises the popularity of the game as well as its music. League of Legends is one of the most successful games around the globe. It's also one of the highest-ranked artists on Chartmetric. Figure 4 shows

that on Spotify League of Legend's music popularity is 81, the same ranking as the popular bands Deftones, Bob Marley & The Wailers, and TV Girl.

League of Legends
Neighboring artists based on Spotify popularity (81)   ⊪ Chartmetric

Artist	Chartmetric Rank	Spotify Followers	Spotify Monthly Listeners	YouTube Channel Views	YouTube Channel Subscribers
Niall Horan	129	9.31M	27.35M	950.83M	4.56M
Bob Marley & The Wailers	223	11.33M	16.54M	1.69B	3.61M
SEVENTEEN	320	8.72M	5.93M	3.75B	9.06M
Logic	394	5.87M	13.96M	1.37B	3.25M
Ninho	440	7.76M	5.58M	3.01B	4.8M
League of Legends	627	1.58M	19.45M	7B	15M
MC Cabelinho	1062	2.72M	8.3M	1.17B	2.5M
TV Girl	1088	2M	12.01M	1.77M	22.4K
Deftones	1427	3.65M	7.79M	646.83M	1.04M

Figure 4. Popularity of League of Legends on Spotify. (Chartmetric 2023).

Soundtrack music is loved by many because it has an emotional power. Hearing themes from a movie you watched long ago can bring back memories of the film and evoke feelings that transport the listener back into the fictional realm. The same goes for listening to the background music of a game you once played. The memories a soundtrack brings to us are a strong motivator to replay a game. Even if the game isn't popular, music can motivate us to experience it once again. Music evokes nostalgia and many gamers cherish memories of the themes of their favourite games. Hearing the music again can singlehandedly transport them to those moments. (Winks 2023.) While listening to soundtracks people often comment "I remember this scene, this is my favourite scene of the entire film" or "This part of the game was really scary, I get shivers by only hearing this music". Music can heighten the feeling during pleasant moments of a movie or a game and deepen the emotions of unpleasant ones. According to Darren (2023) "Listening to soundtracks allows us to relive the intense emotions experienced during the movie and connect with the characters' struggles, triumphs, and heartaches ".

Even if the listener never played a game or seen a film, music alone can illustrate a landscape of the fictional universe and make the listener feel its otherworldly atmosphere. In this sense, the soundtrack becomes the sole world-building entity,

that represents a game or a film. The soundtrack alone can express the fictional world's background, main characteristics, significant moments of the story, and the atmosphere of the fictional world.

Listening to soundtracks is also beneficial for our minds, souls, and imagination. Film music is a captivating universe of feelings and creativity. They are not only an accompaniment to movies but also a great creation of art that deserves acknowledgement. By listening to film music, we become inspired and emotionally connected. Listening to soundtracks transports us into a different world and by choosing the right musical style for the film composers immerse the audience into the movie's universe, whether it's an exciting adventure, romance, or a frightening horror story. (Darren 2023.)

3 SOUNDTRACK'S ROLES

3.1 Soundtrack's roles in fantasy game and movie world-building

Soundtracks can make up, enhance, and even change the atmosphere of an imaginary world. When music is heard, emotions unfold as subtle, but pervasive and spatially wide atmospheres (Torvinen & Riedel, 2020, 2). The atmosphere is an overall feeling of the world. If the imaginary land is gloomy, scary, and dangerous, music can enhance this atmosphere by being dark, terrifying, and filled with minor tonality. If we're watching alien lands, the music is often mysterious, and ethereal synths are playing to boost the atmosphere of otherworldliness. Music sets a mood and a feeling of the fictional land.

There are instances when the atmosphere of the music and the feeling of the imaginary world do not align. This technique creates confusion in the atmosphere and can evoke interesting results. Cheerful music is often used in horror films to juxtapose what is happening visually. This tactic is referred to as "soundtrack dissonance," an effect where the music is out of place to create a strong emotional response to a scene. (Sruthi Aron, 2019.) In this instance, the atmosphere of the created world is changed into a chaotic and unpredictable one which heightens fear and captivates the audience.

Soundtracks can also create an atmosphere a viewer or a player has never experienced before. In the animation series "Blue Eye Samurai," which setting takes place in 17th century Japan, we hear many soundtracks with the themes of old traditional Japanese music. It brings us into an ancient world we've never seen. However, in some fighting scenes, modern rock-metal music starts playing. The usage of modern music in this series creates an interesting switch in atmosphere, which is intriguing for the viewers and highlights the action scenes.

Music can be a powerful storyteller. Musical storytelling is the same as verbal or written one, notes are like letters, harmonies and scales are words and musical phrases become full sentences (How 2019). In a movie or a game, the subtle or sometimes crude changes in music can tell a story on its own. Changes in the tone and mood of the soundtrack guide the audience, creating anticipation for

future events. In the game, when players enter a peaceful zone, the music usually changes into a calmer one. The soundtrack in this example can be a storyteller, who explains that a player has nothing to worry about. Music might also fool the spectators; it can turn darker when nothing bad happens. This "fooling" excites the audience and grabs their attention.

Soundtracks can tell us a story about our characters' inner emotions. Changes in the soundtrack's mood often reflect the changes in the characters' feelings. Music helps us to understand their emotional state and to build a connection with them. Winks (2023) asks readers to imagine a game scene of a wild landscape surrounded by steep mountains on each side and a thin clearing where a plane is wrecked. The sound effects would only reinforce the scene. However, the soundtrack could tell a deeper story. The score may tap into the feeling of being stranded and scared and enhance desolate surroundings. Background music can help us understand the feelings and emotional reactions of characters we adopt in games. Empathizing with a character increases the sense of immersion. (Winks 2023.)

In a movie or a film, the soundtrack can also be used as an element of beauty. Music that we perceive as beautiful and artistic will draw our attention. Our musical tastes and the emotions that music evokes in us are very personal. Sometimes certain songs speak to us, especially if we enjoy their style and melody. "A song will not give everybody the same feeling. That is the beauty of the diversity in music and preference across different cultures and time periods". (Hoffer, Avirett, Bocharski & Da Costa 2022.) However, we as humans experience similar emotions such as happiness, sadness, heartbreak, and hopefulness. If the soundtrack of the game or a film is transmitting these emotions to us, we tend to feel connected. Some soundtracks became extremely popular for this reason alone. Gorgeous musical composition can become the main reason for enjoying the fantasy world.

Along with beauty, a soundtrack can add to the originality of the film or a game. An experimental soundtrack can turn even the simplest fictional land into a unique one. It is an artistic choice, which can be favored among certain groups of audiences. Wigley (2018) says "Ignore where the Oscars went, the best film scores

of recent memory have come from musicians working well outside the formulaic traditions of film music".

3.2   Soundtrack by Joe Hisaishi as a storyteller in Hayao Miyazaki's movie "Spirited Away"

Spirited Away is an animation masterpiece written, directed, and for the most part drawn by Japanese animator Hayao Miyazaki. The movie was released in 2001 by Tokyo-based animation studio "Studio Ghibli" and to this day appears to be the most popular artwork published by them. Stunning hand-drawn visuals and a captivating script filled with folklore and mythology elements are accompanied by emotional scores composed by Joe Hisaishi. Hisaishi, a Japanese composer, conductor, and pianist created soundtracks for all except for one of Miyazaki's movies. His soundtracks are one of the trademarks of Miyazaki's films.

In "Spirited Away" Hisaishi's scores are memorable and significant. It's been more than 20 years since the film's release and it has remained beloved by the audience not only for its stunning animation but also its unforgettable score. Hisaishi's themes have stood the test of time and feature memorable motifs that enhance the film's themes of courage and friendship. Immediately recognizable to fans all around the world, Hisaishi's musical compositions bring a sense of cohesion and familiarity to Hayao Miyazaki's ethereal vision by creating their own kind of magic. (Nguyen 2021.)

The soundtrack of "Spirited Away" serves many roles. It builds a fantasy world's atmosphere while revealing its culture, folklore, traditions, and mythological thematic. However, perhaps the most important is the role of a storyteller. Throughout the course of the movie, the soundtrack guides the audience while shifting our emotions, grabbing our attention during significant moments, and revealing the subtle parts of the story.

The soundtrack describes the experiences of the main character. Spirited Away is an emotional tale about a 10-year-old girl Chihiro. Chihiro and her parents get stuck in a spirit realm, and she alone must learn to navigate it to save them. During the film, Chihiro makes new and unexpected friendships, grows as a person, overcomes her fears, learns valuable lessons and most importantly stays

kind and forgiving even to those who wronged her. By showing Chikiro's journey this film highlights the importance of friendship and empathy. All these important aspects are enhanced and illustrated by the soundtrack.

The theme that signifies Chihiro's growth is "One Summer's Day". It plays at the beginning of the film while Chihiro is unhappy about moving to a new town, lying in the backseat of a car and clutching to the bouquet of flowers from friends she's leaving behind. The theme's beginning is calm, nostalgic, and sorrowful. After Chihiro's parents make a wrong turn, the track grows chaotic, signifying turmoil and fear in Chihiro's mind. Next time we hear "One Summer's Day" Chihiro cries and worries about saving her parents. However, this time there's a friend Haku besides her offering support. The importance of friendship is signified, because this time the track doesn't turn chaotic, instead it ends peacefully. (Nguyen 2021.) The last time we hear the melody of "One Summer's Day" is at the end of the film. Chihiro saves her parents and needs to return to the real world. She's grateful but upset about leaving her new friends in the spirit realm. However, the track's ending is peaceful and bright, because Chihiro changed and learned to overcome her fears by herself. "One Summer's Day" masterfully illustrates how Chihiro defeated all obstacles and grew stronger with the help of her friends.

The soundtrack tells us not only about Chihiro's story, but other characters, events, and the fantasy world. Music changes along with each scene, setting the tone for every event. Chihiro's entering into the spirit realm is accentuated by the track "A Road to Somewhere". The track is slow, high piano notes contrasting with low strings set an uneasy feeling, signaling that something uncanny is happening. During her time in the spirit realm, Chihiro encounters a huge monstrous stink spirit. Theme "The Stink Spirit" is majestic, full of Japanese traditional instruments, giving us the feeling of the spirit's history, power, and dangerous nature. An emotionally powerful scene of Chihiro's journey through a spirit realm by a train is titled "The Sixth Station". The track is heartbreaking, revealing the loneliness of the spirit realm. In the track "The Dragon Boy," we delve into the story surrounding Chihiro's friend, Haku. Trapped within the spirit realm due to the theft of his true name, Haku faces huge dangers. Despite the nature of his situation, he selflessly helps Chihiro. The tense rhythm of violins, loud brass, and mysterious harp melody, portrays Haku's anguish and the imminent danger he confronts.

The usage of traditional Japanese instruments in the themes of "Spirited Away" beautifully accentuates the film's cultural setting and adds authenticity and realism to the story. A double reed Japanese flute Hichiriki, a tree-stringed instrument shamisen, koto, and other traditional instruments make Hisaishi's orchestral scores unique. The story is full of Japanese cultural, religious, and mythological elements. For example, when Chihiro gets close to the spirit realm she notices a wooden gate called Torii. In the Shinto religion, which is indigenous to Japan, crossing Torri gates signifies the entrance into a sacred realm of the Gods. Hichiriki and other traditional instruments often play in the ritual music of Shinto. These instruments reveal religious and folkloric elements of the story.

The storytelling quality of Hisaishi's scores comes from his mindful consideration of the script. In a rare interview composer describes his creative process:

> In general, when working on a movie, I read the script carefully before entering the composition. For animated movies, there is no script, so I read the storyboard. I compose music for an animated movie that has been completely sized, with respect to the timing. In any case, I carefully calculate what kind of music will be applied to each scene. (Hisaishi 2020.)

This quote reveals that the composer spends time analysing the script and thinking about the concrete timing of each track. "Spirited Away" movie demonstrates a great example of a soundtrack telling a story.

3.3 Soundtrack by Vangelis as an atmosphere creator in Ridley Scott's movie "Blade Runner" (1982)

Blade Runner (1982) is an impressive science fiction movie based on Philip K. Dick's novel "Do Androids Dream of Electric Sheep?" directed by Riddle Scott. One of the most captivating parts of the film is the soundtrack composed by Evangelos Odysseas Papathanassiou also known as Vangelis. Vangelis was a Greek composer and keyboardist, who mastered the art of electronic instruments and ambient music. Vangelis never attended music school and didn't learn to read or write notes, nevertheless, he managed to become one of the greatest composers on the planet. His creations for Blade Runner were nominated by BAFTA and Golden Globe as best original score.

The fictional world of Blade Runner is unique. The setting takes place in a futuristic dystopian Los Angeles in 2019. From nowadays perspective, 2019 is in the past, but the movie was created in 1982, while Philip K. Dick's novel was written in 1968. Since the novel was written way before the film's production, director Riddle Scott decided to create a noir, retro-future aesthetic for the film, which increased with each passing year from its release. For the audience watching this movie nowadays, the atmosphere is outstanding. We are immersed in a world filled with flying cars but old TV screens, old-fashioned clothes, and hairstyles but some extravagant pseudo-modern twist in them. Advanced technology inside vintage-styled apartments and massive holographic adverts with Japanese geishas on skyscrapers give this film a distinctive atmosphere. We meet artificial creatures – replicants, who look exactly like humans, surrounded by old Hollywood film noir aesthetic. This contrast between vintage and novelty is also created by the film's soundtrack.

Synthesizers and electronic equipment, as shown in Picture 2, used for the soundtrack create Blade Runner's atmosphere. The old blues melodies and classical compositions are played by at the time modern Yamaha CS-80, Roland VP-330, and Fender Rhodes synthesizers, creating the feeling of old, yet modern times. Low drones and hums generated by a Sequential Circuits Prophet 10 and rhythmic sounds crafted on a Yamaha GS-1 seamlessly blend into the film's sound effects, at moments making both indistinguishable. Drone and ambient sounds coming from machines, flying cars, and holographic screens merge with the soundtrack, which completely integrates Blade Runner's soundtrack into its fictional world. According to the composer himself, the score for Blade Runner doesn't stand out, instead, it blends with the visuals and movie's narrative to create a living and breathing world for the audience to immerse in. Additionally, by running all his instruments through Lexicon 224 digital reverb sound processor, Vangelis evoked Los Angeles 2019 with a sense of vast space and distance. (Music Tech 2014).

Picture 2. Vangelis in his studio, while scoring for Blade Runner. (Nemo Studios archive).

Along with electronic equipment Vangelis also used various familiar instruments such as horns, violin, brass, harps, bells, and pianos, but electronically modified their sounds. The idea was to use well-known instruments while turning them into something more mechanized as if they were from the future. This choice of instruments creates a parallel with the movie's script – just as replicants are artificial humans, Vangelis instruments are also modified. (Nemo Studios, 3.)

Tracks "Blade Runner Blues" and "Love Theme" enhance the movie's atmosphere. During "Blade Runner Blues" various synthesizer sounds blend into an atmospheric ambient, the instrument which sounds like an electronic saxophone is soloing melancholic melody throughout the track, and high notes of electronic piano add richness to the minimal theme. Most of the nine-minute track consists of seemingly random high-pitch synth notes on top of a low backdrop, yet the track is a magnificent ambient that captures the dark and melancholic mood of the film perfectly (Zanobard Reviews 2018). In the track "Love Theme" similar elements were used, except the real saxophone appears. Yamaha CS-80 and saxophone work together to form an incredible piece of unique music. It perfectly captures the atmosphere of the dystopian world, and it is a very beautiful track to listen to (Zanobard Reviews 2018). All instruments sound familiar, creating the feeling of a dark and old Hollywood romance film, but while listening closely it's

apparent, that most of these instruments are electronic. This is exactly the world of Blade Runner – vintage, but mechanical.

For Vangelis, music creation is a quick and intuitive process. When asked about his creative approach composer replies: "They happen. When I do something like that I try not to think. It just comes naturally. And why naturally? Because what I see creates an emotion and this emotion comes out immediately." (Vangelis 1992.) Vangelis relies on his very first impression to create the scores. He says: "I look first, get my first reactions and immediately play. If it had been another moment, it would have been another score, another approach - but the same film exactly." (Vangelis 1992.) A speculation could be made, that this creative technique, which relies on first impression and intuition causes Vangelis's music to be atmospheric and naturally in tune with the fictional worlds he's presented with.

3.4 Exploring the uniqueness and nostalgic quality of Minecraft's soundtrack produced by Daniel Rosenfeld

Minecraft is a 3D sandbox game created by Mojang Studios and released in 2009. At first glance the game appears minimalistic, boasting simple graphics, primitive stylized visuals, and funny sound effects, however, the creative possibilities in Minecraft are endless. By moving three-dimensional blocks and items players can build anything they desire. Towns, parks, landscapes (Picture 3), planets, and even entire solar systems have been built only by using Minecraft's blocks. Players can choose between several modes of the game and indulge in different experiences. For example, survival mode is action-oriented, players must endure harsh conditions while crafting new items in order to survive, however, in creative mode, players can relax and build new structures. The main idea of Minecraft is simple, but genius, and it's written in the game's name – mining new materials and crafting them into existence.

Picture 3. Landscape built by Chloriz and Dousii in Minecraft. (Varuna Builds).

This modest game gained immense popularity and to this day continues to attract players of all ages from around the world. One of the most mentioned aspects of the game is its soundtrack. Minimalistic, very unusual, but calming and relaxing electronic ambient sounds created by producer Daniel Rosenfield, also known as C418 add beauty, depth, and uniqueness to this otherwise overly simplistic world of Minecraft. In 2022 the very first album of Minecraft music called "Minecraft – Volume Alpha" was nominated as top dance/electronic album at the Billboard Music Awards. Rosenfeld's track for Minecraft titled "Sweden" is one of the most streamed game songs on Spotify, with more than 157 million plays.

The soundtrack of Minecraft is unique. Author Jack Moeser (2022) describes it as interesting despite its simplicity, with rich but minimal piano chords reminding us of Erik Satie's compositions and the blend of conventional and futuristic sounds similar to Vangelis's soundtrack for Blade Runner. When Rosenfeld wrote his first themes for Minecraft, he had no clue that the game would ever reach fame. At the time Mojang Studios was a small team of indie game developers. (MCV Develop 2012). The young producer spent his time imitating artists like Apex Twin and creating albums that according to him don't make any sense. Daniel himself describes Minecraft's soundtrack as very strange. He laughs: "It's the most popular game in the world and the music is so weird" (Rosenfeld 2015). He also thinks that the soundtrack is out of tune with the game's visuals. According to the producer, Minecraft's world looks 8bit, and for this kind of game, people expect a soundtrack of chiptune music. (Rosenfeld 2014.) However, Rosenfeld wanted to create something unexpected. "I decided to work with experimental

simplistic acoustic music that doesn't actually tell you anything about the game"
(Rosenfeld 2015).

A special quality of Minecraft's soundtrack is its ability to create nostalgia. Nostalgia is a complex emotion, which is triggered by our past experiences. When encountering a familiar smell, sound, or situation we evoke nostalgia, and it makes us dwell on typically meaningful and comforting memories. In Minecraft, music plays randomly instead of being triggered by specific events. Rosenfield (2015) suggests that this randomness allows players to attribute significance to moments when they unexpectedly encounter music, making those moments more memorable and nostalgic. Author Jack Moeser shares his experience of replaying Minecraft after many years and hearing the piano arpeggio of the track "Wet Hands":

> "I had become unstuck in time. I remembered the first few times I played the game, coming home from school and building grand buildings on my own in creative mode. I remembered staying up late to play survival mode with friends and the genuine fear we felt as we slayed monsters. I even remembered the lonelier later years, returning to playing by myself as my friends slowly lost interest in the game." (Jack Moeser 2022.)

As a child, Daniel Rosenfield, the creator of Minecraft's soundtrack was introduced to electronic music creation while observing his brother use an impulse tracker, which is an extremely limited, yet interesting tool. Daniel taught himself to play several instruments and later in his life experimented with various DAWs to create electronic music. His soundtrack for Minecraft was created on Ableton Live, by combining loops of synthesizers, pianos, drums, and strings and using both acoustic and electronic instruments (Appendix 2). Interestingly, when Daniel started to work on Minecraft's sounds, he had no particular idea or grand vision for the soundtrack. His only wish was to create something interesting, surprising, and contrary to the visuals since at the time he was inspired by a game called "Dwarf Fortress", which according to Daniel Rosenfeld (2015) has ugly MS-DOS visuals, and very contrasting soundtrack of flamenco guitar, which makes no sense. Rosenfield (2014) continues this topic about "Dwarf Fortress" by saying: "This lovely guitar music playing, and it makes the player think, 'maybe I should

keep playing, maybe there's more to this game'. Daniel wanted to create this exact feeling in the world of Minecraft (Rosenfield 2014).

The massive success of Minecraft and its soundtrack proves, that a playful and experimental approach to music creation can be favoured among the audience. Even though Minecraft's music can be called weird or unusual, it has become phenomenally famous and admired. Original and unique tracks produced by Daniel Rosenfeld turned the otherwise empty and minimal world of Minecraft into a special one filling it with depth and beauty.

4   MODERN-DAY MEDIA SOLUTIONS

4.1   Soundtracks from online audio libraries

The fast pace of life and an endless stream of various online content is changing the creation of games and movies. For many game developers and small movie studios it's become much easier, cheaper, and less time-consuming to buy soundtracks from online audio libraries than to hire a composer for the task. Audio libraries are catalogues containing various audio materials for any project. There are numerous online libraries that for a small subscription fee, or sometimes even for free can give you access to various soundtracks and sound effects.

Purchasing a soundtrack from an online audio library can be an effective solution, especially for small indie game studios or beginner movie makers who don't have lots of resources. The diversity of music material on these catalogues is huge and creators can pick and choose the exact tracks they prefer, without the need to hire a composer. Some musically inclined creators without a budget might feel tempted to create their own music. This can be a great challenge if they have time and dedication to learn new skills. However, this option is very time-consuming, especially for people who are less familiar with music creation. The majority of the time game studios and movie makers have tight deadlines to complete their projects. In these cases, finding fitting tracks on audio libraries can be the most efficient way to handle the situation. (Smartsound Cloud 2022.)

Online audio libraries also offer job opportunities for musicians. Uploading and selling tracks on these catalogues can help composers to earn passive income or even build a career. According to composer Dan Graham (2017) creating content for audio libraries is a way smoother career path than working in other music industry fields, and it can provide a more stable income. Graham (2017) also accentuates, that composing for these libraries allows musicians more creative freedom than writing scores for directors. Furthermore, composers can use these libraries to promote themselves and gather a bigger audience. Game and film studios can use these libraries to find a desired sound for their project and contact the composer directly, which is beneficial for both.

However, some issues might arise. For studios, it could be hard to find all required tracks in the same style. Especially if a game or a movie in question is a big project, the changes in various tracks in musical style, instrumentation, track mixing, and mastering could be very prominent. No true adjustments and customization can be made to most of these tracks as well (Smartsound Cloud 2022). There's no way to turn down the volume of individual instruments if needed and if the scene requires a track to last just 15 seconds longer or be half a minute shorter, there's no way to do that unless cutting the track in pieces. There might be a possibility to find creators who upload individual tracks for each instrument with the possibility to adjust them, but it's usually a rare and more expensive library. These aspects might create issues for the movie or a game production.

Another issue that might arise is correct licensing. Even though many libraries offer royalty-free audio tracks, it's still crucial to understand the differences between licenses. Some audio libraries require attribution, and it's very important to remember to give credit. It's also important not to use their music track in any way that is not allowed. Without following the terms of the audio library can result in a legal issue. For the creators selling their work to an audio library can be painful. Most audio libraries split the royalties with the composer 50/50. Creators can feel discouraged by this split. Also uploading one's work to an audio library means handing over all the copyrights to an audio library. This means the creator isn't an owner of their works and can't distribute or release these tracks. (Vert, 2011-2023.) The creators themselves are almost always excluded from credits leaving them completely invisible to the audience (Deaville, Durand, Huelin and Morton 2022).

4.2   Soundtracks generated by AI

Generative artificial intelligence (AI) is a quickly developing technology that recently caught the attention of the whole world. Generative AI is a type of artificial intelligence that can produce new content including text, images, videos, audio, and music. The generation process starts with giving AI an input or a prompt. A prompt can be in the form of a text, an image, or a couple of musical notes. After analysing the prompt AI algorithms generate new content, in response to the given input. (Peck 2023.) AI can generate new material because it uses the

machine learning model to learn the patterns of various human-created content. Afterward, it uses the learned patterns to create new material. (Laforge 2023.) In the case of music composition, AI systems are trained on huge datasets containing musical pieces. AI utilizes this input to learn different patterns, chords, melodies, and styles in existing music. After training, AI models are able to generate completely original compositions. (Martinez 2024.)

As of today, numerous websites are allowing their users to generate new music with the use of AI. People can select a desired musical genre, a tempo, the instruments, a key, and the structure of the musical piece. People are also able to decide the feeling of a song or write a short description of how they want this piece to sound. The generation process is extremely quick, usually happening in mere seconds.

AI music generation systems are changing the way music is created. With the help of AI, even individuals who are not familiar with music composition or production can experiment and come up with new material. This can be a helpful tool in game development and the film industry. AI can generate a new soundtrack very quickly and at a considerably low cost. Furthermore, this technology can be a great tool for composers and music producers, shortening the lengthy repetitive tasks like cutting, looping, mixing, or mastering the tracks. (Martinez 2024.)

However, according to many artists and musical professionals, AI generative technology lacks the skills and emotional input. This lack of authentic emotion can result in a soundtrack being shallow and dull. According to journalist Craig Havighurst (2023), the users of AI music-making platforms are not coming up with new songs, but only some generated sequences of sounds. Havighurst (2023) also adds, that he believes music to be a medium of communication and connection, in which the creators exchange their energy and inspiration with the listeners. Since the AI music has no creator with whom the audience can empathize with, no emotional energy can be exchanged. (Havighurst 2023.) Musicians Institute College of Contemporary Music (2023) writes, that AI-generated music might soon become boring and predictable. Even though the software is capable of generating countless variations of the same theme, the lack of emotional depth that can only be created by human experience is apparent. Musicians Institute

(2023) encourages musicians to incorporate their unique vision and perspective into their music while using the help of AI generative tools.

5 PROJECT AND STUDY CASE - "SHIMMERING LAND" ANIMATION AND SOUNDTRACKS

5.1 Background and main goals

For the project and study case part of the thesis, I created a short animation along with five different musical pieces (Appendix 3). The animation and three pieces of music were used as material for the survey. In the survey, I asked participants to describe their experience of watching the same visual input while listening to different soundtracks. By conducting a survey, I had direct communication with the audience and could observe how people's perceptions of the same animated visual shifted along with the change in music. Most importantly, I wanted to determine if music can change people's emotions and opinions about the same fictional world.

I had a brief idea of the landscape I wanted to design and as inspiration, I used a couple of my paintings (PICTURE 3 and PICTURE 4). The animation was created by using 3D computer graphics software – Blender. It was a novel and enriching experience since I had never made an animation before. During this time, I gained a basic understanding of Blender and became inspired to learn more about animation and 3D visuals in the future. My idea was to create a minimalistic stylized landscape of the fictional planet. I wanted the animation to be vague, without any concrete clues of this fictional place's location, time era, or history, leaving audience space for speculation. I was interested if the participant's interpretation of the fictional land, its backstory, and its surroundings would change along with the changes in the soundtrack.
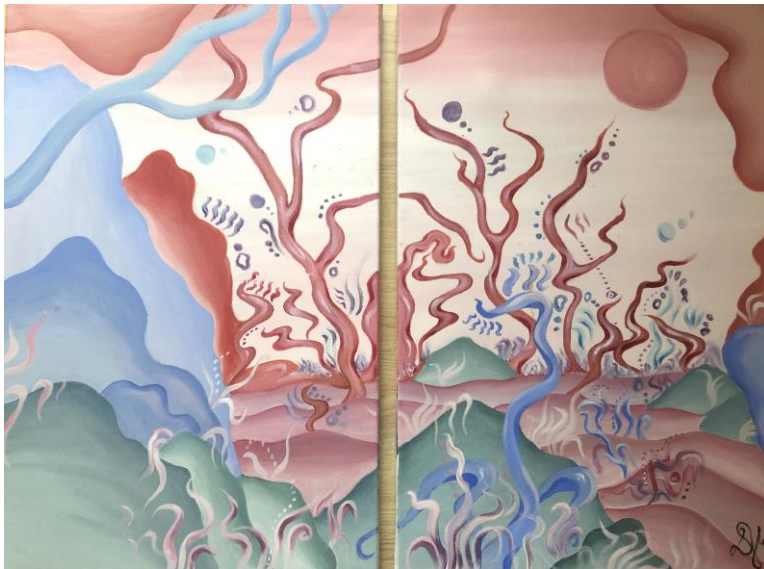
Picture 3. Painting of a mystical landscape. (Daniele Gavenaite 2023).

Picture 4. Painting of a mystical landscape. (Daniele Gavenaite 2023).

The three musical pieces that were used in the survey were created by using electronic and MIDI instruments. I intended soundtracks to have different styles, moods, and rhythms. The soundtrack, which is called Soundtrack 1 in the survey was intended to be slow and fuse orchestral and electronic instruments. For the

second track called Soundtrack 2, I decided on a simplistic and classical piano theme. The last soundtrack used in the survey, called Soundtrack 3 was intended to be fast-paced, harsh, and entirely electronic.

In the survey, I presented four different versions of the same animation. While the first version had no audio at all, the remaining three videos contained three different soundtracks. I asked the participants whether the soundtracks made the animation livelier and whether the changes in music impacted their feelings and perceived narrative about the place. Since the visuals of this animation were stylized, I also asked whether the differences in music impacted their perception of textures, colours, lights, and materials. Along with these questions I presented participants with questions regarding each soundtrack individually. I asked participants how each variation of animation made them feel, what kind of time period they envisioned for it, whether it's a peaceful or a dangerous place, would magic or technology be used in this land, and what genre of movie or game they would expect if the animation was a movie or a game trailer. After these questions, I left space for participants to write a possible history for this fictional land.

5.2 The process of project and study case creation

The process began with the creation of animation. I drew a rough storyboard with each scene. For the animation's beginning, I imagined the camera moving towards a planet. After this moment, I wanted the view to shift, and immerse the audience in a fictional landscape from different angles. In the end, I wished to show a human-like figure disappearing into the water. At first, I tried drawing the animation in Adobe Illustrator and Adobe Animate, but these software programs didn't fit my vision. For the second attempt, I installed Blender which turned out to be perfect for the project. With the help of numerous YouTube tutorials and advice from my friends, I modeled planets, water, mountains, trees, flowers, and crystals (Picture 5). The last step of modeling was to sculpt a human-like figure. However, after sculpting the head and ears I realized that I was way too optimistic in my abilities and designing, furthermore rigging a full human would take months and extensive learning of anatomy. I found a very good royalty-free model of a human figure online and tweaked some of its features, such as ears, face, and body structure. Lastly, I modeled the hair.
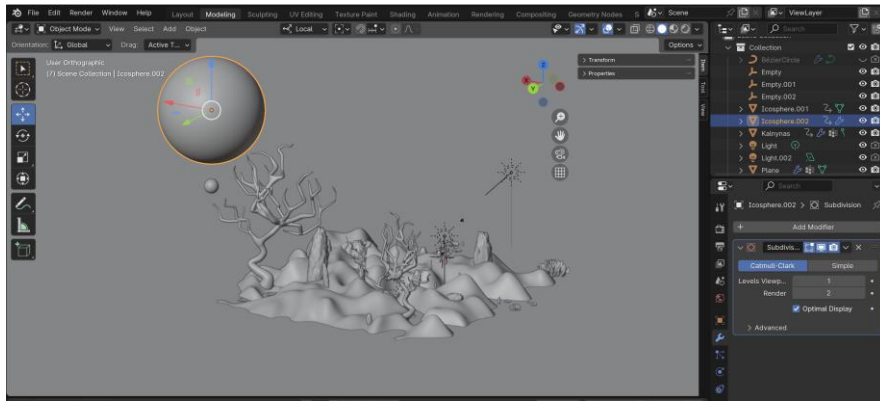
Picture 5. The model of the fictional world in Blender. (Daniele Gavenaite 2024).

After modeling, I began with shading and animating the objects. I shaded everything with a metallic, crystal-like material. The most interesting part of this process was shading the planet (Picture 6). I wanted to create a beautiful and interesting texture for it. Even after shading the place appeared extremely still and motionless, so I animated some minimal movement. I animated flowers to rotate and slightly move their location across the fictional world. I did the same with two planets in the sky, but also animated the smaller planet to rotate around the bigger one, like the moon rotates around the Earth. I edited the movement of a human-like figure very slightly, just to give it a glimpse of liveliness. Lastly, I animated the water movements, which was a crucial step in bringing every piece together.
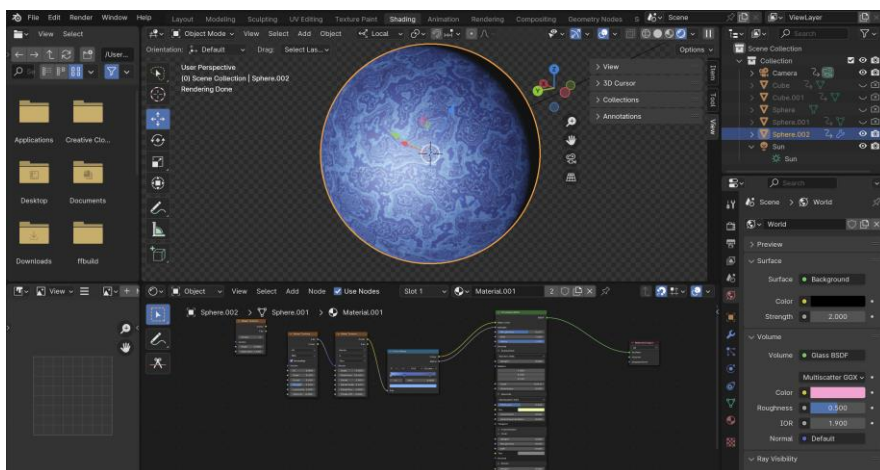
Picture 6. Shading process in Blender. (Daniele Gavenaite 2024).

After the animating process, I moved on to rendering (Picture 7). Rendering and setting up a camera seemed like the last and the easiest step of animation creation, but I couldn't have been more wrong. Setting up a camera movement in

Blender required extensive thought and learning. The longest process of the creation of the whole thesis was animation rendering. Rendering a 1-second scene took approximately one hour, even after lowering the quality settings. The rendering process to achieve the desired number of good-quality scenes took more than 2 months.
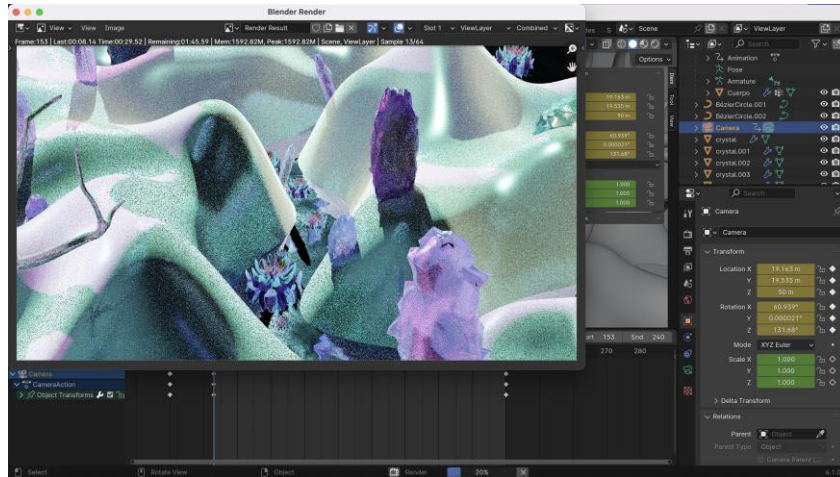
Picture 7. The rendering process in Blender. (Daniele Gavenaite 2024).

The next step was to compose and produce music. For music composition, I used Logic Pro X DAW, a few additional VST's, and sample packs I obtained during the years of my music creation. For the theme, which is called Soundtrack 1 in the survey I made a piece using midi orchestral instruments like harps, cellos, violas, string bass, orchestral drum kit, whistle voice sound, and the Alchemy synthesizer. I added some silent voices of African singers in the background for a mystical effect. I drenched each sound in a heavy reverb and delay and tweaked midi instruments, so they wouldn't sound too mechanical and unrealistic. With this track, I desired to create a dreamy, mythological, yet peaceful, and bright feeling for the landscape.

The second track called Soundtrack 2 was made by only using a piano. With this track, I wanted to create a calm, nostalgic, melancholic, and lonely feeling for the fictional world. That's why I decided on a slow tempo and melancholic melody. It would be nice to record this track with a real piano in the future, but because of limited resources, I recorded it with a MIDI keyboard. My inspiration to create an only piano track came from listening to Hayao Hisaishi's and Daniel Rosenfeld's piano music, which I explored in this thesis. I was also inspired by the usage of piano music in futuristic and fantasy environments, like in the movie Interstellar

or the 3 Body Problem series. I was curious how a classical music piece might affect a fictional environment.

For the last theme called Soundtrack 3, I wanted to produce a fast-paced electronic track with a heavy base and a prominent beat. I intended this track to create a futuristic atmosphere and feelings of tension, action, and danger for the audience. I was inspired by Vangelis' usage of electronic instruments but also wished the track to sound modern. To add this modern feeling, I edited a drum and base type of beat pattern. Along with Logic Pro X's synths like alchemy, hybrid basic, and retro synth, I also used a VST synthesizer Tyrell Nexus 6, that is inspired by Vangelis' compositions in Blade Runner. Even the name Tyrell Nexus 6 is the name taken from the Blade Runner world, since in the film Tyrell is the corporation that designs artificial humans.

Soundtracks 4 and 5, which were not used in the survey were also created in Logic Pro X by using MIDI instruments. The Soundtrack 4 was intended to be bright, joyful, and playful. With this soundtrack, I wished to bring easiness and happiness into the fictional world. The intention behind Soundtrack 5 was to create a very mysterious atmosphere for the fantasy world, reminding of elves and other mystical creatures. I used a mix of orchestral and electronic instruments to achieve such sound.

The survey results were gathered in 21 days, starting on 14.05.2024 and ending on 02.06.2024. The majority of survey participants were fellow students, game developers, and people working in artistic fields; however, I shared the survey across many online platforms, encouraging people from any field to complete it. 34 participants completed the survey.

5.3 Survey results

All participants agreed that music gave liveliness to the animation and that the change of soundtrack shifted the atmosphere of the fictional place. Additionally, 88,2% of participants confirmed that the change in music affected their imagined narrative about the fictional world. 58,8 % of participants agreed that soundtrack changes influenced their perception of the animated visuals and affected the way they see colours, lights, textures, and materials.

Regarding Soundtrack 1, most participants described the animation as calm, serene, and mystical. Few also collaborated that in their opinion this soundtrack fitted animation the best. Some participants wrote that with this theme the fictional world seemed in tune with nature and magic and reminded them of Asia and Japan. Most viewers stated that the fictional word felt peaceful (Figure 4). While deciding on the time period of the fictional place opinions of people drastically differed. The most prominent answers were far future and distant past (Figure 5). 55,9% believed that the use of magical abilities is prominent in this land (Figure 6). Participants were asked to imagine that animation is the movie or a game trailer and decide in what genre this film or game would be. Fantasy, adventure, and science fiction were the main answers (Figure 7).

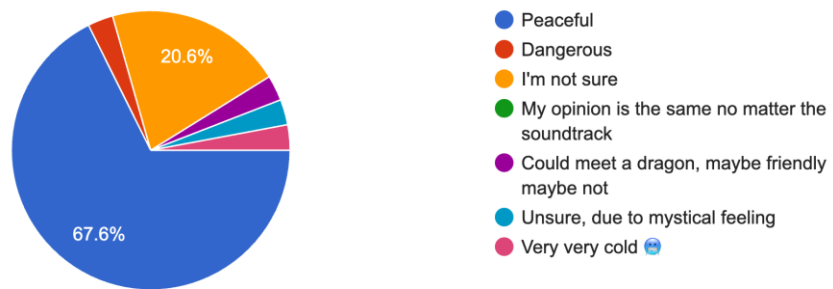Figure 4. Survey answers regarding animation accompanied by Soundtrack 1 presented in a pie chart (Daniele Gavenaite 2024).
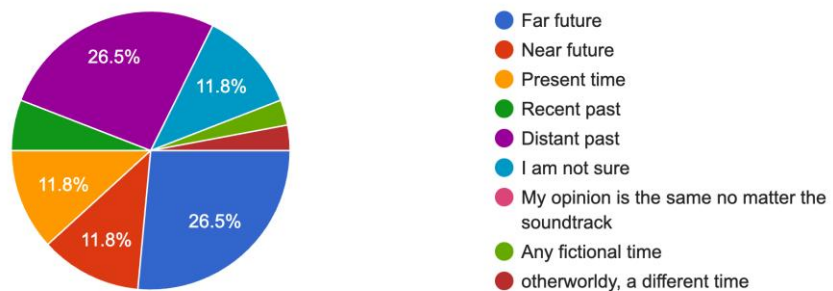

Figure 5. Survey answers regarding animation accompanied by Soundtrack 1 presented in a pie chart (Daniele Gavenaite 2024).

Let's think about the imaginary society residing in this land. Do they utilise technology or posses magical abilities?

34 responses

- Magical abilities
- Technology
- Both
- I am not sure
- My opinion is the same no matter the soundtrack
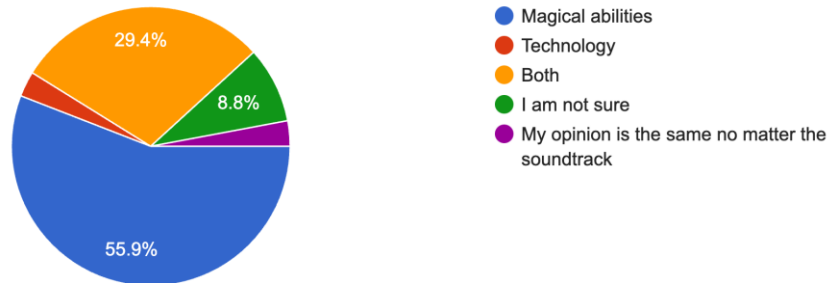
29.4%

8.8%

55.9%

Figure 6. Survey answers regarding animation accompanied by Soundtrack 1 presented in a pie chart (Daniele Gavenaite 2024).

Let's imagine that this animation is a movie or a game trailer. What kind of genres would you expect? (Select as many as you like).
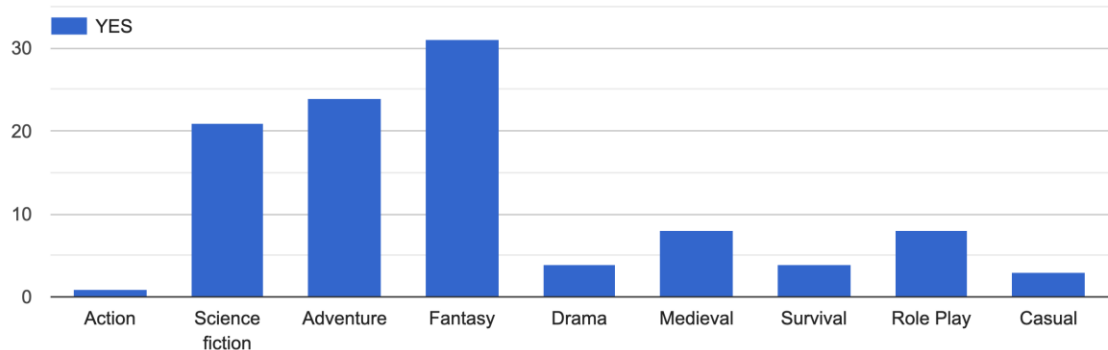

Figure 7. Survey answers regarding animation accompanied by Soundtrack 1 presented in columns (Daniele Gavenaite 2024).

The fictional land accompanied by Soundtrack 2 was mostly described as sad, melancholic, and nostalgic. Two participants wrote that this music piece reminded them of Miyazaki's movies. 73,5% believed the place to be peaceful (Figure 8). Regarding the time era, people's responses varied, however, most believed it to be the present time (Figure 9). The question about the use of magic and technology also gathered varying answers. However, the majority of participants believed that magical abilities are used in this land. (Figure 10). The biggest percent

believed this land to represent a movie or a game in fantasy and drama genres (Figure 11), while two people also added, that they would expect a romance genre.

Figure 8. Survey answers regarding animation accompanied by Soundtrack 2 presented in a pie chart (Daniele Gavenaite 2024).

Figure 9. Survey answers regarding animation accompanied by Soundtrack 2 presented in a pie chart (Daniele Gavenaite 2024).

Let's think about the imaginary society residing in this land. Do they utilise technology or posses magical abilities?

34 responses
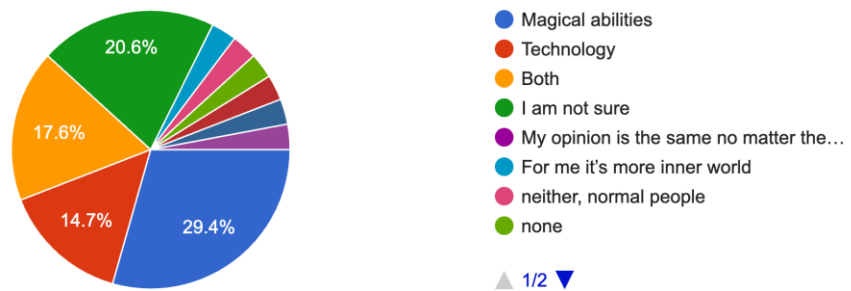
Figure 10. Survey answers regarding animation accompanied by Soundtrack 2 presented in a pie chart (Daniele Gavenaite 2024).

Let's imagine that this animation is a movie or a game trailer. What kind of genres would you expect? (Select as many as you like).

Figure 11. Survey answers regarding animation accompanied by Soundtrack 2 presented in columns (Daniele Gavenaite 2024).

The animation along with the third soundtrack was mostly described as energetic, tense, and futuristic. Most participants agreed that the fictional land seemed dangerous (Figure 12) and that action takes place in the far future (Figure 13). Additionally, the majority believed that the use of technology is prominent in the fictional land (Figure 14). When asked to imagine this animation to be a movie or a game trailer and to decide what kind of genre would fit this movie or a game, participants mostly decided on action, science fiction, adventure, and thriller genres along with shooter and survival (Figure 15).

Is this a peaceful or a dangerous land? If dangerous, what dangers could there be? (Please specify in the "other" field).

34 responses

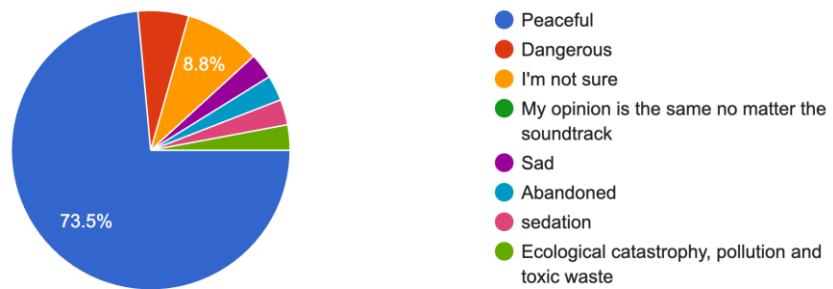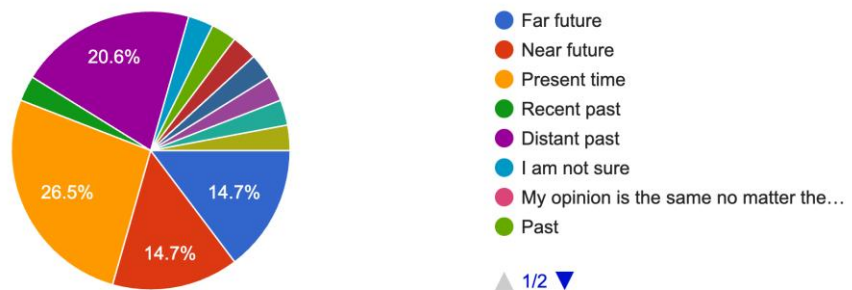- Peaceful
- Dangerous
- I'm not sure
- My opinion is the same no matter the…
- aliens and robots
- Active
- Maybe a fast paced reality with some…
- Powerful

△ 1/2 ▼

Figure 12. Survey answers regarding animation accompanied by Soundtrack 3 presented in a pie chart (Daniele Gavenaite 2024).

Which time period do you envision for this fictional setting?

34 responses

- Far future
- Near future
- Present time
- Recent past
- Distant past
- I am not sure
- My opinion is the same no matter the soundtrack

Figure 13. Survey answers regarding animation accompanied by Soundtrack 3 presented in a pie chart (Daniele Gavenaite 2024).

Let's think about the imaginary society residing in this land. Do they utilise technology or posses magical abilities?

34 responses

- Magical abilities
- Technology
- Both
- I am not sure
- My opinion is the same no matter the soundtrack

Figure 14. Survey answers regarding animation accompanied by Soundtrack 3 presented in a pie chart (Daniele Gavenaite 2024).

Let's imagine that this animation is a movie or a game trailer. What kind of genres would you expect? (Select as many as you like).
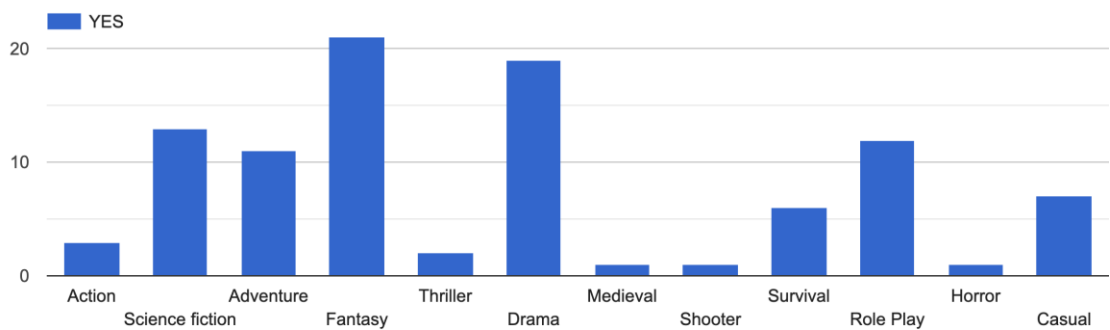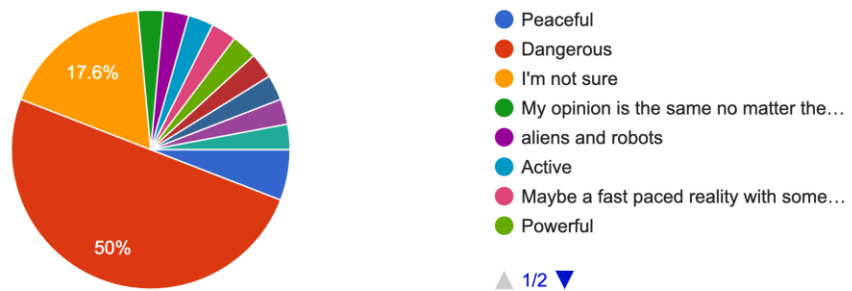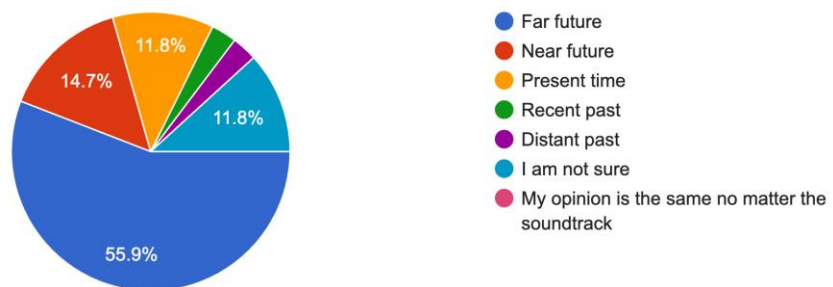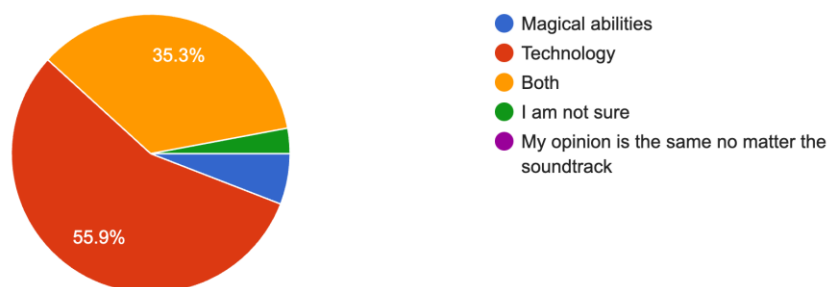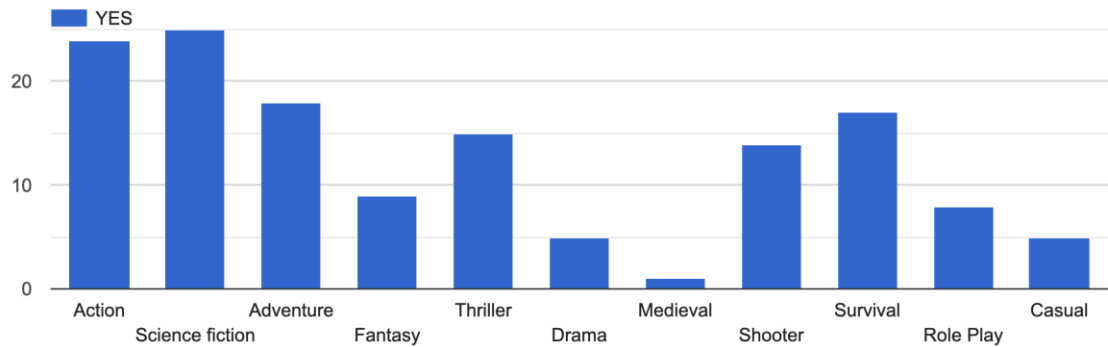
Figure 15. Survey answers regarding animation accompanied by Soundtrack 3 presented in columns (Daniele Gavenaite 2024).

At the end of each section of the survey, I left participants an open space to write a possible history of the fictional land regarding each soundtrack. People had imaginative and creative ideas (Appendix 4). While listening to Soundtrack 1, someone believed that animation depicts Barbelo materializing the spirit into 3D objects. Soundtrack 2 made one participant imagine, that the place shown in the animation most likely ceased to exist or got frozen in time and some great secret that might never be discovered is hidden there. Soundtrack 3 inspired one partic-ipant to imagine the land to be stronger than ever and armed with unimaginable powers because it endured all kinds of galactical crises.

DISCUSSION

Music, specifically the soundtrack, is a crucial element in the world-building of fantasy movies and games. By analysing famous musical works of Joe Hisaishi, Vangelis, and Daniel Rosenfeld, I'm drawn to the conclusion that a soundtrack can indeed enhance or change the atmosphere, tell the story, and add beauty, depth, and originality to fictional worlds. Musical themes are vessels for emotion and empathy; they open a way of communication between creators and the audience. Through this communication, the audience is able to empathize and build an emotional connection with the fictional land, its inhabitants, and the story.

The results of the survey support these findings. All participants agreed that the soundtrack adds liveliness to the visuals and the majority confirmed that their feelings change along with the changes of music. Data showed that the soundtrack can shift participants' opinion of a fictional land's time period and narrative, and for some even impact the way they perceive visual information such as colours, textures, and materials. Additionally, the survey proved that music builds anticipation in people's minds. Viewers imagined different dangers occurring in the fictional setting based on changes in sound and expected different genres of a game or a film if the animation was a trailer. Soundtracks also influenced answers regarding fictional abilities, such as magic and technology used in an imaginary land. The survey not only concluded that the soundtrack affects our perception of the fictional universe but also demonstrated how creative and imaginative people are. Some participants wrote detailed stories about the fictional land based on its background music, which was fascinating to read. The results of the study case proved that music is important in the world-building of fantasy games and movies.

Modern technology offers us new useful tools to speed up and optimize the music creation process. These modern solutions often attract negative comments and skepticism. Some musicians fear that AI generators might replace them in the near future. After conducting my research, I concluded that this is very unlikely to happen. AI lacks the ability to communicate genuine emotion, which is the driving force of all art. However, I believe that AI generators can be helpful and even enhance creativity. AI is just another tool, that can be helpful equally as it can be

harmful. All that matters is how we use and implement it. The same conclusion remains about the use of music libraries. Eventually, it's the finished product that matters, and in some cases, these libraries can help us along our creative journeys.

Ever since I completed my internship in a game development studio as a sound designer and music composer, I have continued to work in the field of games and wish to score music for films in the future. Although working in the game development field has been a wonderful experience, I'm saddened by the fact that music is often regarded as a less important matter. I observed game studios putting tremendous time and resources into their design, visual art, programming, and scripts. However, many game studios overlook the soundtrack, considering it as a less significant aspect of the fictional world. With this thesis, I wish to inspire all creators to invest their time, energy, and resources into a soundtrack, because it can significantly affect the relationship between the audience and the fictional land. Most importantly, I aim to inspire composers to keep on being creative, sincere, and original in their work, no matter the obstacles.

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APPENDICES

Appendix 1. Consonants of Quenya language.

tinco	parma	calma	quesse	ando	umbar	anga	ungwe
t	p	c	qu	nd	mb	ng	ngw
[t]	[p]	[k]	[kʷ]	[nd]	[mb]	[ŋ g]	[ŋ gʷ]

súle	formen	harma	hwesta	anto	ampa	anca	unque
s	f	ch	hw	nt	mp	nc	nqu
[s]	[f]	[x]	[xʷ]	[nt]	[mp]	[ŋ k]	[ŋ kʷ]

númen	malta	ngoldo	ngwalme	ore	vala	anna	vilya
n	m	n	nw	r	v	y	v/w
[n]	[m]	[n]	[nʷ]	[r]	[v]	[j]	[v/w]

romen	arda	lambe	alda	silme	silme nuquerna	áze	áze nuquerna
r	rd	l	ld	s	s	z	z
[r]	[rd]	[l]	[ld]	[s]	[s]	[z]	[z]

hyamen	hwesta sindarinwa	yanta	úre	osse	halla	telco	ára
hy	hw	i	u		h	short vowel	long vowel
[j/ç]	[ẉ/hʷ]	[i]	[u]		[h]	carrier	carrier

Appendix 2. Daniel Rosenfield talks about his life and music creation for Mine-craft game.

https://www.youtube.com/watch?v=SDI2rHG1Xsc

Appendix 3. "Shimmering Land" Animation, Soundtracks and Survey.

Survey - https://forms.gle/7Z871YNRepoTHfs46

Animation without an audio - https://youtu.be/XS0Z-B6NXW0?si=ZPawqyh6nYdcRUML

Soundtrack 1 - https://youtu.be/lmc-HZXIlYA?si=WJZANm0Eb8Uizsq5

Soundtrack 2 - https://youtu.be/aU6_P-HBN-M?si=SfKMGjBeX8vSuy2J

Soundtrack 3 - https://youtu.be/Jzu7grhZC4Q?si=HaOzWgOPoNBTOEfn

Soundtracks 4 and 5 that were not used in the survey - https://youtu.be/x6lnLHpOey8?si=alypwaVxswpluOJ9

Appendix 4. Participants ideas regarding possible history of the fictional land.

If you want, write whatever comes to mind about the possible history of this fictional place. (Regarding Soundtrack 1)

8 responses:

1. It seems like some fictional place

2. It's a dream when you have a high fever.

3. "Barbelo" materialising the spirit into 3d objects

4. there are enchanted rivers and everyone who lives there has a great adventure to tell you about, its magical

5. It's a more spiritual place than Earth. Technologies and survival don't matter here. If a protagonist of this game would be a human - their mission could be to find a secret of this magical/divine existence that is like a constant state of transcendence.

6. It's a place that has formed naturally given very rare set of mysterious circumstances which resulted in an exceptional beauty of this world. When in contact with human-like life forms, the matter of this world gain powers yet to be discovered.

7. They haven't had any contact with planet Earth or someone has just recently found out something about it.

8. Asian palace.

If you want, write whatever comes to mind about the possible history of this fictional place. (Regarding Soundtrack 2)

10 responses.

1. it's a melancholic memory of the far past that it is not clear, was it a tragedy or a comedy, exactly like a real-life experience.

2. Rebuilding a destroyed planet

3. Dark souls but peaceful

4. It is a place that can be reached in the realm of spirit. Or maybe when you lucid dream. It's where lost souls go. It's not a dark place but rather a stop for soul's longing and sadness to pass. When a soul heals it leaves this place.

5. A place that has been destroyed or abandoned due to a natural catastrophe or war.

6. The music made me feel that the things in this place haven't changed in a long while, the video depicts some sort of actions that are routinely happening

7. No history, because no time

8. It's a place that most likely existed and ceased to exist or froze in time. Some great secret has been hidden and maybe never will be discovered.

9. There has been an ecological tragedy or some devastation for the land and all living beings, or they are living through it. The place used to be lush and serene.

10. Something not intriguing, basic fantasy background

If you want, write whatever comes to mind about the possible history of this fictional place. (Regarding Soundtrack 3)

10 responses:

1. There is a war between matrix worlds, war about who's code is better, the world who loves creation or the world that only cares about the power

2. The birth of AI

3. Aliens have come to take over this world, you shoot them with big lasers and rockets

4. It's something similar to the first one, but the danger just entered.

5. Humans and Aliens/Mystical being society with future integration struggles.

6. This is a place which endured all kinds of galactical crises and rose above and beyond what was believed possible emerging stronger than ever, armed with unimaginable powers and knowledge.

7. There are rivals of motorbike gangs and 24h nightclubs for sure.

8. Interesting back story, lots of action

9. A planet inhabited by a form of bio-technological life

10. The third score had me seeing more detailed movements in the video than the first and second