

Film Music as Polyphony

Explorations of meaning-making in film music through artistic research

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Abstract

English

This thesis seeks to describe and reflect on music composition to an experimental and non-narrative film directed by Lasse Årikstad. It presents diverse approaches to establish a dialogue between image and sound, drawing inspiration from the use of industrial avant-garde music in the movie *Eraserhead* by David Lynch to invoke a mood or atmosphere. The film score serves as a starting point for an extensive examination of electroacoustic music and sound within the context of an original film production.

The research design employed in this thesis; artistic research, involved using art practice to discover various ways in which this design facilitated the exploration of music production for an experimental and non-narrative film. Furthermore, the method used provided insight into the multifaceted role(s) of music in film. Through experience, the thesis illustrated some tacit or embodied knowledge, through its direct, hands-on presentation of film music composition. It presented a variety and multitude of film music functions, spanning from sensuous to intellectual, neurological to philosophical. Additionally, it put forth a case on the ethical and aesthetic considerations of using indigenous music in film.

Norsk

Denne masteroppgaven tar sikte på å beskrive og reflektere over musikkkomposisjon til en eksperimentell og ikke-narrativ film regissert av Lasse Årikstad. Oppgaven presenterer ulike tilnærminger for å skape en dialog mellom bilde og lyd, og henter inspirasjon fra bruken av industriell avantgardemusikk i filmen *Eraserhead* av David Lynch for å fremkalle en stemning eller atmosfære. Musikken fungerer som et utgangspunkt for en omfattende utforskning av elektroakustisk musikk og lyd i forhold til en original filmproduksjon.

Forskningsmetoden benyttet i denne oppgaven; kunstnerisk utviklingsarbeid, innebar bruk av kunstpraksis for å oppdage forskjellige måter denne metoden tilrettelegger for utforskning av musikkproduksjon til en eksperimentell og ikke-narrativ film. Videre ga metoden innsikt i de(n) mangesidige rollen(e) musikken har innen film. Gjennom erfaring illustrerte oppgaven noe taus eller integrert kunnskap gjennom sin direkte, «hands-on» presentasjon av musikkkomposisjon til film. Den presenterte flere mangfoldige funksjoner i filmmusikken, som

spenner fra det sanselige til det intellektuelle, fra det nevrologiske til det filosofiske. I tillegg la den frem et case om de etiske og estetiske vurderingene ved bruk av urfolkemusikk i film.

Contents

1	Introduction	6
2	Theories	12
2.1	Functions of film music.....	12
2.2	Aesthetic ideals	16
2.3	Cultural appropriation	21
3	Artistic research on film music.....	23
3.1	The objective of art as research.....	23
3.2	Epistemology of artistic research	25
4	Results	29
4.1	An exploration of film music composition	29
4.2	Use of functions in the 911-film	33
4.3	Timecodes and reflections.....	40
4.4	Case: Aesthetics vs. ethics	47
5	Reflections on film music.....	49
6	Final remarks	56
7	Sources.....	58

1 Introduction

“The film *Man with a Movie Camera* represents
AN EXPERIMENTATION IN THE CINEMATIC COMMUNICATION
Of visual phenomena
WITHOUT THE USE OF INTERTITLES
(a film without intertitles)
WITHOUT THE HELP OF A SCENARIO
(a film without scenario)
WITHOUT THE HELP OF THEATRE
(a film without actors, without sets, etc.)” (Vertov, 1929, as cited in Sezen, 2016,
emphasis in original)

The reason I chose this powerful manifesto to introduce my research has to do with its relevance to the film I am conducting research on. Dziga Vertov was among the first to direct films which could be considered devoid of narrative. He was also the first to produce a sound film in the USSR, combining mechanical sound effects with on-location sound to produce film music collages (Cooke & Ford, 2016, p. 23). His sound explorations and moreover symphony of noises, which fully utilised urban and industrial sounds in their compositions, predated musique concrète and sound art by years (Cooke & Ford, 2016, p. 304). These explorations and noise symphonies might have either directly motivated, or through cultural osmosis influenced later music composers to work with electroacoustic music. Composers such as Varese, Schaeffer, Dockstader, and Parmegiani. Further, the tape manipulations and noise recordings of these composers, perhaps even Vertov himself presumably reached David Lynch and Alan Splet when recording sounds for the score of *Eraserhead*. This score served as an early inspiration for my composition. Karlheinz Stockhausen, another electroacoustic composer was briefly a mentor for György Ligeti whose composition *Atmosphères* would come to be used in Stanley Kubrick’s *2001: A Space Odyssey*, another inspiration of mine (Levy, 2006, p. 10). Other artists whom I’ve possibly been inspired by, include Boards of Canada, Carl Craig, Autechre, and Jan Jelinek. These are among the artists I have listened to for multiple years and drawn inspiration from in my previous compositions outside of film music. While I was able to find aesthetical inspirations with ease, I faced difficulty in uncovering similar artistic research that had been carried out.

Early in the research process, I searched for artistic research on film music composition which could act as groundwork for further research to be conducted. I asked my supervisor, contacted artistic researchers, a PhD candidate who was writing about film editing within this design, and tried looking in artistic research journals. This would turn out being quite challenging. Reading in *The Cambridge Companion to Film Music*, I realised film musicology had to a great extent neglected short films, experimental films, and documentaries among others (Cooke & Ford, 2016, p. 98). A conceivable reason is that film as an art form encompasses various mediums and academic fields, such as film, music, and drama. It is also possible that there are other factors at play. Nonetheless, I believed someone ought to be the first to pave the way, with the hope that others would follow and build upon or fine-tune this path.

Personal background

I've had an interest for visual art and expressions since my childhood, because of the artists in my family, and my family's general interest in the arts. During my Bachelor, I got the privilege to explore an intertwining of sound and image through composing music to a painting by the Russian abstract, geometric artist Kandinsky. The following year, my class partook in a film project directed by UiA in collaboration with Den Norske Filmskolen (The Norwegian Film School) in Lillehammer, where we as electronic music students received the opportunity to compose scores to films directed by students at Den Norske Filmskolen. This was my first experience composing film music, so I have limited exposure to film scoring. However, I am eager to develop my skills and knowledge in various aspects. Moreover, being an aspiring amateur in the field of film music, I am interested in exploring and documenting uncommon, even surprising techniques of film music composition.

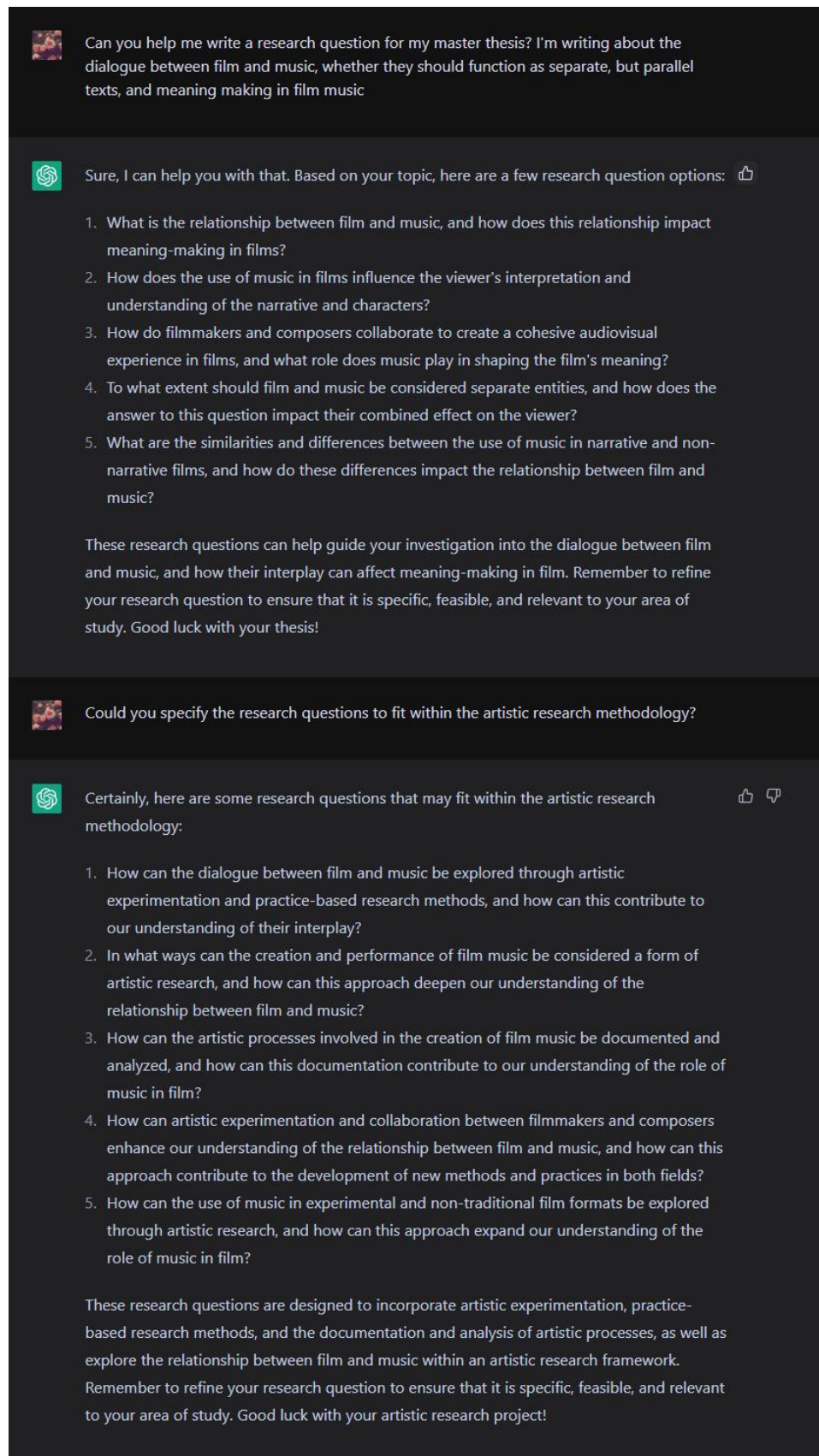
The spring of 2022, I reached out to visual artist Lasse Årikstad, and asked if he wanted to collaborate on my master thesis. I explained to him that I aspired to compose music for visual arts. He seemed intrigued by my question. In early autumn the same year we agreed to reopen, compose new music to, and finish a film he had directed previously. Initially he had music composed for this film, but he was open to me composing a new score. I understood this as an assignment to compose something far different from what was already there, an opportunity to experiment with film music. In contrast to films produced by large companies and creative teams with ample financial backing, this film consisted of two members, one hired film editor, and one collaborative artist.

It is naturally difficult to talk about authorship issues in the context of movie scores. Even putting aside the issue of whether or not music relies on other audio-visual content for its narrative meanings, the process of writing a film score is frequently a collaborative one. To create a score, composers may collaborate with other musicians. Typically, they will be required to work under directors, with producers, editors, sound engineers, or other members of a film's creative team. This cooperation appears to have been most formalized in Hollywood, at least, throughout the 1930s and 1940s, when each major company featured an exclusive music department (Cooke & Ford, 2016, p. 51).


I feel I have been given some leeway, through the film being non-narrative and experimental. This led to a feeling of freedom from typical musical elements expected to follow story cues. Having a supportive, collaborative film director who searched for new ways music could interact with his film, has also meant a lot to my confidence in embracing our project. This will of course, be an important factor to keep in mind throughout the entirety of the text.

Research question

At the beginning of the last year of the master's degree, we as students were tasked with making an elevator pitch (5-minute presentation) of the research we sought to conduct. Watching the film on mute, I felt a great interest in writing about film and music as separate, but parallel texts. How would they converse if I composed the music in a separate relationship to the film, but with my influences from the film's visual content? Shortly after composing the film music, I placed the music onto the film. This furthered ideas about dialogue between film and music, as well as meaning making. Finally, after having difficulties coming up with an accurately formulated research question, I turned to ChatGPT asking for research questions within the field of artistic research addressing the aforementioned aspects:





Can you help me write a research question for my master thesis? I'm writing about the dialogue between film and music, whether they should function as separate, but parallel texts, and meaning making in film music

Sure, I can help you with that. Based on your topic, here are a few research question options: 

1. What is the relationship between film and music, and how does this relationship impact meaning-making in films?
2. How does the use of music in films influence the viewer's interpretation and understanding of the narrative and characters?
3. How do filmmakers and composers collaborate to create a cohesive audiovisual experience in films, and what role does music play in shaping the film's meaning?
4. To what extent should film and music be considered separate entities, and how does the answer to this question impact their combined effect on the viewer?
5. What are the similarities and differences between the use of music in narrative and non-narrative films, and how do these differences impact the relationship between film and music?

These research questions can help guide your investigation into the dialogue between film and music, and how their interplay can affect meaning-making in film. Remember to refine your research question to ensure that it is specific, feasible, and relevant to your area of study. Good luck with your thesis!

Could you specify the research questions to fit within the artistic research methodology?

Certainly, here are some research questions that may fit within the artistic research methodology:  

1. How can the dialogue between film and music be explored through artistic experimentation and practice-based research methods, and how can this contribute to our understanding of their interplay?
2. In what ways can the creation and performance of film music be considered a form of artistic research, and how can this approach deepen our understanding of the relationship between film and music?
3. How can the artistic processes involved in the creation of film music be documented and analyzed, and how can this documentation contribute to our understanding of the role of music in film?
4. How can artistic experimentation and collaboration between filmmakers and composers enhance our understanding of the relationship between film and music, and how can this approach contribute to the development of new methods and practices in both fields?
5. How can the use of music in experimental and non-traditional film formats be explored through artistic research, and how can this approach expand our understanding of the role of music in film?

These research questions are designed to incorporate artistic experimentation, practice-based research methods, and the documentation and analysis of artistic processes, as well as explore the relationship between film and music within an artistic research framework. Remember to refine your research question to ensure that it is specific, feasible, and relevant to your area of study. Good luck with your artistic research project!

Figure 1: Shows interaction with ChatGPT. The fifth research question in the second answer was fundamental to my final research question

I modified the last suggestion for a research question from ChatGPT to refer to non-narrative film rather than non-traditional, as it was more specific to the film. The exact formulation being as follows:

How can the use of music in experimental and non-narrative film formats be explored through artistic research, and how can this approach expand our understanding of the role of music in film?

My values led me to compose music functioning in a dialogical relationship to the visual and inherent sound content of the film. I aimed to compose film music with a distinct identity, running alongside the visual and innate sound elements of the film. One facet of the text was to reflect on whether the film music supported or undermined the various voices present in the film.

Disposition

The introduction has briefly explained the context, academically and artistically for this research. It described the purpose of conducting this research and presented the research question to be answered in the reflection chapter. Next, the theory chapter elaborates on relevant theories for the research, including necessity of film music, functions of film music, vococentrism, the aesthetic ideals and philosophy informing my decisions. Subsequently, the method chapter attempts to answer any questions of how the research was undertaken, objectives, the artistic process, provide contextualisation for the reflection, and the objective, how to generate knowledge of the artistic process through practice informed research, and limitations of artistic research, leading to the result chapter. It presents the artistic process, some timecodes with short reflections, and a case on how aesthetic and ethical concerns can conflict in the treatment of indigenous music. The penultimate reflection chapter answers the research question, provides new perspectives and aspirations for future research and artistic work. Finally, the final remarks summarise the information provided in the previous chapters and round the text off.

Demarcation

In the reflection chapter, I have described how films with a dialogical approach to the visual and auditive can be said to present a multitude of voices. It would be interesting to see a discussion between a model based on a dichotomy between a single and many interpretations, and a model that describes a continuum or range of interpretations. However, this likely

necessitates a different research design where multiple films are analysed, or more time than I have been allocated. Further, I intend to explain my purposes of using joik, the process of arriving at the current joik, and how it represents a unique voice in the film. The research will not go into the ethics of using joik in film music. Again, this is a field that requires time to go properly into since there is much literature and several examples to investigate. Though I have described my artistic process, I do not intend for this research to be a lexicon on composition techniques for electronic film music. Listing composition techniques could presumably detract from the research question at hand.

2 Theories

In the following chapter, the research will be contextualised through relevant theories, such as the necessity or subtlety of film music, as well as different approaches to functions. The literature that has been selected reflect on some level the role of music in film. Lastly, the chapter presents aesthetic ideals and philosophy that have informed my creative decisions working with the film music. These aesthetic ideals and philosophies relate to possibilities for experimentation and exploration within film music composition.

2.1 Functions of film music

A point illustrated by Tarkovsky (1989), who “in [his] heart of hearts [doesn’t] believe films need music at all,” is that “[...] it is quite possible that in a sound film that is realised with complete theoretical consistency, there will be no place for music; it will be replaced by sounds in which cinema constantly discovers new levels of meaning” (p. 159). He feels, “[...] that sounds of this world are so beautiful in themselves that if only we could learn to listen to them properly, cinema would have no need of music at all” (Tarkovsky, 1989, p. 162). Another director who appears to hold similar views is Antonioni, whose “attitude can best be described as an enhanced [...] receptiveness to all sounds [which] results in the valuation [...] of banal, environmental noise and, concomitantly, in the abolition of the category of silence” as summarized by John Cage (Nardelli, 2010, p. 9). He “concentrates on [...] environmental sounds and noises that, having customarily come to provide the acoustic backdrop to everyday activities, [and] often may go unnoticed as to even pass for silence” (Nardelli, 2010, p. 3). Antonioni nonetheless values recording and mixing sounds: “a certain type of silence becomes sonorous because something is abated while something else is boosted” (Nardelli, 2010, p. 9). Regarding use of silence in film soundtracks, Gorbman (1980) writes that: “The effect of the absence of musical sound must never be underestimated: filmmakers traditionally, have indeed tended to ignore musical silences in mixing their soundtracks” (p. 193). She distinguishes between three forms of silence: *diegetic*, *nondiegetic* and *structural*. *Diegetic* musical silence is when environmental sounds and noises explicitly make up the soundtrack, as can be found in Antonioni’s films. *Nondiegetic* silence is when there’s no sound present at all. Gorbman (1980) exemplifies this type of silence with dream sequences or filmic depictions of intense

mental activity (p. 193). The last form of silence, *structural* silence is used to increase the audience's awareness directly after a scene change (Gorbman, 1980, p. 194).

The perspectives of Tarkovsky, Antonioni and Gorbman seemingly contrast with that of Jessica Green (2010), who writes that “[...] despite the artificiality of the musical score in comparison with everyday life, audiences have come to accept film music as an integral part of what it means to watch a film” and that when “[f]ilms [...] fail to use much music or fail to use it well [they will] often have a problem involving the audience as completely as films that embrace music as a tool that can expose the inner feelings and thoughts of characters, and [...] shape the way that viewers feel about what's happening on screen” (p. 2). Green (2010) draws on Kay Dickinson as being a proponent of her perspective (p. 5) and uses “the climactic resolution of *The Last of the Mohicans*” as an example of “[o]ne of the scenes most affected by the contribution of musical scoring in conjunction with the other channels of information” (p. 13).

“Conventional practice has made an anchor of background music, such that it dictates what our response to images ought to be. Remove it from a scene whose emotional content is not explicit, and you risk confronting the audience with an image that they might fail to interpret” (Gorbman, 1980, p. 193).

The concept of silence in film soundtrack is valued as an effective tool by Tarkovsky, Antonioni and Gorbman, but appears as a potential challenge from Green's point of view. This might be a contrast rooted in a discussion of agency versus immersion. Silence can be used to heighten the audience's awareness but will in turn require more time and mental capacity for interpretation which can pull the audience away from emotional and visceral intensity of the movie. Whether a film is supposed to be sensed or studied is therefore fundamental to how the soundtrack functions. There is however not a clear divide between sensing and studying, as emotions can affect thoughts, and vice versa.

Green, as well as Guido Heldt point towards Claudia Gorbman's book *Unheard Melodies* (1987). “The most eye- (or ear-)catching idea gave the book its title: that the melodies of film scores usually go unheard evading conscious audience awareness” (Eds. Cooke & Ford, 2016, p. 109). According to Gorbman's (1987) book, background music in films should be more noticeable than other aspects of the cinematic language because it doesn't directly belong to the fictional world. The music acts as a lubricant for the audience's engagement with the film, helping them to immerse themselves in the story. Gorbman describes music as a hypnotic voice

that convinces viewers to believe, focus, observe, identify, and consume the film (p. 69). In the journal article *Narrative Film Music*, Gorbman (1980) states that: “Most feature films relegate music to the viewer’s sensory background, that gray area of secondary perception least susceptible to rigorous judgement and most susceptible to affective manipulation” (p. 183). Guido Heldt also mentions that in Arnheim’s book *Film als Kunst* as translated by himself the director states that “film music [is] always good if one [does] not notice it” (Eds. Cooke & Ford, 2016, p. 109).

It appears there’s a common agreement that film music should be subtle and blend in as to evade notice, but there are examples of scenes in which the music does make itself noticed, which are nevertheless highly regarded by film critics. One such example would be a scene from the film *Autumn Sonata* by Ingmar Bergman, where the daughter Eva, played by Liv Ullmann performs a prelude by Chopin for her reserved, concert pianist mother and they both discuss the piece and the composer. Other examples can be found in the non-narrative film *Koyaanisqatsi* by Godfrey Reggio, featuring music by Phillip Glass where the music constitutes the audio track, as well as the short film *Daybreak Express* by D.A. Pennebaker set to the classic Duke Ellington recording of the same name. To propose a more nuanced statement, it could be that the function of film music is significant as to determine whether it should be subtle or not. The hierarchy of narrative and sound will be further elaborated upon under the heading vococentrism.

“Aaron Copland [...] describes five broad functions [of film music]: ‘creating atmosphere, underlining the psychological states of characters, providing background filler, building a sense of continuity, sustaining tension and then rounding it off with a sense of closure’” (Frith, 1998, p. 115). Noël Carroll, as cited by Frith builds on Copland’s theory regarding functions of film music and defines “modifying music” as music which “attribute[s] expressive qualities to the [scene], thereby characterising [a scene] emotively as, for example, dreamy or jaunty” (Frith, 1998, p. 105). Music as an adjective to the film as a noun (Medium, 2020). The emotional functions of film music are further explicated by Stam, Burgoyne, and Flitterman-Lewis who define: “redundant music, which reinforces the emotional tone; contrapuntal music, which runs counter to the dominant emotion; empathetic music, which conveys the emotions of the characters; a-empathetic music, which seems indifferent to the drama; and didactic contrapuntal music, which uses music to distance the audience ‘in order to elicit a precise, usually ironic idea in the spectator’s mind’” (Green, 2010, p. 3). The polish music educator and

musicologist, Zofia Lissa wrote a book on the aesthetics of film music, where she included her own definition of its functions. Unfortunately, the entire book has not been translated into English, but her definition has been translated and summarized:

“Lissa distinguishes between music underlining movement, music as stylization of sounds, music as representation of space, music as representation of time, deformation of sound material, music as commentary, music in its natural role, music expressing mental experiences, music as a basis for empathy, music as a symbol, music as story anticipation and music as a formally unifying factor. The deformation of sound material, is not a function in itself, but [rather] a range of techniques for different purposes” (Cooke & Ford, 2016, p. 107).

Frith (1998) and Green (2010) write that film music can affect the audience both personally, but also facilitate the audience recognising and mirroring the characters’ feelings (p. 118; p. 11). In the case of affecting the audience’s feelings, the audience will then attach their feelings to the scene or overarching narrative. The ability of film music to elicit emotions can guide the audience to particular interpretations, and in dialogue with the visual content and narrative become a carrier of meaning. For instance, see the way *The Shining* uses dissonant, loud and sudden music to elicit fear in the “Come Play With Us”-scene (Movieclips, 2011). In this example, the music in conjunction with other channels of information communicates an emotion to the audience. As Green (2010) states, the emotional content of film music includes explaining characters emotional states. It is not limited to the characters however, as the emotional content can also inform the audience how to feel during a specific scene or sequence. The audience does not require a character for the emotional content to be placed upon (p. 5).

“It has often been suggested that art should arouse emotions in the perceiver particularly in music” (P.N. Justlin, p. 252).

P.N. Justlin (2013) describing the neurological effects of music operates with a model of seven mechanisms, “collectively referred to as BRECVEM” (p. 240). These mechanisms are “Brain stem reflexes, Rhythmic entrainment, Evaluative conditioning, Contagion, Visual imagery, Episodic memory, and Musical expectancy” (Justlin, 2013, p. 240). Some of them, like visual imagery are more subjective, while others, like rhythmic entrainment are experienced on a collective basis. In the context of this research, the mechanisms that can be regarded as most relevant are rhythmic entrainment, emotional contagion, visual imagery, musical expectancy.

The definitions above can be condensed into a model of seven unique broad functions: emotion, sense of place, atmosphere, time, tension, asynchrony/synchrony, and reflexivity. Two additional functions have been included, that of asynchrony/synchrony, and reflexivity.

(A-)synchrony originates from an early discussion between Soviet and Hollywood film directors. Soviet filmmakers like Eisenstein, Pudovkin and Alexandrov advocated for asynchronous film sound, arguing that it was unnecessary for sound and image to match, and in certain cases more interesting to juxtapose an image with a dissimilar sound. The early Hollywood film directors however ended up setting the standard of synchronous film sound, which we can see examples of in nearly all mainstream feature films. Asynchronous film sound has become the exception that confirms the rule. The deviant of the norm. Something that registers in the viewer's consciousness and is interpreted as carrying a special meaning.

In this context, it is also relevant to bring up diegetic/non-diegetic film music. Diegetic describes when the music is placed within the image, when it is placed in the headphones of a character or the radio in a room. This is done using special mixing techniques or recording the music being played through its physical representation. Non-diegetic film music is the opposite and relates to Michel Chion's concept of the *acousmètre*. Diegetic film music is not a function of film music, as much as it is a technique of synchronous film music.

Reflexivity is somewhat related to the discussion of (a-)synchronous film sound but encompasses and describes some form of Mickey Mousing. Mickey Mousing is a technique where sounds are in synchrony with the image, but aren't realistic, one-to-one representations of the image. Reflexivity occurs when the image and its context is in dialogue with the sound and its context. An example of reflexivity can be found in contrapuntal film music, where a sad scene with happy music or vice versa indicates that something else is going on underneath the scene.

2.2 Aesthetic ideals

Some of the aesthetic ideals for the film music include David Lynch and Alan Splet's score for *Eraserhead*, Stanley Kubrick's use of Ligeti in *2001: A Space Odyssey*, various scores by Phillip Glass, electroacoustic works by Varese, Stockhausen, Dockstader, Parmegiani, and Bianchi, electronic music by Boards of Canada, Carl Craig, Autechre, and Jan Jelinek, as well as minimalism in the style of Reich and Riley.

A trend of twentieth century art music was the use of noises and anything producing sound as musical elements (Kostelanetz, 2003, p. 165). The invention of audiotape allowed for new sonic possibilities and experimentations with sounds and noises, creating the foundation for electroacoustic music. Kahn (1999) states that: “Sound is [usually] defined as the result of a succession of regular and periodic vibrations. Noise, instead, is caused by motions that are irregular, as much in time as in intensity” (p. 80). It could be hypothesised that electroacoustic music influenced Lynch and Splet when composing the score for *Eraserhead*. In Lynch’s own words: “People call me a director, but I really think of myself as a sound-man” (Michel Chion, 1992, as cited in Cooke & Ford, 2016).

Electronic film music

According to Tarkovsky “[Electronic music] has exactly that capacity for being absorbed into the sound. It can be hidden behind other noises and remain indistinct; like the voice of nature, of vague intimations [...] like somebody breathing” (Tarkovsky, 1989, p. 163). However, he sets a criterion for the usage of electronic music: “[...] [It] must be purged of its ‘chemical’ origins, so that as we listen we may catch in it the primary notes of the world” (Tarkovsky, 1989, p. 162). Experimental electronic music, especially styles that rely on noise often make use of digital artefacts to highlight some sense of physicality (Cooke & Ford, 2016, p. 158). Sounds indicative of instrumental materiality are appreciated and cherished in various non-Western cultures (Cooke & Ford, 2016, p. 158). Kahn (1999) writes that Pierre Schaeffer rejected his first composition *Étude aux chemins de fer*, due to sounds from the train station being too identifiable (p. 81).

It is difficult to understand what exactly Tarkovsky meant by the chemical origins of electronic music. One possible interpretation is the synthetic sounds of oscillators and filters. Another might be the use of digital artefacts to purge electronic music of a robotic, perfected nature. It might be an objective for some to avoid revealing the sound source, as with Schaeffer, inviting the listener to revel in a post-physical world where the connection between sound and source is blurred and obfuscated.

Improvisation and imperfection

Andy Hamilton and Lara Person (2020) in their book, *The Aesthetics of Imperfection in Music and the Arts* requested multiple artists from various disciplines to write about imperfection in music and arts. The book contains texts on interpretations of imperfections, embracement of

imperfections, imperfection turning into perfection, recorded improvisations, and subversion of perfection. Following is a brief summarisation of parts of the book relevant to this research:

It seems that recording has the capacity for an improvisation to be turned into a composition, or at least that it undermines the presumption that there is a clear distinction between the two. A recorded improvisation can be performed numerous times, in addition to being distributed for frequent listening, treating it exactly like a composition. (Hamilton & Pearson, 2020, p. 20). The idea of "perfectibility" is subverted by improvisation, which relies on coincidences, risk, the unforeseen, and the unintended (Hamilton & Pearson, 2020, p. 33). Some items of aesthetic value come with characteristics regarded as defects or shortcomings. These flaws reduce and distract from the attributes that make those items deserving of admiration (Hamilton & Pearson, 2020, p. 22). If something is flawlessly produced or executed, it will most often be evaluated as worthy of the highest level of admiration (Hamilton & Pearson, 2020, p. 21). However, imperfections can be used creatively (Hamilton & Pearson, 2020, p. 24). In the recording process, artefacts produced by analogue gear are frequently used for their aesthetic associations. One example is how artists and producers use analogue saturation for its distinctive sound characteristics (Hamilton & Pearson, 2020, p. 24). What was once a defect cannot help but be recast as some type of perfection when it is chosen as a desirable objective (Hamilton & Pearson, 2020, p. 26). The objective eventually receives its own evaluative criteria to the mainstream. Some cases of that imperfection will be recognised as "perfect," and will be preferred to other instances that fall short of the criteria (Hamilton & Pearson, 2020, p. 26).

Andy Hamilton (2000) has previously denoted the fluid continuum between composition and improvisation as "interpenetrating opposites" (p. 4). Jack Halberstam's (2011) theory of failure, posited in his book *The Queer Art of Failure* considers the advantages of getting lost over finding a way. A connection can be drawn between his description of an exploration of the "unplanned" and "unexpected" and improvisation in the musical field (p. 15-16).

Vococentrism

"There are voices, and then everything else" (Chion, 1999)

Chion (1999) writes about the voice in cinema and how through the standard of vococentrism, films set up a "hierarchy of perception" (p. 5). Following 1930, the film industry, particularly the American film industry, implemented efficient methods for making sound films. Several of

these methods were guided by vococentrism (Cooke & Ford, 2016, p. 24). Neumeier & Buhler in their book *Meaning and Interpretation of Music in Cinema* examine the soundtrack of Hollywood classic *Casablanca*, addressing several examples from the film demonstrating the effect of vococentrism on narrative and interpretation (Aakshi Magazine, 2016, par. 5).

Although the film is non-narrative and literal voices rarely are present throughout the film, I still find vococentrism to be a helpful term. In this text, it's meaning pertains not to actual voices, but to narrative in general. Whether the film music is adding to or subtracting from the narrative established by the visual content, or on-location sounds. Nicholas Cook (2018) speaks of the compositional process as a dialogue between the composer and their materials (p. 133). In this research, this dialogue in a wider sense pertains to a conversation between the sound and the image.

Asynchrony vs. synchrony

A manifesto signed Eisenstein, Pudovkin and Alexandrov directed focus towards synchronization of sound to images and its potential consequences. They had garnered global fame through their pioneering usage of montage in silent films and were concerned about the new American film industry particularly in regard to the advent of sound film. Synchronization entailed matching music to the plot, through mood, recurrent motifs, and exploitation of elements relevant to the narrative (Cooke & Ford, 2016, p. 8). Following is an excerpt from this manifesto:

“To use sound in this way will destroy the culture of montage, for every *adhesion* of sound to a visual montage piece increases its inertia as a montage piece, and increases the independence of its meaning-and this will undoubtedly [sic.] be to the detriment of montage, operating in the first place not on the montage pieces but on their **JUXTAPOSITION**. Only a **CONTRAPUNTAL USE** of sound in relation to the visual montage piece will afford a new potentiality of montage development and perfection. The first experimental work with sound must be directed along the line of its distinct **NON-SYNCHRONIZATION WITH THE VISUAL IMAGES**. And only such an attack Will [sic.] give the necessary palpability which will later lead to the creation- of an **ORCHESTRAL COUNTERPOINT** of visual and aural images” (Eisenstein et al., 1928, emphasis in original).

In the book *Reflections on the Cinema*, film director René Clair likely agreeing with Eisenstein, wrote that: “if *imitation* of real noises seems limited, and disappointing, it is possible that an *interpretation* of noises may have more of a future in it... We do not need to *hear* the sound of clapping if we can *see* the clapping hands” (Clair, 1953 as cited in Cooke & Ford, 2016). Dziga Vertov known for ground-breaking non-narrative films like *Man with a Movie Camera* and *Enthusiasm* wrote in favour of both synchronization and asynchronization as instruments accessible to the film director. According to Vertov, neither was mandatory: “Sound and silent shots are both edited according to the same principles and can coincide, not coincide, or blend with one another in various, essential combinations” (Vertov, 1966, as cited in Kahn, 1999).

It is possible synchrony ties into immersion, related to questions such as: What would we really hear if placed in this situation? Asynchrony, on the other hand might tie into agency and dialogue between the sound and image. In this text, I rely on Vertov’s instrumental approach to synchrony/asynchrony, while simultaneously questioning the necessity of sounds in certain scenes in alignment with Clair. Presently, we’re so accustomed to synchronous film sound that anything else may appear unusual or uncomfortable. Asynchronous sound may have a use as an effect making us aware of the water the fishes swim in, the oxygen we breathe, the film as a medium, an object to examine in three-dimensional space rather than as a highly immersive story-telling device. A parallel might be drawn to Steven Spielberg’s *Schindler’s List*, the entire film being monochrome, save for the scene featuring the girl in a red coat. A very powerful, yet thoughtful moment during the film.

Adorno & Eisler

An essay from *The Cambridge Companion to Film Music* claims that the notoriety of Theodor Adorno and Hanns Eisler’s *Composing for the Films* comes from their idiosyncratic perspectives on film music, rather than the work’s utility as a guidebook (Cooke & Ford, 2016, p. 108). It can be seen as an offshoot of the philosophy presented in Adorno and Max Horkheimer’s *Dialectic of Enlightenment* a study of the culture industry which sees “mindless studio movies” as failures towards the objective of cultural enlightenment and freedom in the Marxist sense (Zuidervaart, 2015). Lissa (1965) published her own work nearly twenty years later, which instead of casting film music through a socio-economic lens, defines music’s role in film as part of an “organic cooperation of the means of different arts” (as cited in Cooke & Ford, 2016, p. 108-9).

Adorno and Eisler believed that rather than parallel or complementary voices, the relationship between music and image should represent divergence of filmic content. Following, they advocated for organizing music and image based on configurations of "question and answer, affirmation and negation, appearance and essence," reminiscent of audio-visual counterpoint (Adorno & Eisler, 2007, as cited in Cooke & Ford, 2016, p. 310). Rather than conforming to the hierarchy of vococentrism, music should suddenly appear, disappear and/or be used to "outshoot" the image. The music should also be "objective" and "based on constructive principles, in which there is no room for clichés and embellishments" (Adorno & Eisler, 2007, p. 22). This would reveal the relationship between sound and image components in Hollywood films as fabricated and insincere (Cooke & Ford, 2016, p. 310).

Adorno and Eisler advocated for the use of modernist music for its musical potential and the lack of associations (Cooke & Ford, 2016, p. 309). They held the opinion that music that was intended for its stimulating effects rather than its compositional value would become outdated quickly (Adorno & Eisler, 2007, p. 10-11).

Another example that contrasts with Adorno and Eisler is Hans Erdmann, Giuseppe Becce and Ludwig Brav's *Allgemeines Handbuch der Film-Musik* which describes the significance of music in film through placing film between drama, as "the representational objective" and music, as "wordless" and "averse to pure thought" (1927, trans. Heldt, as cited in Cooke & Ford, 2016, p. 102).

2.3 Cultural appropriation

Writing in 2021, Michael Walling discusses the awkwardness of being a white director pursuing multicultural work. The privileged position that whiteness has been given through the violence and greed of colonialism is currently being called out and confronted. Whiteness has customarily been understood as the absence of ethnicity as opposed to a racial identity in and of itself (p. 142). The position held by the academy and among arts funders seem to be that only non-white artists should be allowed to address intercultural themes, but Walling (2021) claims this as ignorance of responsibility and further, a continuation of segregation (p. 143). Speaking to Claire Trevien about his festival *Westway Solstice*, he states that no one will benefit from keeping cultural voices in separate boxes, and that this instead cuts them off from any broader dialogue and involvement. Only allowing people of a nation to talk about that nation, or Indigenous people to talk about their own indigenous culture is pushing people apart. Since

the problems are international, arts and culture can assist and advance inclusive, global conversations (Interview with Claire Trevien on Westway Solstice, as cited in Walling, 2021). However, the cultural eclecticism of the 80's and 90's aided by Euro-American companies, that appropriated non-western cultures for exoticism were justifiably criticised (Walling, 2021, p. 139).

“The border crosser, the migrant, the refugee, the undocumented, the stateless, the colonized, the Indigenous, the fluid, the undefined, the shape-changer, the trickster, the performer – these are the figures who, through their courageous actions, suggest the necessity for, and the means towards, the dissolution of the border. Beyond borders, we discover what Tim Pretkni has called ‘the ultimate expression of border-crossing empathy’. Beyond borders, we find a precious space that is not owned or walled, but shared and open” (Walling, 2021, p. 137).

Deep Forest, “Sweet Lullaby”

One such example is the song *Sweet Lullaby* by Deep Forest which begins with the announcement that “Somewhere deep in the jungle are living some little men and women. They are your past. Maybe they are your future” (Deep Forest, 1992, as cited in Feld, 2000, p. 156). The song was licensed as sync music for TV commercials by the likes of Coca-Cola, Porsche, and Sony (Feld, 2000, p. 156). In 1992, Deep Forest requested a licence for Hugo Zemp's West Africa recordings for UNESCO. Instead, they used material from his Solomon Island recordings, namely Afunkawa's “Rorogwela.” Deep Forest claimed to be the victims of academic purists when questioned about sample ethics to depict themselves as respectful and humble (Feld, 2000, p. 159).

Being aware of instances where culture was appropriated, leads to better knowledge of what and what not to do when interacting with other cultures. While this chapter has addressed cultural appropriation in general, the thesis will describe my approach to using joik in the film music under chapter 4.4. The literary sources above indicate that awareness is important, and hopefully this research reflects that.

3 Artistic research on film music

In this chapter, I seek to explain my methodology concerning how I arrived at the research question, how I answered the research question, the tools and instruments I used for composition of film music, and decisions made about the presentation of results.

To answer the research question, I required (1) a finished film production with a premiere concert at Vaktbua the spring of 2023, and (2) a 50-page text including a reflection pertaining to the artistic research I had conducted where I present my theories.

The methodology consisted of two components:

- Composition of film music
- Theoretical reflection

Composition of film music can be defined under the colloquial description of art practice, as presented by Henk Borgdorff:

«Art practice qualifies as research when its purpose is to broaden our knowledge and understanding through an original investigation. It begins with questions that are pertinent to the research context and the art world, and employs methods that are appropriate to the study. The process and outcomes of the research are appropriately documented and disseminated to the research community and to the wider public» (Borgdorff, 2012, p. 43).

Borgdorff (2012) expands on Christopher Frayling's three distinctions of art research. He distinguishes between (a) research on the arts, (b) research for the arts, and (c) research in the arts (p. 37-39). The research I've conducted falls under the latter of these distinctions. Research in the arts encompasses research through art practice and attempts to uncover tacit or "silent" knowledge present in the creative process.

3.1 The objective of art as research

The artistic objective was to compose film music without seeing the movie simultaneously and working with sound effects to the image. Overseeing anything to do with sound, sampling, recording, performing, producing, mixing etc. Early in the project, the film director and I agreed about presenting the film for an audience. Our original idea was to premiere the film at

Cinematket, Aladdin but after working with the film music and sound we settled on performing a concert at Vaktbua.

Additionally, there was a theoretical objective to write a 30–50-page text about artistic research. I chose to structure the research as intro-theory-method-results-reflections-conclusion. The usual analytical chapter was swapped for a reflection chapter since I'm examining myself and my composition as research objects. The aim is to uncover implicit knowledge, and it's therefore ideal to present the contemplations as someone who's put themselves in the field and compare my own findings to theory.

In the theoretical reflection, I attempted to provide an answer to the research question. I used the second half of the question as a gateway into discussions and reflections on themes such as function, meaning, composition, and operational roles in the sound aspects of film. Theory and results were used to substantiate the reflections. I concluded the reflection with my aspirations for future research, academic and artistic work.

Creative process

I used the following equipment to produce the score and sound effects:

- Ableton
- Soundcard
- Zoom H4N, field recorder
- Modular Synth (Behringer 2600)
- Guitar Pedals (OCD, Joyo Boost, Joyo Tremolo, Hall of Fame 2)
- Launchpad [MK2]
- Faderfox MX12

Data analysis

I used four separate types of analysis to attempt to answer the research question. Firstly, the description of artistic process where I address both techniques I used, but also reflections I had composing film music. Secondly, I detailed some functions of film music and how they pertain to the film music I've composed. Thirdly, I wrote down timecodes from the film featuring the music and sound effects in an Excel sheet. The specific timecodes were chosen based on how interesting or significant I felt the interaction between visual and auditive content was. I decided to present the information in a relatively fragmented manner detailing the timecode's

visual content, auditory content, functions, and reflections. Finally, I described a case of ‘aesthetics vs. ethics’ where my artistic intuition led me to use a particular sound for a scene, but my moral character was at odds.

3.2 Epistemology of artistic research

According to Borgdorff (2008): “[A]rtistic research seeks to convey and communicate content that is enclosed in aesthetic experiences, enacted in creative practices and embodied in artistic products” (p. 45). The advantage of art as practice is that “it does not represent things; it presents them” (Borgdorff, 2008, p. 61). Following, he writes that artistic research is valuable because of the new understandings it contributes to art theory, as well as the innovation of art works and experiences (Borgdorff, 2008, p. 46). He supports this statement by claiming that the impact of such research advances the frontiers of the field and reaches further than personal artistic development (Borgdorff, 2008, p. 54). An advantage of artistic research is the fundamental position artistic practice holds as a research method. The way artistic practice encompasses the research topic, method, context, and outcome (Borgdorff, 2008, p. 46). A quality of discovery-led artistic research is that “one does not know exactly what one does not know” (Borgdorff, 2008, p. 55).

“[A]rt invites us to think, ‘without the possibility of any definite thought whatever, i.e. concept, being adequate to it’ [...] The artistic, pre-reflective, non-conceptual content enclosed in aesthetic experiences, embodied in art works and enacted in artistic practices is articulated, amplified, contextualized and thought through in the research” (Borgdorff, 2008, p. 60).

Sarah Rubidge (2014) addresses what she refers to as “generalised descriptors of Practice as Research in the Arts” (p. 4). These consist of practice-based research, practice-led research, and research into practice. She states that they do not have a clear dichotomy, but that their boundaries are “fuzzy” (Rubidge, 2014, p. 5). “[Practice-based Research] uses artistic practice as a means of interrogating a pre-determined theoretical or technical issue” (Rubidge, 2014, p. 5). “Practice-led research in the arts is [...] research in which the research is initiated by an artistic hunch, intuition, or question, or an artistic or technical concern generated by the researcher’s own practice which it has become important to pursue in order to continue that practice” (Rubidge, 2014, p. 6). She suggests that this form of research is a technique to examine one’s artistic practice, to develop new creative strategies, frameworks, and insights,

to solve artistic problems, and/or to search for theoretical frameworks inherent in the artistic practice (Rubidge, 2014, p. 6). She refers to these categories as either hypothesis-led, where a pre-formulated hypothesis or questions establishes the fundament for research to be conducted, or discovery-led where the specific research topic, and question are discovered while conducting artistic research (Rubidge, 2014, p. 8). The final mode of research, “[r]esearch into artistic practice, through artistic practice [...] privileges the practice in and of itself.” It is concerned with artistic development explicitly and pushing the envelope for various art forms. The research question I ended up with pertains to the second mode of research, practice-led research. It is additionally discovery-led research, since the progression of film music and sound guided and delimited my research topics, and questions.

Artistic research, according to Borgdorff (2012) occupies the science of “knowing how to do something, to make something” as opposed to “knowing that something is the case” (p. 122). This is referred to as “knowledge as *skill*” (Borgdorff, 2008, p. 55). More important than an “explanatory grip” is “insight” and “comprehension” entailing that of a sensitive, open, and interpretive approach. (Borgdorff, 2008, p. 55). As previously mentioned, artistic research does not necessitate a hypothetical underpinning, but research questions can often transpire as explorations of art practice (Borgdorff, 2008, p. 56). The questions and topics may also change under the creative expedition (Borgdorff, 2008, p. 56). Borgdorff (2008) writes that: “Artistic research articulates the fact that our natural relationship with things we encounter is more intimate than what we can know [...] it also familiarizes us with the fact that those things are in some way foreign to us” (p. 60). Borgdorff (2008) refers to the construction and depiction of our world and society by means of artistic research as the “realism of artistic research” (p. 61). He states that there are three forms of conveying information in the result chapter:

“Many people place emphasis on a rational reconstruction of the research process, clarifying how the results were achieved. Others use language to provide interpretive access to the findings, the material products and the practices generated by the research. A third possibility is to express something in and with language which can be understood as a ‘verbalization’ or ‘conceptual mimesis’ of the artistic outcome. The concepts, thoughts and utterances ‘assemble themselves’ around the artwork, so that the artwork begins to speak” (Borgdorff, 2008, p. 58).

Eirik Vassenden (2014) alerts to the importance of contextualising artistic practice in relation to minimum two backgrounds: “one (international and/or national) artistic arena and one

personal horizon of experience and interests” (p. 25). He posits three questions central to reflection texts which can be emphasised differently: “1) the relationship between [one’s] own artistic practice and the surrounding field, 2) the relationship between [one’s] own artistic practice and the problem of articulation, and 3) the relationship between [one’s] own artistic practice and their personal experience of theoretical work and reflection work” (Vassenden, 2014, p. 31). The examples he points to share one characteristic: “an expository model in which the presentation of examples is followed by a commentary that interprets and explains them” (Vassenden, 2014, p. 16). Vassenden (2014) explicates that “[artistic] practice also contains theory” (p. 19). According to Vassenden (2014): “The most important difference between science and research in this perspective, however, is that research is not about pure objectivity, but about what happens in practice [...] (regardless of whether the practice in question is interpretative or performative). Science registers, while research is productive and creative” (p. 22). One of his examples from Swedish lyricist and literature critic Magnus William-Olsson states that:

“[T]he relationship between doing and interpreting is essential to all artistic creation. You try something out and then try with all your mental faculties, ability and knowledge to decide whether it is worth keeping and building on or whether it must be discarded. You oscillate between reading and writing, between playing and listening, between intention, performance and evaluation in order to find an answer in the form of a way, a relevant perspective, an example. The ability to answer, to train your sensibility to what has been done is primarily the artist’s art, an art that can be refined and changed, sometimes in completely different directions, but always and in all variations without end” (William-Olsson, 2013, as cited in Vassenden, 2014).

Limitations of artistic research

Artistic research requires an original contribution. It should not have been executed by others, and it should result in new knowledge (Borgdorff, 2008, p. 55). In the context of artistic research, this contribution leads to an original artwork serving as evidence to the research’s quality (Borgdorff, 2008, p. 55). In each instance of artistic research, one must clarify to what extent the research led to artistic and academic developments (Borgdorff, 2008, p. 55).

Questions of distance permeate artistic research. The first points to the dissimilarity between the artistic and the theoretical, reflective output. Language cannot completely fathom or depict

art, although it can serve as a complementary tool (Borgdorff, 2008, p. 58). The second regards the interpretive advantage of distance. How distance clarifies significant findings and lends to categorisation. Vassenden (2014) states that: “[T]he distance between the presentation of examples and the commentary cannot be too great – in [his] opinion, it is precisely this interaction, the movements within this field, that is the locus of critical reflection” (p. 16).

An additional limitation is that artistic research operates with a single, unquantifiable event where qualitative and quantitative methods will use numbers and statistics to increase their reliability and validity. To ensure that artistic research is reliable I have made my best effort to describe my artistic process, compositional tools and reflections I’ve had while working with the material. This will be described in the next chapter. The validity of the research should be addressed through my research question and topics, and the contextualisation of my research and film music.

4 Results

In the following chapter, I seek to describe the philosophical reflections and production techniques that have guided and shaped my artistic process in creating film music and sound. I have chosen to highlight points throughout the film that I find particularly interesting in regard to communication between the visual and auditory content of the film. Lastly, I present a case of using joik in film music and how I've navigated through some aesthetic and ethical problems associated with using music of a minority, and indigenous people who have been historically ostracised and assimilated.

4.1 An exploration of film music composition

One of the first questions that arose when initially viewing the film, was how I could accentuate the features of the film I soon realised this approach would lead the film in a certain direction, away from the many other possible readings I had of the film upon initially viewing it. The film would be sequenced, and its time distorted. The music in my belief, had the ability to fracture the contents of the film. This in my opinion, was to be avoided. I wanted to keep these interpretations, and the sense of time intact. In some way, this could relate back to what Tarkovsky stated regarding the value of film music. Films can or should be able to stand on their own without the need for much accompaniment. As is the case for films like *Autumn Sonata*, where only three pieces by Chopin, Bach, and Händel constituted the soundtrack (IMDb, 2023). The restrictions I felt were necessary to impose, led me to consider how *Eraserhead* by David Lynch used music to convey a sense of place – the industrial cityscape that Henry Spencer (the main character) appears in.

To capture a general atmosphere of the film, I started the compositional process by watching the movie muted so that I couldn't hear the soundtrack nor the sound effects. I then proceeded by noting down what I perceived to be the key elements or themes in the movie. Much like Antonioni's "enhanced receptiveness" (Nardelli, 2010, p. 9). The elements ranged from specific elements such as a bus ride, to more flexible elements such as water. I consider the bus ride to constitute a specific element because it's something you hear exclusively in that setting alone. In contrast, you have elements like water which you can hear in multiple settings or emanating from a diverse set of sources (a spring, a river, a toilet flushing, a rainstorm etc.) Following this, I recorded these sources with my Zoom H4N handheld recorder. The field

recordings became the basis for some improvisations I had, running the recordings through my modular synth and guitar pedals. I wanted something less representational, and more personal. To embed the recordings with my own artistic and aesthetic desires and values. After I had laid down my first improvisation based on recordings of bus rides, I chose to listen through what I had done, finding parts I believed to hold something unique and interesting. I looped them, turned them into scenes in Ableton, and made them play in random order. What I ended up with was something cryptic, noisy, or textural. Nearly devoid of various identifiers such as people speaking, laughing, or moving about. As long as the audience is not made aware of the nature of the content beforehand, they will likely not recognise the source of the elements. The abstraction occurred once the aforementioned samples were heavily treated using a modular synth and guitar pedals, sliced up, and put together in new formations. Still, one might be able to either consciously, or subconsciously observe the essence, spirit, or source of the sounds. Especially, when this is coupled with the video of a bus ride. Since the image informed the music, it could be argued that the music and the film operate in a reflexive manner.

The improvisations based on the bus ride recordings contained a nice low humming sound, and I figured it could work as a basis for some harmonies to place on top. I used two sinewaves from my modular synth, because I wanted to avoid the synthetic quality of other waveforms dominating the composition. According to Fourier theory, every sound can be reduced to relationships of sine waves. Following, the “primary notes of the world” would be of this waveform (Tarkovsky, 1989, p.162). That might help to explain the clean, plain sound of sine waves. They do not reveal much about the quality of the instrument, or synthesiser emitting it. It’s this precise quality, I interpret as the “chemical” origins of electronic sound (Tarkovsky, 1989, p. 162). I spaced them apart, listening to one sinewave at a time, adjusting its frequency to match the low humming sound. Once I had a sinewave that matched, it would determine what the next sinewave should be in its relation. This was determined by what sounded harmonically pleasing or interesting. I recorded several such harmonies as scenes in Ableton. This was to me a new approach to microtonality. Not tuning instruments to specific, pre-conceived or “intellectualised” scales, but tuning instruments to my own liking. Finally, I made some improvisations based on the other sound effects, repeating what I had previously done with the bus ride recordings.

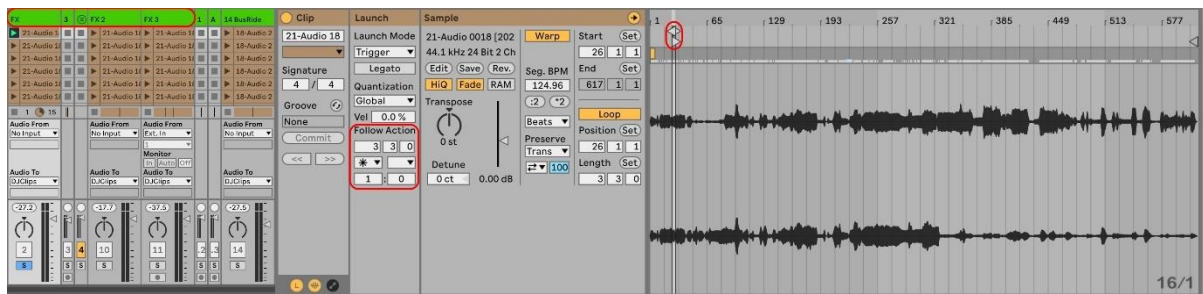


Figure 2: Shows session view in Ableton with 3 fx tracks (shown to the left), the bus ride recordings on track 14, and looped field recording improvisations belonging to the fx tracks (to the right) playing in random order through follow actions.

The next step would be to arrange the scenes based on the length of the film. I chose to improvise an arrangement, deciding on my Launchpad what harmonies would go next, the noise playing in random order. I listened through what I had recorded, looped it due to being too short according to the film's length, and cut away the "excess" minutes. I began editing through muting and unmuting the fx tracks, using my ears to listen for interesting sound events – this noise effect (call) was followed by another noise effect (response). I duplicated the fx tracks, making them play backwards. I also put the fx tracks through other tracks with various, mostly "random" effects such as distortion, bitcrusher, delays, reverbs, flanger etc. Always focusing on what sounded good to my ears.

Once I had organised the arrangement based on scenes I had created, I started working with modular synth drones that would fade in and out throughout the arrangement. I felt it wasn't necessary to strictly keep myself to sinewaves, because I perceived a greater control over the temporal movement of the sound. I would adjust parameters on my modular synth, like volume, filter opening, vibrato (lfo to pitch) etc. Then I recorded some guitar through my modular synth and effect pedals, tuning the strings based on the sinewave harmonies as to allow myself greater freedom when facing microtonality. The guitar, in its standard configuration, has frets which limit you to 12 tones when playing casually. One can bend the strings and use a bottleneck to achieve the microtonality I'm speaking of. I did bend strings, but I did not think to use a bottleneck. It might have given me some fresh creative ideas to tune the strings in such a way, nevertheless.

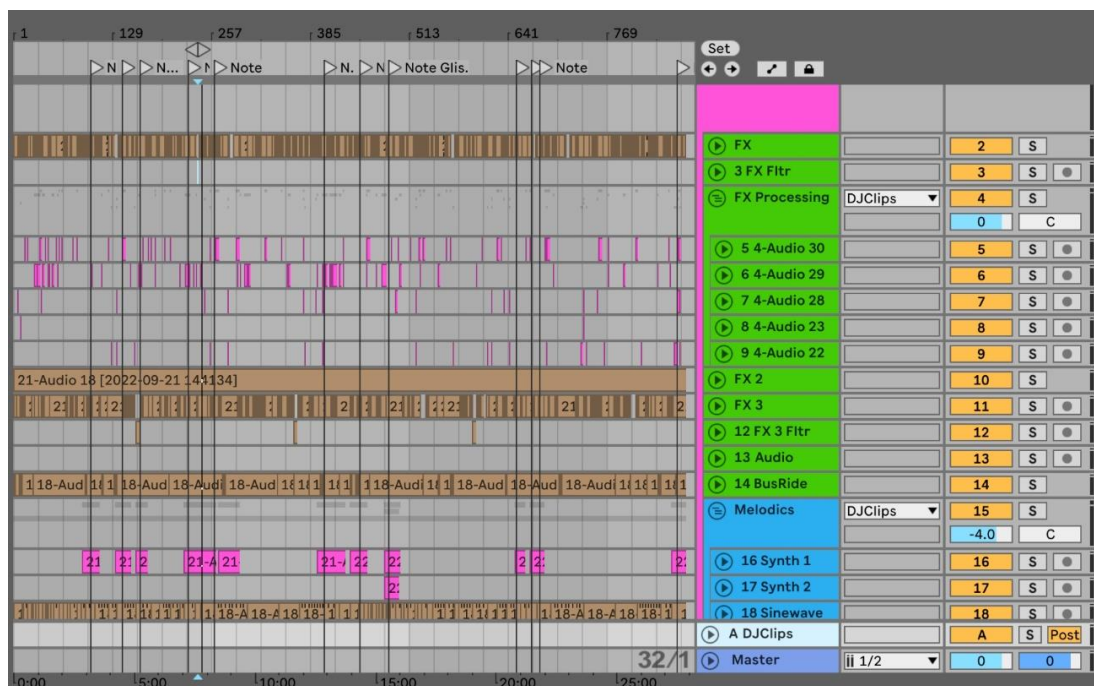


Figure 3: Ableton arrangement view (with minutes in the bottom, grey strip). Shows fx tracks with filters, various types of processing, and melodic tracks featuring synth drones, sinewave harmonies. What's not shown in this picture is the track with guitar running through modular synth.

In essence, the film music consisted of electronic manipulations of field recordings, accompanied by microtonal sine-wave harmonies, slow complex wave drones that fade in and out, and electric guitar played through a modular synthesiser dramatically distorting and stripping it of most inherent qualities. The continuous exchange between composition and improvisation played a significant role in the development of the musical arrangement, consistent with Hamilton's (2000) concept of composition and improvisation as “interpenetrating opposites” (p. 4).

I exported the composition, put the score to the film, and sent it to the director. After getting a positive response from the director, it was time to start working with sound effects. I sampled some of the original sounds from the film, for example applause, street musicians, and monk/friar chanting. Things I didn't consider necessary to change or alter. I intentionally left some out, drawing on Clair's (1953) comments about the necessity of hearing certain sounds (as cited in Cooke & Ford, 2016). For the sound effects I wanted to change or add, I would use field recordings (ex. creaky wood), or samples from my internet browser (ex. reading in Farsi, speaking in Greek etc.). At this point, I also recorded the intro scene using a modular synth drum sound and a high-pitched sinewave being distorted harshly over time. I exported three tracks from the musical composition (fx, sinewaves and “temporal melodics,” consisting of drone and guitar). I mixed the tracks according to the picture and other sound effects. In the

intro scene this consisted of narrowing the stereo-field of the musical composition, fading the sinewave harmonies in, and making the noise louder. Much like *Koyaanisqatsi* by Reggio, the level of the music was also intentionally kept loud, instead of reducing it to colourless background music as with the cliché Gorbman (1980) pointed out (p. 183).

4.2 Use of functions in the 911-film

Modifying music, as stated in the theory chapter functions to augment a film scene with expressive qualities. It appears to be nearly indistinguishable to film music evoking emotions in the audience. A possible difference may be one of semantics, where modifying music functions as a metanarrative to a particular scene, and the alternative would be music placing itself within the narrative of the scene. In this thesis however, modifying music will be used to explain the function of music evoking emotions or creating meanings within a scene. In the film music, modifying music appears not to infuse the visual content with emotional adjectives, as much as commenting on or creating meanings in the scene. Modifying music has not appeared to influence my compositional process, as much as it has served as an explanation of what I was doing while composing. The most interesting example of modifying music can be found in the scene at 09:59, where the music of two street musicians continues onto the next scene seemingly commenting on an interaction between a shopkeeper and a customer.



Figure 4: Street musicians (left) play over the subsequent scene showing an interaction between a shopkeeper and a customer (right).

Sense of place describes the function of music seeking to place the audience in a different country. Such use is sometimes problematised for its “pseudo authenticity,” because it uses music that evokes the essence of a particular place to western listeners, rather than incorporating authentic sounds from that location (Hoffmann, 2023). The function can also be used on a smaller scale, placing the audience in a club, a street market, a renaissance fair or in Las Vegas. One example from the film music is a scene at 25:14 where tourists are seen looking at Greek architecture while Greek-speaking voices are heard, enhancing the sense of place. The sense of place can also stand in contrast to the image, as with the scene at 24:46.

The *atmospheric* function of film music appears to pertain to music with an over-arching mood or style. The musical atmosphere can help “build a sense of continuity,” one of the functions described by Aaron Copland (1949, as cited in Spadoni, 2020, p. 55). Spadoni (2020) writes: “Atmosphere helps to save a film from the centrifugal force of its own heterogeneity. Binding, blanketing music makes this function explicit, although I have argued that every part of a film feeds atmospheric production.” (p. 55) There are instances in the film's score where the music creates a particular atmosphere. For instance, at 13:37, the music evokes the feeling of being inside an airplane. Similarly, during the scene with jellyfish at 23:24, the music's atmospheric quality complements the imagery.

Music can provide a sense of *time* through properties like tempo and beat. According to Hoffmann (2023), the extension or constriction of musical tempo can change the perception of duration in scenes. Montage sequences, according to Gorbman (1980) often turn to music to appear seamless (p. 201). The music during the scene at 15:36, albeit unintended seems to emphasise the slow movement of the patrolling guards through the timing of elements being in synchrony.



Figure 5: Guards patrolling outside building. Notice the clarity of their movement in the image.

Jacobs (2022) writes about how *tension*, as in musical dissonance, tempo shifts, and crescendo can create suspense in film sequences. When paired with various images and settings, suspenseful music builds tension in the audience to anticipate what's to come or experience some form of sensation reflecting what is presented on screen. Alternatively, the absence of music or sound can create tension, as is the case with the scene at 22:08. We see two people appearing to watch a movie, but there is no sound accompanying the movie. The lack of music potentially creating a sense of unease in the viewer.

Eisenstein, Pudovkin and Alexandrov referred to an “orchestral counterpoint” between the visual and the auditive in their manifesto (Eisenstein et al., 1928). Zofia Lissa (1965, as cited in Cooke & Ford, 2016) writing on *audio-visual counterpoint*, stated various possible uses: “music commenting on images or characterizing protagonists; music adding ‘its own content’ to images; music anticipating a scene; music in counterpoint to speech and noises; and music in Eisensteinian montages of thesis and antithesis implying a conceptual synthesis” (p. 106). The essential feature of counterpoint is the opposition between sound and image, and the ensuing meaning-making abilities. An example of counterpoint in the film can be found in the scene at 11:40, where the sound of joik is not matching the image of two men singing in the karaoke bar. The joik can be perceived to characterise the men and add its own content to the image. Additionally, the traditional joik stands in contrast to the overarching electroacoustic

film music. This use of joik also fits the description of displaced music, through its continuation onto and over the subsequent scenes.

Guido Heldt (2013) writes of *displaced music*: “music that has a shown or implied diegetic source, but is used with images in relation to which it cannot be understood as diegetic” (p. 98). He defines two types of displaced music, spatial and temporal. The first, spatially displaced music occurs when the same music is seen over scenes from different locations. The second, temporally displaced music is observed when the scenes imply a leap of time, but the music remains. David Bordwell and Kristin Thompson, also acknowledge the use of temporal displacement (Smith, 2009, p. 14).

Michel Chion (1994), in the book *Audio-Vision: Sound on Screen* defines the *acousmètre* as a voice that is neither in the image nor outside of it, much like a detached narrator. Its connection to the visual involves a special kind of “ambiguity” and “oscillation” (p. 129). The scene depicting tourists observing Greek architecture, while we are hearing Greek voices aligns with this description. Although the source of the voices are not visible, they are in accordance with the image, and not disconnected from it.

A certain mode of interaction between image and sound can be referred to as *reflexivity*. According to Simon Frith (1998) the repeated use of music styles in particular films can modify the understanding of that style, since the image contextualises feelings induced by the music (p. 112). “What we hear can [...] be a more powerful source of meaning than what we see” (Frith, 1998, p. 111). The image puts the music in perspective, or vice versa. The scene at 2:40 of light being reflected in the surface of water was one source of inspiration for the musical composition, and as thus contextualises the music. Alternatively, you have the inverse where the “Gregorian chanting” seems to contextualise the image featuring the inside of a lighthouse at 24:07.

Considering the presentation of *asynchrony* in the theory chapter, it is not necessary to elaborate deeply on its function. In essence, asynchrony is a deviation from the presentation of the image, either temporally or functionally. To distinguish between audio-visual counterpoint and asynchrony, the first will be used specifically to apply to contrasting image and sound, whereas the second will be used about the absence of sound. There are a few scenes throughout the film where featuring on-location sound recordings was not necessary, so I intentionally left them out or mixed their volume to be nearly silent.

There are few voices in the film that constitute *narratives*. Firstly, there's a trashcan at 06:02 which a first-person character we do not fully see opens, and the speech tells us "sabla bra at du kaster søppel" (trans. "It's very good [southern Norwegian expression] that you throw trash"). This is a diegetic, on-location sound that has been added to a trashcan by the designers of the trashcan. It adds an extra level of detail or finesse to the scene. It's very rare that these things occur in films, so the theory on such instances is difficult to locate. Perhaps it could be classified as some form of diegetic personification. Secondly, there's a stony-faced dog bound to a metal railing at 12:56. This function could maybe be defined as voice-over anthropomorphism, or something to that effect. Chion (1994) defines "emanation speech" as speech that may not be fully heard or comprehended and is not closely linked to the central narrative action (p. 177). Some films have obscured speech by incorporating a foreign language that the majority of viewers do not comprehend (Chion, 1994, p. 180). The voice-over is in Farsi which is not a widely spoken language in Norway, in contrast to French, German or Spanish. Also fitting the description of emanation speech is the Greek voices shown in the scene at 25:14.

Parallel, overlapping, or simultaneous sound/music in this thesis refers to the function of having two competing musical elements. Analogous to Frank Zappa's technique of Xenochrony where elements from two different compositions are placed over one another. Examples from films can be found in the intro scene to *Nostalghia* by Tarkovsky, and at several points throughout *Histoire(s) du Cinema* by Jean-Luc Godard. The effect can potentially induce excitement through dissonance or create meaning if the sound elements are juxtaposed in a certain way. The function can be found in my film music, at 08:51 when street musicians are playing while the music continues. The street musicians are providing a sense of place and time through their rhythmical performance.

Symbolism or expressive film music aims to use the associations of a type of music to imbue a scene with a particular meaning that can either stand in contrast, develop a new interpretation, or expand on a specific interpretation that could be made beforehand to make it stand out more clearly. Symbolism is employed in the movie to augment a scene (17:01) featuring two trees positioned next to each other in a way that could be perceived a certain way.



Figure 6: Two trees standing next to each other in a suggestive pose (17:01).

BRECVEM

In Justlin's (2013) BRECVEM model of neurological functions of music, *rhythmic entrainment* is characterised as the process where a strong, external rhythm in music alters the internal bodily rhythm of a listener, such as their heart rate, leading to an emotional response. This adjustment of the internal rhythm towards a shared periodicity eventually leads to synchronization. The intro scene fits this description using a synth drum that mimics a heartbeat and causes feelings of uneasiness. Ben Winters (2008) has written about the significance and trope of using rhythms that resemble heartbeats in film music, and its effects. In that sense, this is nothing new, but I sought the potent effect it produces as a viewer.

Emotional contagion occurs when a listener experiences an emotion in response to a piece of music because they interpret the emotional expression conveyed by the music and internalize it, causing them to mimic the expression internally. A scene where a dog is seen bound to a metal railing (12:56) and appears to talk to the viewer in a serious tone is somewhat interesting in this aspect. Instead of the music affecting one's emotions, it's a sampled voice talking in a foreign language. This could point to emotional contagion being linked to the sections of our brain associated with language. Alternatively, both could be related to mirror neurons. At 14:25 in the film, there is another instance where music impacts emotions. This scene shows a Picasso

mural covered by a tarpaulin, and despite the randomness of the notes, they can be perceived as conveying a sense of happiness.



Figure 7: Displays a dog bound to a metal railing or bike rack (12:56), overlapped with a picture of a man seemingly distressed. Colour added for emotional effect. Courtesy of Sander van der Wel from Netherlands, CC BY-SA 2.0, via Wikimedia Commons.

Justlin (2013) describes *visual imagery* as emotions evoked by the listener conjuring mental images, such as a breathtaking landscape, while they listen to music. The repeated usage of certain musical styles, instruments or phrases coupled with specific movie scenes and narrative contexts, or even cultural environments outside of films can quite possibly affect the visual associations the audience will make. Not all people experience visual imagery and not to the same extent either. A few people have *aphantasia* which is a condition where they can't conjure up images in their minds (Macdonald, 2017). A scene that could potentially produce images in the audience is 17:01, where the rhythm of the wood creaking could make the audience visualise events which are not present onscreen.

Musical expectancy is the phenomenon by which a listener's emotions are influenced when a particular characteristic of the music either violates, delays, or verifies the listener's expectations of the continuation of the piece (Justlin, 2013, p. 242). Such violations and delays of expectations can be quite powerful in creating suspense or tension. Confirming the listener's expectations does the opposite and can be used to release or produce emotions. It is quite satisfying, in some cases even cathartic to have our expectations validated as audience

members. Leading into the scene at 24:46, we have a type of interlude played using an Irish folk drum. Quickly thereafter our expectation of the musical progression is broken by a silence, gradually fading into birdsong. This also fits Gorbman's (1980) description of structural silence, and Adorno & Eisler's (2007) concept of music suddenly disappearing, as mentioned in the theory chapter (p. 194; p. 22).

4.3 Timecodes and reflections

[02:40] Visual event: Light reflected in water. Musical/Sound event: Noise.

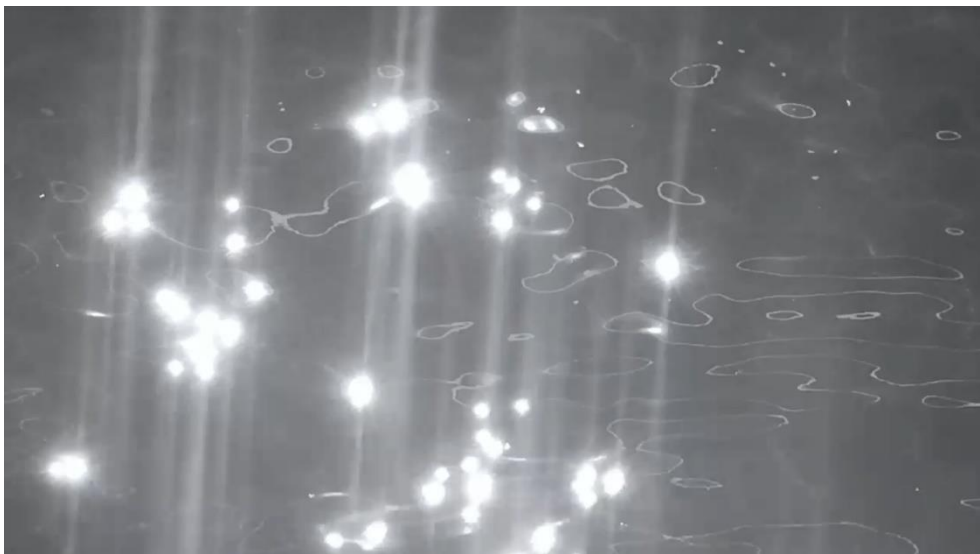


Figure 8: Light reflected in water (2:40).

Functions: Reflexivity.

Reflection: This was one of the movie's visual events that had a major influence on my film music. To me it felt very expressive, and I could imagine music with a lot of resonance to fit the brightness of the light upon the watery surface. Although my film music was composed separately to the film, it still appeared to me that the inspiration from this particular scene lingered and therefore resonated with the visual content. I would consider this to fit the function of reflexivity, and because of its non-idiomatic inspiration, I would consider it novel as well.

[06:02] Visual event: Opening trash can, "Sabla bra at du kaster søppel" (trans. "It's very good [southern Norwegian expression] that you throw trash"). Musical/Sound event: On-location sound from original recording.

Functions: Narration.

Reflection: This scene was disturbing to watch without the original sound, so by extension the sound appeared to explain the action in the scene.

[08:06] Visual event: Industrial work. Musical/Sound event: On-location sound from original recording.

Functions: Sense of place, asynchrony.

Reflection: Here, I was in slight disagreement with the film director. He had kept the whole sound recording of the machinery, but I chose to fade it in only once you see the machinery. I also lowered the volume a lot, because to me, it was distorting the image. My thought was that you could see the machinery, and therefore didn't require hearing it.

[08:51] Visual event: Street performers, dancing. Musical/Sound event: On-location sound from original recording.

Functions: Sense of place, time, parallel sound/music.

Reflection: I tried to convince the film director that the scene would look better and be more interesting if we kept the original on-location sound, but simultaneously have the film score playing. I don't think the film director quite understood what I had imagined, so his suggestion was to place something unnatural on top of the image. I didn't comply and instead followed my original idea. In the mix, I had to lower the melodic content in the score for the dissonance to not be too overpowering. To me, it stands as an example of parallel sound and music. Also, the on-location sound elaborates and provides a sense of place, makes the time appear faster, and is in synchrony to the picture.

[09:59] Visual event: Street performers continuation. Musical/Sound event: On-location sound from original recording.

Functions: Modifying music, atmosphere, reflexivity.

Reflection: I continued the sound of the street performers onto the next scene by crossfading into an earlier section of the recording, which was previously unused. This ended up sounding quite natural to me, and I felt it continued an emotional setting or mood acquired from the previous scene with the street musicians. Without this continuation of the recording, the scene appeared to be unrelated to the previous one.

[10:33] Visual event: Fireworks. Musical/Sound event: Absence.

Functions: Asynchrony.

Reflection: Normally one would expect the sight of fireworks to be coupled with the sound of explosions, but I decided it was not necessary.

[11:40] Visual event: Two men singing in karaoke bar. Musical/Sound event: Sampled sound.

Functions: Audio-visual counterpoint, modifying music, symbolism, displaced music, parallel music.

Reflection: I needed some audio to match the men singing in this scene, and the first thing I came across in my internet browser was some old joik recording from the 1950's. After discussing use of joik in film music with several different people, and the organisation Davvi Division, I asked a Sámi artist to provide a different traditional joik for use in this scene. I have described the course of events more in detail as a case later in the chapter. Nonetheless, I associate (traditional) joik with nature, shamanism, harmony, and indigenous culture, so it was a strong contrast when placed on top of an image of two tipsy men who acted silly. It provides a message of the relationship between the new and the old, the modern and the traditional.

[12:10] Visual event: Mother drags kid on sled. Musical/Sound event: Sampled sound.

Functions: Modifying music, sense of place.

Reflection: I continued the joik into this scene, eventually leading into a sample of applause. The joik in this scene appears to comment on the snow and the sled, since Sápmi is located in what's known as the "cap of the north."

[12:56] Visual event: Dog bound to metallic stand looks miserable. Musical/Sound event: Sampled sound.

Functions: Narration, emotional contagion, reflexivity.

Reflection: Lasse originally interpreted the dog as looking miserable and had decided to place speech in German that had a voice quality portraying seriousness and existentiality on top. He mentioned having shown it to an audience where someone in the audience knew the language well and told me he didn't want anyone to recognise what was being said. I therefore changed the speech he had used to a recording of someone reading a book in Farsi that has only about 5000 speakers in Norway (Tirosh, 2021). German is often taught in school alongside French and Spanish, and it belongs to the same language group as Norwegian. I also pitched and slowed the speech down to make it sound gloomier.

[13:37] Visual event: Inside view of airplane hovering above mountainous region.
Musical/Sound event: Drone.

Functions: Atmosphere, sense of place.

Reflection: Upon my first viewing of the film with the new score, I found myself looking for the equivalent to the constant airplane noise one hears when flying. I found this within the music I had composed, a drone that revealed itself to be a match. To me, the sound provided an atmosphere of being inside the airplane.

[14:25] Visual event: Picasso mural on wall of Oslo Rådhus covered by tarpaulin.
Musical/Sound event: Random notes.



Figure 9: Picasso mural on wall of Oslo Rådhus covered by tarpaulin (14:25).

Functions: Emotional contagion, tension.

Reflection: Another unintended resonance between the visual and auditive events was between the Picasso mural covered by tarpaulin and the playful, sudden, sample-and-hold notes that fade in halfway through the scene supported by an insistent and serious-in-nature drone. I feel that the playful nature of these notes matches the description of emotional contagion. There's also tension in how they're placed over a drone which doesn't appear as playful, and the image which to those familiar with the plans for the parliament documents an artwork before its inevitable removal.

[15:36] Visual event: Guards patrolling outside of ancient, Greek building. Musical/Sound event: Drone fades in.

Functions: Time, reflexivity.

Reflection: I considered this to be a strike of luck, in regard to how well the movements of the guards fit with the timing of the drone. Upon setting their feet down, one can hear a synth note. None of this was intentional upon composing the music.

[17:01] Visual event: Two trees standing next to each other. Musical/Sound event: Sampled sound.

Functions: Modifying music, rhythmic entrainment, visual imagery, time, symbolism.

Reflection: In the original, Lasse had placed moaning on top of these trees. I thought the moaning to not work too well with my impression of the film, particularly after having placed the new score to the film. However, I still wanted to retain the euphemism and resulting awkwardness of the scene coupled with the original sound. My idea was to replace the moaning with the sound of wood creaking as to imply a specific movement. I looped three parts from a recording of rocking back and forth on a wooden bench to create rhythms at three different speeds, which I then gradually faded into each other.

[20:26] Visual event: Two people playing football outside a house. Musical/Sound event: Absent.

Functions: Asynchrony.

Reflection: I considered sampling the sound of people playing football to use in my music composition but ended up not doing it. Not for some particularly good reason, other than the feeling of the music being complete before having the opportunity to record it. As with several of the sound effects I've left out, I didn't consider it to be entirely necessary either.

[22:08] Visual event: Two people watching a movie. Musical/Sound event: Absent.

Functions: Tension.

Reflection: In this specific scene, I thought it would be quite logical to feature some samples from an optimistic movie, to clarify that these people are enjoying themselves watching a movie. Yet, I found it more interesting not to do so. It put the visual and musical content in a state of tension, where the music made it seem that there was something else going on underneath the scene.

[23:24] Visual event: Jellyfish swimming by. Musical/Sound event: Noise.



Figure 10: One of several jellyfish swimming by (23:24).

Functions: Musical expectancy, atmosphere, reflexivity.

Reflection: Upon letting friends and family initially view the film, one of them let me know she thought there should be a sound accompanying the jellyfish swimming by. During the scene, she heard something representing what she was searching for, “yeah, exactly like that.” I asked her if she could describe the sound, and she did her best impression of a clicky, repetitive noise present in the soundtrack. I suppose this ties into some kind of musical expectancy, where you associate a type of scene with a type of sound and it’s relieving to hear what you expect. I believe the sound represents a specific atmosphere – the atmosphere of jellyfish swimming in a sea of blue.

[24:07] Visual event: Inside of Lighthouse. Musical/Sound event: Sampled sound.

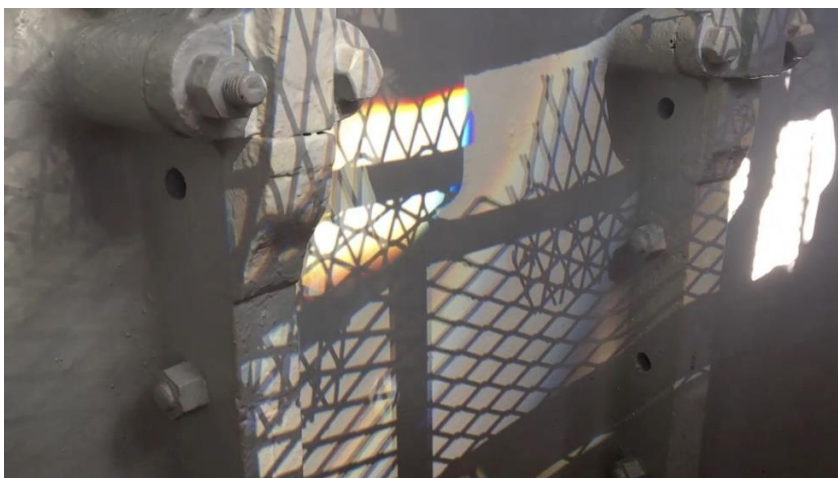


Figure 11: Inside of Lighthouse (24:07).

Functions: Modifying music, visual imagery, atmosphere, reflexivity, symbolism.

Reflection: Lasse had previously determined what type of sound to put to this scene, and I complied. It gave me associations to Gregorian monk/friar chanting but has a cryptic meaning. It sounds like the voices are played backwards. It led me to think of subliminal messages. Specifically, the Beatles' composition *Revolution 9* which according to some, played backwards contains a male voice saying, "turn me on, dead man." I added a sample of bodhran (Irish folk drum) to the end of the clip so it would lead into the next scene, acting as a transition.

[24:46] Visual event: People with headphones walking by –seemingly listening to the same music. Musical/Sound event: Sampled sound.

Functions: Visual imagery, musical expectancy, sense of place, asynchronous, symbolism, reflexivity, audio-visual counterpoint.

Reflection: In contrast to the scene before, I wanted this scene to start off quiet. I cut the sound of the noise leading into the scene. I added the sound of birds singing. I automated the volume of the field recording and the noise so they would fade in gradually through the scene. It created a contrast between the people walking with headphones manoeuvring and the natural field recordings. This is the only place in the film where I cut the noise, so the viewer becomes more aware of what else is happening sonically in the scene. Further, I felt the birdsong was clearly green in colour which contrasted with the image being monochrome. This might not be something the audience will pick up on, but it informed my aesthetic process working with the scene.

[25:14] Visual event: Tourists viewing ancient Greek architecture on a peak. Musical/Sound event: Sampled sound.

Functions: Sense of place, time, acousmètre.

Reflection: For this scene, I sampled several YouTube-videos featuring different people speaking in Greek. I then looped parts I found interesting rhythmically and/or melodically, and removed the rest, placing one loop on top of another as to make it cluttered. I had likely taken some inspiration here from Steve Reich, and especially his tape composition *Different Trains*. Greek is a fairly distinctive language, and to me I associate the language with the place. Maybe this is because I visited the Greek island of Crete with my family several times as a child, or maybe the language has such a unique sound to it that you can't help but associate the language

with the place. The rhythm, repetitiveness and length of the loops placed on top of each other made me experience the passage of time in this scene. The voices weren't featured in the visual content either, so I suppose it would fit the concept of acousmêtre.

4.4 Case: Aesthetics vs. ethics

For one of the sequences in the movie, I required a vocal sample. Some traditional joik recorded in 1956 was open in my internet browser. I decided to sample it and use it in a scene where two men were seen singing in a karaoke bar seemingly tipsy. The perceived contrast between the joik and the two men singing felt significant to me. I started thinking of the ethical implications of using joik and indigenous music, and decided it was best to ask for a collaborative partner. Unfortunately, the artist we asked ended up being too expensive for the budget we had. However, he let me know I had his permission to use one of his songs. The song was written for Sámi Grand Prix, an annual music contest in Sápmi. I tried using his song, and his joik in a creative fashion. I edited different parts to fit the visual and narrative content as I had done previously with the traditional joik recording. I sent the movie clip to him, asking whether it was okay for him. He declined, stating he felt it to mutilate his original composition and use his joik as an effect. However, I still wanted to use a joik for this sequence, so I showed the version featuring the traditional joik to various people asking them for their thoughts. One of them being my main instrument teacher, who strongly advocated using it. Particularly for the sound of an aging recording and the joik being more "raw" or unrefined, in contrast to more modern pop-infused joik. I checked the release date of the sample but found out it was 2 years too young to be of public domain. Precedingly, I filled out a licensing form for Smithsonian Folkways, who had ownership of the recording. They gave me permission to use the sample. I had all of this done, yet I felt like something was off, not quite right. I started worrying about it and had nightmares of being accused of cultural appropriation or being racist. I was caught in a dilemma. Aesthetically, I felt this had great value, but I was concerned about the ethical implications. I made the decision to contact a Sámi multi-art centre, Davvi Division about how to correctly use joik in film music. They reconfirmed my previous belief about contacting a Sámi artist to have it done and told me there was nothing wrong about asking the artist to record a traditional joik. I received the joik shortly after contacting this artist. He had chosen to record his own version of "Boahra" as written and performed by Johan Eira on the collaborative album *Duvva* (1976). I felt so emotionally attached to the joik that I chose to place it over thhdfree

subsequent scenes, and in an asynchronous relationship to the visual content. It resulted in a dichotomy between the visual content and the joik itself. Less likely to be perceived as two Sámi men acting silly and joiking, and more likely to be seen as a contrast or dissonance in accordance with the picture.

5 Reflections on film music

In the following chapter, I intend to answer my research question, share some reflections I've had working with the film music, and aspirations for future research and academic work.

To repeat my research question: "How can the use of music in experimental and non-narrative film formats be explored through artistic research, and how can this approach expand our understanding of the role of music in film?"

I approached artistic research through being in the arts, and using art practice to explore the use of music and sound in an experimental and non-narrative film. Analysing my results through both macro (case) and micro (timelines) lenses, I've found that my explorations can be comprised into five categories: (1) trying to elucidate tacit or silent knowledge, (2) trying out alternative methods of film music composition and sound design, (3) trying to interpret interactions between sound and image, (4) reading/learning – processing – doing, and (5) exploring the occupational and interpersonal dynamics of being a film music composer, sound designer and sound mixer concomitantly.

These categories were displayed through the results chapter. Trying to explain tacit or silent knowledge by documenting and elaborating the artistic process, intentions and reflections. Trying out alternative methods of composition and sound design by composing improvised electroacoustic music separately from but inspired by the film. Fortunately, I had few restrictions from the film director, and he allowed me a lot of leeway to experiment sonically with his film. Trying to interpret interactions between sound and image by writing about personal experiences and reflections watching the film – what happens when you put 'x' sound to 'y' image? Reading/learning – processing – doing by becoming familiar with film music functions and theory from films, film directors and other literature on film music, and trying out newly acquired knowledge. Exploring the occupational and interpersonal dynamics of being a film music composer, sound designer and sound mixer in one by moving ahead with artistic intention, being observant and sensitive to counter-voices and addressing them, but ultimately believing in one's own vision. The final being an example of my case surrounding aesthetics vs. ethics.

Through this research, I've made some observations about the role of music in film. Music doesn't have to be hierarchized; it can stand as a free voice. Music doesn't have to exist within the confines of one established genre or style. It can borrow from other genres, styles, and

cultures. I believe it is important to be sensitive borrowing from other cultures, but it doesn't mean it's strictly prohibited. Music can be composed in a separate relationship to the film, without them completely detaching from one another. Depending on one's definition, audio-visual counterpoint does not have to consist of polar opposites between sound and image. Finally, the role of the music composer doesn't have to be restricted to that of composing music. The music composer can also take on roles of the sound engineer and mixer.

Based on movies in the mainstream, one could assume that music composed in an outside view of the film would end up with the music not being wholly integrated in the interaction of film and music. Through this research, I have found that a more interesting question would concern what constitutes film. I consider films to be a total artform, composed of images, the dramatical, including literature, and sound. Soundtracks might be necessary depending on one's intention but can indeed be composed separately if the film allows for it. This could lead to unintended or accidental meanings being created, and the film crew, including director and composer needs to keep an open mind for new possibilities through the auditory content having a distinct voice. New possibilities can also occur through improvisation, as the theory on improvisation and imperfections highlighted, in particular Halberstam's (2011) philosophy of and explorations through accepting failure. In addition, soundtracks despite being composed separately to the film, can adapt to the film's key elements and themes. Either through noting down what comes to mind while watching the movie, or going by unprocessed first impressions of the movie.

To realise this project as I had envisioned, the normative hierarchy of narrative that places the film director's voice on top and reduces music merely to a building block to achieve greater clarity and immersivity had to be challenged. The project was restricted to a low budget, and consisted of three operators: the film director, the editor, and myself as the film music composer. I aspired for the film to stand as a true combination of three great artforms, (1) the visual, (2) the theatrical and (3) the audio.

In the theory chapter, I pointed to literature by Tarkovsky, Gorbman, Adorno and Eisler, and Chion who describe different ways that the Hollywood standard could be defied. Whether it's by swapping music for sounds, becoming aware of musical silence as an effect, using functions such as asynchrony, meaning making or reflexivity to carry meaning instead of limiting the function of music to that of an emotional device, or challenging the established vococentrism that hierarchizes everything around it under the sound mixing process. Some film music examples I showed to that challenge this hierarchy include *Autumn Sonata* by Ingmar Bergman,

Koyaanisqatsi by Godfrey Reggio, *Daybreak Express*, the D.A. Pennebacker tribute to Duke Ellington, and *Eraserhead* by David Lynch.

Considering my background in electronic music, I found that using electroacoustic improvisations and field recordings as basis for composition could be another way to challenge this standard. *Eraserhead* is an exceptional case in using experimental recordings in an avant-garde fashion for film music. The film music I've composed is heavily inspired by it. There are examples of films with electronic scores, such as *The Social Network* by David Fincher with music by Trent Reznor and Atticus Ross, *It Follows* by Robert Mitchell with music by Disasterpeace or the scores by John Carpenter written to his own films. These contrast to the score I've composed and *Eraserhead* because they have a clear, traditional musical arrangement, and the primary focus is not overtly on the sounds themselves and their characteristics. The research question encompasses explorations of composition to experimental and non-narrative film, and it is my belief that explorations should go beyond the normative, the already mapped-out or established to discover new alternatives. To find unique and unknown paths by having failed or being lost, in accordance with Halberstam's (2011) queer theory of failure.

Joik is another music genre which is mostly seen in movies with an overarching Sámi narrative, such as *Pathfinder* by Andrés J. Peralta or *Ellos Eatnu: La Elva Leve* by Ole Giæver. My role as a film music composer who takes the joik out of Sámi movies and places it in a new context might receive some fair criticism. In the case presented in the results, I've made my best attempt to address my reflections and process around using joik. Unfortunately, writing a master thesis does not provide enough time to go properly in depth concerning ethical questions or texts about using joik or indigenous music in general. However, it is desired to see someone more experienced writing an article or a possible, beneficial discussion about the use of joik by outsiders or dáža (from sáN, approx. translation: northerner/Norwegian).

As we see with non-narrative or silent films, the story or audio is not necessary. The departure from vococentrism can however complicate the narrative, turning it from an authorial monologue into a significantly more democratic dialogue. One where the audience plays a part through their interpretation of the film, and valuation of the film's constituent elements. Green (2010) was particularly attentive to the role of music in immersing the audience. Gorbman (1980) stated the audience's familiarity with music having a background role, and that breaking with this arrangement might confront the audience with situations that are difficult to interpret.

I believe the audience might have to pay the price of immersivity for the benefit of agency. I also value agency over immersivity, although I can understand why some seek escapism in the face of capitalism and our industrial society. However, Adorno and Eisler warned us of the self-soothing or pacifying effects of “mindless studio movies” (Zuidervaart, 2015). Obstacles of the advancement towards cultural enlightenment and freedom. Also in regard to Adorno & Eisler (2007), my choice to compose music separately from the film would likely lead the film music away from being a tool for stimulation and towards an intrinsic compositional value.

Early on, I made the choice to compose music as an independent voice to the film. This might have been influenced by the film’s non-narrative nature, and its way of cutting between various scenes without necessarily creating meaning. One of my initial thoughts was for the music to function as a piece that would bind the film together, but from working with the project I became increasingly more aware of the dialogue that could be created through creative use of sound. The objectives of meaning making, and parallel voices were present from the early beginning, but after placing a music composition inspired by my own sensory experiences to the film the idea of a polyphony of voices resulting from resonances and cancellations between the visual and auditory contents came into being.

According to the Russian philosopher and literary critic Bakhtin, “life is dialogic and a shared event; living is participating in dialogue. Meaning comes about through dialogue at whatever level that dialogue takes place. Nothing can exist without meaning; everything has meaning” (Coghlan & Brydon-Miller, 2014). Bakhtin describing a decentred authorial stance that grants validity to all voices, ascribed the musicological term “polyphony” to Dostoevsky’s prose (Emerson, 2019).

The voices within film music can be seen as functions, as we have observed in the reflections on timecodes. Several of these voices can exist within the film music itself, and it was very difficult to discern clear functions. The functions seem to blend into one another – atmosphere is at some point sense of place, or time is at some point tension. The atmosphere inside an airplane could technically be considered sense of place, as an airplane is a place. Italy today isn’t Italy twenty years ago, or even a year ago. Things move or change constantly and are hardly if ever specific. Everything contains multitudes. Perhaps it is only a question of how far these concepts reach, how much space they occupy. The Hollywood orthodoxy is placed within a broader film orthodoxy, the same goes for Dogme 95, Adorno & Eisler’s or Godard’s orthodoxy.

A new model of functions that can be proposed having gone through the process of research, would place empathetic, neutral, and an-empathetic film music/sound at the top, with more specific functions below. Film music/sound can range from foreground to background. Perhaps an-empathetic film music is by its nature of opposition placed more to the foreground, whereas empathetic or neutral film music is placed more in the background. Empathetic music that seeks to comment on a scene, instead of being domesticated by the image places itself more at the foreground. This understanding, I would claim is more complex than the perspectives presented in the theory. This could be a result of the research design, placing art practice and reflections as a central component.

A great development in the past decades has been the still expanding democratisation of music production skills. No longer do you need to know or get in touch with a professional with decades of experience, or to attend university to learn the fundamentals of music production or mixing. It's possible to learn a lot from working in a DAW on one's laptop, testing out parameters, plugins and training one's ears, and watching videos on YouTube or reading about music production in various forums or online magazines. Hopefully this democratisation will continue its way into film music and sound engineering. It has the potential of diversifying film and subverting established procedures. In contrast to the fundamentals of Dogme 95, I believe this constant struggle against the normative needs to occur constantly at the forefront of the established. The walls of the establishment will continually be reconstructed by those who walk in the shadows of revolutionaries.

Drawing a parallel to Eisenstein's montage theory. He found that conflicting scenes would lead to an elevated form of meaning, rather than an incongruence of opposing parts. This is further expanded upon through the technique of audio-visual counterpoint, in which you place a sound to a contrasting image. Researching and practising composition of film music has led to my acknowledgement of counterpoint as one of several meaning making techniques. It is not required that the sound be the polar-opposite of the image, either. Though it may lead to a more powerful sense of dissonance, the properties of an opposing sound and the way it's used can also carry meaning. The sound of a recording (ex. age, effects, volume), the duration of a specific sound (over one scene explicitly vs. over many scenes), and the placement of the recording (asynchrony/synchrony, musical expectancy) all count in the formation of counterpoint.

Another important factor in my work was the ability to not only work with music, but also sound. Maybe the idea of a film's sound engineer needs to be reconsidered? Whether it's through diversifying the practice of the music composer to also encompass the job of the sound engineer or allowing the sound engineer greater freedom of expression. To avoid reducing them to a technical supervisor. Sound, as I experienced working with the film can be a distinctive voice and carrier of meaning.

My problem of articulation appears to correlate to the lack of quantifiable data. Because of my research question, I felt like it was necessary to avoid writing in great detail about composition techniques for electronic film music, as if to write a lexicon on film music compositional techniques. Instead, I decided to focus on the points during the film and functions that from my perspective generated meaning or dialogue. It would've been obstructive for my own creative process to write down every single thought or intuitive choice I made composing film music, through fieldnotes or logging. Several places in my results I noted that "what sounded good" or "what was aesthetically pleasing" affected my decision making. What sounds good to me is affected by so many aspects it would take too much time to write about, and it's far too easy to neglect or ignore certain influences. This could potentially affect reliability and make it virtually impossible for others to replicate my research, specifically regarding the music composition.

My perspective is of course biased, as with any researcher. In the context of artistic research, one could argue this bias becomes amplified. I consider my role to be as an artist-researcher or to practice research on myself through my own artistic work. I do not have the privilege to view myself from an outside point of view. Any valuation of what constitutes a significant finding is determined by my own subjective opinion and not something else as in multiple other research designs.

Learning about film music theory and particularly functions had an impact on my aesthetic choices in some of the scenes mentioned in "timecodes and reflections." Theory on (a-)synchrony informed my choices in the scenes that featured industrial work (08:06), fireworks (10:33), and two people playing football outside a house (20:26). Clair's statement that the audience didn't require hearing sounds they could see, presented a greater sense of freedom to omit, or reduce the volume of certain sounds I perceived as uninteresting. I didn't feel like it was necessary to include all sounds from the film to keep the audience immersed in the film, because I valued meaning and agency to a greater extent. My choice of parallel sound/music

in the scene with street performers and a dancer (08:51) was encouraged by the opening scene from Tarkovsky's *Nostalghia* (The aesthetic of the Image: [world] cinema clips, 2022). As I mentioned in the results, I encountered a discussion with the film director where I felt he didn't have knowledge of the possibility to use parallel sounds, and my attempts at explaining what I wanted were feeble and perhaps unsubstantiated. Regardless, I chose to follow my intuition because the scene appeared evident and faultless in my mind. The use of sounds in scenes that displayed two men singing in a karaoke bar (11:40) and people with headphones walking by (24:46) came to me after learning about audio-visual counterpoint. As previously mentioned, I used joik for the first example. The particular use of the joik, and its continuation into the scene where the mother drags kid on sled (12:10) were additionally inspired by learning about displaced music, and the detachment of sound to image. This was significant in making the use of joik appear less comical and caricatured, and to rather stand in a clear contrast to the image – the men are not embodying the stereotype of drunk Sámi men. Lastly, asynchrony and Chion's concept of the acousmètre affected my creative choices in the scene of the tourists appreciating ancient Greek architecture on a peak (25:14).

Currently, I find there to be a need to look at several films through the perspectives gained from my work with film music. It could be interesting to conduct similar research on a narrative or more traditional film. In addition, I would like to attempt teaching film music composition to colleagues and invite along film directors and crews from the film department at university, or other organisations to take part in a longer research project on film music polyphony. To see if my observations are limited to this particular film or whether they can be generalised to some extent. It is easy to scrutinise artistic research for a lack of applicability. Therefore, more research needs to be conducted on independent, non-narrative and experimental film, creating polyphony through use of other channels in film, and electronic film music composition.

6 Final remarks

Through the framework of artistic research, methods of describing and reflecting on composition of film music and answering the research question: “How can the use of music in experimental and non-narrative film formats be explored through artistic research, and how can this approach expand our understanding of the role of music in film?” The thesis has described methods of meaning making, and how film music can be composed outside of the Hollywood orthodoxy, even suggesting a new perspective of narrative polyphony. Most of this being described in detail in the reflections of the previous chapter.

I presented several answers to how I explored the use of music in an experimental and non-narrative film through artistic research. I described “silent” knowledge, tested alternative methods of film music composition and sound design, reflected on interactions between sound and image, read or learned, processed, and tried out, and finally, I faced the role and responsibilities of being a film music composer, sound designer and mixer simultaneously. My attempt to increase the understanding of music’s role in film came through personal observations that I reflected on. These included music not having to be hierarchized, to exist within the confines of one established genre or style, being composed in a separate relationship to the film, to be in diametric opposition to the image in order to be classified as audio-visual counterpoint, and for the role of the music composer to embody sound in general.

At the beginning of this research, I was interested in how film and music could function as separate, but parallel entities. I was concerned about the fragmentation of film. Through the course of this research, however I have become interested in resonances and cancellations between film and music, and new methods of film music composition. My inspirations and influences have grown from *Eraserhead* by David Lynch to films by Vertov, Eisenstein, Goddard, Antonioni, Reggio, Jarman, and Deren to name a few. It is interesting to reflect on how my approach has changed from composing complementary, minimalist film music to a student film from Den Norske Filmskolen in Lillehammer, to improvising electroacoustic music to an art film by Lasse Åriksstad.

In the future, I would like to test out this new approach in several contexts, in both non-narrative, as well as narrative films. I will likely feel more comfortable within experimental film styles but hope that anyone working within the confines of mainstream film can pick up some inspirations the research I’ve conducted. As I mentioned in the reflection, it could be

interesting to teach students in alternative film music composition. This may be an aspiration that will encourage me to apply for a PhD in the future. For now, though, I want to experiment with film making myself, and low budget art films.

Learning about film music has taught me compositional techniques I can use in several contexts outside of film, as well. Musical elements don't have to follow a hierarchy of narrative. In some instances, melodies typically foregrounded, can be incorporated into the background. The harmonies and rhythms of the instrumental track doesn't have to provide a backdrop for something more interesting to be placed on top. Improvised electroacoustic music using field recordings isn't restricted to film music composition, but can be used whenever, wherever. It doesn't have to dominate the composition either, but it can be a helpful source of inspiration.

I recently presented a vocalist with the theory of vococentrism, as I felt the feedback she received was relevant to this practice. Her smile during a sad performance was categorised as a problem to fix, rather than as an occurrence of intimacy and revealing personality not in contrast to the over-arching mood or atmosphere, but as a sort of third axis or dialogue between the voice of a smile and the atmospheric voice of the piece itself. This proves to me that there is use for film music theory, even outside of the practice.

I plan to present my research in a format demonstrates to a greater extent the intertwinement between the artistic and textual, or theoretical output. This is fundamental to artistic research. An example of a format that allows for this, is the Research Catalogue. Their about section reads:

“Images and sounds are not subordinate to, but fundamentally on par with the text; because of the possibility provided to break out of the linear narrative structure”
(Research Catalogue, 2023).

My wish is for this artistic research to reach and inspire other academics and artists, to continue film music with my project as a fundament, a trail to follow. To cover weaknesses or limitations of the study I've committed. Some of these limitations were quantity, quantifiable data, time constraints, and film genre.

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