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Master Thesis

Narrative Transportation, Verisimilitude, and the Filmic Soundtrack

A theoretical and empirical investigation of narrative transportation and verisimilitude in film, with special emphasis on The Continuity Editing System and the soundtrack's ability to enhance narrative transportation and affect verisimilitude in film.

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ABSTRACT

A characteristic trait of human interaction is arguably our engagement with narratives. We are surrounded by stories in the guise of fiction, non-fiction, and poetry. This thesis explores how and why we become 'transported' into fictional narratives – how and why we get carried away and become lost in the fiction, despite being fully aware that it is all 'make believe'. The pivot point for discussion is the Hollywood film tradition and the influence of its Continuity Editing System. The thesis clarifies the impact of this system on filmic storytelling and how it affects narrative transportation and verisimilitude in filmic experience. Further, the thesis is focussed on the relation between narrative transportation and verisimilitude as well as sound/non-diegetic music in film. The main part of the thesis is a theoretical discussion of a selection of central technical and aesthetical means in film production. The theoretical part is complemented by an empirical case study that – designed around an original video production – poses the following hypothesis: *A congruent and coherent underscore, abiding by the rules of continuity editing, enhances narrative transportation and supports the impression of verisimilitude in a filmic narrative.* The case study finds to a certain extent support for this hypothesis.

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To my late mother, who let me stay up at night watching *Dracula* on TV, as a young boy. She warned me and she was right: it scared the living daylights out of me. But, at the same time, it triggered a lifelong interest in – and appreciation for – film in general and Hollywood movies in particular. Thank you!

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1. INTRODUCTION

‘Cinema is after all an art of fakery and illusion, and music is a superbly competent illusionist.’ (Palmer, 1990, p. 11).

1.1. Scope

In the opening quote to this section, the author of the book *The Composer in Hollywood* (1990) – Christopher Palmer – succinctly articulates a core attribute of film: its ability to make us engrossed in an imaginary universe, to make us absorbed in its characters, intrigues and action, its world of light and shadows, landscapes, interiors, costumes, sound, and music. As spectators we are being seduced and led astray into a world of what is often pure fiction and fantasy, and for a couple of hours we adjust our critical sense accordingly. We willingly follow, and as we go, music entices us on the path. In a state of being ‘carried away’, sensible, grown-up people can become completely absorbed in a fictional story unfolding in an imaginary universe, while at the same time knowing perfectly well that it is all utter make-believe.

In the recorded history of humanity, in all parts of the world and at all social levels, humans have been surrounded by stories. From our very first moments in life, storytelling is a significant part of our social and cultural interaction (van Lear et al., 2013, p. 797). We create myths and fictions, and most importantly – we can share them with others and have them in common. Telling stories and experiencing shared narratives is a fundamental part of human communication. History scholar Yuval Noah Harari even claims that our ‘… ability to speak about fictions is the most unique feature of Sapiens language.’ (Harari, 2011, p. 27).

The power of the human imagination and our capacity for entering and engaging with a fabricated world of illusion and fantasy is the wider backdrop for this thesis. The more tapered scope is to explore and discuss the role of a film’s soundtrack in relation to two terms well known from film scholarship, namely ‘congruence’ and ‘narrative transportation’. Ann-Kristin Wallengren and Alexander Strukelj have pointed out that: ‘… the concept of congruence seems vital for narrative transportation or absorption into a film.’ (Wallengren & Strukelj, 2018).

The notion of being transported in the experience of narratives was first used by Richard J. Gerrig, in the context of reading novels (van Lear et al., 2013, p. 799). In the opening lines of his book *Experiencing Narrative Worlds* (1993), Gerrig states: ‘Our lives overflow with experiences of narrative worlds. Even a brief story told in response to ‘What did you do last night?’ can swiftly remove us from our day-to-day reality. At another extreme, we can disappear for hours into the narrative worlds of books and movies.’ (Gerrig, 1993, p. 1). To Gerrig the reader becomes a traveller, transported on a voyage into the narrative (Gerrig, 1993, p. 10 – 11).

A further aim of this thesis is to interrogate the close connection congruence and narrative transportation have to the concepts of coherence and continuity in film and discuss the interrelation

between these different constituents within the experience of film and the effect they have on how we perceive filmic *verisimilitude* – i.e., the extent to which the *filmic story* is experienced as convincingly 'truthful'.

I find this quality of human perception fascinating and to my knowledge there are few studies of this related to film sound and film music.

The theoretical part of the disquisition will be complemented by an empirical case study aiming to explore perception and interpretation of a video sequence created specifically for the purpose. The study is included as a part of the project *Engagement and absorption* at the RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion, at the University of Oslo. Due to the constraints of the thesis (30 ECTS credits/18 000 words +/- 10%) the study is restricted to focussing on nondiegetic music. It investigates the effect of both congruent and incongruent music on spectators' experience of the given video sequence, and is a between-subjects study, performed by use of a questionnaire combined with eye tracking and pupillometry.

To clarify – in brief – the link between the theory and the empirical case study in this thesis, a couple of sources can be mentioned. Central literature is Claudia Gorbman's book *Unheard Melodies* (1987), Michel Chion's book *Audio-Vision* (2019) and the book *Film Art an Introduction* (2020), by David Bordwell, Kristin Thompson and Jeff Smith. Among others I will also build on Daniel Maddock's article 'Virtually Real: Cinematographic Verisimilitude within the Construct of Artistic Referentiality' (2021), 'Into the Film with music: Measuring Eyeblinks to Explore the Role of Film Music in Emotional Arousal and Narrative Transportation' by Ann-Kristin Wallengren and Alexander Strukelj (2018) – and the article "How Soundtracks Shape What We See: Analyzing the Influence of Music on Visual Scenes Through Self-Assessment, Eye Tracking, and Pupillometry" (Ansani, et al. 2020). Their research has shown that music has a strong influence on the interpretation of visual scenes. One of the conclusions from this article is that it provides '... new evidence of the extent to which music can shape the interpretation of a scene ...' (Ansani, et al. 2020, p. 15).

1.2. Motivation, research contribution, and impact

I have a higher education background as a musician and teacher from what was previously called the Department of Music and Theatre (Institutt for Musikk og Teater) at the University of Oslo and the Music Conservatory (Drammen and Oslo). However, due to both coincidence and choice, the trajectory of my professional life eventually became nested within TV-/video production. I have worked as a freelancer over many years, performing different tasks, such as producing/directing, photo, editing/sound design, and graphic design. I am now running my own company, mainly producing corporate films and commissioned films for clients in the business of events and conferences, organisations, commercial enterprises, and education. Formats, subjects and genres are diverse.

In a small production company, versatility and all-round efforts often emerge from necessity, not reluctance to specialization. However, the combined background from music and TV-/video production eventually led to a special interest and profound fascination for sound design and film

music and when the chance was offered to attend the MCT-master program, it became a welcome opportunity to approach these matters from an academic point of view.

I find the interaction between sound and moving pictures – and especially the role of music in film – intriguing, and have in particular been puzzled by the following overall questions: how and by what means do music and sound add meaning to what we see (and vice versa), and what is the nature of the interaction between the two? And: how can the soundtrack impose its own rhetorical impact on viewers, on their perception, interpretation, and beliefs, when applied to the visual action?

Although they have shaped the choices I have made for the current investigation, these are extensive questions that reach beyond the limitations of the discussion offered. Within the scope of my thesis, the aim is to contribute novel insights to research within film scholarship by offering an original perspective based on extensive practical and technical professional experience with audio-visual production. I hope to cast new light on the notion of verisimilitude in general, and in terms of how it relates to sound and music in film in particular. Verisimilitude is a subject matter which has yet to see in-depth exploration within an academic context. I wish to explore the concept not only by examining it from a theoretical point of view, but also through offering an empirical case study based on an originally-produced video sequence, where I maintain full control over all aspects of the content. This combination of audio-visual theory and media practice is, to my knowledge, rare within an academic context: by offering this combination, my ambition is to add more nuanced both theoretical and practical aspects to the field.

I believe that research like this might have significant and substantial impact, not only with respect to understanding narrative strategies and techniques in feature film and entertainment, but also through how it can contribute new knowledge regarding how we perceive and understand audio-visual messages, communicated on a variety of digital platforms, and how these messages are being used and – potentially – abused. Although there is nothing new to propaganda and deceptive communication, understanding media seems even more important in a time where ‘fake news’ and false information are ubiquitous – and almost anyone can publish anything at any time, non-linearly and not subject to editorial control. When, in addition considering the proliferation and vast potential of Artificial Intelligence and how this already can be used to create sophisticated, yet deceptive and fraudulent messages disguised as truth, it appears vital to investigate all aspects of mediated audio-visual communication. This development emphasizes the importance of searching for robust explanations of the psychological and cognitive mechanisms at work when we are exposed to such messages and the technology that effectuates them.

1.3. Outline

The second chapter of this thesis provides a historical and thematic background while Chapter Three is an explication of its theoretical framework and methods. Here, I go through the key terminology that will be used throughout the thesis. Chapter Four is the main chapter and provides a theoretical discussion. In Chapter Five, I account for some technical and creative ideas behind the video sequences associated with the experiment. This chapter is also dedicated to discussing the empirical experiment: I will here discuss the results of the experiment in the light of relevant

theory and the narrative intentions behind the video sequences. Chapter Six will contain a short conclusion and some suggestions for further work.

2. BACKGROUND

This chapter provides a brief outline of some historical preconditions of classical film music as it occurred in Hollywood, where it found its place as what has become known as the Classical Hollywood Style. Established early in the history of sound film, the style and its techniques soon became an important foundation for narrative film in many parts of the world.

2.1. Invisible tools and the Hollywood Style

An anecdote from Hollywood famously recounts that in the making of the movie *Lifeboat* (1944) director Alfred Hitchcock did not want to use music. He allegedly asked: '… where is the music supposed to come from out in the middle of the ocean?'. The reply from composer David Raksin to this remark, was: 'Ask Mr. Hitchcock where the cameras come from.' (Prendergast, 1992, p. 222-223). In a 1994 interview with Daniel Mangodt in *Soundtrack Magazine* Raksin confirms the anecdote, although the laconic response to Hitchcock's question here is laid out to be: 'Ask Mr. Hitchcock to explain where the cameras come from, and I'll tell him where the music comes from.' (Mangodt, 1994). Regardless of the precise wording, the essence of Raksin's response captures a characteristic trait of Hollywood film, namely the way that it hides its means, i.e., its tools and apparatus of production.

A classical Hollywood movie tells its story through the use of cameras and lenses, microphones, lighting equipment, and a versatility of technicalities and gear, such as dollies, cranes, rails, stabilizing-and motion control systems. It tells the story with a director and a crew, in studios or on locations, surrounded by scaffolding and support-systems, and informed by a wide range of preceding events and processes of brainstorming, ideas development, writing, storyboarding, planning, budgeting, casting, research and investigation. All these elements of a movie's planning, preparation, technology and hardware, knowledge, skills and craft, are preconditions of a movie that are never seen or heard by the spectators. They are single parts in the often complex and extensive 'machinery' needed to facilitate and create the different shots and scenes that eventually will make up a story on the screen. For example, every single shot in a scene is a result of camera work and choices made with respect to the craft of photography and filming, such as framing, angle, focal lengths, depth of field and camera movement (or not).

In each shot, everything that unfolds within the frame of the camera constitutes the 'Mise-en-Scène'. The French term, first associated with the practice of directing drama on stage, means 'putting into the scene' and '… includes those aspects of film that overlap with the art of theatre: setting, lighting, costume and makeup, and staging and performance.' (Bordwell, Thompson and Smith 2020, 113). Although sometimes after-dubbed, dialogue is normally a part of the Mise-en-

Scène. That is also the case with some environmental sounds (yet often applied or altered/enhanced in post-production).

If we are to engage with and believe in the story, this whole 'machinery' needs to go unnoticed, and not disrupt the narrative. Its job is to *carry* the narrative and enable the spectators to be engulfed in the drama, by directing their attention and engagement towards the story, away from the means with which the story is told.

Preparatory work, camera work, sound engineering and everything related to the Mise-en-Scène and the process of recording, are all substantial parts in the telling of a filmic story, and hence important for a film's potential success. However, these processes of planning, labour, craft, and technology only provide the films 'raw' material: a typical Hollywood movie consists of 1000 – 2000 individual shots and an action movie can consist of more than 3000 shots (Bordwell, Thompson and Smith 2020, p. 216). Through the process of editing and post-production all these single shots or clips are processed and assembled, to make an entity that constitutes a final movie.

Modern digital post-production facilities offer a great number of possibilities with respect to editing, to applying visual effects and colour-correction, and to working on a film's sound. This advancement in technology has undoubtedly had a major influence on both workflow and aesthetics, in film making. But, regardless of the technology available at any specific time, the main principles of editing narrative films date back to the early years of Hollywood's Golden Age. These principles are practically the same today and are referred to as *continuity editing* or *invisible editing* (Kuhn & Westwell, 2020). The system is designed for the purpose of telling '… a story coherently and clearly, to map out the chain of characters' action in an undistracting way.' (Smith 2012, p. 2). As mentioned above, it is also known as the *Hollywood style* or the *Classical Hollywood style* (Bordwell, Steiger & Thompson, 1985), and has dominated the history of filmmaking with its predominant and highly influential principle of concealing the tools by which its story is told.

It is with this hallmark of classical narrative film in mind that the somewhat paradoxical title of Claudia Gorbman's book *Unheard Melodies – Narrative Film Music* (1987) can be understood. The book is acknowledged as a milestone in the literature of film music and represents a key component for the historical and theoretical background of this thesis. In the introduction Gorbman reflects on the nature of film music and how we all sometimes might snap out of the state of immersion we are led into – engaged as we might be in a film's story – and suddenly start to listen to the abundance of music that surfaces to our conscious attention. For a short while we become aware of how the story is permeated with all this musical richness, and then, a few moments later, we re-enter the narrative and the filmic universe, absorbed by the story – and music again does its job of remaining unheard '… masking its own insistence and sawing away in the backfield of consciousness.' (Gorbman, 1987, p.1). This quality of music, when applied to filmic narratives, was eminently understood by the pioneers among Hollywood composers. In a lecture at the University of Michigan, Ann Arbor, in 1978, David Raksin expressed his view on the matter by stating that film music's purpose '… is not to be noticed for itself. Its great usefulness is the way in which it performs its role without an intervening conscious act of perception. It is most telling

when the music registers upon us in a quiet way, where we don't know it's actually happening.' (Burt, 1994, 5).

The Hollywood style is also the basis for Gorbman. She uses the expression *Classical Hollywood Practice*, and with reference to film music, she connects it to what she names *The Model of Max Steiner* (Gorbman, 1987, p. 70). Maximilian Raoul Walter Steiner was born in Vienna, Austria in 1888, and emigrated to The United States in 1914. Due to his remarkable and multifaceted musical talent, he soon earned a name on Broadway, where he worked for 15 years. Steiner moved to Hollywood in 1929 and was initially employed as an orchestrator by RKO[1] (Palmer, 1990, p. 15-16).

Steiner was eventually to become highly influential and together with composers like David Raksin, Erich Wolfgang Korngold, Alfred Newman, Franz Waxman, Hugo Friedhofer, and a few others, he is now regarded one of the pioneers of the classic Hollywood film music tradition. This tradition was strongly influenced by the late romantic European music idiom, drawing especially upon Richard Wagner's leitmotif-technique (Cooke, 2010, p. 80), his ideas regarding dramatic gesture and his insistence that the orchestra should always be in service of the drama (Heiberg, 1920, p. 8-9).

In his article 'Scoring the Film' (1936), Steiner points out that these premature years of sound film were characterized by extensive technological challenges and a lack of experience with sound and music among film workers. Underscoring was rare and Alfred Hitchcock's concern, more than a decade later, was widespread in Hollywood of the late 1920s and early 1930s:

> 'At this time, music for dramatic pictures was only used when it was actually required by the script. A constant fear prevailed among producers, directors and musicians, that they would be asked: Where does the music come from? Therefore they never used music unless it could be explained by presence of a source like an orchestra, piano player, phonograph or radio, which was specified in the script.' (Steiner, 1936, p. 218).

Hence, music was used mostly for title sequences and musical productions. This was about to change. After a short downturn, music in film should prove to become a significant mean in the Hollywood style of storytelling. Although Steiner had planned to move, he decided to remain in Hollywood, when RKO asked him to stay as head of the Music Department – even though it was on a month-to-month basis without a contract. (Palmer, 1990, p. 18).

The works and ideas of Hollywood trailblazers like Steiner and Raksin have had a huge impact on the manner of traditional filmic storytelling, but there are of course many examples of films throughout film history that apply music in ways that are not true to this ideal. It is a stylistic choice and different styles employ different means. Two famous examples are *The Graduate* (1967), nominated for 7 Oscars, with Mike Nichols receiving one for best director, (Britannica, s.v. The Graduate, read 4th Feb. 2023), that based its non-diegetic soundtrack entirely on five songs by

[1] Radio-Keith-Orpheum

Simon & Garfunkel (Cooke, 2010, p. 409) – and *2001 a Space Odyssey* (1968), where director Stanley Kubrick made the highly controversial decision of discarding the original score by composer Alex North, replacing it with various pieces of classical music. The main title sequence, with the opening music from *Also sprach Zarathustra,* by Richard Strauss, became iconic to the extent that it is now '… inextricably associated with outer space in the popular imagination.' (Cooke 2010, p. 442).

Nevertheless, the conventions of the classical Hollywood underscore have remained strong in mainstream cinema: the foremost function of music is to support the narrative and the action, and thereby enhance the viewer's absorption into the drama. Further, given the Hollywood tradition's clear indebtedness to Wagner and nineteenth century musical legacies, the roots of these conventions go far beyond modern film with a history that to a large extent "… predates the cinema itself." (Gorbman, 1987, p. 1).

With its Continuity Editing System and the film music tradition emerging from it, the Hollywood Style has had great influence and impact on different levels throughout film history and serves as a pertinent theoretical and practical foundation for this thesis.

3. THEORETICAL FRAMEWORK AND METHODS

In this chapter, I will introduce the theoretical framework of the thesis, accounting for the key terminology and for the methods utilised in the empirical study.

3.1. Theoretical framework and terminology

3.1.1. Audio and vision or Audio-Vision?

Although sound film has existed for almost a century, cinema is frequently approached as a visual art. We 'watch' TV or go to 'see' a movie, and a film experience is often considered to consist of two separate processes of perception, where we *look* at the images while we *listen* to the soundtrack. In a strict sense that is what our sensory apparatus actually does, but the experience and our interpretation of the scenario unfolding before us is a reciprocal interaction, where one mode of perception affects the other – what film scholar and author Michel Chion has labelled 'The Audio-visual Contract' (Chion 2019, p. XXII). Chion uses the expression 'added value' in relation to this interaction between sound and image. Both takes on an expanded meaning when combined and this meaning is a process of 'audio-viewing' (Chion 2019, p. 202). Sound is perceived and understood differently when interacting with image and likewise, the image is understood differently when one is exposed to it together with sound (Chion 2019, p. 19). Although sound and music in general, and non-diegetic music in particular, is the primary subject of this thesis and its associated study, this understanding of the mutual interaction between sound and image, is an important precondition.

3.1.2. Coherence and continuity

A main issue in the discourse of classical film theory is the question of coherence (Cumming, et al., 2017, page 1). How and by what means are visual and auditive constituents put together and organized in a way that establishes an intelligible and credible narrative – a coherent story we as spectators can understand and believe in? A film is a series of shots that isolated would make little or no sense. It is the method by which those single shots are aligned and fused together that enables a narrative that we can experience as coherent. A film within the classical narrative Hollywood tradition is constructed in a way that arranges these shots to: '[…] reliably convey unbroken stories, taking place in continuous space and time (Cumming, et al., 2017, page 1).' In this process of editing a filmmaker decides which takes to include and how to arrange these different shots on a timeline. The filmmaker can then control time and tempo, alignment, and different qualities and properties that will shape the viewers film experience (Bordwell, Thompson and Smith 2020, p. 217).

Initiated by the Hollywood pioneers, continuity editing became an essential tool for filmmakers with which to achieve the desired coherence. As mentioned in Chapter 2, this codified system originates from US filmmaking in the early 20th century and is still dominant in mainstream filmic storytelling today (Kuhn & Westwell, 2020). Claudia Gorbman points out that this editing technique is an integral part of the model that underpins the classical Hollywood film: '[…] an implicit model that determines the duration of a film, the possibilities of its narrative structure, and its organization of spatiotemporal dimensions via mise-en-scéne, cinematography, editing (that is, the "continuity system"), and sound recording and mixing.' (Gorbman, 1987, page 71).

The terms 'Continuity System', 'Continuity Editing System' and 'Continuity Editing' are often used somewhat interchangeably (e.g., Bordwell, Steiger & Thompson, 1985, Smith, 2012, Gorbman, 1987 and Kuhn & Westwell, 2020). Here, I will use term 'Continuity Editing System' comprising the overall principals, covering all aspects in a production that depend on continuity for being convincingly perceived. This can, then, refer to the process of filming, where the planning and executing of each single shot in a scene needs to be performed so that they cut together – or it can refer to the responsibility of a prop manager to ensure that a lit fire in a long shot of a living room still is lit and burning with the same intensity when the following shot is a medium shot of a person sitting in front of the fire. With 'continuity editing' I refer specifically to the process of editing – that of aligning and matching the different shots in post-production – the final process of eventually creating a coherent filmic narrative.

For a film or a scene, and the Continuity System to work – and hence secure successful communication of the plot – continuity must be maintained at different stages and with respect to several aspects of the production, both within scenes and between scenes. As summarised by Kuhn & Westwell (2020): firstly, there must be continuity in action and dialogue. Secondly, there must be continuity in the physical environment and the attributes of everything that exists within this physical environment (costumes, makeup, placement of props, etc.). Thirdly, there is a demand for visual continuity: the different shots must be planned and carried out in a manner that makes it possible to edit the scene(s) according to the rules of continuity editing –

and camerawork, style, light- and set design must be consistent. Finally, there is a need for continuity of sound.

3.1.3. The dramatic illusion: narrative transportation and verisimilitude in film

When watching a movie, we all know that it is not for real: the filmic universe has its own life-world, separate from our own lived reality. Still, and especially if it is a good movie (and even when one is fully aware of 'all the tricks in the book'), one can be completely immersed in the story, its inhabitants, dialogue, intrigues, and plots: there and then we believe in it and at the same time we know that it is not true. This attribute of the human mind – to be able to engage with the imaginary – has been debated and pondered since the time of Plato and Aristotle. The English philosopher and poet Samuel Taylor Coleridge (1772-1834) addressed this phenomenon as: 'A willing suspension of disbelief for the moment', implying that we temporarily set our disbelief aside and hence believe in the fictive narrative unfolding before us (Morill, 1927, p. 443).

Our psychological ability to dismantle our mindset, to disconnect from the real world and enter a fictional one while being aware of our presence in the real world, has much to do with *the dramatic illusion* at work in films. As we engage with the story it can occupy our full attention to an extent of almost absolute absorption, but even though engrossed in the story, we are at the same time conscious and aware of our surroundings and the world we live in.
This sensation of being captured or carried away by the story, also referred to as 'narrative transportation' (van Laer, et. al., 2014, p. 799) is an essential psychological mechanism that 'kicks in' when we engage in a story and its characters. Author and formerly professor of classical languages Louise Cilliers has expressed this phenomenon distinctively, albeit with address to theatre: 'One of the most remarkable phenomena in dramatic performances is the way in which adults get involved in the events on the stage, to the extent of going through agonies of suspense, fear and pity while knowing full well that these events are pure make-believe.' (Cilliers, 2014, p. 105).

This kind of drama, 'the theatre of illusions' (Arnott, 1961 in Cilliers, 2014, p. 105), strives to create an illusion of reality, and applies equally to cinema and TV films. The ultimate target of the performance is to allure the audience so deep into the tale being told that they forget that it is a tale. The game of the actor is to convince the spectator to accept the realness of the story and: '[…] persuade himself and the audience that he *is* person A or B […]' (Cilliers, 2014, p. 107).

Throughout film history there are many examples of movies that violate the dramatic illusion by breaking the rules of continuity editing, also in the film segment that finds its way to a larger audience. Two examples are the jump-cuts in Jean-Luc Godard's *À bout de souffle* (1960) and Alex' gaze directly into camera, in Stanley Kubrick's *A clockwork orange* (1971). Violating the dramatic illusion, whether it is by breaking the rules of continuity editing or by other means, does not necessarily mean that the story becomes incomprehensible or that the film is poorly made.

However, in the classical feature film it is essential to uphold the dramatic illusion because this is what the audience expects when watching a film in this style. If this is not done the film will, at some point, cease to be what it pretends to be: a story in which we want to engage and believe – at least for as long as we are involved in the tale. A legendary scene at the end of *Gone with the Wind* (1939), might serve as an example: Rhett Butler is about to leave Scarlett O'Hara. He is standing in the door, looking at her. To her question 'If you go, where shall I go, what shall I do?' his legendary answer is: 'Frankly my dear, I don't give a damn!' He then turns around and walks away into the fog. One can only imagine the consequences if he instead had pushed her aside, looked straight into the camera, and made a funny remark about her dress. It would of course have ruined the dramatic illusion and spoiled the scene completely, not to say the whole experience of this film as a grand drama.

The continuity system is an important guarantor for upholding the dramatic illusion, by the way it contributes to the verisimilitude of a film, i.e., the extent to which the film and its realm appear as real or true. Verisimilitude in the filmic sense is not concerned with real life authenticity or truth as such. It refers to the truthfulness of the filmic universe and depends on – in the words of Coleridge – our ability to 'suspend disbelief' – i.e., how we apply and adapt our critical sense to fit the universe of the story we are engaged in.

Verisimilitude in fiction is a creative paradox which was treated already by Aristotle in his work *Poetics* (c335 BC). The quality of a story is not to be measured by its: '[…] possibility or impossibility […] but rather the verisimilar imitation of events and characters taken from real life.' (Sánchez-Escalonilla, 2013, p. 81). The paradox becomes especially illuminated in stories that are built on a fantasy world or fantasy characters: we are more likely to identify ourselves with the action in a pure fairy tale with convincing plot and figures, than with the story in a realistic drama with dubious characters and stumbling dialogue:

> '[…] as spectators, we recognize ourselves in the ethical dilemmas of an impossible millionaire such as Bruce Wayne in *The Dark Knight Rises* (2012), while perhaps rejecting [as] implausible the human portraits of Woody Allen in *To Rome with love* (2012), whose characters may seem less authentic […]' (Sánchez-Escalonilla, 2013, p. 81).

We all know that Batman is not real and that his extreme abilities are out of this world, but while we are engaged in watching the movie we believe in the character and the filmic world in which he exists. On a meta-level, *within* the filmic universe, this engagement works as well. We accept the immense and unreal skills and powers of Batman, but any superhero fan would react with consternation if Batman suddenly could fly into outer space and turn back time by reversing the spin of the Earth (and by this bringing a reporter named Lois Lane back to life) because only Superman can do that (*Superman*, 1978).

In his article 'Virtually Real: Cinematographic Verisimilitude within the Construct of Artistic Referentiality' (2021) award winning academic and filmmaker Daniel Maddock discusses the term from an historical perspective with respect to lens-based practices and explores how: '[…]

modern feature film cinematographers interpret realism or verisimilitude within the construct of artistic referentiality as a response to the narrative content.' (Maddock, 2021, p. 63).

In the introduction, Maddock refers to the Australian war-correspondent, photographer and film maker, Frank Hurley (1885 – 1962), who during World War One strived to capture the dramatic events of warfare in a single still picture. Due to immense practical difficulties Hurley never managed to achieve the result he wanted. Instead, he took to the dark room and created composite images made from different negatives, merged in a manner that made them appear as a single shot. This glaring manipulation of images from a highly real and terrific war obviously caused controversy, but Hurley's stance was that by doing this, he could convey an imprint of the vastness of war that would be impossible to communicate in a single 'true' image. Although incontrovertibly manipulating real events, his still montages may also be seen: '[…] as compressed and dramatically enhanced versions of reality.' (Maddock, 2021, p. 62).

As journalistic documentary such collages are obviously not acceptable, and Hurley also had to face confrontation in his own time. His commanding officer Charles Bean considered the images to be fakes and disallowed Hurley to exhibit them.

The dispute represents a dichotomy in the way reality can be understood in photographic mediums and is an early example of how cinema and photography can be associated with reality in ways that arguably surpass what other artforms may be capable of offering (Maddock, 2021, p. 62 – 63).

A contemporary equivalent of Hurley's debated, yet innovative techniques was American film maker Norman Dawn (1884 – 1975). Where Hurley adapted and manipulated captures of reality in post-production, Dawn's contribution was associated with – as Maddock puts it – the 'lens-based practice' in the actual process of photographing. By installing a glass painting, accurately aligned, between the camera and the object to be depicted, Dawn was able to create an optical illusion and thereby virtually extend the set. This could, for example be an old, dilapidated building that he 'restored' virtually by painting the missing parts on the glass plate, positioning the plate and the camera proportionally and hence creating an effect that made the composite image look like a full building, with walls, roof, towers, etc. On film it would appear as it once may have looked. The glass painting could also be used to cover something unwanted. Dawn adapted the technique for film and was to become a prominent pioneer in the art of matte painting. He was one of the first cinematographers to facilitate virtual cinematography and his influence on film production was to become highly significant (Maddock, 2021, p. 64).

The debate about realism in the movies, among both film makers and film viewers of narrative film, can be regarded a debate over verisimilitude. We all know that the events played out before us have not happened for real (Maddock, 2021, p. 66). With reference to British philosopher Stephen Neale, Maddock suggests that we can understand verisimilitude of the cinema image as 'cultural verisimilitude', defined as: '[…] the plausibility of a fictional work within the cultural and historical context of the real world.' (Maddock, 2021, p. 66).

Hurley and Dawn were breaking new ground by using inventive techniques to achieve perceptual realism in image and film. Overtly manipulating the images, they sought not to present reality per se, but a reality that is verisimilar to their narrative and this at a level that would be impossible to achieve with traditional photography.

The extensive use of CGI (Computer Generated Imagery) in feature films today is the best example of how using inventive techniques to manipulate our sense of what is real has become a standard in modern digital storytelling. In the making of *Jurassic Park* (1993) completely new ideas for VFX (Visual Effects) were applied for lighting the virtual dinosaurs in a realistic way. Although no one believes that the film makers actually went out and filmed the extinct creatures for real, it is fundamental for the movie that the dinosaurs *appear* to be real. As explained by the film's cinematographer Dean Cundy: 'The audience has to believe the unbelievable, […]' (Cundy in Maddock, 2021, p. 75).

Claudia Gorbman expresses the notion of verisimilitude eloquently: 'Few would wish to claim that "classical realist cinema" is realist in the sense of approximating objective reality […] – film serves up fantasy in the guise of verisimilitude.' (Gorbman, 1987, p. 4).

In other words: if we are to enter the story world and be engaged and absorbed in the story, a necessary precondition for film spectators is for us not to evaluate the extent to which the story is genuine and gestalts the truth per se, but to temporarily trust and believe in the fiction and the fictional universe within which the story is played out.

3.1.4. Diegesis – the filmic universe and the story world

The fictional universe is also referred to as the diegetic universe, or the diegesis: '[…] a story world, a place of action.' (Gorbman, 1987, p. 3). This Greek word, meaning 'recounted story' encompasses: 'The total world of the story action […]' (Bordwell, Thompson, Smith, 2020, p. 76). French filmologue Etienne Souriau defined the diegesis as: '… all that belongs, "by inference" to the narrated story, to the world supposed or proposed by the film's fiction.' (Souriau in Gorbman, 1987, p. 21). Hence, the diegesis is not only the action we can see and hear, but everything in the temporospatial world constituted by the narrative (Gorbman, 1987, p. 21).

As audience we all will have different and individual notions and assumptions with respect to the order and nature of many possible events, dialogues or thoughts that have passed through the mind of the characters in the plot – everything that must have happened before or in between the portrayed scenes. In, for example, an opening scene of an action movie where the protagonist is a highly skilled soldier, we do not need to see the education and training process to comprehend that this is something the soldier, at some stage in life, must have gone through. It is likely that we will imagine this in very different ways, but for most viewers it will be self-evident that behind these skills lies an extensive training process. This understanding, or insight, is something we as spectators share with the protagonist and also an antagonist, ending up in

the soldier's way. It is implied as a part of the diegesis, though not explicitly portrayed or spoken of.

In an opening scene there will, in addition to the portrayed action, often be titles and underscore music. These are not a part of the diegesis. They take place outside the story world, accessible only for the spectators and cannot be seen or heard by the characters in the story (Bordwell, Thompson, Smith, 2020, p. 76).

The discussion of music in this thesis will mostly concern the music that is not a part of the diegesis, the so called *non-diegetic music* or the *underscore.* This is all the music we can hear without the music having any source in the story: it emanates from outside the life-world of the film. On the other hand, *diegetic music* is the music we can trace back to a source which is a part of the narrative (e.g., a visible musician or the sound of a news reader coming from a radio). Although these two concepts can seem to be in disjunction, there are ways in which they can overlap and interrelate.

Especially with digital editing it has become easier to merge and intertwine all elements of film sound in creative and effectful ways. Nevertheless, the idea itself is old: in a well-known scene from *Casablanca* (1942), Humphrey Bogarts character, café owner Rick, is sitting alone at a table after closing time, in his café in Casablanca. He is in a melancholic mood, drinking heavily, and eventually insists on pianist Sam to 'play it', meaning play *As time goes by*. Sam plays and as the camera closes in on Rick, orchestral music gradually interweaves, and almost imperceptibly in the beginning, fades up and accompanies the diegetic piano music. The orchestral music takes over and then, the scene dissolves to a flashback of happier days. Simultaneously, the non-diegetic orchestral version of the song turns elegantly into a quick modulating cadence, followed by a very short passage touching upon the *Marseillaise*. At the same time, an image of Arc de triomphe de l'Étoile is established and faded up through a focus shift, and we are effectively (and for the engaged and absorbed spectator, by 'invisible' and 'inaudible' means) transported through time and space, to Paris. This transition in scenery, strongly conveyed by the music and the sophisticated treatment of it, is a distinctive quality marking the style and technique of Max Steiner and it also shows how effectively music can establish a geographical setting by its high degree of cultural coding (Gorbman, 1987, p. 58).

3.1.5. Congruence

In mathematics congruence is defined as: "…a term employed in several senses, each connoting harmonious relation, agreement, or correspondence." (Britannica, s.v. congruence, accessed 25th March 2023).

As mentioned in the Introduction, Wallengren and Strukelj (2018) have claimed that the concept of congruence is of vital importance for narrative transportation in film. Further, they point out that although the idea of congruence has proved troublesome in film music theory, the concept is commonly applied in psychological studies and the term is apprehended similarly by different scholars. However, there are variations with regard to the terminology in use. Where there is correspondence between music and image, congruence can be temporal, structural, or formal.

This can, for example, be rapid music to rapid motion (or rapid cutting rhythm), music that moves upward in pitch, set to upward visual movement or music that coincide with the dramatic structure. Congruence can also coincide with synchronization and can also be semantic or associative, appearing as a result of correspondence between meaning or affections that are of an equivalent nature in both sound and visuals (Wallengren and Strukelj, 2018).

3.2. Methods

3.2.1. Audio-visual analysis

Audio-visual analysis has been applied both to the theoretical part of the thesis and the associated empirical study. The approach is partly historical and partly technical/aesthetical. I have built on analysis and theory and studies from different fields, such as film music studies, film sound theory and film music history. I have also drawn on literature covering a range of subjects within film history and film production. Particularly relevant is literature and studies dealing with continuity editing, narrative transportation and verisimilitude. In addition to audio-visual theory and history, I have approached some relevant topics from a practical perspective drawing on my own professional background in audio-visual analysis, production, and editing.

3.2.2. Video screening and questionnaire

50 participants were recruited among students at the University of Oslo. A gift card with a face value of 100 NOK was offered to all participants. The participants attended one by one and were recruited consecutively. They were ignorant to the purpose of the experiment: the only information they had in advance was that they were about to see a short video sequence. Before attending, all participants had to fill out a form of consent. The video was 3 minutes long and made in two versions. The only difference between them was the underscore. One version had music regarded as congruent and the other had music regarded as incongruent.

It was a 'between-subjects' study: half of the participants watched the video with a congruent underscore and half of the participants watched the one with an incongruent underscore. There is no clear narrative in the video. It has characteristics reminiscent of an opening sequence or a trailer to a film, revealing some relevant locations, environments, objects and people. It is made like this for the sake of keeping the experiment simple enough, with respect to the number of variables. After screening, the participants were asked to answer a questionnaire. The questions were related to experience of time, modes and moods (described by adjectives), genre, plot, continued action, and attention towards details. The questionnaire took place in *Nettskjema.* During screening (one by one) the participants were placed with their chin resting on a supporting device to keep the eyes in a fixed position. The monitor was standing approximately 1 metre from the participant with one loudspeaker on each side, placed behind the monitor. The rig was covered with black cloth, both to create some immersion for the video experience but also to achieve optimal light conditions with respect to the eye-measuring. The computer was a Dell Latitude E 6530, running on Windows 7, with a DELL 22" Display and Behringer MS40 loudspeakers.

3.2.3.
Pupillometry and eye-tracking

Very few studies and experiments are devoted to exploring music's capacity to encourage and support engagement and narrative transportation in film. Those that exist mostly rely on post-screening questionnaires, and studies involving pupillometry and eye-tracking are rare (Wallengren and Strukelj, 2018).

Different methods have been used to record eye movements for more than a hundred years. For a long time, the methods were uncomfortable and invasive to the users, but during the last two decades the methods have improved (Smith, 2013, p. 3). In psychophysiology "Pupillometry is considered a reliable response system …" (Ansani, et al., 2020, p. 10).

The hardware used in this experiment was a SMI RED 500 eye tracker. Software: SMI iView X 2.8 (60 Hz), SMI Experiment Center 3.2.17 and SMI BeGaze 3.6. Software for analysis: Statview 5.0.1 and IBM SPSS Statistics 29.0.0.

I find that a method like this is useful as a *complement* to theory and analysis in the thesis, and also to the questionnaire, as it can provide some objective quantitative data.

4. THEORETICAL DISCUSSION

'I saw David Lynch and asked him: 'What's this about crossing the axis?' And he burst out laughing and said, 'That always gets me.' And I asked if you could do it, and he gave me this startled look and said, 'Stephen, you can do anything. You're a director.' Then he paused and said, 'But it doesn't cut together.'' Stephen King, novelist, on directing his first film, *Maximum Overdrive*' (Bordwell, Thompson and Smith 2020, p. 232).

The Continuity Editing System is governed by principles associated with camera axes, and the most prominent of these is the 180° rule. This rule defines the area covering 180° on the side of this axis where the cameras must be positioned in, for example, a conversation scene between two actors if the interchanging shots between them (shot-reverse shot) are to appear as if they are looking at each other. If this axis is crossed the interchanging shots between them, when cut together, will appear as if they are looking in the same direction and not at each other.

In this chapter I will discuss some key principles associated with continuity editing and how continuity editing relates in general to narrative transportation and verisimilitude in film. I will also discuss how these principles apply to film sound and film music.

4.1. The Continuity Editing System

In daily life the notion of continuity (and discontinuity) can be regarded as axiomatic. It is self-evident. If we turn on a faucet the water will run in a continuous stream and not stop in mid-

air. The furniture in our living room will not disappear in front of our eyes. Continuity, whether it occurs over a short or a long span of time is something we can take for granted because the world around us adheres to the laws of physics. We do not need any further evidence or explanation to comprehend continuity since it occurs all the time, in real time, in real life. It can be considered as '[…] a priori continuity, that is independent of evidence.' (Smith, 2012, p. 6).

But how does the concept of continuity apply to film and editing? A traditional film is, after all, a discontinuous assembly of images and sounds appearing very different from the world as we perceive it in real life. Nevertheless, one important reason as to why we accept narrative film, and its edited story – often with several thousand clips consisting of different shots from different positions in time and space, juxtaposed and arranged on a timeline – is arguably that it can be perceived in ways similar to how we perceive reality.

As touched upon in the previous chapter, the genesis of the Continuity Editing System is to be found in the early years of the classical Hollywood film tradition, also referred to as the Classical Hollywood Style (Bordwell, Steiger & Thompson, 1985). In his article 'Perceiving scenes in film and in the real world' professor in psychology, James E. Cutting, states that the popularity of film can partly be attributed to this style. Cutting's approach to cinematic theory is ecological and foremostly concerned with the visual aspect. He claims that to understand why a film works so well and why we accept the nature of its story telling techniques, we must understand how we perceive the real world. For example, he compares film cuts with eye saccades and argues that we perceive the layout of a film scene the same way we perceive a scene in reality. The layout of a specific film scene requires a certain positioning of the camera and as viewers we do not focus on the camera position and the projection it produces but, '… on the world behind the screen.' (Cutting, 2005, p. 10). The same holds for our perception in the real world. We watch any scene from a specific position, a point of view, and in general we make no notice of the projection that this specific point of view causes. Our attention is normally towards the '[…] three-dimensional layout of the environment.' (Cutting, 2005, p. 10).

Cutting also states that '[…] Hollywood style has a main goal that is almost purely cognitive and perceptual – to subordinate all aspects of the presentation of the story to the narrative.' (Cutting 2005, p. 9). Hence, the system is developed to work in a manner where it avoids drawing attention to itself. I.e., every part of the production line, such as camerawork, staging, editing, etc., must be '[…] unnoticed by the filmgoer.' (Cutting 2005, p. 9).

The style of the classical Hollywood film is '[…] implemented via a suite of heuristics […]' (Smith, 2012, p. 1) and although the Continuity Editing System is often referred to as 'rules' they are a set of suggestions or *rules of thumbs* developed and used by filmmakers to ensure that '[…] a scene is staged, filmed, and edited so that the viewer can comprehend the scene with minimum effort.' (Smith, 2005, p. 22).

As film evolved in the first decades of the 20th century, as a completely new form of art and entertainment, filmmakers had to solve for themselves how to create narratives designed to be understood by the audience. Different from a written novel, the film had to present a series of

different physical spaces, using sounds and images, to tell an overarching story. Hence the spectator needed a rendering of the story that assembled these different impressions in space and time in ways that imposed some kind of causal meaning. The guidelines or implicit 'rules' that came out of this process of inference was to become The Continuity System (Bordwell, Steiger & Thompson, 1985, p. 287).

As mentioned initially, there are numerous examples of films (and also TV-series) that partly – or even extensively – do not adhere to the Hollywood ideal. Famous directors like representative of French New Wave Jean-Luc Godard or American filmmakers like for example Stanley Kubrick and David Lynch, have all in various ways challenged the Hollywood idiom, sometimes with great success. Further, they can do this calculating the effect it will have *because* of the firm standing of the established conventions.

Even in Hollywood classics violations of the continuity rules can be found. For example, in John Ford's *Stagecoach* (1939) a clear violation of the 180° axis rule appears. Here, the camera position relative to the axis of movement is changed across cuts. As a result, the spectator will experience an abrupt change in the line of direction in which the stagecoach moves. First it moves left to right and, in the next moment, right to left (Bordwell, Thompson and Smith 2020, p. 239).

Another example, regarding continuity of physical appearance, is shown in a well-known experiment, regarding so called 'change blindness'. By introducing several continuity errors, with respect to props and costumes, in a short video scene, Levin and Simons (1997) illustrated how continuity errors with respect to props and costumes can go unnoticed and without significant disruption of the spectator's comprehension of the scene (Levin & Simons, 1997, p. 502).

Although interesting from an experimental point of view, professional filmmakers of traditional film cannot enter into compromises with the continuity principals, even with peripheral details in a setting. It would easily be noticed and regarded as non-professional and a result of poor craft. In a traditional narrative film, if the rules of continuity are violated to a certain extent, the story will start to fall apart and the verisimilitude of the story will be weakened, making it appear less convincing – and at some point, the audience will find it difficult to engage themselves in the narrative.

Even though the Continuity Editing System can and also needs to be challenged, the convention of traditional filmmaking makes it the guiding norm of narrative audio-visual storytelling. More than 90 percent of Hollywood films are made according to this norm (Smith, 2012, p. 1). Cutting calls it 'The Filmmaker's Contract with the Viewer' (Cutting, 2005, p. 21) and points out that filmmakers do not know to what extent continuity errors will be discovered. Hence, they must take into consideration that errors can and will be noticed, which in turn might '[…] jeopardize the Hollywood style and the success of the film.' (Cutting, 2005, p. 21).

The full range of The Continuity Editing System, with all its implications, is complex. For the sake of space, I will here only discuss some central aspects that in particular pertain to the overall goals and themes covered in the thesis. As accounted for, the system is an essential and well-proven film-makers tool with which to achieve coherence: it relies on various technical operations and rules, designed with the purpose of ensuring that:

> "[…] shots are matched across boundaries, along perceptual features, spatiotemporal (ST) relations, and actions. Continuity editing enables viewers to perceive some sequences of shots as depicting a continuously unfolding event, but to perceive other transitions between shots as transitions from one episode to another." (Magliano and Zacks 2011, p. 1490).

As seen, spectators can fail to notice even obvious continuity errors. But as long as the objective is to tell a coherent and comprehensible story, any filmmaker will try to avoid them.

In the following, I will account for some central continuity principles.

4.2. Continuity in the layout of the scenery

When filming a continuity scene one of the first things to take into consideration is the physical layout of the location. In a small production, with a simple scenario, you normally just need to make sure that furniture and other props remain in the same place – or *appear* to be in the same place – in the different shots (it can sometimes be required to move props slightly for the sake of getting the shot right). In larger and more complex productions, it is usual to employ a continuity supervisor or a script supervisor (Kuhn & Westwell, 2020).

4.3. Continuity in light conditions/lighting

To give the impression of continuity in light conditions, it is important to maintain consistency with respect to colour tone, colour temperature, and direction of light and brightness between shots. A typical continuity problem that can arise, especially in small low budget productions where you might only have access to the actor(s) and the location for one day, is if you decide to rely on sunlight. You may have a scene to be shot in a specific room and on the day of shooting, the sun comes in through the windows, partly through transparent curtains, with the sun rays vividly drawing lines and curves of light and shadows on your scenery. An open window lets a smooth breeze create small movements in the curtains, bringing the shadows to life. The setting seems perfect.

You decide to shoot the whole scene from angles that gives you the advantage of the sunlight. The problem arises if you experience delays that lasts long enough for the sun to disappear from the windows. Certainly, to some extent even small production companies today are in possession of LED lamps providing day light colour temperature and it would, for a short while, be possible to compensate for some of the diminishing day light. However, if the sun sets and the day moves into twilight, not to say evening, and you still need shots for your continuity scene, you're in trouble. Closeups would still be possible to execute, since modelling the light can be done with a totally different reference to the background (or even without any

background). But, in any picture where you need a framing showing parts of – or the whole room – it is not possible with a few lamps to get even close to the light provided by the sun coming through the windows. The amount of light, tone, colour temperature – everything will be so different that when aligning the shots in editing, it will appear extremely strange.

4.4. Continuity of axis – the 180° rule

When adhering to the rules of the Continuity Editing System, one critical issue is to maintain a clear spatial orientation, i.e., to keep the orientation of direction and movement between juxtaposed clips. The most prominent rule is the 180° rule. This rule – or principle –is referring to the placement of the camera, according to certain axes that define the axis of action in a scene (Bordwell, Thompson and Smith 2020, p. 232).

This principle is also referred to as 'The X-Constraint' and can be considered a semantic convention in mainstream film (Cumming, et al., 2017, p. 2). Levin and Wang found that out of a random sample taken from the twenty best rated and twenty worst rated films on the Internet Movie Database Top 250 and Bottom 100 list – when analysing 60 scenes in each category – 91% of the films adhered to the 180° rule (2009, p. 35 – 36)

The 180° rule must be understood according to the action line of a scene. This is defined as the main linear direction of a certain action, for example the course of a moving vehicle, a pointing gesture, someone looking at something or, most usually, persons in a conversation (Cumming, et al., 2017, p. 7). As shown in figures 1 and 2, the axis between two people in a dialogue, standing directly opposite one and other runs in a straight line from the midpoint of their direct eyelines. 180° is referring to the blue half circle on the camera-side of the black midline.

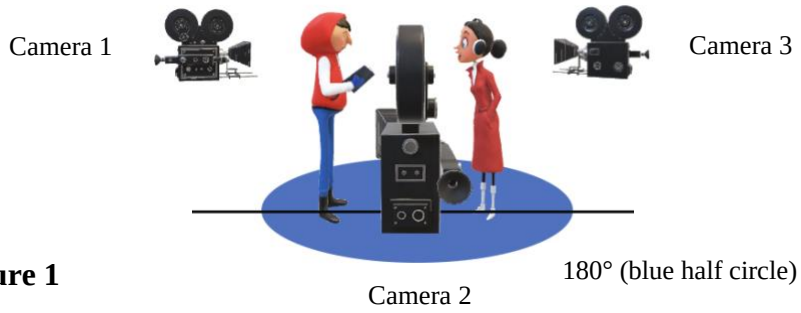

Figure 1

All figures are made with models and shapes openly available through Microsoft Office software.

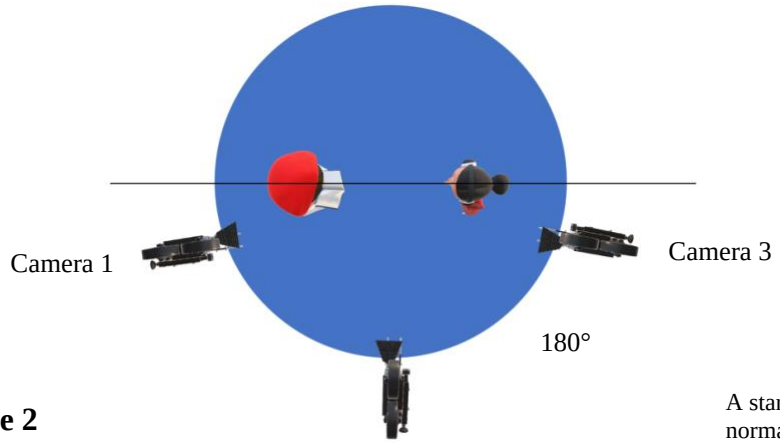

Figure 2

A standard multi camera setup is normally numbered from left to right.

A standard solution in a scene like this would be to establish the situation with a shot of both persons, approximately 90° from the side, on Camera 2 (Figure 3) and then, as the dialogue proceeds, take alternating shots from camera 1 and 3 respectively, resulting in a shot-reverse shot (figure 4 and 5).

Camera 2

Figure 3

Camera 1

Figure 4

Camera 3

Figure 5

Depending on factors like genre, the nature of the dialogue, the directors' personal preferences, etc., framing and camera position will vary. The main principle is to not cross the axis during the conversation. If the axis is crossed, when cut together, it will suddenly seem like the two persons are looking in the same direction, not towards each other (figure 6, 7 and 8).

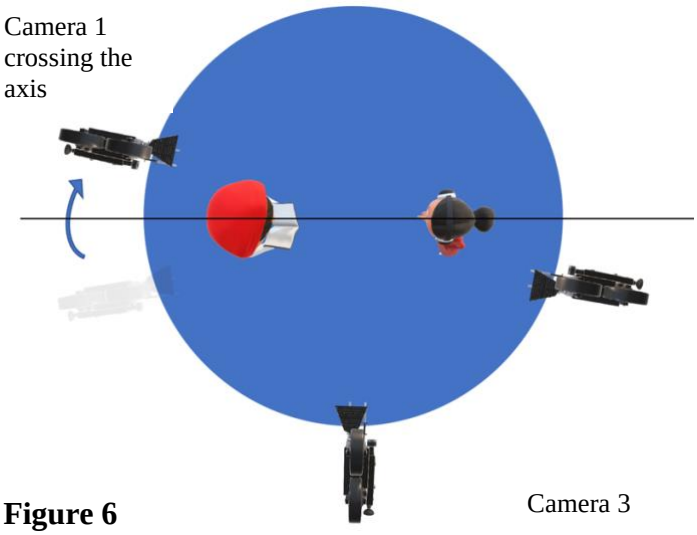

Figure 6

Camera 1

Figure 7

Camera 3

Figure 8

The 180° rule is crucial if traditional continuity is to be upheld. It is there to ensure consistent eyelines, consistent screen direction and consistent experience of the direction of moving objects or persons within the same scene (Bordwell, et al., 2020, p. 232 – 233).

4.5. Continuity of axis – the 30° rule

If, in a shot, you want to move closer to an object or a person, this can be done by zooming in or by moving the camera closer to the object. In both cases the movement is continuous, and the spatial orientation is maintained. On the other hand, the desired solution might be to close in on the object by cutting from one shot to another. This shot must be performed according to the 30° rule with respect to axis and spatial orientation. The 30° rule implies a placement of the camera (figure 9) that deviates by at least 30° between the two shots. This is to avoid confusion in size and position of the object.

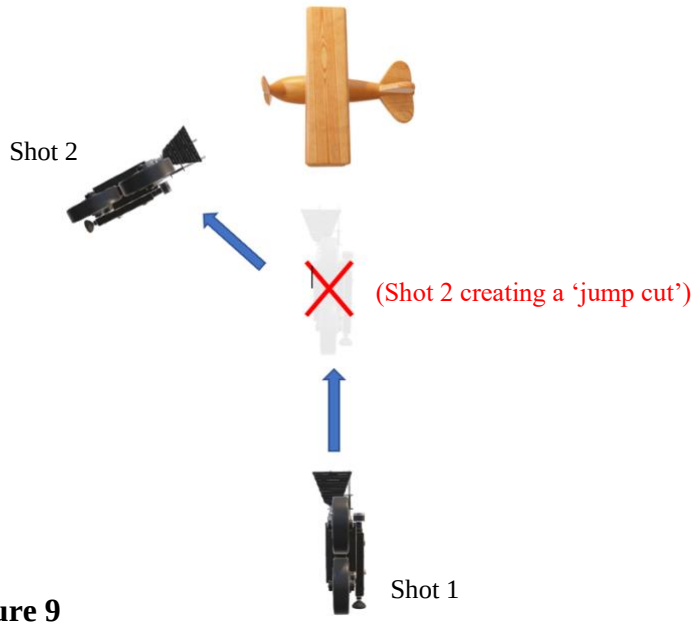

Figure 9

If the angle is less than 30° (or as here, straight on the same axis), it will appear as a 'jump cut' (figure 10 and 11), meaning that the depicted object will abruptly appear bigger across the cut, since the camera simply is moved closer to the object along the same axis as the camera was pointing in the first shot.

Shot 1

Figure 10

Shot 2 ('jump cut')

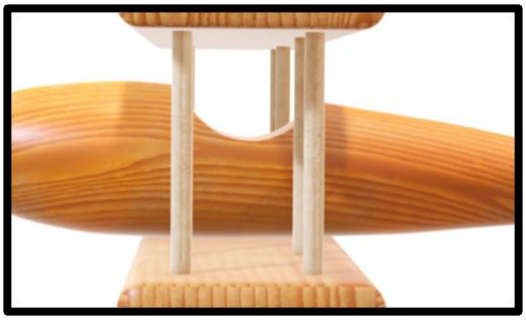

Figure 11

This viewer experience is not in accordance with the way we perceive the world. But if the camera is moved both closer and sideways towards the action and to a position at least 30° away from the shooting axis of the first shot (yet within the limits of the 180° rule), it is not just image size that's been altered: then '[…] the projective geometry inherent in the image provides unambiguous information that *we* have changed our position (the camera has changed its position) […]' (Anderson, 1996, p. 101), something that is applicable with how we perceive objects in real life (figure 12 and 13).

Shot 1

Figure 12

Shot 2

Figure 13

4.6. The match on action cut

The match on action cut is '… simply a matter of carrying a single movement across a cut." (Bordwell, et al., 2020, p. 235). If you have a scene where a person is slamming a door in a long shot and you want a cut to a closeup of the door as it slams, the editor needs make the cut from the long shot to the closeup a split second before the door hits, to follow the movement and make us believe that it is a single movement.

The match on action cut is a strong storytelling device. As an integrated part of the Continuity Editing System, it contributes to moving the action forward, seamlessly driving the narrative without drawing attention to itself. It is commonly used in feature film, as in the example above or e.g., when following a character's movement across cuts. In Bordwell's words, it is a '[…] tool of narrative continuity. So powerful is our desire to follow the character's movement flowing across the cut that we ignore the cut itself.' (Bordwell, et al., 2020, p. 235).

A physiological explanation as to why this editing technique works so well is that motion is processed very rapidly in the brain '[…] without recourse to form or colour processing. […] the two shots are perceived as one motion prior to the processing of the forms involved.' (Anderson, 1996, p. 102).

The effect of a cut like this is not depended on the visuals alone, and often sufficient sound will be needed to achieve a proper result.

4.7. Continuity of sound

Continuity of sound '… ensures that sound levels are consistent, especially relative levels of background sounds and dialogue.' (Kuhn & Westwell, 2020). An imaginary example can illustrate this: in a film scene we see two people (A & B) having a conversation in a rural landscape with a railroad obliquely in the background.

It's a long shot with both people shown in full figure in the foreground. The sound of an approaching train gradually appears. A couple of seconds before entering the picture, the train blows its horn. It maintains the signal for a few seconds after passing and thus creates a clearly audible Doppler Effect. As the train in the background (still in the long shot) reaches halfway

into the picture frame, there is a cut to a medium shot of person A, followed by a cut to a medium shot of person B. The shots are arranged so that the railway is seen in all three shots. Unless, for example, the purpose is to establish a kind of oneiric atmosphere by leaving out the sound of the train when cutting away from the long shot, the background sound must remain uninterrupted. It must be continuous as it would be heard if the whole scene was a single shot.

If the intention is to make the scene realistic, convincing, and believable, then the glissando-like rise and fall in pitch due to the Doppler effect must be upheld continuously throughout all the three different shots. The level of the train-sound would need to be balanced according to the principle of *sound scale matching*, which means that the sound level must be in proportion with the scale of the screen size of the object that makes the sound (Kuhn & Westwell, 2020). In this case it would obviously depend on the distance from the persons having the conversation in the foreground to the train crossing in the background. The closer the train is, the more intrusive the sound would have to be on the dialogue. If necessary, the sound of the train would (intentionally) be drowning the dialogue.

In this example a violation of continuity in the background sound would not make the scene unintelligible, but it might disrupt or perhaps even destroy our experience of the scene as being credible or 'real', with respect to the narrative. Especially if the train is in relatively close proximity the scene would seem quite strange if the sound of it is cut or appearing wrong with respect to volume. The violation of continuity would become explicit and noticeable in a way that would affect the trustworthiness of the scene. It would no longer correspond to our expectations of 'reality' within the narrative, and the spectator's attention would be drawn away from the unfolding story.

4.8. The Continuity Editing System: a transporter into believing

The Continuity Editing System has been developed over more than a hundred years. Across generations the system has been cultivated, challenged, and refined. The outcome of this evolution is a system that has resulted '[…] in a film viewing experience marked by focused attention, the buildup of tension, and narrative immersion that was not possible in the early days of film.' (Armstrong & Cutting, 2016, p. 9).

In his book *The way Hollywood tells it* (2006) David Bordwell discusses this development and introduces the term 'Intensified Continuity', pointing at four main tendencies in the historical progress of film. These are: '[…] rapid editing, bipolar extremes of lens lengths, reliance on close shots, and wide-ranging camera movements.' (Bordwell, 2006, p. 121). As a result of this, narrative cohesion between shots within scenes becomes even less detectable (Armstrong & Cutting, 2016, p. 9).

This is only one example of how the development of film style is dynamic. Further, along with this development evolves the spectators' expectations and understanding of a film's message. The audience's ability to comprehend filmic narratives changes and develops alongside the development of film itself and new viewer habits follow logically: 'The relative ease of

processing movie narratives is linked to shifts in media norms and viewer expectations.' (Armstrong & Cutting, 2016, p. 8).

To understand continuity editing it is important to understand the role of the viewer in film's perceptual construction (Smith, 2012, p. 1 – 2). In accordance with Cutting (2005, p. 10) and Anderson (Anderson, 1996, p. 10), Smith builds on the assumption that the cognitive processes at work in film experience are quite similar to those who lets us experience the real world. However, he acknowledges the huge differences between film and reality, for example that film instantly a cross a cut can move to another scene. (Smith, 2012, p. 4). To explain how we can overcome these obvious discrepancies Smith introduces the 'Attentional Theory of Cinematic Continuity' (AToCC), where focus is on the spectator's attention – and ability to shift attention accordingly to '[…] the audiovisual details currently relevant to them and the narrative.' (Smith, 2012, p. 9).

The notion that film experience as a result of editing techniques, resembles real life, and that it imitates the way our mind is set up to attend to the world around us, dates back to philosopher and psychologist Hugo Münsterberg, who already in 1916 claimed that films are made in a way that '[…] mimic the way that the human mind attends to stimuli […]' (Armstrong & Cutting, 2016, p. 15).

Seeing as it mimics the way we perceive the real world, the Continuity Editing System has proven to be a sustainable foundation for audio-visual storytelling. When successfully constructed, it is a strong 'transporter' into the narrative and, although challenged and altered in creative ways by many filmmakers, over time, it can arguably still be regarded a vital feature of filmmaking. In the words of Armstrong and Cutting: 'Through continuity editing, the viewer becomes immersed in the narrative […] Narrative transportation is achieved by viewers without regard for the editing techniques that define the temporal progression of the film.' (Armstrong & Cutting, 2016, p. 8).

The cognitive resemblance of real-world action and the spatial-temporal effects of the different aspects associated with the Continuity Editing System provides temporary journeys into a narrative. We 'loose' ourselves and get 'carried away' in the story. Further, to be able to do this successfully, we have to believe that the story is truthful, not as truth in our own lives, but as truth in the fictional movie universe with which we are engaged. This is the concept of verisimilitude in narratives. Drawing on Armstrong and Cutting, it is relevant to return to the ideas of Samuel Taylor Coleridge, going back to 1817:

> 'The theory of narrative transportation […] is reminiscent of the concept of the *willing suspense of disbelief*, coined by poet Samuel Taylor Coleridge in 1817 […] Coleridge argued that by imparting an impression of truth through a work of fiction, a writer could trigger in her audience the tendency to ignore any overt awareness or judgment surrounding the false nature of narrative, thus allowing intelligent audiences to enjoy fictional work as a vehicle for entertainment. This concept is especially applicable to a medium as immersive as film. By suspending the tendency to judge the truth of what is

perceived, audiences become susceptible to the goals of filmmakers to promote belief and emotional reactions to their stories.' (Armstrong & Cutting, 2016, p. 18).

4.9. Narrative transportation and verisimilitude in the perspective of sound and non-diegetic music

My late mother was an irredeemable fan of Hollywood films, American music, and American History. When her job in the Norwegian Broadcasting Corporation (NRK) brought her to the United States, she stepped down the flight stairs, kneeled on the ground, kissed the asphalt and, with a great portion of self-irony, asked loudly: 'Where are the violins?'. She obviously knew there were no violines in the air, even in USA, but it became a good story among TV-colleagues. Almost any film with music made by e.g., Erich Wolfgang Korngold could prove her heartfelt humorous point.

Non-diegetic music is a phenomenon which is arguably very far from how real-world sound is experienced. In many cases the same can be said about film sounds. The sounds we hear in a film can have little or nothing to do with how the real-world actually sounds: a film's soundtrack is thoroughly compiled and constructed.

The art of Foleying, named after Jack Foley, a pioneer in the making of postproduction sound (Bordwell, et al., 2020, p. 25), is a well-known technique for applying effectful sounds to a movie. This is often necessary because the actual shooting situation, for different reasons, do not provide the conditions that are needed to create the desired sound environment required to advance the narrative. Today almost any sound is available through digital archives and stock-companies, but going back a few decades, these sounds had to be made by physical means (as they were made in the days of early film). An example from my own experience as director/producer can illustrate this: a scene in a humoristic promo for an entertainment series (mid 1990s) portraited the program host running around on a farm. In one scene he gets a door slammed in his face. Obviously, the scene had to be faked and some kind of auditive enhancement was needed to create the appropriate humoristic sound effect. The solution was to record the sound of a piece of wood being cracked and then synchronise this sound to the impact of the door (seemingly) smashing into his face. It worked well. Colleagues remarked that they could almost feel the pain in their own noses as the sound effect imitated something being brutally broken. The effect worked as a mean of transporting the spectator closer to the story, and giving the story a higher level of (in this case humoristic) verisimilitude. But, everyone knows that getting a door smashed in your face, even if your nose gets broken, does not sound like cracking a piece of wood.

This is the power of sound in film and Michel Chion discusses this often-used technique in his book *Audio-Vision* (2019, p. 19). Chion claims that an image is seen in a different way when accompanied by sound – and vice versa – that a sound will be perceived differently if heard together with an image. Further, the influence is mutual and dynamic: 'Transformed by the image it influences, sound ultimately reprojects onto the image the product of their mutual influences.' (Chion, 2019, p. 19).

One of Chion's examples is taken from *The Skin* (1981), a film by Liliana Cavani, based on the novel of the same name by Italian writer Curzio Malparte. The scene is set in 1943, war-time Napels. As allied forces are entering the city, an American tank accidentally runs over a person celebrating in the streets. A macabre sound is heard as his body gets crushed. The real sound of a human body being crushed is obviously something with which very few, if any, among the movie audiences are familiar with, but – as Chion remarks: '[…] they might imagine that it has some of this humid, viscous quality. The sound has obviously been Foleyed in, perhaps by crushing a fruit.' (Chion, 2019, p. 20).

According to Chion the sound itself does not necessarily carry any value or mean anything specific. It is the visual and dramatic context in which it appears that defines how we perceive and understand it. Depending on the image with which it is associated, the same sound can convey different meanings. Therefore, it is not the acoustic realism that determines how the sound is experienced, but '[…] synchrony above all and, secondarily, the factor of verisimilitude (verisimilitude arising not from truth but from convention) […]' (Chion, 2019, p. 20).

The conventions in question have been developed over generations through the codes of theatre, television, and film. It is a question of how we render the sounds we hear in a film, not whether they are a reproduction of how these sounds would appear in a similar real-life situation. (Chion, 2019, p. 107 – 108). Chion defines this rendering as: 'The effect whereby the spectator recognizes a sound as true, fitting or proper.' (Chion, 2019, p. 210).

Another example is a montage sequence in the film *Robin Hood Prince of Thieves* (1991) which shows the outlaw inhabitants of the Sherwood Forest as they make weapons and train for battle, after having been persuaded by Robin Hood (Robin of Locksley), played by Kevin Costner, that they can fight back against the evil sheriff of Nottingham. The climax of the sequence is a short scene that starts with a profiled closeup of Robin Hood, as he draws his bow and aims. As the arrow is released it is accompanied by a sound appearing almost like the blast of a gun. In the next shot we follow the arrow as it moves towards its target but as if we (the camera) are placed *on* the arrow in a Point of View shot. The arrow, enlarged in the foreground, moves rapidly towards its target. The sound accompanying this shot is like the sibilant hiss you will experience if you stick your head out of the window in a fast-moving car. The image is a composite of two images: the arrow (most likely animated) superimposed over another image filmed with a camera (mounted on a steady-cam or a dolly on rails) moving rapidly forward through the woods, towards a tree. Visually the result is a feeling of riding *with* the arrow. In a split second, before impact, a transition (blur-zoom) boosts the feeling of speed and power. As the arrow hits its target – another arrow already shot into the tree (this being split) – the impact sound is a combination of a small explosion and a trembling wooden sound (might expected to be heard also in real life, if standing close to the tree – but not likely).

Everything in this scene is basically unbelievable. Intentionally splitting an arrow with another arrow, from distance, on one attempt, is practically impossible, even with a modern weapon.

But, as with Batman and Superman, Robin Hood is a hero we *want to* believe in, at least as long as we are engaged in the narrative.

The sounds in this arrow scene are definitely different from what we can expect in the real world. Not only are they exaggerated to the extreme in volume, but they are also simply not the sounds that an arrow would make. Not in the flight, not on impact. However, in the context the sounds help us to believe in the fantastic skills of Robin Hood. We get closer to everything: to the drama, to the man, the archer, the hero, to the weapon and to the impact. These are seven seconds that can summarize the concept of a heroic narrative in film, and it is the combination of closeups, camera movement, cutting, and sound, that makes this short scene a key scene, telling us what Robin Hood is 'made of'– who he is as a leader, as a person and as a warrior.

This scene and the whole montage sequence leading up to it is also accompanied by non-diegetic music. This music starts to build up carefully in the preceding scene, where Robin Hood has an argument with the residents of the Sherwood Forest. He has incurred the sheriff's wrath and the outlaws are afraid that this will come to harm them. Robin wants to lead them in battle against the tyrannic sheriff, but the residents are reluctant to his plan, arguing that they have no weapons, no battle training and hence will be an easy match for the skilled soldiers in armour, serving the sheriff. There is a reward set out on Robin Hood and one of the residents makes an attempt to throw a knife in his back. Robin is warned, turns around and in one quick movement he reaches for an arrow from his quiver, loads and fires the arrow through the lifted hand of the knifeman, before he manages to throw the knife. As the scene proceeds, the people of Sherwood are eventually persuaded by Robin. He appeals to their wish for freedom and argues that the forest can provide everything they need. Throughout this scene music is building up under the dialogue, commenting but never interrupting in a way that will disturb the dialogue – just 'surrounding' it or kept softly under, in an elegant manner.

This is a key principle in the Hollywood Style. Music is subordinate to the other important sounds and to the demands of the narrative (Gorbman, 1987, p. 59). The narrative in a traditional Hollywood film is, almost without exceptions, driven mainly by human vocal expressions and foremost dialogue. Michel Chion labels this *vococentrism* and *verbocentrism* respectively and claims that the main reason why film is arranged like this is simply because this is a central characteristic of human behaviour (Chion, 2019, p. 6).

In the last part of this scene, after the knife incident, Robin asks the people if they want to end this and if they want to go home. They do. He urges them to remain united and states that they must face the fact that freedom comes at a price. He then throws his bow forcefully on the ground in front of the feet of a couple of men before he steps quickly up on a large fallen tree, from where he continues to speak.

With respect to editing the rest of the scene is basically a shot-reverse shot scene, where Robin Hood argues with the group. It basically follows the continuity editing rules, with regard to axes, using axis neutral shots to get around the somewhat challenging fact that Robin is standing in a position where he is placed higher and looking out over a crowd of people. This also puts

him in a position where he has a bird perspective on the people he is addressing, and they have a frog's perspective on him. This is a well-known visual rhetorical strategy to impose authority (e.g., Kjeldsen, 2002, p. 57) and works well to mark the leader qualities of Robin Hood. Continuity editing rules are clearly broken once as Robin looks down on his companion, the Maurian warrior Azeem Edin Bashir al Bakir, in a long shot, with Robin in full figure in the foreground. Then there is a cut to a closer shot of Azeem straight on the same axis, resulting in a jump cut. However, in the context it affects the verisimilitude marginally.

In the moment Robin throws the bow on the ground a fanfare-like motif (C-F-G) is played in horns. Not loud, but significant enough. The motif is a characteristic one for the films main theme and appears in different variations throughout the film, often associated with Robin Hood and his heroic escapades. Here it is used on a background of strings, slightly building up some tension with underlaying harmonies in a different key. The music is carefully mixed and timed to support the dialogue and the motif is repeated with some variations. The second time it is heard in this scene is a moment after Robin expresses the word 'free' ('The sheriff calls us outlaws, but I say we are free.').

The music in this scene is very effectful as it, at strategic points, underpins and comments the rhetorical argumentation of Robin Hood. As Robin answers 'Then, by God we take it back' to the question from one of the men regarding the fact that the sheriff has taken everything also from their kinds, the music intensifies. In the short pause before his answer the strings are brought to foreground with a fast crescendo, then a decrescendo during his answer and finally a new crescendo leading over to the montage/training sequence.

The music in the training sequence has an epic and grandiose character with powerful major chords and an orchestration dominated of brass supported by strings and bass drums. It is almost like a teambuilding event that we as audience can take part in. People are cooperating, weapons are made, and training sessions are carried out. And all this is happening as the heroic music is leading everything foreword, generating passion and victorious emotions. Naturally the music is foregrounded in the sequence but there are some diegetic sounds as well. Most notably are the sounds of arrows being shot and the impact sound they make when they hit their targets – dummy soldiers made of cloth and stuffing.

This first time this happens is early in the sequence. The shooters are obviously untrained and unfamiliar with weapons. Their attempts to shoot are feeble and poorly executed. They either miss, or the arrows bounce off their targets. This weakness is reflected by the diegetic sounds of the arrows as they are similarly weak in volume. But, at the end of sequence, as music is building up with a raising melodic line in the horns, we see the shooters again, now with determined looks. This time, the diegetic arrow-sounds and the sound of their impacts are loud and powerful, blending with the music. The arrow-impacts are also shown in closeups or medium closeups in order to enhance the total impression. As the shots are performed, we hear a brass fanfare that ends on sustained Dominant chord and the picture is cut to the closeup of Robin Hood as he aims at the tree and performs the final 'splitting arrow' shot. We don't' actually see the impact, only a closeup of the arrows quivering in the tree, but the sound makes

us believe that we see it. The filmic verisimilitude is strong, but yet unlike anything we can expect to experience in the real world.

The dynamic relationship between narrative transportation and verisimilitude sketched here manifests itself in different ways in the dialogue scene and the training sequence. In both cases it is closely connected to filmic and musical conventions, incorporated as cultural imprints, over generations. In the case of music, these conventions are likely to make us react emotionally in different ways, depending on the character of the music. Intense up-beat and thrilling music helps to make us exited and engage in a fighting- or car-chase scene while slow, soft string music in a minor key would encourage us to empathise with a grieving film character. The emotional engagement created by music can work as a catalyst, enforcing absorption in the dramatic action but also lowering our defences against the *unbelievable* that often unfolds in a fantastic and imaginative filmic universe (Gorbman, 1987, p. 79). In the training scene, the action and images together with the music, abundantly scored in a late Romantic idiom, creates a transcending and epic atmosphere of heroism. Heroic music influences us to feel '[…] more positive, more inspired, active, alert and less afraid […]' (Koelsch et al., 2019, p. 5). The characters seem to become bigger than life and as spectators we take part in this united feeling of group identity, strongly enhanced by the music. It is 'us against the bad guys' and we have a common destiny. This is a phenomenon that '… seems to point back to anthropological analyses of the ritual functions of rhythm and song in human groups. The sense of common destiny which fans at a football game might have as, "of one voice," they sing the national anthem or chant a slogan in support of the home team […]' (Gorbman, 1987, p. 81).

The soundtrack engenders emotions and contributes to immersing the spectator in the story. It has the ability to make us more engaged in a filmic narrative and directs our attention towards important elements in the narrative (Wallengren and Strukelj, 2018). Music also '… contributes to a schematic structure that integrates a scene's action into one cohesive framework that directs the path of perception and attention, influencing both comprehension and memory.' (Boltz, 2004, p. 1195). According to Claudia Gorbman music can almost act like a hypnotist: 'It masks contradictions and lessens spatial and temporal discontinuities with its own melodic and harmonic continuity. […] drawing the spectator further into the fantasy-illusion suggested by filmic narration.' (Gorbman, 1987, p. 6). Hence it becomes a strong transporter into the narrative.

Van Laer et al. (2014, p. 805) found that the more a story possesses verisimilitude the more narrative transportation increases. With the dynamic relationship between these two aspects of storytelling one can arguably assume that this also works the other way around: although not using the expression 'verisimilitude', Green (2004, p. 262) found that persons who were considered to be more deeply transported into a narrative also believed the story to be more like real life, and that deeper immersion also resulted in a higher '[…] story-consistent beliefs.' (Green, 2004, p. 262).

The study cannot account for the causal direction, but – according to Green – transportation theory posits '[…] that immersion into a narrative world makes the narrative world seem more

like a real place.' (Green, 2004, p. 262). As music can be said to enhance narrative transportation it seems plausible to assume that it contributes to strengthening the spectator's belief in the fictive diegetic realm of a film. Further, the assumption is then also that by enhancing engagement and absorption in a filmic narrative, a musical underscore can strengthen the experience of verisimilitude intrinsic to the story world.

In a dialogue scene as the one referred to above, the music can only do this by following some key principles established through conventions. In the introduction to her book Claudia Gorbman asks the pertinent question: 'What is music doing in the movies […]?' (Gorbman, 1987, p. 2). A somewhat similar thought seems to run through the mind of author Russel Lack as he states: 'One should never forget how bizarre a phenomenon film music really is.' (Lack, 1997, p. 65).

The underlying film musical conventions makes us accept that music is present under the dialogue and enhances our engagement, identification with, and belief in Robin Hood's appeal to the outlaw inhabitants of the Sherwood Forest. Film music can do this due to its ability to be 'unheard'. Although Gorbman herself points out that it is obvious that '[…] film music can always be heard.' (Gorbman, 1987, p. 76), it is the analogue to 'invisible editing' that makes musical underscore work like it does here and hence remains 'unheard'. The spectators are absorbed by the dialogue and the evolving drama, while music does its work unconsciously, in the background (Gorbman, 1987, p. 76).

In a classical-style film like *Robin Hood Prince of Thieves* this is possible due to skilled composing, orchestrating and instrumentation, timing and cutting, and not least, a good *balance* between music and dialogue. Music is subordinated to the voice and any other sound that is important to the narrative. 'It should always be remembered, as a first principle of the aesthetics of music in the cinema, that logic requires music to give way to dialogue.' (Sabaneev in Gorbman, 1987, p. 77).

It is important to note that the effect of film music as it described here relies on the music being congruent. A simple definition here is that the music adheres to the films style, mood, and tempo.

5. VIDEO PRODUCTION AND EMPIRICAL STUDY

5.1. Video production

With respect to form, content, and narrative, different alternatives were considered for the video production. The two most pertinent options were deemed to be either to produce a completely new

sequence based on a dialogue between two people, or to create a sequence without dialogue, mainly based on drone footage recorded – with the thesis and the associated experiment in mind – in the summer of 2022.

A dialogue sequence, with a clear narrative could seem appropriate, and could also involve a variety of examples of continuity editing. However, the concern with this solution was that it would create too many variables and thereby require a number of participants in the experiment that by far would exceed the time and resources available for the study. Hence the second option was preferred. Although consequently leading to a more ambiguous narrative, it was deemed more applicable with respect to the experiment and the requirements to keep this as clear and simple as possible. Without a clear narrative, the aim was to form the video as a possible opening sequence to a feature film. The main attributes of the story are pre-determined aspects, such as mood, locations, and themes, yet without revealing the connection between them. The plot is kept in suspense. Normally one might expect written titles in a sequence like this, but such titles were deemed to attract too much attention and thereby potentially affect the participants' interpretation of the video in an undesired way.

The underlying idea for the video production was that congruent, thriller-like music, helps to create associations to remoteness, melancholy, and even something daunting and sinister (rain was digitally added in post-production, to emphasise this atmosphere). Footage from my own archive of something which can be characterised as 'dark and urban', implying the involvement of people using digital technology for some dubious purpose, was included in the narrative, to add to the thriller atmosphere.

The old ship wreckage depicts death and decay in an explicit and concrete way, reduced as it is, to a disintegrating ramshackle of rotten wood and oxidizing iron: half submerged in water and sand, almost eaten by seaweed, algae, seashells, and partly overgrown by grass and other growths. The thriller music is intended to make the spectators more absorbed and attentive, and maybe even generate more subtle associations with the ship. The ship might also be connected with death and decomposition in a bodily manner: rotting wooden planks sticking out like rib bones and the drone camera moving closer and closer downwards, eventually entering, 'the belly of the beast' – or gliding sideways, looking into it. The music is here meant to intensify the feeling of malaise. In addition, the music might – by its tense expression – help to build up a notion of something (or someone) being hidden inside the old ship – or that the ship itself hides a disturbing story. The two

persons swimming and the house (with a man sitting inside) are connected to the ship in space-time through the characteristics of the surrounding nature and its colour tones, the water, and the birds, and through the continuous rain. Although they seem to feel comfortable and safe in the water, the music together with the use of slow motion might sway the viewers experience in an uncomfortable and more tense direction. The nature and even the birds can seem more like a threat than a source of comfort and relaxation. The shift to the dark, urban scene connects the persons in the water (and the house), their remote location and the old ship, to a another and modern digital threat. Something is going on in a city, maybe far away, involving digital resources. There is a connection not yet clarified and comprehensible. In the following this video, with a congruent underscore, will be named video A.

Video A video can be accessed here, in HD, 1080p or 720.
https://vimeo.com/826613093/e2a13560ee?share=copy (1080p)
https://vimeo.com/826613055/0246f2348a?share=copy (720p)

The same video (visually identical) was accompanied by incongruent music (video B), with the intent that this would have a less specific – or 'transporting' – effect on the spectators' experience, that their understanding of what the video was about would be more ambiguous and confused, and that they would perhaps be less interested and attentive overall

Video B can be accessed here, in HD, 1080p or 720.
https://vimeo.com/826613170/66cead008c?share=copy (1080p)
https://vimeo.com/826613138/89d25cdc80?share=copy (720p)

There are four main differences with respect to the way that the two different soundtracks are designed to work:

Firstly, in video A the underscore is continuous from beginning to end. Although the music track is constructed by several individual short music pieces and elements, they are put together and edited in a way that makes them appear as one piece welded into a continuous and coherent underscore. The same mood is upheld throughout the video, building up and down in intensity, accordingly to the visuals. This is achieved with special attention to timing, fading, and sound levels. Secondly, in video A the underscore interacts with both visuals and diegetic sounds on a more intentional level, than is the case in video B. The third main difference is that the underscore

in video A is congruent with the visuals, especially with regard to tempo, shifts, and mood. Finally, as a result of the three preceding aspects, the music- and soundtrack as a whole should appear as coherent and in conjunction and compliance with the visuals. The idea is that this will lead to enhanced engagement/absorption, support narrative transportation and by this also result in a stronger notion of verisimilitude for the spectator.

In video B, the aspects previously mentioned, and the technical/aesthetic principles they build upon, are violated. The underscore consists of three musical pieces, different in tempo, rhythm, and metre. The transitions between them are quite sudden and disruptive, performed in a manner that make them interfere with each other, creating confusion more than upholding continuity. The pieces are different in character, but all of them can – to some extent – be said to have jolly, happy, or even humoristic qualities. Although the visuals in themselves do not inherit specifically scary qualities, they are definitely not jolly, so there is an intended discrepancy in this regard. The different pieces appear and disappear randomly and have no obvious connection or synchronicity with the visuals (or the diegetic sounds), something that strongly violates the principles of coherence and continuity. Altogether, it is envisaged that the added, incongruent underscore will undermine engagement and absorption, weaken narrative transportation and by this decreases the experience of verisimilitude, for the spectator.

5.2. Introduction and background to the study

As seen, the notion that music can enhance spectators' engagement with a film goes back to the very early days of cinema itself and is well accounted for in the literature. Even so, empirical research in the field is sparse, and there are few studies with only a small number of experiments dealing with the subject. This is arguably because there are barriers associated with methodology, when it comes to measuring the experience of engagement (Wallengren and Strukelj, 2018).

Nevertheless, we do find studies attending to the topic. In an online between-subjects experiment Ansani and colleagues (2020) found that two different music scores, one regarded as 'melancholic' and the other as 'anxious', '[…] deeply affected the interpretations of an unknown movie scene in terms of empathy felt toward the main character, impressions of his personality, plot anticipations, and perception of the environment of the scene.' (Ansani et al., 2020, p. 1). The experiment was later replicated in a laboratory with the addition of eye-tracking and pupillometry measurements and to a large extent, the original results were confirmed (Ansani et al., 2020, p. 1). By combining a questionnaire with eye tracking and pupillometry, the current study aims to contribute to the empirical research in the field. The study was performed in the cognitive laboratories at the Department of Psychology and RITMO, Centre for Interdisciplinary Studies in Rhythm, Time and Motion, at the University of Oslo under the

aegis of the project *Engagement and absorption*, a project investigating temporality and rhythm in a variety of experiences that involve deep engagement and/or absorption. The purpose of the study was to interrogate specific effects of non-diegetic music in a video sequence. This is done by hypothesising that:

A congruent and coherent underscore, abiding by the rules of continuity editing, enhances narrative transportation and supports the impression of verisimilitude in a filmic narrative.

In addition, the study sought to uncover whether congruence and coherence in audio-visual content affect a spectator's perception of time as well as their attention towards particular details in the filmic narrative. It is thus framed by two research questions:

RQ1: Is there a difference in spectators' perception of time, when exposed to:

a) a filmic narrative with a congruent and coherent underscore? and
b) a filmic narrative with a non-congruent and non-coherent underscore?

RQ2: Is there a difference in spectators' attention towards details in a filmic narrative, when exposed to:

a) a filmic narrative with a congruent and coherent underscore? and
b) a filmic narrative with a non-congruent and non-coherent underscore?

The two groups, each consisting of 25 participants, were shown the same video, with the same diegetic sounds but with different music. The underscore in video A is regarded as congruent and the underscore in video B is regarded as incongruent.

In order to adhere to the space limitation of the thesis, only the most relevant results will be discussed here.

5.3. Eye tracking and pupillometry

Eye-tracking and pupillometry are considered to be reliable methods for measuring psychological responses, like, for example arousal (pupil dilation) or attention (e.g., fixations and dispersion). The two methods are typically joined together by using an eye tracker, which can monitor both of these oculomotor responses. In recent years, they have been applied for measuring different aspects of audio-visual media experiences. To this end, they have proven to be a helpful supplement to questionnaires and self-reporting methods, not least as mitigation for the risk of subjective biases that such methods carry. In the context of film music, using eye tracking and pupillometry is quite a novel development (e.g., Wallengren and Strukelj, 2018, Ansani at al., 2020, Millet, et al., 2021 or Smith, 2012).

In the current experiment, the participants' pupil dilation, fixation counts, saccade counts, and fixation dispersion were measured. Unpaired t-tests were performed to assess whether there were significant differences between the groups, with respect to both arousal and attention.
It should be noted that 5 participants were excluded due to low data quality and low tracking ratio. Hence the total N=45.

Measuring of fixation count showed a borderline significant result. The group who watched video A, with congruent music (M = 1130.5, SD = 137.5) compared to the group watching video B, with incongruent music (M = 1032, SD = 182.6) showed a nearly significantly higher fixation count, t(43) = 2.008, p = .0510 (figure 14).

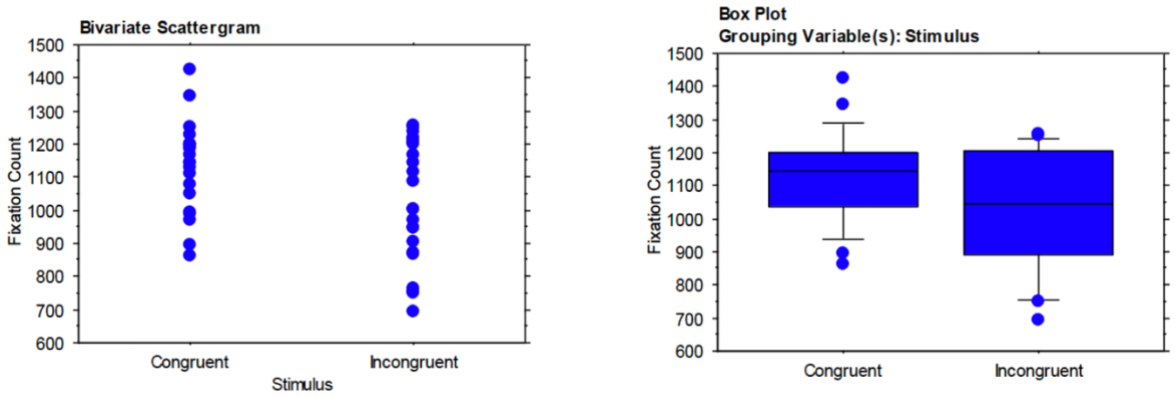

Figure 14

Saccade count showed a significant result. Participants who watched video A (M = 1157, SD = 137) compared to the participants watching video B (M = 1050.8, SD = 184.9) demonstrated significantly higher saccade count, t(43) = 2.162, p = .0363 (figure 15).

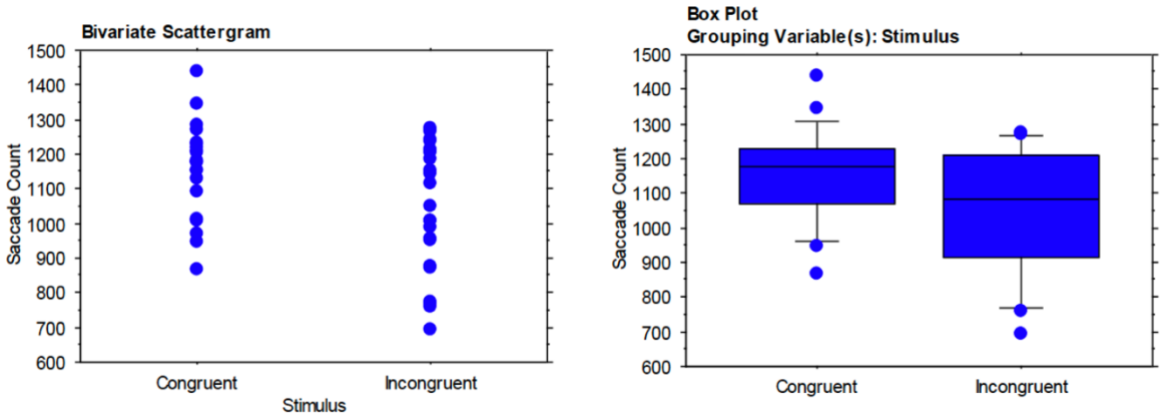

Figure 15

The fixation dispersion (i.e., microsaccades during a fixation) also gave a significant result. The participants who watched video A (M = 90581, SD = 12617.9) compared to the participants watching video B (M = 81169.2, SD = 15135.3) demonstrated significantly higher fixation dispersion, t(43) = 2.247, p = .0299 (figure 16).

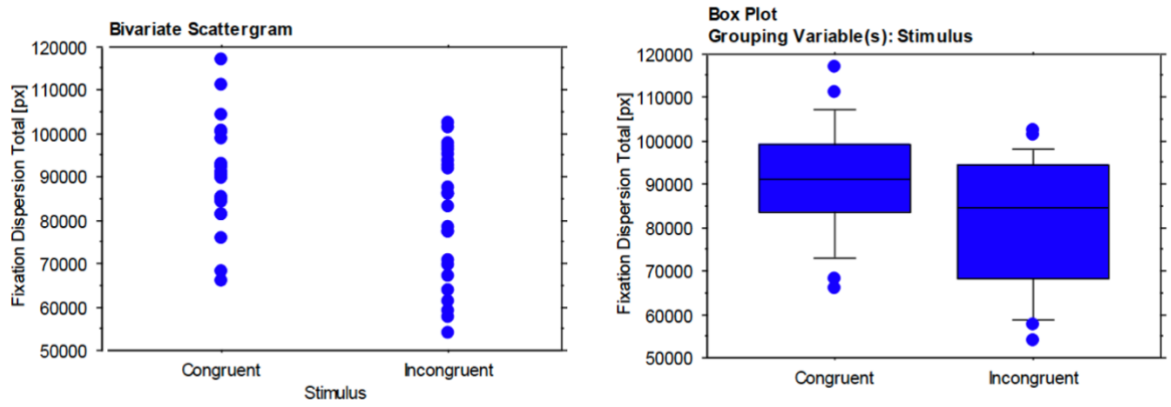

Figure 16

Difference in pupil dilation was not significant. This was somewhat unexpected. At least in the passage of the video, where the drone descends the final meters into the old ship and music intensifies, increased arousal and hence pupil dilation was expected. The reason for why this did not occur, although there is suspense building up, might be that what visually followed the hidden transition (one camera movement ending with a fade to black, at one location while the next movement starts in black at a different location) was not frightening enough. If the transition (maybe enforced by a powerful sound effect) led to something daunting or terrifying, then one would assume that arousal would rise sufficiently to achieve pupil dilation.

5.4. Questionnaire and predictions

The participants were asked to answer the questionnaire immediately after screening. The questionnaire had eleven questions with a varying number of answer options.

5.4.1 Experience of time

1. Tick one box. What do you believe was the approximate duration of the video?

☐ 1 minute
☐ 2 minutes
☐ 3 minutes
☐ 4 minutes
☐ Other (please estimate)_____ minutes

Prediction: The tendency in deviations from the correct answer (3 minutes) will be that participants exposed to video A tend to experience shorter duration while participants exposed to video B tend to experience longer duration.

The prediction was based on the presumption that video A would entail greater immersion. Immersion will often create a sense of 'time flying' and '[…] a lack of awareness of time and the natural world.' (Yan et al., 2022, p. 2). Although less than half of all the participants guessed the correct duration, there was no significant difference between the two groups. The result did

not support the prediction and the conclusion here might be that in order to find support for this prediction the duration of the video would need to be longer and the narrative of a type that would involve a deeper immersion over time.

5.4.2. Experience of mood and action/content

2. Tick the boxes you find relevant. Which of the words below describe the video appropriately?

- ☐ Calming
- ☐ Confusing
- ☐ Coherent
- ☐ Believable
- ☐ Fragmented
- ☐ Exciting
- ☐ Absorbing
- ☐ Realistic
- ☐ Funny
- ☐ Tense
- ☐ Boring

Prediction 1: There will be a preponderance among participants exposed to video A choosing two or more of these words, for an appropriate description of the video: *Coherent, Believable, Exciting, Absorbing, Realistic, Tense.*

Prediction 2: There will be a preponderance among participants exposed to video B choosing two or more of these words, for an appropriate description of the video: *Calming, Confusing, Fragmented, Funny, Boring.*

Due to limitations with respect to both time and available statistical resources, this multi-choice question turned out to be difficult to test. However, a Chi-Square test indicates that the relation between these variables was significantly different, X^2 (11, N = 50) = 66.410, p = <.001. That is, each group responded differently. Since the only variable was the underscore, it is likely that this difference in the answers is due to the different experience evoked by the underscore. The most interesting single results from this test was that the term ‘tens’ was chosen by 24 of the 25 participants in the congruent group and only 6 of the 25 participants in the incongruent group – and the term ‘calm’ was chosen by only 2 participants in the congruent group and 17 in the incongruent group.

3. Tick one box. If this video were an opening sequence to a movie, which term would be appropriate? Please choose one.

Genre:

- ☐ Western

☐ Action
☐ Comedy
☐ Historical drama
☐ Thriller
☐ Sci-fi
☐ Fantasy

Prediction 1: There will be a preponderance among participants exposed to video A choosing one of these words as an appropriate term:

- Action
- Thriller

Prediction 2: There will be a preponderance among participants exposed to video B choosing this word as an appropriate term:

- Comedy
-

There is nothing in the visuals that can be related to comedy, but the prediction stands as a result of music's supposedly strong influence on the experience – as a fragmented underscore with these characteristics can come across as clumsy and comical. Western, Historical drama, Sci-fi and Fantasy was left in for control.

Also here a Chi-Square test indicated that the groups were independent or that the relation between the variables was significant, X^2 (5, N = 50) = 11.588, p = .041 (figure 17). The two groups responded differently, depending on the different underscore as the only variable.

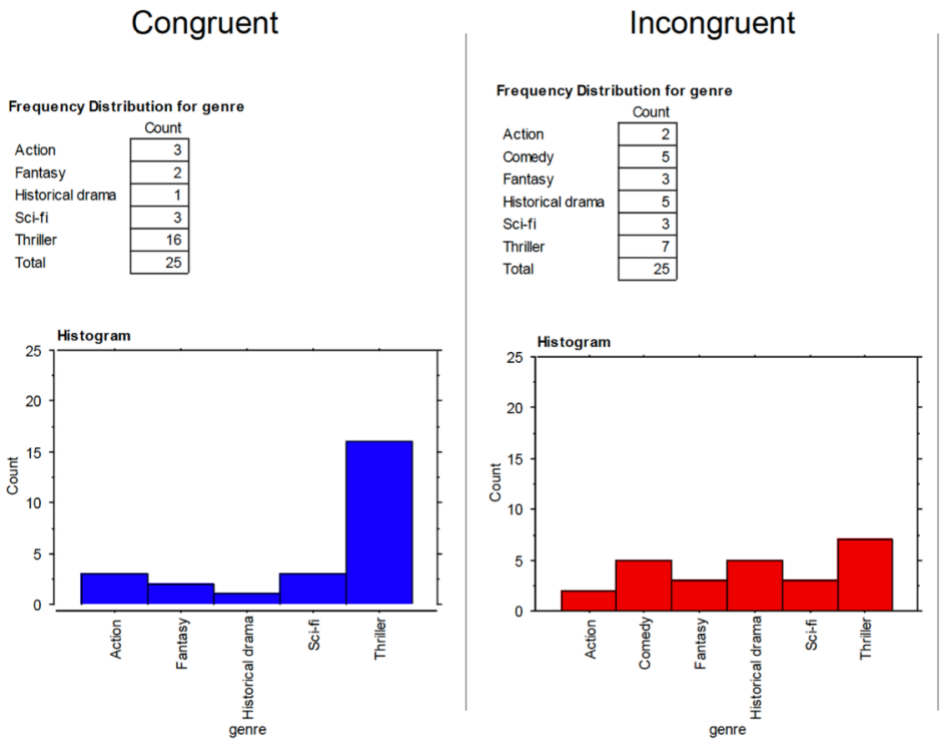

Figure 17

With respect to the group experiencing the congruent underscore in video A, they robustly responded in accordance with the original prediction. However, the result of the incongruent group was somewhat surprising, and did not comply with the prediction, seeing as it had such large variance. A plausible explanation is that this music had an unclear 'direction'. Whereas the congruent thriller-like underscore is designed to work in accordance with film music conventions and support the somewhat dark mood of the visuals, the incongruent underscore, by its jolly and leaping nature provides ambiguity and conveys uncertainty, regarding the question of genre.

4. Tick one box. If this video were an opening sequence to a movie, which term would be appropriate? Please choose one.

Main plot:

☐ Family intrigue
☐ Murder
☐ Funny complications
☐ A nature catastrophe
☐ Human relations
☐ Climate change
☐ Scientific mystery

Prediction 1: There will be a preponderance among participants exposed to film A choosing one of these words as an appropriate term:

- Murder
- A nature catastrophe
- Scientific mystery

Prediction 2: There will be a preponderance among participants exposed to film B choosing these words as an appropriate term:

- Family intrigue
- Funny complications

Human relations and Climate change are left in for control. There were no significant results regarding this question.

5. Tick one box. What do you think might happen next in the movie?

☐ Something bad
☐ Something good
☐ Something funny
☐ Something sad
☐ Nothing in particular

Prediction 1: There will be a preponderance among participants exposed to film A choosing one of these statements:

- Something bad
- Something sad

Prediction 2: There will be a preponderance among participants exposed to film B choosing one of these statements:

- Something good
- Something funny

Nothing in particular is left in for control. There were no significant results regarding this question.

5.4.3. Attention towards details in the experience of action/content

The predictions for the questions related to attention is in general that there will be more correct answers related to film A with the congruent underscore.

6. Tick one box. How many people did you see swimming?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4

There were no significant results regarding this question and 25 out of 25 participants answered correctly in the congruent group and 23 out of 25 in the incongruent group. In general attention towards actions and motives of people dominates our perception in film, as well as in the real world (Smith, 2012, p. 8), and the assumption in this case is that the participants quickly register the two people in the water, regardless of the character of the music.

7. Tick one box. How many close ups of animals did you see?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4

A Chi-Square test shows that the groups are independent and significantly different. The relation between these variables was significant, X^2 (1, N = 50) = 5.882, p = .0153, and 21 out of 25 participants answered correctly in the congruent group, while only 13 out 25 participants

answered correctly in the incongruent group (figure 18 and 19). This is an indication of higher attention and deeper transportation into the narrative. The assumption is that the congruent music can make the spectator more aware of details. The birds are a central theme in the video, both visually and aurally, and 'prompting' elements in the music – such as a bass drum hit in the moment right before the cut to the closeup of the seagull, appearing as if the seagull reacts to the bass drum when turning its head – can be a plausible explanation as to why this works the way it does.

Video A
Congruent

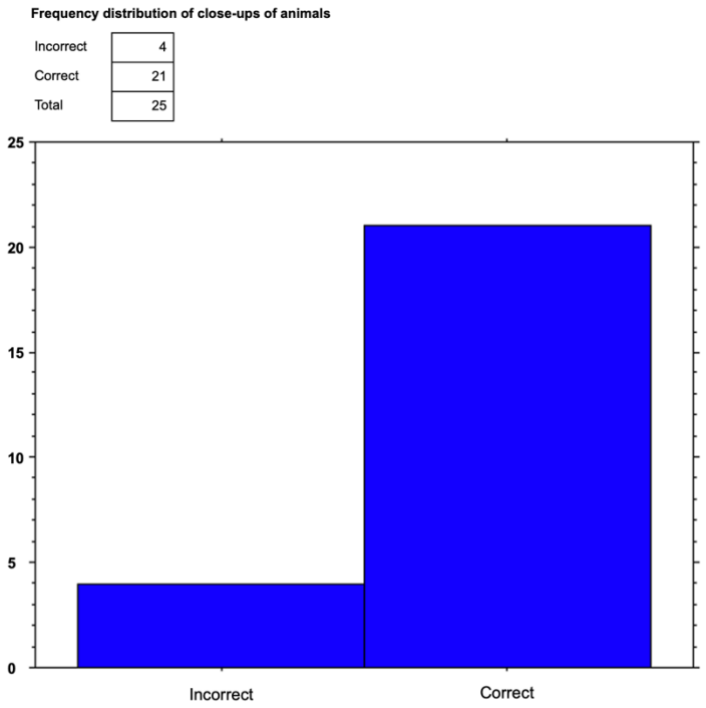

Figure 18

Video B
Incongruent

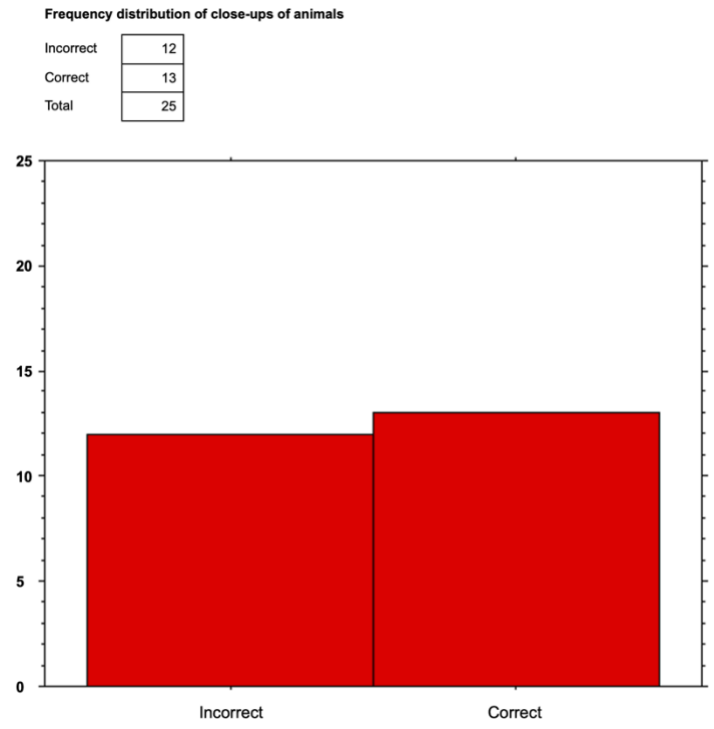

Figure 19

8. Tick the boxes you find relevant. Which of these objects do you believe appeared in the video?

☐ A platform
☐ A church
☐ A pier
☐ A bridge
☐ A bus
☐ A house
☐ A fish farm

There were no significant results regarding this question.

9. Tick the boxes you find relevant. Can you identify sounds you heard coming from the environment/surroundings, in the video?

☐ Footsteps
☐ A person screaming
☐ People talking
☐ Rain falling
☐ A dog barking
☐ Birds shrieking
☐ A voice coming from a radio

A Mann-Whitney U test was conducted to determine whether there is a difference in accuracy scores between the congruent and the incongruent group. The results indicate a significant difference between groups, [U = 217.00, tied p = .0445]. The assumption is that deeper transportation into the narrative, due to a congruent underscore, not only affect visual attention, but also auditory attention. (figure 20).

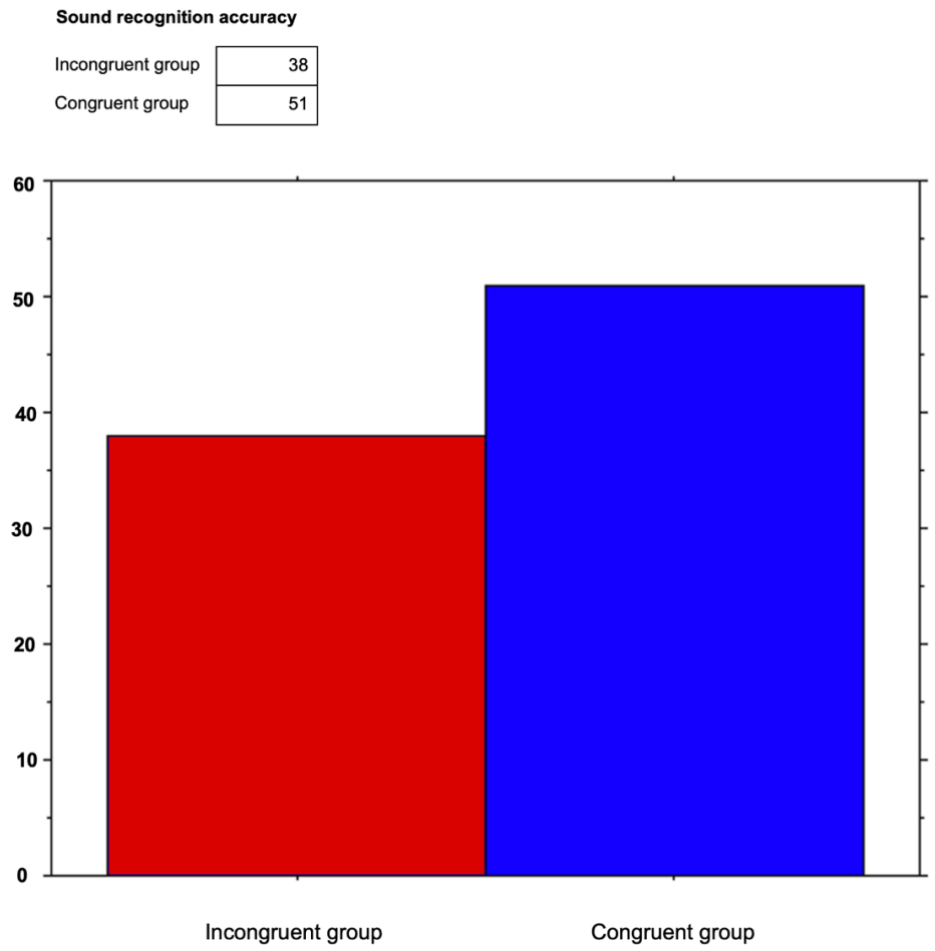

Figure 20

10. Tick one box. What did you see inside the steering house of the old boat at the end of the sequence?

☐ A person
☐ Scrap
☐ Furniture
☐ A dead animal
☐ Nothing

There were no significant results regarding this question.

11. Tick one box. How many times did you see someone typing on a computer keyboard?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4

There were no significant results regarding this question.

5.5. Reflections on the study

Although the findings in this study are to some extent ambiguous there are nevertheless some clear tendencies that support the original hypothesis.

To the extent that it fits the intended thriller idiom, the underscore in video A is regarded as congruent. This was confirmed from the result of the genre-question. In addition, in the congruent group, the term 'tense' clearly stood out as a preferred term to describe the video.

The video abides by the continuity rules in the sense that it is coherent and congruent. It works in 'joint action', together with diegetic sounds and visuals - as a device of suturing '[…] aiding the process of enunciation into fiction, lessening awareness of the technological nature of film discourse.' (Gorbman, 1987, p. 5).

The result of the eye tracking showed almost significant results for fixation count and significant results for saccade count and fixation dispersion. Put differently: There was a higher number of counts in the congruent group, meaning that they were fixating more often, that rapid eye movements were occurring more often, and they were searching over a wider area of the screen. This indicates that the spectators were more curios and interested in finding out what was going on in the video, hence likely to be more transported. Since the underscore is the only variable, this is an indication of this transportation being caused by the congruent music. As discussed in the theory section it is likely that the effects of narrative transportation and verisimilitude is reciprocal and that the phenomena work both ways, dynamically influencing each other.

Given this background, I believe that the findings in this study partly supports the hypothesis.

The answer to the first research question is that there is no difference in perception of time between the groups.

The answer to the second research question is that there are some significant results showing a difference between the groups with respect to attention towards details, and that a congruent underscore is likely to enhance attention toward details in a filmic narrative.

6. CONCLUSION AND FURTHER WORK

In this thesis, I have explored the Hollywood Style in film, while emphasising the significance of the Continuity Editing System and how this contributes to a cohesive filmic narrative in traditional feature film. This is not to disregard other film traditions or styles, but it is a fruitful focal point due to the enormous impact the Hollywood style and the Continuity Editing System have had on film in general.

I have discussed how narrative transportation and verisimilitude in film are interconnected and reciprocal phenomena that to a great extent depend on The Continuity Editing System. More specifically, my attention has been directed towards the role of sound and non-diegetic music (the underscore). It has been pointed out that a film is not simply watched or viewed: it is a process of "audio-viewing" (Chion, 2019, p. 202). This is an important point with regard to future film analysis, whether this interrogates the traditional Hollywood movie or other film idioms. Traditionally, film analysis is characterised by a predominance of attention to the visuals.

Further, filmic verisimilitude is a topic that appears to be relatively overlooked in the scholarly debate about filmic narratives. I believe that including the phenomenon further in film theory and debate would yield a valuable contribution to the discourse about film, especially with regard to uncovering deeper, critical levels that sound and music might play for filmic verisimilitude.

The results of the associated study in this thesis indicates that a congruent underscore can increase narrative transportation and in turn support the spectator's perception of verisimilitude in film. This quality of music implies that it is not only an aesthetical and narrative tool in the hands of filmmakers, but also a rhetorical one with significant potential for establishing convincing messages and stories. Since this is a vital field poorly explored, the potential for development and engagement is extensive and warrants further scholarly attention.

For future studies, the questionnaires could be sharpened and made more precise in relation to what should be asked and how it should be asked. The eye tracking technology could be improved and modernised when it comes to both the hardware and software in use. A great improvement would be to facilitate possibilities to perform experiments that are more ecological, with more cohesive narratives and in a more spectator friendly environment (e.g., with high resolution screens and optimal sound). This would provide significant progress for exploring and understanding *how* filmic messages are perceived under more real-life like conditions.

Finally, another aspect of future interest might be to develop strategies and methodologies for encouraging an academic approach to investigating how sound and music interact with two visual elements that – due to modern digital technology – have radically altered even low-budget filmmaking in recent years: camera motion (also involving drone technology and robotics) and time-remapping.

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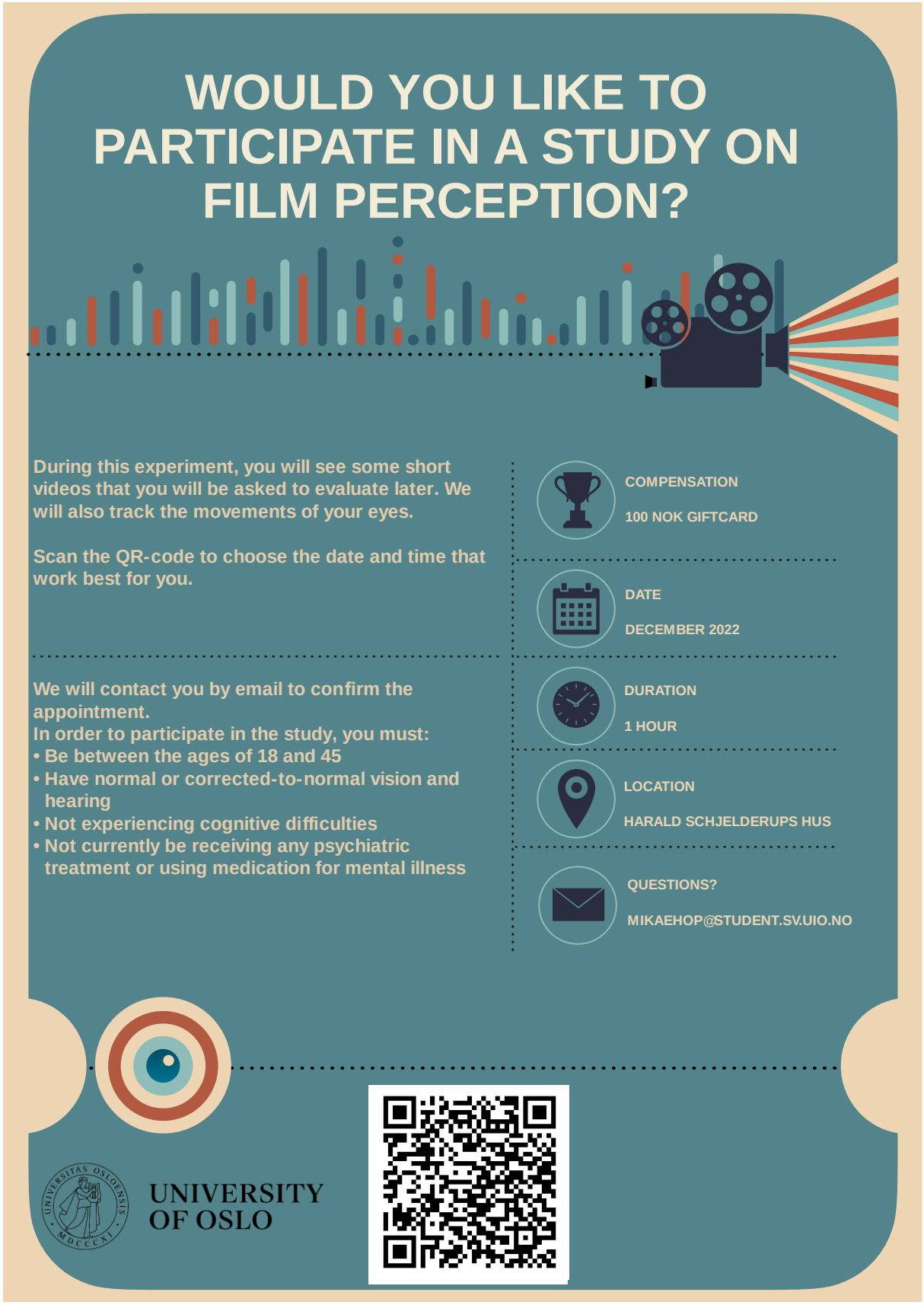
FILMS REFERRED TO IN THIS THESIS

2001 a Space Odyssey (1968).
À bout de souffle (1960).
A clockwork orange (1971).
Casablanca (1942).
Gone with the Wind (1939).
Jurassic Park (1993).
Lifeboat (1944).
Robin Hood Prince of Thieves (1991).
Superman (1978).
The Dark Knight Rises (2012).
The Graduate (1967).
The Skin (1981).
Superman (1978).

LIST OF APPENDICES

Recruit form, study
Consent form, study
Consent form, participation in video
Consent form, filming on private property

APPENDICES


WOULD YOU LIKE TO PARTICIPATE IN A STUDY ON FILM PERCEPTION?
During this experiment, you will see some short videos that you will be asked to evaluate later. We will also track the movements of your eyes.
Scan the QR-code to choose the date and time that work best for you.
We will contact you by email to confirm the appointment.
In order to participate in the study, you must:
• Be between the ages of 18 and 45
• Have normal or corrected-to-normal vision and hearing
• Not experiencing cognitive difficulties
• Not currently be receiving any psychiatric treatment or using medication for mental illness
COMPENSATION
100 NOK GIFTCARD
DATE
DECEMBER 2022
DURATION
1 HOUR
LOCATION
HARALD SCHJELDERUPS HUS
QUESTIONS?
MIKAEHOP@STUDENT.SV.UIO.NO
UNIVERSITY OF OSLO

Are you interested in taking part in a research project?

Film experience

This is an inquiry about participation in a research project where the main purpose is to explore film experience, partially tested through an experiment gathering eye tracking data. In this letter we will give you information about the involvement of your participation.

Purpose of the project
The purpose of the project is to explore different aspects of experience when watching a film.

Who is responsible for the research project?
The RITMO Centre of Excellence and Dept. of Musicology at The University of Oslo are the institutions responsible for the project.

Why are you being asked to participate?
We are asking you to participate because we believe that data gathered from your experience, when watching a film, can contribute in important ways to the project.

What does participation involve for you?
What we ask for you is that you come to our eye tracking lab at RITMO. There, you will be asked to watch a short film while your eye movements are being measured. You will then be asked to answer some questions on a survey.

Participation is voluntary
Participation in the project is voluntary. If you chose to participate, you can withdraw your consent at any time without giving a reason. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

Your personal privacy – how we will store and use your personal data
All personal data will be anonymized and only used for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).

- Only the project leaders – Associate Professor Nanette Nielsen and Professor Bruno Laeng – and participating staff/students will have access to the data.
- All data will be stored on a password-protected server with access strictly limited to the project leaders and participating staff/students.
- Processed and totally anonymized data of eye tracking data, will be used in our research and publications. There will be no recording or use of person recognizable images in our publications.

What will happen to your personal data at the end of the research project?
The project is scheduled to end 31. May 2023. After that only the eye-tracking- and the survey data will be stored at the secure server of RITMO with access only for project staff/students for publication purposes. No data that can be traced back to an individual is to be stored after 31 May 2023.

Your rights
So long as you can be identified in the collected data, you have the right to:

- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data

What gives us the right to process your personal data?
We will process your personal data in an anonymized form, based on your consent.

Based on an agreement with University of Oslo, NSD – The Norwegian Centre for Research Data AS has assessed that the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?
If you have questions about the project, or want to exercise your rights, contact:

- Research assistant Mikael Hope (mikaehop@uio.no) or master's student Espen Wik (espenwik@uio.no)
- RITMO via ass. prof. Nanette Nielsen/prof. Bruno Laeng
- Our Data Protection Officer: Roger Markgraff-Bye
- NSD – The Norwegian Centre for Research Data AS, by email: (personverntjenester@nsd.no) or by telephone: +47 55 58 21 17.

Yours sincerely,

Espen Wik (master's student)
Nanette Nielsen (assistant professor)
Bruno Laeng (professor)
Mikael Hope (research assistant)

I have received and understood information about the project "Film experience" and have been given the opportunity to ask questions. I give consent:

☐ to participate by performance as indicated above

(Signed by participant, date)

Samtykkeerklæring som gjelder personlig medvirkning i video

Jeg/vi gir med dette samtykke til at det brukes videoklipp der jeg/vi medvirker i forbindelse med Espen Wik sin masteroppgave ved masterprogrammet *Music, Communication and Technology*, ved Universitetet i Oslo samt prosjektet *Engagement and absorption* ved RITMO - Centre for Interdisciplinary Studies in Rhythm, Time and Motion, ved førsteamanuensis og prosjektleder Nanette Nielsen.

Jeg/vi er innforstått med at klippene inngår i en video som skal benyttes i forbindelse med et forsøk og at videoen vil bli vist som en engangsvisning for deltakere i dette forsøket. Videoen vil også være tilgjengelig for fagpersoner knyttet til disse to prosjektene, sensorer for masteroppgaven samt fagfeller i forbindelse med eventuell fagfellevurdering, ved senere publisering knyttet til prosjektet *Engagement and absorption*.

Sted: Bekkestua 10.01.2023

Underskrift: Odd Steinar Wik

Underskrift: Rita Hartford

Navn med blokkbokstaver:

RITA HARTFORD

ODD STEINAR WIK

Samtykkeerklæring som gjelder video/filming av privat eiendom/hus

Jeg gir med dette samtykke til at det brukes videoklipp av min eiendom/mitt hus i forbindelse med Espen Wik sin masteroppgave ved masterprogrammet *Music, Communication and Technology*, ved Universitetet i Oslo samt prosjektet *Engagement and absorption* ved RITMO - Centre for Interdisciplinary Studies in Rhythm, Time and Motion, ved førsteamanuensis og prosjektleder Nanette Nielsen.

Jeg er innforstått med at klippet inngår i en video som skal benyttes i forbindelse med et forsøk og at videoen vil bli vist som en engangsvisning for deltakere i dette forsøket. Videoen vil også være tilgjengelig for fagpersoner knyttet til disse to prosjektene, sensorer for masteroppgaven samt fagfeller i forbindelse med eventuell fagfellevurdering, ved senere publisering knyttet til prosjektet *Engagement and absorption*.

Sted: Oslo Dato: 29 jan 2023

Underskrift: Silje S Hasle

Navn med blokkbokstaver:

SILJE S. HASLE