

Listening to meditative sounds in film: an exploration of emotional guidance for the audience

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Abstract. This dissertation explores the role of meditative sound in film and its influence on emotional guidance and audience immersion. In contemporary film sound design, meditative sounds subtly evoke introspection, calm, and deep emotional resonance, yet their narrative significance is often overlooked. By analysing three distinct films - *Nomadland*, *Arrival*, and *Her* - this study examines how different auditory environments, from natural landscapes and silent cosmic expanses to futuristic electronic soundscapes, shape the perceptions and emotional responses of viewers. Employing psychoacoustic analysis, the research focuses on features such as low-frequency sound waves, rhythmic repetition, ASMR-like auditory triggers, and the strategic use of silence. The findings reveal that meditative sound design creates emotional balance, fosters psychological intimacy, and enhances immersion by constructing sonic spaces that guide audiences into states of relaxation, introspection, and emotional openness. These techniques significantly impact narrative engagement and emotional experience. The dissertation concludes that meditative sounds are intentional, integral elements of cinematic storytelling, offering filmmakers subtle yet powerful tools to shape audience emotions and perceptions. It also encourages further exploration into the integration of psychoacoustic principles within sound design practice.

Keywords: meditative sound, psychoacoustics, film sound design, audience immersion, emotional guidance.

1. Introduction

Before entering the National Film and Television School (NFTS), I was primarily drawn to strong emotional sounds, those evoking shock, horror and tension. These intense sonic elements often captivated me more than subtler ones, causing me to overlook the quiet, gentle moments in sound design that are rarely discussed. However, as my studies at NFTS deepened, I gradually realised that this type of sound not only evokes a sense of inner calm and focus but also creates a gentle yet lasting emotional impact. It guides me into a psychological space akin to meditation, where I unconsciously form a deep connection with the emotional world of the film.

This kind of sound is not merely a source of emotional comfort; it is a mechanism of emotional resonance, allowing the audience to immerse themselves in the characters' journeys with delicacy and depth. It creates a space for meditative reflection and awakens the audience's sensitivity to the film's themes and emotions. I refer to this type of sound as 'meditative sound'. In film narrative, meditative sound not only provides a powerful way for audiences to immerse themselves in the story, but it also becomes an indispensable component of the film's emotional rhythm in a subtle and under-explored way. These sounds are not mere fillers or transitions, but deliberately crafted auditory expressions, imbued with clear narrative intent and emotional depth.

One of the central concerns of film theory is the relationship between sound design, film narrative, and emotional communication. In film, meditative sound plays three essential roles. First, it serves as a 'breathing mechanism' within the rhythm of storytelling. After or before a scene of intense action, horror, or emotional outburst, the audience needs a moment of sonic relief to recalibrate emotionally. Meditative sound provides this emotional buffer. For instance, in *Blade Runner 2049*, after K fights with the replicant, the scene shifts quickly into a quiet moment dominated by the sound of rain and synthesiser ambience. This auditory 'landing' perpetuates the sense of loneliness and creates a stark dynamic contrast between the preceding and following moments.

Secondly, meditative sound is an 'auditory close-up' of the character's psyche, externalising subjective emotions. In *Into the Wild*, the sounds of the wilderness change depending on the protagonist's emotional state - soft and embracing in moments of peace, piercing and isolating during emotional breakdowns. This sound dynamic allows the audience to 'hear' the character's loneliness, freedom, and struggle.

Thirdly, meditative sound has the subtle power to guide the audience's attention. French theorist Michel Chion [1] introduced the concept of Acousmatics, which highlights how sound detached from visible sources can heighten atmosphere, suggest hidden dimensions, and enrich narrative structure. In a scene without background music, subtle sounds, such as the dripping water in *Parasite*, can focus the audience's attention and subtly signal emotional danger. In this way, meditative sound is not about relaxation per se but about awakening: it engages unconscious receptivity, fostering a deep connection to both the narrative and the audience's internal emotional landscape.

Meditative sound is not limited to conveying a singular emotional tone, such as serenity. It provides a structural counterpoint that gives shape and contrast to tension, fear, tenderness, or joy. For instance, the absolute silence of the soundstage in *A Quiet Place* renders even the slightest sound dangerous, amplifying tension. In contrast, the natural soundscape of the Shire in *The Lord of the Rings*, for example, birds chirping and water flowing, builds an idyllic world 'worth returning to' in the audience's mind. These examples demonstrate that meditative sound is not passive but a precise and controlled compositional strategy, one that guides rhythm, deepens emotion, and anchors the narrative. Thus, studying meditative sound is not merely a technical exercise. It is a lens through which to examine how sonic art influences storytelling, shapes atmosphere, and profoundly affects audience perception and psychology. It is an exploration of how film can create not only immersion but also introspection and emotional resonance, gently, quietly, but with immense power.

During the case study, I realised that the application and design of meditative sound elements in film have a profound and multidimensional significance. This research lies at the intersection of sound design and psychoacoustics. From the perspective of psychoacoustics and environmental psychology, such as Kaplan's Attention Recovery Theory (ART) [2] and Ulrich's Stress Recovery Theory (SRT) [3], show that natural regularity, low-frequency continuous tones, and ASMR-specific sounds can stimulate the parasympathetic nervous system, promoting relaxation, introspection and emotional openness. These theories provide a physiological and psychological basis for meditative sound design, elevating it from an aesthetic experience to an element of perceptual and affective science.

Sound is not just something that is 'heard', but is something that is 'felt'. Psychoacoustics explores how humans subjectively perceive pitch, loudness, spatiality, direction, texture, and temporal variation, often differently from their physical (such as frequency, decibels). For example, a 50-decibel electronic hum may induce anxiety, while soft water sounds soothe. A high-frequency doorbell might alarm, while a wind chime at the same volume may comfort. Psychoacoustics helps us to understand how sound resonates emotionally, not just acoustically. Different audiences may have different physiological responses to sound, but psychoacoustics provides patterns of perception across cultures and populations. For example, soft ASMR sounds induce intracranial pleasure in most people. The sound I aim to design is not merely what the audience hears but what they feel drawn into. In cinema, meditative sound draws the audience inward, awakening awareness, and invites them to inhabit a shared emotional landscape with the film. Psychoacoustics enables me to explore the audience's psychology, guide emotional pacing, and deepen narrative immersion through meditative auditory spaces.

Again and again, I find myself immersed in the meditative sound worlds crafted by sound designers. These moments, fleeting or extended, merge sound and image to invite quietude, reflection, and identification with characters. Based on this experience, this study seeks to rediscover these often overlooked sound structures from multiple dimensions, explore their roles across film genres, and analyse how sound designers use unique sound elements to allow emotional flow with the film's context. I also aim to consider how these strategies can inform and enrich my own future creative practice.

By analysing the sound composition and emotional effects of these 'moments of meditative resonance,' I will deepen my understanding of the inner logic of sound design and provide continuous and forward-looking theoretical support and aesthetic inspiration for my creations. The first chapter will focus on natural environments, using *Nomadland* to examine how poetic natural sounds evoke belonging and emotional depth. Chapter two explores extraterrestrial sound environments in *Arrival*, where white space and silence express calm loneliness. Chapter three turns to the futuristic electronic soundscape *Her*, where hypnotic timbres construct an intimate emotional space around the protagonist. Whether it is the gentle and healing sounds of nature, the emptiness and silence of the cosmos, or the futuristic hum of digital life, immersive sound design has a powerful emotional impact.

Meditative sound is not incidental; it is intentional, emotionally charged, and narratively vital. As an essential part of the overall sound design of the film, the subtle use of these sound fragments not only enhances the intended emotional experience of the film but also lays the foundation for a richer and more delicate perception of the emotional twists and turns and layers brought about by the sound narrative.

2. The poetry of nature - exploring the calming power of natural sounds in *Nomadland*

Taking the meditative sounds of natural sounds as an entry point, this chapter will explore how sound is an important medium connecting the viewer's heart with the film's emotions and further analyse how the film leads the viewer to experience a lasting and profound psychological resonance and peace through the stark contrast between natural and artificial sounds.

When talking about the film *Nomadland*, it is essential to mention the sound design system that Sergio Diaz and Zach Seivers, the film's sound directors, established in three main categories: prominence, serenity, and silence. Ramos [4] mentioned in an interview:

'We focused on the cold and the sound of footsteps trudging through the snow. Everything was to put you in Fern's shoes; if you understand how cold Nevada is, or how oppressive the Amazon fulfilment centre is, you can understand why she makes the decisions that she makes. The same goes for when she arrives in Quartzsite, in Arizona. There's a distinct shift. We go from this very cold and miserable environment in Nevada to things starting to warm up and the wildlife starting to come out. You can feel the sound reacting to the environment in a way that helps you understand what that existential journey is like for Fern'.

This sonic strategy mirrors Fern's psychological journey. Fern has lost her husband, home, and job, but she gradually recovers some sense of freedom, resilience, and inner calm during her nomadic journeys. The meditative sounds in this film are a way of externalising the character's emotions, and the choice of meditative sounds also echoes the film's naturalistic aesthetics. Director Zhao Ting uses documentary-style filming with the participation of real nomads, and the overall style maintains a sense of authenticity that is 'life itself'. The sounds of birdsong, campfires, night breezes, and streams are all characterised by low dynamics, gentle rhythms, and mild frequencies and are key elements of meditative sound. They allow the audience to enter Fern's perspective without realising it and to perceive the passage of time and the process of self-healing together with her.

Director Zhao Ting and the sound design team abandoned the complex processing typical of traditional movie sound effects and adopted a 'documentary-style' natural sound recording method, preserving as much detail as possible in the natural environment. The film allows the audience to experience a soundscape that is raw and close to reality. The slow and steady rhythm of these sounds and the subtle contrasting techniques resonate with human physiological rhythms, helping the audience relax and engage with the emotional journey of the main character, Fern.

Natural sounds can help listeners reduce anxiety and stress and enhance mental health. Amid the wilderness, the sound of the wind gently brushing across the grasslands, birdsong as melodious and clear as music, and the silence of the desert punctuated by the faint sound of insects in the distance create a serene and poetic space. This ambient sound helps the audience immerse themselves in the vast natural landscapes of *The American West*. At the same time, the natural sounds express the emotional journey of Fern and emphasise the sense of solitude and freedom of nomadic life. The sound of the wind blowing in the meadow, the faint crackling of the campfire, the trickling of the stream, and the rustling of the leaves are all detailed natural elements that not only create a sense of freedom but also resonate deeply with Fern's inner quest for belonging and meaning in life. These sounds create an almost meditative experience, allowing the viewer to experience the emotional world of the protagonist in detail and gain a deep sense of relaxation and peace during the journey. Research has shown that exposure to nature can significantly reduce stress hormone levels while boosting mood and well-being. A study by Mayer et al. [5] found that both natural visual and auditory stimulation enhance an individual's ability to focus and feel positive emotions. These naturopathic treatments utilise the healing properties of nature to help individuals gain mental and emotional support.

One of the key scenes in the film is when Fern arrives at the caravanning colony, and at night, people sit around the campfire and tell each other stories about their lives. Accompanied by the crackling of bonfires, the voice of the speaker is soft and sincere, while the night breeze is gentle and soothing. Within this carefully constructed auditory environment, a tender, enveloping soundscape is formed. There is no harshness or sonic intrusion, only a sense of shared vulnerability and quiet understanding. Fern gradually calms down in this atmosphere, finding spiritual resonance and belonging. This carefully constructed sound environment gradually introduces the audience to a calm and relaxed emotional state.

When Fern first arrives at the camp, she is curious about the unfamiliar environment, and she cannot hide her insecurities and sense of constraint. However, after the night, Fern naturally blends into the community the next day, warmly greeting and chatting with her neighbours and actively participating in the exchange of goods. This kind of sound is designed through natural elements (the sound of the campfire) intertwined with sincere human voices, successfully creating a highly emotive sound atmosphere rooted in natural elements and authenticity, gently guiding both Fern and the audience toward emotional openness and psychological comfort. The sound of the campfire not only evokes physical warmth but also becomes a metaphor for connection, belonging, and quiet healing. It demonstrates how meditative sound externalises subjective emotional states.

Kaplan and Kaplan's [2] Attention Restoration Theory (ART) notes that exposure to natural environments can help restore attention, reduce mental fatigue, and improve emotional states. The subtle integration of natural sound in this sequence embodies a form of nature-based therapeutic design, echoing principles found in ecopsychology and nature-based healing practices [4]. Nature-based healing is a therapeutic approach that enhances mental health and promotes emotional balance and well-being. Sound becomes not just an ambient detail but an intentional emotional guide.

However, all good things must come to an end. After Fern saw off the last person from the caravanning colony, she resumed her journey alone. Driving through a vast, empty wilderness, accompanied only by the low hum of her van's engine and the gentle sound of the wind in the distance, she is enveloped in an atmosphere of tranquillity and solitude. She then strolls into the vast desert, where the low and distant sound of the wind gradually dominates the soundscape, as if the earth is breathing steadily and rhythmically, bringing the audience's emotions slowly into a state of silent meditation. When she floats on the water of a slowly flowing river, the rhythm of the water is stable and soothing - a fluid rhythm that mirrors breath and heartbeat, gentle and steady. This immersive soundscape delicately conveys Fern's emotional evolution, no longer framed by loss and grief but by

quiet acceptance and inner peace. Once again, *Nomadland* uses meditative sound as a tool of emotional expression and resonance. Through minimal yet intentional sonic cues, wind, water, and silence, it creates moments of deep reflection and emotional clarity. For the audience, these sounds offer not just auditory pleasure but a shared space of stillness, healing, and gentle awakening. As suggested in Ulrich's (1991) Stress Recovery Theory (SRT), natural landscapes can effectively reduce psychological stress and produce positive emotional responses. Sounds in natural environments (e.g., water running, leaves rustling, and birdsong) can reduce anxiety and enhance psychological comfort and well-being [3]. Natural sounds in the environment usually have a stable frequency and a gentle rhythm similar to the body's physiological rhythms (e.g., heartbeat and breathing). This rhythm guides the brain into an alpha or theta wave state, which aids in deep relaxation and meditation and is not as stimulating as industrial noise.

In addition to the rich natural soundscape, the film *Nomadland* also presents a strikingly contrasting urban sonic environment. As Ramos [4], the sound director, says, the only way to understand Fern's situation and choices is to experience the cold of a Nevada winter or the depressing environment of an Amazon distribution centre. The Amazon distribution centre scene in the film uses several uncomfortable sound elements. The cacophony of mechanical equipment, the harsh sound of rapidly turning conveyor belts, and the hurried footsteps of the workers create a highly oppressive and anxiety-inducing atmosphere of emotional suffocation. This sharply contrasts with the quiet expanses of nature where Fern finds solace, effectively externalising her inner restlessness and deep yearning to escape the dehumanising grip of modern industrial society. This contrasting sound design strategy is also evident in the scene where Fern returns to stay with her sister. The awkward conversations and unnatural silences at the party, the subtle ambient sound effects such as the clinking of cups and plates, and the sporadic whispers create a slight sense of detachment and oppression, and Fern is uneasy in this enclosed space, in contrast to her free life in the outdoors. This sound design reinforces her inner yearning for a nomadic existence closer to the rhythms of nature and gives me a deeper understanding of her psychological motivation for choosing a nomadic life.

Furthermore, the film's portrayal of the darkness before dawn is full of meaning. In the middle of the night, the wilderness is empty and silent, with only the occasional sound of wind or the faint cries of animals in the distance. The sparseness and quiet of these sounds create an atmosphere of calm and anticipation. With the appearance of morning light, the natural sounds gradually become more abundant, with bird songs, gentle winds, and the sound of leaves rubbing together intertwined, symbolising a shift from loneliness and uncertainty to emotional release and renewal. One especially poetic moment comes when Fern wanders alone among towering rocks. At first, only her breathing and the wind are audible. Then, Dave's distant whistle, delicate and bird-like, pierces the silence. It subtly pulls her out of her introspective state, reintroducing human connection. This juxtaposition illustrates how meditative sounds are not merely aesthetic choices but serve as emotional punctuation, regulating the rhythm of the narrative and deepening the viewer's sense of resonance with the character's journey.

Through these meticulous sound designs, *'Nomadland'* effectively uses the stark contrast between natural sounds and artificial noise to guide the audience through the protagonist's inner transformation. The film explores the therapeutic potential of natural sounds. The careful use of natural elements, such as the sound of the wind, the sound of running water, the chirping of birds, and the sound of a campfire, all work together to construct a serene and meditative emotional atmosphere. These elements do more than set the scene - they create space for the audience to breathe, to feel, and to relax. In sharp contrast, the industrial scenes are filled with mechanical clatter, harsh frequencies, and sonic congestion, which evoke stress and emotional dissonance. This subtle use of sound not only sets the rich emotional tone of the film but also cleverly integrates sound art with environmental psychology. It highlights how ecological sounds - rooted in the rhythms of the natural world - can play a crucial role in emotional regulation and mental rejuvenation. Ultimately, *Nomadland* offers more than a narrative journey; it delivers a gentle, immersive, and profoundly meditative sonic experience, one that soothes the mind, awakens emotional awareness, and invites the audience into a space of quiet reflection that lingers long after the final frame.

3. The silent deep space - the loneliness and calmness in the sound of space analysed in *Arrival*

The movie *Arrival* employs unique alien sound elements and subtle, quiet white space to create a deeply meditative atmosphere. Unlike the explosions and electronic sound effects common in traditional sci-fi blockbusters, director Denis Villeneuve and the sound team deliberately abandoned a noisy, complicated formula, opting instead for a minimalist and poetic sound expression. Based on natural sound textures, their approach uses low-frequency vibration and silence as key tools.

Sylvain Bellemare and his team extracted material from real-world sources to create the Heptapods' language, creating a natural texture through clever layering and blending. For example, the alien creature's 'howl' is taken from the bird calls of New Zealand's endemic birds (such as the kokako and Tūī), lowered in pitch and mixed with the mooing of camels. The team even used bagpipes, Maori indigenous instruments, and rice paper bags filled with water to simulate lung breathing, creating a unique alien breathing sound effect [6]. The Bellemare team reportedly trekked through the high mountains of New Zealand for three days to record the most authentic bird calls [7]. These natural sounds were carefully processed to become a unique 'font' of alien creature sounds, which are both strange and familiar. Film critics have described the Heptapods' sound as low and long, similar to whale song. These choices give the alien communication a meditative sonic quality: gentle, immersive, and emotionally

resonant, avoiding the tension created by traditional monster sounds. The low and high-frequency sounds are nested and looped structurally, creating a sound pattern similar to a 'Möbius strip'. The low frequency provides an emotional anchor, inviting psychological stillness and a sense of inner security, while the high frequency stimulates cognitive curiosity and the desire to explore. This treatment narrows the emotional distance between humans and aliens, allowing the audience to remain open and curious when listening to unfamiliar sounds rather than feeling nervous and fearful.

Low-frequency sounds play an important role in the soundscape of *Arrival*. The film uses profound low-frequency sound effects to represent the alien spacecraft and its environment, creating a surrounding, calm atmosphere. The alien spacecraft ('shell') hovering over Montana does not use the exaggerated roaring sound commonly found in science fiction movies. Instead, it uses low-frequency sounds similar to the Earth's resonance to convey a sense of its grandeur and weight. The sound team slowed down and blended the sound of rocks falling off a cliff, creating a mysterious low-frequency sound that resonates like the earth's crust and the operation of giant machinery. At the same time, low-frequency natural sounds, such as ice cracking and earthquakes, were also cleverly integrated into the overall sound design, further enhancing the sense of the presence of the alien spaceship.

Composer Jóhann Jóhannsson[8] frequently uses sustained low-frequency drone and ambient sounds in the soundtrack, such as a steady heartbeat or distant thunder, which run through key scenes in the film. These sounds create a sense of vast cosmic space and subconsciously guide the audience into relaxation and tranquillity. For example, the physical properties of low-frequency sound waves can directly affect the human body. When used appropriately, they can give the audience a sense of security, as if they are being hugged and surrounded by sound, rendering science fiction scenes unthreatening and instead creating a quiet grandeur and serenity. Scientific studies have shown that 30-120 Hz low-frequency sound waves can effectively lower heart rate and relieve anxiety through somatosensory resonance, producing a calming effect similar to 'intracranial massage'. In psychology, this is known as vibroacoustic therapy (VAT), and researchers Olav Skille and Lee Bartel [9] have confirmed the positive effect of low-frequency sound on emotional stability and relaxation.

This design concept is also reflected in the scene where Louise builds a trusting relationship with the Heptapods; this scene is also where the subjective emotions of the characters are reflected through sound. When Louise first decides to take off her protective suit and bravely face the alien creature, she places her hand on the glass barrier, and the alien creature responds to her in the same position. At this moment, a strong resonant vibration erupts, followed by a gentle and continuous low-frequency sound that lingers. This sonic shift creates a peaceful and emotionally open environment, marking the first moment of mutual trust, a kind of emotional 'meeting point' made possible through sound. Louise defines this moment as the actual 'official meeting'. The low-frequency environment helps the character and viewer enter a state of openness and trust simultaneously, successfully opening a bridge for honest communication between the two sides. This culminates at the film's end when Louise fully enters the Heptapods' space, and low-frequency vibrations return once more, not as alien signals but as sonic gestures of trust and unity. In this moment, meditative sound becomes the emotional thread binding character, audience, and narrative into a space of profound calm and mutual understanding.

The film cleverly uses Michel Chion's [10] theory of acousmatic silence. Chion emphasises that silence in a movie is not simply the absence of sound but a deliberate expressive choice, one that symbolises the limitations of human language and opens space for deeper emotional perception. In *Arrival*, this silence becomes the 'meta-language' of the alien civilisation, complementing the intricate sound design of the Heptapods' language to jointly construct the film's profound philosophical connotations and emotional resonance. Director Villeneuve is well-versed in the artistic philosophy of 'silence speaks louder than words' and frequently and boldly uses extended periods of silence at key plot points to highlight the characters' psychological states and narrative tension. These soundscapes are not empty but charged with introspection, guiding the audience into a contemplative state and recalibrating the narrative rhythm. For example, at the beginning of the film, when the world first reports the arrival of an alien spaceship, the campus is filled with the noise of alarms and panicking crowds. When the protagonist, Louise, drives back to her lakeside residence, the ambient sound instantly falls silent, leaving her only the company of a vast, calm lake. This sudden sonic withdrawal contrasts powerfully with the prior chaos, creating a meditative moment charged with uncertainty and emotional weight. In this silence, the viewer feels a profound shift, not merely an absence of noise, but an invitation into Louise's emotional interior. This treatment of meditative silence recurs throughout the film. Before the military arrives at the door, Louise is alone in an almost entirely silent scene, highlighting her inner anxiety and sense of isolation in a minimalist way, contrasting her isolation from the noisy outside world. In the scene where they first enter the alien spaceship, the sound team cleverly uses the alternation of radio communication to create tension. The radio static in the background suddenly disappears, creating a breathless moment of silence. Bellemare [11] emphasises that 'the key to creating silence is to give sound and then remove it'. Through this disappearance of sound, the film successfully focuses the viewer's attention on the subtle emotions and detailed actions of the characters, and the psychological rhythm slows down. The audience, along with the characters, is drawn into a space of concentrated awareness - an inner stillness that reflects not emptiness but an awakened attentiveness.

The sound design of the interior space of the alien spaceship takes silence to the extreme. The spaceship's interior is dark and spacious, like a 'sonic black hole' that swallows all sound. The director has almost completely removed the background sound in this scene, leaving only the character's gentle breathing and the faint echo of footsteps. This minimalist sound design amplifies

every tiny sound detail (such as the friction of protective clothing and the frequency of heartbeats), shifting the audience's attention and making them feel as if they are holding their breath alongside the characters, waiting for the unknown to happen. In this highly tranquil atmosphere, the viewer's emotions gradually transition from tension to a solemn, awe-inspiring, calm state. The film uses this minimalist sound design and quiet space to make the sci-fi scenes a vehicle for quiet observation and contemplation. This sound strategy nurtures an experience of silent awe and inner stillness.

In *Arrival*, sound design not only shapes the atmosphere but also serves to express emotions and structure the narrative. Sound supervisor Sylvain Bellemare [11] emphasises that every sound element in the film has a clear narrative purpose and emotional effect, and even the slightest background sound supports the character's psychology. With this in mind, the film cleverly connects the protagonist Louise's emotions with the grand science fiction events through sound, creating clear contrasts and echoes. The scenes at the beginning and end of the movie about Louise's daughter are exceptionally soft and warm, accompanied by the soothing and melodious string music, *On the Nature of Daylight*. These tender scenes contrast sharply with the tense alien communication in the middle of the movie, reflecting Louise's tenderness as a mother and her anxiety as a scientist.

According to composer Jóhann Jóhannsson [8], the film has two distinct emotional tones: the emotional and sentimental line between mother and daughter and the tense and unknown atmosphere of deciphering an alien civilisation [9]. The sound design team differentiated between these two threads. The scenes involving Louise and her daughter were given a warmer, softer sound. In contrast, the scenes involving the government, military or alien communication were given a more detached, mysterious tone. This nuanced sound design allows the audience to perceive the changes in the character's inner worlds keenly and also provides the film with a richer humanistic concern.

The film's narrative structure extensively uses sound to connect the past, present, and future, with sound design serving as the key tool for connecting different times and spaces and regulating the narrative rhythm. When Louise's fragments of memory appear, the film employs subtle fade-ins and fade-outs in the soundscape to achieve a seamless transition between different times and spaces. For example, when Louise concludes her conversation with Costello and returns outside from the alien spaceship, the sound of cold, mechanical helicopter engines, noisy crowds, and frenzied winds creates a chaotic and detached sense of reality. In the next moment, however, warm memories of her daughter at the lake come to mind, and the sound changes to soft ambient tones and whispered vocals. A similar contrast of sounds occurs in the subsequent evacuation scene: on the one hand, there is the noise of the crowd, while on the other, Louise remembers the warmth and softness of the room where she and her daughter whisper about the name 'Hannah' under the warm yellow light. The two very different sound atmospheres alternate without any sense of incongruity. The sound successfully guides the viewer into Louise's subjective emotional experience while subtly subverting the linear narrative and anchoring the viewer in a subjective, meditative emotional experience.

The sound design also dramatically enhances the film's immersive feel and emotional resonance. Director Villeneuve and Bellemare [11] chose minimal dialogue and music, leaving plenty of 'breathing room' for the camera and scenes. When the soundtrack enters, it precisely aligns with the emotional tipping point of the scene, thereby intensifying the audience's emotional response. Furthermore, the integration of extensive ambient sound with the musical score contributes to a diffuse and organic soundscape, an effect that scholar Rick Altman [12] refers to as 'mise-en-bande', making the audience feel like they are immersed in the character's world. The low, mysterious voice of the alien evokes a breath-held stillness, and the murmuring and chanting of the human voice slowly awakens a quiet awe. This sound design strikes a balance between the rational and the emotional, enhancing the credibility and realism of the film while also inspiring a more profound emotional resonance, making sound not just a vessel for storytelling but a profoundly felt emotional presence.

In addition, the sound design in *Arrival* successfully utilises the Subjective Perspective on Sound to enhance the immersive experience for the audience. Sound mixer Bernard Gariépy Strobl [11] says he normally focused on Louise's auditory perception during the mix, deliberately suppressing environmental ambience while highlighting intimate, physiological sounds such as her breathing and heartbeat. This sound design mirrors the character's internal state, particularly during scenes of heightened emotional tension, allowing the viewer to experience her subjectivity viscerally. For example, when Louise steps into the alien spaceship for the first time, the ambient noise is gradually replaced by the faint sound of breathing inside the protective suit. At this moment, the viewer's physiological rhythms synchronise with hers, drawing them into a profound state of emotional alignment and immersion. Through this subtle use of sound, *Arrival* allows the audience to feel an intense immersion and further achieves emotional resonance.

With its unique artistry and deep emotional expression, the sound design of *Arrival* serves the audience an extraordinary sci-fi auditory journey. With the meticulous craftsmanship of Bellemare and his team, the film abandons the usual noisy sound effects used in traditional sci-fi films. Instead, it draws on natural sound materials and subtle white space techniques to create a calm, contemplative and poetic sound atmosphere. The fundamental and mysterious extraterrestrial sound elements make people feel both strange and intimate. In contrast, the clever use of low-frequency sound effects gives the audience a grand and reassuring emotional experience. At the same time, the deliberate silence and white space are used like pauses in music, directing the audience's attention from the outside to the inside, allowing emotions to grow naturally in silence.

Under the guidance of this design concept, sound not only aids the narrative but also directly introduces the audience to the protagonist's inner world, allowing the viewer to experience confusion, realisation and relief together with her, and even quietly

breaking the traditional perception of time. Sound in *Arrival* greatly enriches the film's emotional and philosophical layers, creating a deep resonance that transcends language and vision. At the end of the film, when the images are accompanied by melodious music and faint ambient sounds, the serenity felt by the audience is not detachment and indifference but a kind of relief and emotion after crossing the boundaries of time and space. This sense of deep, reflective calm is the core power of the sound art of *Arrival*. In the name of sci-fi, it leads the audience to examine the essence of human emotions and the meaning of life, leaving a lasting impact and a profound emotional and philosophical afterglow.

4. Hypnosis of electronics - exploring emotional guidance in the digital soundscapes of *Her*

If the sound in *Arrival* is silent white space, creating a deep and philosophical sense of meditation, the film *Her* creates a more intimate, soothing, and humanistic experience of meditation through digitised electronic soundscapes and soundscapes of the future city. Director Spike Jonze and his sound design team have cleverly constructed an 'inoffensive' soundscape of the future city through subtle digital synthesis, soft urban soundscapes, and nuanced human-computer sound interactions. In this soundscape, repetitive electronic sounds, long and steady ambient sounds, and gentle ASMR-like whispers are interwoven to give the audience a sense of warmth and stability in the technologically advanced cybercity, allowing them to enter a meditative state of relaxation. In this environment, sound becomes both a medium of emotional connection and a vessel for introspection. This chapter will take the sound qualities of Samantha, the artificial intelligence in the film, as a starting point to explore how sound becomes a medium for emotional attachment and intimacy and further analyse how the film makes use of the delicately changing urban soundscape to map the inner emotions of the characters, and gently guide the audience into a deeply immersive experience.

One of the most unforgettable aspects of the film is the voice of the AI character Samantha, voiced by Scarlett Johansson, whose gentle and infectious voice manages to give the character an emotional temperature that transcends the coldness of the machinery and brings her closer to the warmth of a human whisper. Unlike the cold electronic synths commonly found in traditional sci-fi films, Samantha's voice carries a distinct emotional colour and intimacy, creating a listening experience that is both intimate and soothing. Firstly, Scarlett Johansson [13] employs the close-miking technique, which involves recording very close to the microphone, deliberately reducing reverberation and spatial echoes to make the sound more direct and intimate. I can hear the subtle mouth, lip, and breath sounds in a way that resembles everyday whispers or soft murmurs of a soothing nature. This sonic intimacy evokes not only physical closeness but also psychological intimacy, inducing a state of gentle attentiveness and emotional receptivity. Johansson [13] mentions in an interview that she deliberately maintains a warm and smooth tone during the voice-over process, with fine control over the rhythm and breath of the voice, creating a vocal quality of 'always listening patiently', which further reduces the listener's psychological wariness, and enhances a sense of closeness and relaxation.

Michel Chion's [10] theory of 'acousmatic voice' is particularly relevant when analysing Samantha's voice. Although the character does not possess a physical visual image, her voice brings the audience a sense of omnipresent companionship. Moreover, her voice functions as both a companion and emotional anchor. The absence of a physical body paradoxically strengthens the illusion of presence, heightening the listener's sensitivity to the voice as a pure emotional signal. This creates an intimate relationship that transcends the boundaries of the screen. The strong sense of accompaniment stimulates the audience's psychological sense of security and dependence, creating an effect of intimacy that transcends physical spatial distance. In addition, the psychological theory of parasocial interaction also explains the audience's emotional attachment to Samantha's voice. Scarlett Johansson's voice embodies the qualities of patience, softness, and clarity that human beings are psychologically inclined to favour so that the listener subconsciously sees her as an honest, trustworthy and emotionally resonant being and then relaxes and actively produces emotional projection. The characteristics of the voice are even similar to the triggering mechanism of ASMR, including gentle intonation, subtle breathing sounds and slight mouth sounds, all of which can trigger mild pleasure and relaxation. These sound features, far from incidental, contribute to the film's overall meditative soundscape.

The character's timbre aside, the post-production processing of sound in *Her* also plays a crucial role in shaping the film's distinctive intimacy. The film's sound design utilises the acoustic space to shape the intimacy of the characters' interactions and enhance the audience's immersive experience. In the film, the interaction between the protagonist, Theodore, and Samantha usually takes place with the help of headphones or a small personal stereo. This intimate aural presentation allows the audience to experience the sound field directly from the character's point of view, which is limited to the individual, with the background ambient sound intentionally weakened; meanwhile, Samantha's voice is accentuated and strengthened, creating a highly private and exclusive acoustic experience. At the same time, this film is designed to flexibly switch between external ambient sound and internal private dialogue space: whether Theodore is on a busy, noisy city street, in a lift, or alone in his home, once he engages in a dialogue with Samantha, the perception of background noise quickly diminishes and is replaced by soft electronic background sounds or Samantha's intimate, focused voice. This quick and smooth change of sound space creates an 'emotional sanctuary' for the characters, highlighting the readily available nature of the AI companion and symbolising Theodore's

psychological retreat into a space of safety and calm. Samantha's sound design, through both vocal timbre and spatial treatment, thus serves to externalise Theodore's subjective experience.

In an interview, director Spike Jonze [14] emphasised that he hoped the audience would unknowingly fall in love with the voice. Scarlett Johansson [13] also mentioned in an interview that when dubbing, she deliberately created a sense of intimacy and authenticity, as if she were whispering to a loved one face-to-face. The authenticity of this emotional voice also profoundly influenced the audience's attachment to the character. This voice performance, paired with the strategic manipulation of sound space, generates a powerful sense of presence and connection, drawing the audience into a meditative state of attention and emotional resonance. In short, *Her* successfully created a warm, intimate artificial intelligence voice with unique sound design techniques. At the same time, through the flexible use of acoustic space, the film cleverly intertwines the intimacy of character interactions with the emotions of the urban soundscape, achieving a uniquely intimate and emotionally textured soundscape. The film's meditative sound design not only supports narrative immersion but also fosters a profound, calming, and emotionally affecting experience for the audience by transforming the futuristic cybernetic interface into a warm and emotionally accessible voice. By constructing sound spaces that mirror the protagonist's inner world, *Her* stands apart from conventional portrayals of technology. It offers a vision of the future where emotional connection is facilitated through subtlety, reflection, and the gentle pull of a voice that feels as close as breath.

In future cyber movies, sound design will not just be a simple addition to the scene but will become a direct reflection and guide of emotions and psychological states. With its unique sound design strategy, *Her* creates a non-intrusive sound atmosphere in a highly digital urban environment. This type of sound can be referred to as a low-intensity urban soundscape. The crowd's murmurs and the faint echoes of traffic in the distance exist in a soft and non-intrusive form that does not cause auditory interference. The core feature of this soundscape is that the sound exists in a smooth, stable and detailed manner, avoiding disturbing or stimulating the listener. It wraps the audience in gentle and stable ambient sounds, a carefully curated sonic environment that avoids overstimulation while fostering emotional receptivity. The key characteristic of this design is not merely its subtlety but its intentional meditateness - it supports the viewer's immersion into the character's inner emotional landscapes.

According to cognitive load theory [15], low-volume background noise with insignificant fluctuations can effectively reduce the cognitive load on the audience when processing visual and emotional information, helping them fully immerse themselves in the emotional world of the characters. At the same time, this background sound can also relieve emotional fluctuations, provide psychological security and comfort, and make the audience more relaxed and immersed when watching the movie [16, 17], which aligns closely with *Her* of enveloping the viewer in a non-disruptive sound environment. These sound patterns help users focus, reduce distractions, and support emotional regulation, consistent with mood induction theory [18].

One of the most prominent design strategies for non-aggressive urban soundscapes is the use of repetitive sound effects and a steady rhythm. Psychological research has shown that repetitive and regular acoustic stimuli can reduce human stress responses and evoke a sense of familiarity and emotional security [19-21]. Nora [22] and Bogatyrenko [23] proposed that a steady rhythm can synchronise with the body's natural physiological rhythms, such as heartbeat and breathing rate, and guide the listener into relaxation or meditation. In the film, when the protagonist Theodore interacts with the artificial intelligence Samantha, the background sound effects often feature a gentle, repetitive and regular electronic rhythm, similar to the natural rhythms of heartbeat and breathing. These rhythmic undercurrents create a stable acoustic environment and create a shared affective space where the emotional tempo of the character and viewer can synchronise, enhancing the meditative immersion.

Another key sound design strategy is the use of long or sustained sound effects. The film's soundscape favours continuous auditory textures, such as low electronic drones, subdued machinery hums, and whispering synthetic winds. These provide an audibly stable sound field environment and avoid the auditory interference caused by sudden sound changes. This continuous and stable sound can reduce emotional reactivity and improve attention and relaxation [24-26]. This steady-state environment allows emotional reflection to unfold gradually, without interruption, echoing the rhythm of meditative contemplation.

In addition, the sound design of *Her* also uses a sound-triggering mechanism similar to ASMR (Autonomous Sensory Meridian Response). The electronic ambient sounds in the film, especially Samantha's voice, feature gentle murmurs, subtle breathing and soft oral sounds that evoke calm and pleasure. While the film does not explicitly reference ASMR, the sound design undoubtedly evokes comparable effects. These intimate acoustic details reinforce the film's warm and soothing tone, further strengthening the role of sound in mood regulation. Combined with the film's use of 'warm electronic sounds', they help form part of the 'non-aggressive urban soundscape'.

Importantly, the film's soundscape is not static, but dynamically reflects Theodore's evolving emotional state. At the beginning and end of the film, when Theodore is isolated, the urban soundscape is dominated by low-frequency background noise, distant and sparse traffic, and minimal, cold electronic sounds. This creates an indifferent and lonely auditory atmosphere. Therefore, as Samantha gradually enters Theodore's life, the auditory environment of the city also becomes warmer and more detailed, with the addition of soft electronic pulses, human whispers, and more intimate and soothing ambient sounds. Some film and media studies researchers have pointed out that this change in the city soundscape subtly guides the audience through Theodore's emotional transformation – from the cold, thin 'grey noise' to the gentle and bright 'white noise'.

Moreover, even within a hyper-urbanised future setting, *Her* introduces imagined scenes of nature (such as beaches and forests). By blending the sounds of the wind, waves or birdsong with electronic synthesised sounds, a hybrid soundscape is

created where the organic and synthetic coexist. This mixed soundscape softens the city's original coldness and alienation, still evoking moments of warmth, humanism, and inner peace within a technological environment. To summarise, Her successfully constructs a gentle, non-intrusive urban soundscape through a repetitive, steady rhythm, continuous ambient sound effects, and an ASMR-style sound design.

Although the film's ending does not give a traditional sense of fulfilment, and Theodore ultimately returns to being alone, it is undeniable that the time spent with Samantha was genuine and warm. This journey has indeed given him companionship and joy. Director Spike Jonze and the sound team skilfully used digitally synthesised sounds, intimate human-computer interactions, and non-aggressive urban soundscapes to envelop the audience's senses and emotions gently. In doing so, the film guides us into a calm and reflective state, gradually revealing the complexity and depth of the emotional connection between humans and technology. Beneath the cold surface of technology flows a subtle and profound current of humanistic care. Long after the final frame, the soft resonance of those sounds lingers, offering not only emotional comfort but a contemplative stillness that invites us to reflect on love, intimacy, and presence in a technological future.

5. Conclusion

This article demonstrates the use and potential of meditative sound in film through an in-depth analysis of three distinct films: *Nomadland*, *Arrival* and *Her*. Although the themes and styles of these films differ significantly, they all employ a sound language that is more delicate, softer, and full of poetry. *Nomadland* uses the primitiveness and rhythm of the natural soundscape to echo the human physiological rhythm and draws on environmental psychology theories to evoke the audience's emotional resonance for freedom and belonging. *Arrival* constructs a contemplative space of cosmic scale through low-frequency sound waves and silence, guiding the audience into a deep state of emotional stability through vibroacoustic and philosophical expression. *Her* blends hypnotic rhythms with repetitive and regular patterns and an ASMR-style auditory trigger mechanism to recreate human warmth and emotional attachment in the cyber world. These examples demonstrate that sound design, when rooted in a deep understanding of human psychology, physiological rhythms, and emotional needs, and through a carefully constructed soundscape, can guide audiences into a meditative and peaceful emotional state. Like the blank space in a painting, this kind of sound 'white space' provides an indispensable narrative tension and perceptual foundation for the eruption of other emotional colours.

It is important to note that cinema does not solely revolve around calm or contemplative emotions; instead, it traverses a vast emotional spectrum. Psychoacoustic principles are universally applied to shaping emotions in all types of films. For example, in the action movie *The Bourne Identity*, the audience is guided into the situation before the chase or fight through low-frequency drumbeats similar to the rhythm of the heartbeat or gradually slowing breathing sounds, and the tension is then enhanced through sudden bursts of sound. In the horror film *The Conjuring* (2013), silence and faint, ambient creaks are deliberately used to heighten psychological tension. Rather than relying on jump scares or loud effects, the film's sound design leans on whispers, distant footsteps, and eerie silence to pull the audience into the protagonist's fragile emotional state, transforming quietness into a tool of unease and suspense. Conversely, in the animated film *My Neighbor Totoro* (1988), the natural rural soundscape - rustling leaves, cicadas, soft wind, and the rhythmic pattern of rain - creates a soothing, grounded auditory environment. These gentle, meditative sounds evoke the simplicity and emotional security of childhood that linger long after the film concludes. These examples collectively demonstrate that the auditory space and psychological rhythm created through sound design can effectively guide the audience into the emotional atmosphere of the film, thereby creating an immersive experience and emotional resonance that significantly enhances the appeal and expressiveness of the film's narrative.

This research has deepened my theoretical understanding of sound design and sound psychology and provided valuable insights for my sound creation practice. Sound design is not simply a technical means or narrative tool, but an essential medium through which film communicates with the audience's psychology. By understanding the subtle relationship between sound frequency, rhythm changes, techniques of leaving blank space, and psychological cues, I am better equipped to evoke emotional resonance and craft immersive, emotionally rich auditory experiences. Whether in film, games or multimedia art, sound design needs to go beyond simply reproducing the environment and instead focus on the interaction between sound and the human perception system, constructing emotional pathways that reach the depths of the listener's consciousness. This also suggests the direction of subsequent research, such as exploring the differences in empathy in sound design in different cultural contexts, or how new technologies can deepen the practice of sound psychology.

In conclusion, the future of film sound design holds great potential for further exploration, particularly in its capacity to integrate psychological insight and technological innovation. The sound that touches the heart inevitably resonates with the emotions deep within the audience's hearts. When sound truly resonates with the audience's inner feelings, it can unleash its most powerful emotional impact, helping people find inner peace and the rhythm of their breath in a chaotic and noisy world. This is also one of the essential directions and endless possibilities for the future exploration of film sound design.

References

- [1] Chion, M. (1994). *Audio-vision: Sound on screen* (C. Gorbman, Trans.). Columbia University Press.
- [2] Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge University Press.
- [3] Ulrich, R. S. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology*, 11(3), 201–230.
- [4] Ramos, D. (2021). Detail oriented: Creating the careful soundscapes of 'Nomadland' (Part one of two). Film Independent. <https://www.filmindependent.org/blog/detail-oriented-creating-the-careful-soundscapes-of-nomadland-part-one-of-two/>
- [5] Mayer, F. S., Frantz, C. M., Bruehlman-Senecal, E., & Dolliver, K. (2009). Why is nature beneficial? The role of connectedness to nature. *Environment and Behavior*, 41(5), 607–643.
- [6] Maranon, N. M., & Kiss, M. (2021). The role of experimenting with the human voice in film music in the representation of the human/alien divide: The case of *Arrival* (2016). *Acta Universitatis Sapientiae, Film and Media Studies*, 20, 1–19.
- [7] Simpson, M. L. (n.d.). (2025). What is sound design? An intro to sound design in film. MichaelSimpsonCreative. <https://www.michaelsimpsoncreative.com/post/what-is-sound-design-an-intro-to-sound-design-in-film>
- [8] Jóhannsson, J. (2023). *Arrival*: Translating the sounds of the film with Jóhann Jóhannsson [Personal interview]. Den of Geek. <https://www.denofgeek.com/movies/arrival-translating-the-sounds-of-the-film-with-johann-johannsson/>
- [9] Skille, O., & Bartel, L. (2018). Music medicine: Sound at a cellular level [Video]. YouTube. <https://www.youtube.com/watch?v=wDZgzsQh0Dw>
- [10] Chion, M. (1999). *The voice in cinema* (C. Gorbman, Trans.). Columbia University Press.
- [11] Bellemare, S. (2023). Creating the poetic sci-fi sound of 'Arrival' [Personal interview]. A Sound Effect. <https://www.asoundeffect.com/arrival-sound/>
- [12] Chattopadhyay, B. (2021). *The auditory setting: Environmental sounds in film and media arts*. Edinburgh University Press.
- [13] Johansson, S. (2013). Scarlett Johansson's AI performance in 'Her' [Personal interview by D. Letterman]. YouTube. <https://www.youtube.com/watch?v=7YJ9PCWga8Q>
- [14] Jonze, S. (2013). 'Her': Spike Jonze brings his singular vision to the year's most offbeat romance [Interview]. *Variety*. <https://variety.com/2013/film/news/her-spike-jonze-scarlett-johansson-joaquin-phoenix-1200938214/>
- [15] Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12, 257–285.
- [16] Klatte, M., Lachmann, T., & Meis, M. (2010). Effects of noise and reverberation on speech perception and listening comprehension of children and adults in a classroom-like setting. *Noise and Health*, 12(49), 270–282.
- [17] Buxton, R. T., et al. (2021). A synthesis of health benefits of natural sounds and their distribution in national parks. *Proceedings of the National Academy of Sciences of the United States of America*, 118(14), e2013097118.
- [18] Thayer, R. E. (1989). *The biopsychology of mood and arousal*. Oxford University Press.
- [19] Panksepp, J. (1995). The emotional sources of 'chills' induced by music. *Music Perception*, 13(2), 171–207. <https://doi.org/10.2307/40285693>
- [20] Gingras, B., Pöhler, G., & Fitch, W. T. (2014). Exploring shamanic journeying: Repetitive drumming with shamanic instructions induces specific subjective experiences but no larger cortisol decrease than instrumental meditation music. *PLoS One*, 9(7), e102103. <https://doi.org/10.1371/journal.pone.0102103>
- [21] Oster, G. (1973). Auditory beats in the brain. *Scientific American*, 229(4), 94–102.
- [22] Nora. (2025). Frequency is the way (Part I): Opening the inner meditative journey through electronic shamanic music. SOLER Style J. <https://www.solerstyle.com/frequency-part1>
- [23] Bogatyrenko, O. (2024). *Meditative music as a method for stress reduction, relaxation, and focus enhancement* (Master's thesis). Novia University of Applied Sciences.
- [24] Woods, D., Lee, A., & Simon, J. (2019). Modulation in background music influences sustained attention. *arXiv preprint arXiv:1907.06909*.
- [25] Jones, J. (2019). The therapeutic benefits of ambient music: Science shows how it eases chronic anxiety, physical pain, and ICU-related trauma. Open Culture. <https://www.openculture.com/2019/07/the-therapeutic-benefits-of-ambient-music.html>
- [26] Neporent, L. (2023). World's most relaxing song may reduce anxiety by 65%. Psychiatrist.com. <https://www.psychiatrist.com/news/worlds-most-relaxing-song-may-reduce-anxiety-by-65/>