

A Sonic Examination of Silent Film: Weimar Cinema and
Implied Sound

Laurence Jamie Carr

Submitted in accordance with the requirements for the degree of Doctor
of Philosophy (PhD)

The University of Leeds

School of Languages, Cultures and Societies

September 2022

The candidate confirms that the work submitted is their own and that appropriate credit has been given where reference has been made to the work of others.

This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

The right of Laurence Jamie Carr to be identified as Author of this work has been asserted by Laurence Jamie Carr in accordance with the Copyright, Designs and Patents Act 1988.

Acknowledgements

For Ronnie ‘Papa’ Carr (1932-2022). A caring and supportive grandad who would have loved to read this completed thesis. Fondly remembered and missed.

I would like to extend my thanks and gratitude to a number of people and organisations whose contributions have been critical to the successful completion of this thesis. Firstly, I would like to thank my supervisors Professor Paul Cooke and Dr. Angelos Koutsourakis. Their patient and conscientious critical readings of my drafts have helped me significantly improve my understanding of Weimar cinema and scholarly practice.

Throughout the course of my degree, my mother’s unwavering support and encouragement has been of paramount importance to the completion of this thesis. Despite being busy with her own work, she consistently offered to read drafts of my chapters and offered valuable feedback that helped me improve my writing. I would also like to thank my partner, Adriana Suchanova, who has sat through many silent Weimar films and always shown an interest in the progress of the thesis over the last four and a half years.

I am indebted to the White Rose College of Arts and Humanities (WRoCAH) and the University of Leeds who granted me a WRoCAH PhD Competition Studentship in 2017 to facilitate my research. This financial backing has allowed me to concentrate all of my energies on my work and immerse myself in the study of Weimar cinema and implied sound every day.

I am also grateful to the staff at the British Film Institute (BFI) who placed rare and fragile archival collections at my disposal during my visits to London. I

would especially like to thank Jonny Davies for their specialist assistance during my sessions in BFI Southbank's Reuben Library.

Abstract

Although critics have briefly highlighted implied sound in Weimar cinema, there has been no comprehensive study of the sensory phenomenon hitherto. My study attempts to fill this gap by arguing that silent Weimar cinema implied sound was fundamentally inspired by the employment of synaesthesia in contemporary paintings, and evokes and examines artistic and societal movements and crises of the period. In my three core thesis chapters, I aim to demonstrate that Weimar filmmakers had an acute understanding of the filmic possibilities of sound during the silent era.

In Chapter One, I explore the influence that *Der Blaue Reiter* (The Blue Rider) artists' use of synaesthetic sound had on F.W. Murnau's *Nosferatu, eine Symphonie des Grauens* (*Nosferatu: A Symphony of Horror*, 1922). I suggest that Murnau's strong friendships with key members of the group motivated him to push the sensory and artistic boundaries of silent cinema with implied sound.

The connections between *Berlin: Die Sinfonie der Grosstadt's* (*Berlin Symphony of a Great City*, 1927) rhythmic implied sound and Futurist passion for speed and machines is the focal point of Chapter Two. I argue that the film's director, Walter Ruttmann, uses 'loud' implied sound in order to extol the advancements of modern technology and also the physical and psychological suffering that it can cause.

Chapter Three reads Robert Siodmak and Edgar G. Ulmer's *Menschen am Sonntag* (*People on Sunday*, 1930) as an ambivalent meta-cinematic critique of the contemporaneous conversion from silent to sound filmmaking. I suggest that the film

can be linked to the essay film because Siodmak and Ulmer's employment of implied sound appears to directly address issues related to their craft.

Table of Contents

| | |
|--|------------|
| Table of Figures | 8 |
| Notes to the Text | 13 |
| Introduction | 14 |
| Chapter One– The Blue Rider, F. W. Murnau and Implied Sound: Rereading <i>Nosferatu: A Symphony of Horror</i> (1922) as a Multisensory Silent Film | 46 |
| Chapter Two–A Futurist Evaluation of the Modern City: Rethinking the Role of Sound in Walter Ruttmann’s <i>Berlin: Symphony of a Great City</i> (1927) | 94 |
| Chapter Three–The Silent Film’s Last Stand: Silent Protest and Sound Acquiescence in Robert Siodmak and Edgar G. Ulmer’s <i>People on Sunday</i> (1930) | 132 |
| Conclusion: ‘Listening’ to Silent Cinema | 184 |
| Illustrations | 207 |
| Bibliography | 252 |

Table of Figures

- Figure 1.** *Metropolis* (1927) – Fritz Lang creates implied sound by ejecting smoke through the factory whistles at the start of the film [Film Screenshots].....207
- Figure 2.** *Faust: Eine deutsche Volkssage (Faust: A German Folktale, 1926)* – The superimposition of Gretchen’s (Camilla Horn) screaming face creates implied sound as it flies across the mountains and informs Faust (Gösta Ekman) that she is in danger [Film Screenshots].207
- Figure 3.** *Nosferatu: Eine Symphonie des Grauens (Nosferatu a Symphony of Horror, 1922)* – The consistent presence of ellipses in Knock’s (Alexander Granach) intertitles suggests that the implied sound of the character’s speech is broken and unnatural [Film Screenshots].209
- Figure 4.** *Orlacs Hände (The Hands of Orlac, 1924)* – The implied sound of Paul Orlac’s (Conrad Veidt) piano playing confirms to the audience that the professional pianist has lost his musical abilities after the rail accident that injured his hands [Film Screenshots].....209
- Figure 5.** *Sunrise: A Song of Two Humans* (1927) – The Woman from the City (Margaret Livingston) encourages the Man (George O’Brien) to elope with her by conjuring a vision of a wild jazz band, which creates ‘loud’ implied sound. Furthermore, ‘loud’ implied sound is also produced when The Man shouts directly into the camera while searching for the Woman (Janet Gaynor) on the lake at the end of the film [Film Screenshots].....211
- Figure 6.** *Der Golem, wie er in die Welt kam (The Golem: How He Came Into the World, 1920)* – Director Paul Wegener’s sets frequently suggest implied sound as they feature Expressionist shapes that resemble throats or open mouths [Film Screenshot].....211
- Figure 7.** *Skrik (The Scream, 1893)* – Edvard Munch produces implied sound with the open-mouthed expression that is etched on the face of the humanlike figure in the centre of his canvas [Painting Screenshot].212
- Figure 8.** *Cover-Design für Der Blaue Reiter Almanach (Cover Design for The Blue Almanac, 1911a)* – *Der Blaue Reiter*’s (The Blue Rider) use of the horse and rider motif is often considered to be a representation of the artist’s (the rider) creative control over their chosen media (the horse) [Painting Screenshot]. ...213
- Figure 9.** *Der Traum (The Dream, 1912b)* and *Caliban (aus Shakespeares Der Sturm) (Caliban (from Shakespeare’s The Tempest), 1914)* – These Blue Rider paintings create implied sound through the presence of the open-mouthed lion and humanlike monster [Paintings Screenshots].213
- Figure 10.** *Improvisation 26* (1912) and *Komposition VI (Composition VI, 1913)* – The guitar-like strings in Kandinsky’s abstract paintings suggest musical implied sound to the beholder [Paintings Screenshots].....214
- Figure 11.** *Alte Stadt (Old Town II, 1902)* – Kandinsky believed that the colours he used in this painting were reminiscent of a range of different musical effects and instruments [Painting Screenshot].215

- Figure 12.** *Das Wunder (The Wonder, 1922)* – The animated male heads in Julius Pinschewer and Walter Ruttmann’s animation produce synaesthetic sound and taste when they argue and drink an alcoholic beverage [Film Screenshots]. ...215
- Figure 13.** *Nosferatu* – Synaesthetic touch is apparent when Nosferatu’s (Max Schreck) hand grasps Ellen’s (Greta Schröder) heart in shadow. The act paralyses her body and allows the vampire to feed on her blood, before being destroyed by the rays of the morning sun thereafter [Film Screenshots].217
- Figure 14.** *City Girl (1930)* – The demeanour of Lem’s Father (David Torrence) is dramatically altered when he mistakenly fires his gun at Lem (Charles Farrell) and hears his son scream in terror, which we understand through implied sound [Film Screenshots].218
- Figure 15.** *Blaues Pferd (Blue Horses, 1911b)* and *Rotwild II (Red Deer II, 1912e)* – Marc’s Blue Rider paintings have musical rhythm thanks to the artist’s use of rhythmic flowing brushstrokes. [Paintings Screenshots].....219
- Figure 16.** *Nosferatu* and *Anatomische les van Dr. Nicolaes Tulp (The Anatomy Lesson of Dr. Nicolaes Tulp, 1632)* – The *Nosferatu* scene that depicts Dr. Sievers (Gustav Botz) and other Wisborg dignitaries examining the body of the ship’s captain (Max Nemetz) visually resembles Rembrandt’s Baroque painting [Film and Painting Screenshots].220
- Figure 17.** *Der Wanderer über dem Nebelmeer (Wanderer above the Sea of Fog, c.1818)* and *Nosferatu* – The Rückenfigur in Caspar David Friedrich’s German Romantic painting is reminiscent of Ellen looking out to sea in Murnau’s silent film [Painting and Film Screenshots].220
- Figure 18.** *Das Lied von der Wolga (Volga Song, 1906)* and *Wiesel Spielen (Playing Weasels, 1909)* – The boatmen and weasel probe and attack the borders of the artwork that they are encased within. We can link their assaults on the paintings’ frames to The Blue Rider group’s broader to desire to demolish the barriers between the arts and pursue synaesthetic monumental works of art [Paintings Screenshots].221
- Figure 19.** *Landschaft mit einer Dampflokomotive (Landscape with a Steam Locomotive, 1909b)* and *Springender Hund Schlick (Jumping Dog Schlick, 1908)* – The implied sound of the steam train and sprinting dog physically breaks down the borders of Kandinsky’s and Marc’s paintings and metaphorically alludes to their wider desire to demolish the barriers between the arts and the senses in their Blue Rider artwork [Paintings Screenshots].....222
- Figure 20.** Kandinsky’s *Der blaue Berg (The Blue Mountain, 1908)* and *Amazone mit Löwen (Amazon with Lions, 1918)* – The riders appear eager to escape the confines of their paintings and the horses’ clattering hooves produce ‘loud’ implied sound. This links to the Blue Rider group’s (the riders) desire to take the arts (the horses) in a new multisensory direction in their monumental works of art [Paintings Screenshots].....223
- Figure 21.** *Nosferatu* – The horses in the Carpathian Mountains tavern sequence continually invade and exit Murnau’s shots and one of the animals kicks the

- edge of the frame. These actions create implied sound and physically break down the borders of *Nosferatu*'s frame [Film Screenshots].....224
- Figure 22.** *Die Gelbe Kuh* (*The Yellow Cow*, 1911c), *Kühe, rot, grün, gelb* (*Cows, Yellow-Red-Green*, 1912d) and *Hunde spielen* (*Playing Dogs*, 1912c) – Like the horses in Murnau's scene from *Nosferatu*, the animals in Marc's paintings often break down the borders of their frames and create implied sound with their bodily movements [Paintings Screenshots].....226
- Figure 23.** *Nosferatu* – The large waves off the coast of Wisborg aggressively *break* through the boundaries of Murnau's composition and imbue it with 'loud' crashing implied sounds [Film Screenshots].....227
- Figure 24.** *Drei Katzen* (*Three Cats*, 1913a), *Eselfries* (*Donkey Frieze*, 1911d), *Affenfries* (*Monkey Frieze*, 1911a) – The animals in these Blue Rider paintings by Marc penetrate the perimeters of their canvases and produce implied sound [Paintings Screenshots].....228
- Figure 25.** *Nosferatu* – Ellen's scream exits Murnau's frame in Wisborg and re-enters it in Transylvania. Therefore, her verbal implied sound demolishes both filmic and geographical borders [Film Screenshots].....229
- Figure 26.** *Beim Malen* (*While Painting*, 1911) and *Zwei blaue Pferde* (*Two Blue Horses*, 1913b) – Gabriele Münter and Marc visually and sonically penetrate the borders of their paintings. The actions performed in these works of art also suggest the existence of implied sound outside the boundaries of their frames [Paintings Screenshots].....230
- Figure 27.** *Nosferatu* – Count Orlok's magical coach consistently infuses Murnau's frame with 'loud' rattling and thudding implied sounds. It drowns out the 'quiet' implied sound created by Hutter's footfall and contributes to the sensory overload that Hutter appears to experience during his journey to the vampire's fortress [Film Screenshots].....231
- Figure 28.** *Der Blaue Reiter* (*The Blue Rider*, 1903) and *Lyrisch* (*Lyrical*, 1911c) – Kandinsky's horses and riders imbue their 'quiet' and 'soundless' environments with 'loud' implied sound [Paintings Screenshots].....232
- Figure 29.** *Nosferatu* – Shortly after *Nosferatu* takes command of the *Empusa*, the ship's 'quietness' is replaced with crashing, roaring and ringing implied sounds [Film Screenshots].....233
- Figure 30.** *St. George und der Drache* (*St. George and the Dragon*, 1915) – The horse and rider create 'loud' thudding implied sounds that dominate the painting's soundscape [Painting Screenshot].....235
- Figure 31.** *Berlin: Die Sinfonie der Grosstadt* (*Berlin: Symphony of a Great City*, 1927) – Ruttmann presents mechanical speed, dynamism and noise as exciting aspects of modernity through the creation of implied 'mechanical music' [Film Screenshots].....235
- Figure 32.** *Berlin* – Ruttmann suggests the passage of time from the distant past to the early twentieth century present with three shots at the start of the film [Film Screenshots].....236

- Figure 33.** *Berlin* – Ruttmann juxtaposes a shot of the spinning city with a Catherine wheel firework. This suggests that the city is exciting and should be celebrated because it is fast-paced, dynamic and loud [Film Screenshots].238
- Figure 34.** *Berlin* – The pace of the secretaries’ work and the ‘loud’ implied sound of their typewriters destroy their minds. Ruttmann allies himself with contemporary Futurists by presenting the mental deterioration of the workers as an exciting event with fast-paced cutting and special effects [Film Screenshots].238
- Figure 35.** *Berlin* – The ‘loud’ implied sounds of the train and rollercoaster appear to motivate the woman’s suicide. Ruttmann depicts her death as an enthralling event with fast-paced cutting and loud implied sound, which links the scene to Futurists’ morbid obsession with death [Film Screenshots].....239
- Figure 36.** *Menschen am Sonntag (People on Sunday, 1930)* – Erwin (Erwin Splettstößer) shows distaste for sound throughout this scene. The implied sounds interrupt the ‘quiet’ tranquil environment of his home. This links to contemporary disdain for the arrival of sound cinema in Germany and abroad [Film Screenshots].241
- Figure 37.** *People on Sunday* – Erwin and Annie (Annie Schreyer) destroy photographs of Willy Fritsch and Greta Garbo, two prominent silent film actors that had recently transitioned to sound filmmaking. Later on in the scene, they create ‘loud’ implied sound as they rip up numerous film star photographs [Film Screenshots].242
- Figure 38.** *People on Sunday* – Erwin falls asleep to the implied sound of Brigitte’s (Brigitte Borchert) record player. This connects to contemporary silent filmmakers’ disinterest in the arrival of sound cinema [Film Screenshots].243
- Figure 39.** *People on Sunday* – The implied music of Brigitte’s record player dramatically alters Christl’s (Christl Ehlers) mood. We can connect this to contemporary arguments that the sound film was capable of unifying people around the world [Film Screenshots].....244
- Figure 40.** *People on Sunday* – Erwin’s note fails to inform Annie of the group’s plans for the weekend. This failure is reminiscent of the decline of silent cinema’s storytelling tools, including the intertitle [Film Screenshots].245
- Figure 41.** *Chelovek s kino-apparatom (Man with a Movie Camera, 1929)* – A silent era orchestra accompanying a film in a Russian cinema [Film Screenshot]. ...245
- Figure 42.** *Oravský Hrad (Orava Castle)* – Two *Nosferatu* locations as they appeared in 1922 and 2015. The 2015 images were taken during the author’s guided tour of the Slovakian fortress [Film Screenshots and Personal Photographs].246
- Figure 43.** *They Shall Not Grow Old (2018)* – By pairing newly-recorded synchronised dialogue with First World War footage of an officer addressing his troops, Jackson removes the scene’s implied sound and encourages a one-dimensional reading of the sequence [Film Screenshot].247

- Figure 44.** *Bronenosets Potemkin (Battleship Potemkin, 1925)* – The Pet Shop Boys added audible sound effects, including gun shots, to Sergei Eisenstein’s silent film in 2004 [Film Screenshot].....247
- Figure 45.** *The Cabinet of Dr. Caligari (2005)* – David Lee Fisher comprehensively ‘remixed’ Wiene’s *Caligari* by reshooting the film with different actors and adding sound effects and dialogue. Using green screen technology, he inserted Wiene’s original sets during post-production [Film Screenshot].....247
- Figure 46.** *Der Letzte Mann (The Last Laugh, 1924)* – Two men drunkenly play trumpets outside the doorman’s (Emil Jannings) tenement block. Murnau emphasises the sound of the trumpet by initially photographing it being blown in close-up and then pulling the camera backwards towards the doorman’s open window, which suggests the trajectory of the noise [Film Screenshots].....248
- Figure 47.** *Metropolis* – The explosion in the machine city knocks Freder (Gustav Fröhlich) to the ground. Lang creates implied sound by using the ‘unchained’ camera technique to swing the camera towards Freder from the direction of the explosion, which simulates the force and noise of the blast [Film Screenshots].....249
- Figure 48.** *That Fatal Sneeze (1907)* – British director Lewis Fitzhamon creates ‘loud’ implied sound with the protagonist’s (Thurston Harris) dramatic sneeze, which appears to cause an earthquake [Film Screenshots].....249
- Figure 49.** *The Great Train Robbery (1903)* – Edwin S. Porter produces implied sound, smell and touch in the shot at the end of the film when a cowboy (Justus D. Barnes) shoots directly into the camera [Film Screenshots].....250
- Figure 50.** *Sunrise* – Through implied touch, the ghostly doubles of the Woman from the City manipulate the Man’s affections and persuade him to attempt his wife’s murder [Film Screenshots].....251

Notes to the Text

British English is used throughout this thesis. Quotations using American English remain unchanged in the text.

In each thesis chapter, I insert films' original foreign language titles and release years when they are referred to for the first time. Furthermore, authors' and actors' full names are recorded the first time that they are mentioned in each chapter.

Introduction

Aims and Scope

This thesis analyses the use of implied sound in silent films produced in the Weimar Republic (1919-1933).¹ Throughout my three chapters, I attempt to rethink our perception of silent film as an inherently soundless medium by demonstrating that, despite not featuring any audible synchronised sound, silent cinema consistently suggests sound visually and textually to the audience. By using the term implied sound, I am not referring to audible sound that is heard by audiences acoustically in the cinema. Rather, I determine implied sound to be an inaudible phenomenon that is internally constructed by spectators when they are confronted by sound stimuli found in silent film: acting, intertitles, cinematography, set design, lighting and props. The primary aim of this thesis is to explore: how we perceive implied sound in silent Weimar cinema, the extent to which it is fundamentally influenced by the use of synaesthesia (a form of crossmodal perception) in contemporary paintings, by what means the sensory phenomenon is linked to societal and artistic movements of the era and the length to which it evokes, and critiques, coeval crises in Germany and other countries around the world.²

My study of implied sound in silent Weimar film is part of a wider investigation into how cinema works with, and exploits, all five senses, which has

¹ German sound films were also produced in the Weimar Republic from 1929-1933. Two years after the premiere of *The Jazz Singer* (1927) in the United States, Germany's first sound film, *Melodie der Welt* (*Melody of the World*, 1929), was released. The Weimar Republic's transition from silent to sound filmmaking is explored in detail in Chapter Three.

² From the beginning of the Weimar Republic in the aftermath of the First World War until its end in the early 1930s when the Nazi party seized power, Germany was consistently mired in various far-reaching societal crises (see Hales, Petrescu, Weinstein, 2016: p.3). From 1918-1923, Germany dealt with political and financial instability, hunger and disease. In addition to these significant quandaries, many artistic crises, including the transition from silent to sound filmmaking, also unfolded during the Weimar Republic.

developed significantly in the last twenty years. Laura U. Marks' book *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* (2000) and Thomas Elsaesser and Malte Hagener's text *Film Theory: An Introduction through the Senses* (2015), in particular, have shaped the study of senses in film studies. Hitherto, the vast majority of the analyses conducted have concentrated on the presence of the senses in sound cinema. In my thesis, I attempt to expand our current understanding of the senses by specifically examining the use of implied sound in silent Weimar film. As I will outline in more detail later in my review of secondary literature, small-scale analyses of silent cinema implied sound have already been produced by several twenty-first century critics, including Dominique Nasta, Isabelle Raynauld, and Melinda Szaloky. Kata Gellen's recent book *Kafka and Noise: The Discovery of Cinematic Sound in Literary Modernism* (2019) is currently the most comprehensive study of the phenomenon. In a chapter devoted to implied sound in silent cinema, Gellen consistently pinpoints its presence in numerous silent films and argues that phenomenon enables spectators to construct their own interpretations of noises and dialogue during exhibition. However, for the most part, her book is focused on the use of implied sound in Kafka's literature. Therefore, the book does not explore implied sound's capacity to fundamentally structure our readings of silent film narratives and characters in significant depth. My study endeavours to build on Gellen, in addition to the other scholars mentioned above, by arguing that Weimar cinema implied sound is inspired by the synaesthetic sound located in contemporary paintings and engages with contemporary crises and movements in Germany and abroad, such as the transition from silent to sound cinema.

To be clear, I define implied sound as the inaudible "acoustic dimension" (Szaloky, 2002: p.109) of silent cinema that is perceptible in almost all films

produced before the coming of sound film in the late 1920s and early 1930s, irrespective of where they were produced and whether the director is conscious of its existence or not. As Raynauld notes, “[implied] sound is not only present, it is *represented* in novel and unique ways” in silent cinema (Raynauld, 2001: p.70) (emphasis in original). In Fritz Lang’s *Metropolis* (1927), for example, the implied sound of the factory whistle, which marks the worker shift change at the start of the film, is created by the sudden expulsion of jets of smoke (Figure 1). Or in F. W. Murnau’s *Faust: Eine deutsche Volkssage* (*Faust: A German Folktale*, 1926), the implied sound of Gretchen’s (Camilla Horn) scream is conveyed through a superimposition of Gretchen’s wailing face that travels across the landscape to the protagonist’s location in the mountains (Figure 2). Although implied sound can be found in many parts of a silent film, it is most noticeable and common in character dialogue, which is communicated through the mime of the actors and words on intertitles. As we cannot hear actors speak in silent cinema, Gellen notes that spectators have creative freedom to determine how long characters’ speech lasts:

In *The Kid* (1921), we can ask whether the baby starts crying before the sounding image was shown, or whether the image correlates with the onset of the sound. We can also wonder how long the baby continues to cry after we see this image (Gellen, 2019: p.49).

Furthermore, Michel Chion and Marc Silberman recognise that the implied sound of characters’ accents, intonation, pitch, tone and timbre can all be communicated to the audience through intertitles (see Chion, 2009: p.12; Silberman, 2010: p.42). This is typically achieved through shortening or lengthening words (to indicate characters’ accents), punctuation, typography and underlining, amongst other methods. For example, in *Nosferatu, eine Symphonie des Grauens* (*Nosferatu: A Symphony of*

Horror, 1922), Murnau uses four ellipses in a single intertitle during Knock's (Alexander Granach) speech to Hutter (Gustav von Wangenheim) at the start of the film. "Count Orlok – his Lordship...from Transylvania ...would like to purchase...a nice house...in our small town" (Figure 3). The repeated use of ellipses suggests that Knock constantly pauses as he speaks. Therefore, when we come to imagine his voice internally, we anticipate that his speech is fractured and unnatural. When this uneven implied sound is coupled with Knock's jerky visual movements in Murnau's film, it allows us to immediately understand that the character is likely insane as both his physical and verbal mannerisms are highly unusual.³

Spectators are able to understand implied sound in silent cinema thanks to the internal bank of sounds that they have amassed during their everyday lives (see Cooke, 2008: p.2). Rudolf Arnheim claims that:

[n]o one who went unprejudiced to watch a silent film missed the noises which would have been heard if the same events had been taking place in real life. No one missed the sound of walking feet, nor the rustling of leaves, nor the ticking of a clock (Arnheim, 1983: p.36).

Evidence from a 1904 screening of Edwin S. Porter's *The Great Train Robbery* (1903) appears to back up Arnheim's claim about implied sound and silent era spectators.

³ On a personal note, I employed the same textual implied sound techniques in a short silent film that I wrote and directed during my undergraduate degree at film school in 2014. I initially thought that the absence of audible dialogue could negatively impact my ability to deliver a coherent narrative to the audience. However, I soon realised that I could create inaudible impressions of sound by imbuing my onscreen text with sonic stimuli. For instance, in a scene that depicts the protagonist receiving a video call, I used ellipses and large font to indicate the impatient tone and 'loud' voice that is employed by the offscreen character. The implied sound that I created in this scene added greater nuance and depth to the characters in my film and encouraged me to examine how silent era directors employed the sonic phenomenon in their work.

There is a great amount of shooting. The smoke of the pistols is plainly seen, and men drop dead right and left, but no sound is heard. Nevertheless, while witnessing the exhibition women put their fingers in their ears to shut out the noise of the firing (Anon, 1904, in Altman, 1996: p.648).

Sheila J. Nayar recognises that silent film spectators also regularly imagine the sound of characters' voices when reading dialogue intertitles and lip-reading the actors on the screen (see Nayar, 2009: pp.154-155).⁴ In the 1960s, former silent film actress Louise Brooks noted that the medium's spectators "were excellent lip readers and often complained at the box office about the cowboy cussing furiously trying to mount his horse" (Brooks, in Brownlow, 1968: p.296).⁵ The lack of audible dialogue allows the audience significant creative freedom to decide how silent film characters' voices sound, whether they are reading their intertitle dialogue or studying the lips of the actors. As Chion notes, Greta Garbo "had as many voices as all of her admirers individually conferred her" (Chion, 1999: p.8) during the silent era.⁶ The arrival of the sound film and death of silent cinema in the late 1920s-early

⁴ If we observe silent film actors' mouths we often find that they mime words that are displayed on films' intertitles. In *Nosferatu*, Gustav von Wangenheim (Hutter) mouths the word "Ellen" twice shortly before he escapes from Count Orlok's (Max Schreck) castle, which matches Murnau's accompanying intertitle. However, as intertitles do not contain all character dialogue in a silent film, spectators can also decipher further speech by lip-reading actors. For instance, in *Caligari*, Werner Krauss clearly says the word "nein" (no) when Dr. Olsen (Rudolf Lettinger) asks him to wake Cesare (Conrad Veidt) in the caravan. As dialogue was limited to intertitles in silent film scripts, actors would commonly improvise dialogue that suited onscreen situations (see Shklovsky, 1988a: p.98). American silent film actor William S. Hart claims that he "make[s] up extemporaneous lines for [himself] [...] and for the rest of those in the cast, always striving to maintain the author's original intent and atmosphere" (Hart, 2015: p.5).

⁵ Unsurprisingly, deaf spectators were particularly adept at lip-reading silent film actors. A 1912 article in *The World's Fair* states that a deaf family of three regularly visited cinemas in an area of London and were able to comprehend all of the sentences delivered by actors in silent films (see Anon, 1912, in Harding and Popple, 1996: p.110). As the anonymous author notes in Colin Harding and Simon Popple, "[f]or this party of three, the films were not only moving pictures, but talking pictures" (Anon, 1912, in Harding and Popple, 1996: p.110).

⁶ Spectators viewing silent films in the post-silent era continue to use implied sound to create their own specific voices for characters. Buster Keaton biographer Edward McPherson, for example, was surprised when he found out that Keaton's real voice was significantly different to the one he projected onto the actor's characters. "[Keaton's voice was] deeper, huskier—not at all the voice I had heard in my head, which, I realized, was modelled (in a cheerfully narcissistic way) after my own internal monologue" (McPherson, 2004, in Stock, 2012: p.69).

1930s effectively eliminated implied sound from cinema due to the use of audible synchronised dialogue and sound effects during exhibition. As a result of this, the audience's creative engagement with character dialogue, which Brooks and Chion both refer to, came to an end as spectators became accustomed to accepting specific voices for film characters.

Over the last forty years, critics have frequently argued that the term 'silent film' is misleading and should be regarded as a misnomer. This is because several forms of audible sonic accompaniment were commonplace during the exhibition of silent films around the world (see Brownlow and Kobal, 1979: p.7; Abel and Altman, 2001: p.xiii; Stock, 2012: p.46).⁷ The most common form of silent film accompaniment was of the musical variety. In large cinemas, music was often provided by an orchestral ensemble that would sit in a pit below the screen. Conversely, in smaller venues, silent films were typically accompanied by a sole resident pianist or organist (see Anderson, 1988: p.xiii; Chion, 2009: p.9).⁸ As Lee Grieveson and Peter Krämer note, such was the significance of silent film music that "[a]udiences [...] often stated that they chose which cinema to visit on the basis of the music played" (Grieveson and Krämer, 2004: p.6). To a lesser extent than the use of music to accompany silent films, cinemas also employed actors, known as 'lecturers' in United Kingdom and the United States and 'Benshis' in Japan, to provide spoken commentary on the events unfolding on the screen (see Pople and Kember, 2004: p.70; Usai, 2019: p.191).⁹ As Jeffery Dym notes, "[t]hey were, in

⁷ Although the vast majority of silent films were accompanied by sound in some form, certain screenings did not have any sound accompaniment whatsoever (see Chion, 2009: p.8).

⁸ Silent films are also typically accompanied by music today when they are released in cinemas, on home media and video on demand services like YouTube and BFI Player. However, although traditional piano and orchestral scores are still paired with films, avant-garde musical accompaniments are regularly composed for new restorations and re-releases of silent films.

⁹ Lecturers were a hangover from the Magic Lantern (see Crangle, 2001: p.39), a pre-cinema projection-based medium which typically featured still images projected on a screen and a lecturer's

short, ‘silent film narrators’” (Dym, 2003: p.2). In addition to narrating the progression of a silent film’s plot, these actors would also habitually read intertitle dialogue to the audience using different voices in attempt to make the experience more immersive and to aid illiterate spectators (see Harding and Popple, 1996: p.89; Chion, 1999: p.8; Chateauvert and Gaudreault, 2001: pp.186-187; Usai, 2019: p.191).¹⁰ Some silent cinemas also had their own sound effects machines or teams of people employed to create noises during exhibition (see Robinson, 1973: p.157; Milsome, 1979: p.30). This widespread and varied use of sound accompaniment, which has been consistently highlighted by scholars, shows us that audible sound had a major role to play in the filmic experience during the silent era. In this thesis, I suggest that a close examination of silent cinema’s implied sound further underscores sound’s integral role in films produced in the silent period. By highlighting its power to shape our understanding of silent Weimar film narratives and characters in a multitude of different ways, I aim to demonstrate that implied sound is a fundamental part of silent cinema that has not been explored in detail by critics hitherto.

As I mentioned earlier, implied sound can be located in most silent films, regardless of their genre, design and origin. Therefore, why should my thesis exclusively focus on silent films produced in a particular country (Germany) during a specific fourteen year period (Weimar Republic)? Unlike silent cinema produced in other countries during the 1920s, and in prior decades, German silent films from this

verbal accompaniment. Lecturers became popular during the first decade of cinema (1895-1905) (see Kember, 2013: p.18; Trezise, 2019: p.8) and the practice fell into decline before the start of the First World War in 1913 (see Buchanan, 2013: p.50).

¹⁰ In addition to guiding spectators’ reception of silent film characters and plots, Lecturers would habitually communicate with the audience directly (see Kember, 2013: p.17). Judith Buchanan claims that lecturers were expected to deal with “late arrivals, noisy children, unlicensed smoking [and] inopportune laughing” (Buchanan, 2013: p.49) in the cinema auditorium during exhibition. Like a teacher in a school class room, silent cinema lecturers had to capture their audience’s attention, communicate messages and control behaviour.

era are regularly structured around music and sound. To name just a few examples, *Der Müde Tod: Ein deutsches in sechs Versen* (*Weary Death: A German Folk Story in Six Verses*, 1921), *Berlin: Die Sinfonie der Grosstadt* (*Berlin: Symphony of a Great City*, 1927) and *Nosferatu* are all paired with sonic subtitles and contain rhythmic editing that is closely tied to the films' original musical scores.

Furthermore, implied sound is also often an integral part of Weimar cinema plot and character structure. For instance, in *Orlacs Hände* (*The Hands of Orlac*, 1924), Paul Orlac (Conrad Veidt), a professional pianist, is mentally tortured by his inability to play the piano due to injuries he suffered during a rail accident. When his fingers tentatively attempt to play the piano, director Robert Wiene cuts to close-ups of Orlac's and his wife's, Yvonne (Alexandra Sorina), anguished faces (Figure 4).

These reaction shots visually communicate that the sounds he creates on the piano are unpleasant and thus uncharacteristic of a professional pianist, which sends him into a downward spiral that is not lifted until the film's conclusion. Through close analyses of three silent Weimar films, which I will outline in more detail in the Thesis Structure section of this Introduction, I aim to demonstrate that, despite producing films that were technically soundless, silent Weimar directors had an acute understanding of the filmic possibilities of sound.¹¹ By reading their implied sound as explorations of contemporaneous crises and movements, and linking the use of the sensory phenomenon to the synaesthesia located in coeval paintings, we can uncover a new method of analysing Weimar cinema that allows us to not only see these pictures in a new light, but also *hear* them in novel ways too.

¹¹ This might explain why many prominent silent Weimar film directors, including Fritz Lang and G. W. Pabst, immediately experimented with the creative possibilities of synchronised sound effects and dialogue in their early sound films. For example, in Lang's first sound picture, *M* (1931), the identity of a serial child murderer is eventually revealed thanks to his distinctive sinister off-key whistle.

The films that I have chosen to analyse in the main body of my thesis are: *Nosferatu*, *Berlin* and *Menschen am Sonntag* (*People on Sunday*, 1930). One of the most important reasons for selecting the above titles is because it allows me to show that complex implied sound can be located in numerous different areas of a silent film, such as editing in *Berlin* or props in *People on Sunday*. I will outline this further in the ‘Thesis Structure’ section of this Introduction chapter. Another reason for selecting these particular films was because they were produced at the beginning, middle and end of the Weimar years. Therefore, by making this selection, I aim to prove that implied sound was not just present at one stage of the Weimar Republic, but instead had a significant role in silent German cinema produced throughout the period. Moreover, the films are also from a number of distinct genres and were each produced by different directors. By examining a broad range of film genres and the work of four different silent film directors, I intend to show that implied sound was not limited to specific film categories or the output of a particular filmmaker in Weimar cinema. On the contrary, the thesis demonstrates that implied sound is prevalent in, and fundamental to, genres as diverse as horror (*Nosferatu*) and documentary (*Berlin*), and in films produced by novices like Robert Siodmak and Edgar G. Ulmer (*People on Sunday*) and more experienced directors like Murnau (*Nosferatu*).¹²

Review of Secondary Literature: Senses in Cinema, Implied Sound and Weimar

Cinema

¹² Although inexperienced when they made *People on Sunday* in the Weimar Republic, Siodmak and Ulmer had long and influential careers in the United States. For example, Siodmak directed *The Killers* (1946) and Ulmer made *The Black Cat* (1934) and *Detour* (1945). *People on Sunday*’s writer, Billy Wilder, and camera assistant, Fred Zinnemann, also became prominent directors in Hollywood, directing *Sunset Boulevard* (1950) and *High Noon* (1952) respectively, amongst many other films.

Since the publication of Siegfried Kracauer's *From Caligari to Hitler: A Psychological History of the German Film* (1947) after the end of the Second World War, an abundance of books and articles have been written on silent Weimar cinema. The majority of literature focuses on two particular areas: its aesthetic debt to Expressionism, on the one hand, and its role as socio-political commentary on the other.¹³ In contrast to this, and although scholars often analyse audible sound accompaniment created during silent film exhibition (see Anderson, 1988; Abel and Altman, 2001; Altman, 2004), only a handful of critics have thus far discussed the presence of implied sound in silent films. That said, since the beginning of the new millennium, scholarly interest in silent film implied sound has slowly started to develop. As I will discuss in more detail below, this is particularly thanks to Raynauld (2001) and Szaloky's (2002) foundational studies, and Gellen's more recent book on implied sound in modernist literature and silent cinema. Following the lead of critics, such as Marks, that have highlighted the function our senses have in our consumption of cinema, scholars are starting to acknowledge that sound has an important part to play in silent cinema. Throughout this section of my chapter, I review the existing literature on senses in cinema, silent film implied sound and scholarly discussions of Expressionism and allegory in Weimar cinema, in order to outline our current critical understanding of silent Weimar film and implied sound.

Marks' *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* conducts a detailed examination of the senses in cinema. Although Marks explores all five senses in the book, her work, for the most part, is focused on the

¹³ Expressionism is an artistic movement that began in Germany shortly before the start of the First World War. The seeds of Expressionism were sown in painting and poetry and the movement grew from there into the other arts such as theatre and film. Exponents of Expressionism typically seek to use their art to outwardly express inner turmoil. This is usually achieved in visual arts through distorted and nightmarish imagery that is designed to inspire terror and confusion. Expressionist elements are visible in many German silent films such as *Caligari* and *Von morgens bis mitternachts* (*From Morn to Midnight*, 1920).

sense of touch in aboriginal sound films. As her title (*The Skin of the Film*) suggests, Marks contends that cinema is tangible and that the audience can touch a film with their eyes, a phenomenon that she terms “*haptic visuality*” (Marks, 2000: p.xi) (emphasis in original). Although Marks acknowledges that her book gives “short shrift to the power of nonverbal sound” (Marks, 2000: p.xv), her text has, nevertheless, helped shape my understanding of implied sound in silent cinema. Through her analysis of touch in aboriginal film, Marks makes the case that each audience member uses the unique sensory knowledge that they have accumulated during everyday life to engage with and understand the corresponding senses depicted in sound films (see Marks, 2000: p.153). Building on this point by Marks, my thesis argues that, due to silent film implied sound being inaudible, every spectator has the autonomy to use their knowledge of sounds from real life to internally determine their own unique conceptions of characters’ voices and other implied sounds during silent cinema exhibition.

Expanding Marks’ work on aboriginal cinema’s haptic touch, Elsaesser and Hagener’s study of senses in film offers detailed analysis of the ways that sound and other senses are depicted in various film industries and genres. Throughout their book, Elsaesser and Hagener’s principal aim is to determine “*the relationship between the cinema, perception and the human body*” (Elsaesser and Hagener, 2015: p.4) (emphasis in the original). They argue that the human body and film are intrinsically linked through spectators’ senses and those depicted on the cinema screen (see Elsaesser and Hagener, 2015: p.4). The authors devote a chapter of their

study to the role of sound in silent cinema and briefly note the presence of implied sound in silent Weimar cinema.¹⁴ They recognise that:

[t]here are numerous – and ingenious – examples of visualised sound in ‘silent’ films: close-ups of ears that listen, feet that tiptoe on gravel, people who turn around in astonishment, shots of church bells and musical instruments, drums and artillery (Elsaesser and Hagener, 2015: p.150).

Although the authors rightly note that implied sound can be created by silent filmmakers in multiple different ways, such as through cinematography (“close-ups”) and set design (“gravel”), Elsaesser and Hagener’s analysis of the phenomenon is not exhaustive and is thus ripe for expansion. For example, one of the ways that my thesis attempts to build on this understanding of the sensory phenomenon is by specifically contending that Weimar film implied sound is fundamentally influenced by the use of synaesthesia in contemporary paintings. This will allow us to appreciate that, beyond merely being present in the medium, Weimar cinema implied sound was part of a broader movement towards multisensory artistic expression in the early twentieth century.

Corporeality in Early Cinema: Viscera, Skin, and Physical Form (2018), edited by Marina Dahlquist, Doron Galili, Jan Olsson and Valentine Robert, represents the first dedicated in-depth analysis of silent film’s relationship with the human body, including the senses found therein. Chapters in *Corporeality in Early Cinema* particularly focus on how human bodies are depicted in silent films released before the end of the First World War in 1918 and the extent to which the body of the spectator has a part to play in our comprehension of this (see Dahlquist, Galili,

¹⁴ Elsaesser and Hagener highlight isolated examples of implied sound in *The Last Laugh* and *Metropolis* (see Elsaesser and Hagener, 2015: p.150).

Olsson and Robert, 2018: p.1). For the most part, the volume is concerned with the visual appearance of bodies in silent cinema, rather than the presence of implied sound in scenes that contain human figures. My analysis of implied sound in silent Weimar cinema takes inspiration from the editors' argument that the audience's bodies and those located in silent film scenes are "inherently intermedial" (Dahlquist, Galili, Olsson and Robert, 2018: pp.1-2) due to their visual similarities and biological connections. With the intention of broadening this point, I make the case that the union between film-based bodies and those located in the cinema auditorium is also apparent if we analyse implied sound in silent film. As I have already mentioned, I make this connection in my thesis by arguing that spectators are able to recognise implied sounds that are suggested to them through visual and textual means and then determine their own unique comprehension of the sonic stimuli on the cinema screen.

Nasta was one of the first critics to specifically analyse silent film implied sound. Nasta's book chapter *Setting the Pace of a Heartbeat: The Use of Sound Elements in European Melodramas before 1915* (2001) examines the implied sound found in silent film dialogue.¹⁵ Throughout her work, Nasta makes the case that dialogue implied sound is consistently "visualized" (Nasta, 2001: p.96) by silent filmmakers in order to allow the audience to better understand characters' mental states (see Nasta, 2001: p.96). She also goes on to suggest that we can consider silent film implied sound as a form of 'subception', a sensation that is experienced by the audience without them being fully aware of its presence (see Nasta, 2001: p.96).¹⁶ In

¹⁵ The chapter is part of Richard Abel and Rick Altman's edited collection *The Sounds of Early Cinema* (2001).

¹⁶ Gellen also briefly discusses subception when analysing silent film implied sound. She states that "[t]he enlightened silent film viewer must have license to engage in subception, but should do so

my chapters on *Berlin* and *People on Sunday*, which I will outline later, I build on Nasta by contending that, in addition to being tied to characters' psyches, silent Weimar film implied sound also evokes, and engages with, contemporaneous artistic and societal movements and crises in Germany and abroad, such as Futurism and cinema's conversion from silent to sound filmmaking in the late 1920s and early 1930s.

Raynauld's book chapter *Dialogues in Early Silent Screenplays: What Actors Really Said* (2001), which is included in the same edited collection as Nasta's chapter, was also one of the first studies to engage with implied sound in detail. Using Georges Méliès' *La Vengeance du gâte-sauce* (*The Cook's Revenge*, 1900) and Georges Monca's *Rigadin, garçon de banque* (*Rigadin, The Bank Clerk*, 1912) as examples, Raynauld contends that silent film actors consistently suggest implied sound to the audience through their gestural body language and inaudible dialogue (see Raynauld, 2001: p.70). She points out that, just like sound film actors today, silent film performers "had to memorize [their] pre-scripted lines" (Raynauld, 2001: p.75) and spend large amounts of screen time talking to other characters, despite the fact that spectators were unable to hear what they were saying. Raynauld argues that this was largely immaterial as audiences would often lip read character dialogue and recreate their voices internally (see Raynauld, 2001: p.75). By discussing the presence of implied sound in editing, props, cinematography and set design, my study of silent Weimar cinema tries to expand Raynauld's comprehension of the sensory phenomenon. I hope to demonstrate that, in addition to acting and dialogue, we can also observe and analyse implied sound's role in numerous areas of silent

critically and skeptically. She should not assume that all implied sounds ought to trigger acts of mental hearing, but neither should she assume that none of them ought to" (Gellen, 2019: p.58).

cinema, which will allow us to better understand silent film as a multisensory medium.

Szaloky's article *Sounding Images in Silent Film: Visual Acoustics in Murnau's "Sunrise"* (2002) is one of the most detailed studies of implied sound conducted thus far. Her work focuses on the use of implied sound in Murnau's *Sunrise: A Song of Two Humans* (1927), but she uses the opening third of the article to outline her overall understanding of the phenomenon in silent film. In addition to recognising the existence of implied sound in character dialogue and the audience's role in its creation, Szaloky also goes beyond the scope of Nasta's and Raynauld's earlier studies by highlighting its presence in silent film cinematography and editing (see Szaloky, 2002: pp.112-113). She recognises that "[e]very significant moment in [*Sunrise's*] narrative is expressed acoustically" (Szaloky, 2002: p.127) (Figure 5).¹⁷ Unlike many other critics, Szaloky's article also uses examples of implied sound to demonstrate how it can help determine our comprehension of silent film narratives and characterisations.¹⁸ However, despite currently being one of the most developed studies of implied sound, Szaloky's work is predominantly focused on Murnau's use of implied sound in *Sunrise* and thus does not discuss the phenomenon in any other silent films in detail. In my larger study of implied sound, I aim to expand on

¹⁷ Among many other examples of implied sound in *Sunrise*, Szaloky highlights the Man's (George O'Brien) desperate screams for his wife, the Woman (Janet Gaynor), at the end of the film when he presumes that she has drowned after falling out of their boat during a storm (see Szaloky, 2002: p.126). Murnau's creates 'loud' implied sound by slowly drawing the boat carrying the shouting Man towards the camera in medium shot and closing on an extreme close-up of his mouth screaming into the camera. I will discuss 'loud' and 'quiet' implied sound in more detail in Chapter Two of this thesis.

¹⁸ For instance, see Szaloky's analysis of the scene in *Sunrise* when the Man and the Woman are stood aboard a trolleybus journeying from the countryside to the city. The Woman shields her face in terror from her husband because he almost murdered her moments earlier, before coming to his senses and seeking forgiveness. The couple stand in silence inside a cabin in misery as a ticket inspector repeatedly taps on the glass partition, but fails to obtain a response from the couple until they finally acknowledge him. Murnau's decision to have his characters be ignorant of implied sound in this scene adds depth to his plot and characterisations because it demonstrates to the audience that the couple are in a world of their own due to their powerful emotions (see Szaloky, 2002: pp.125-126).

Szaloky's pioneering article by demonstrating that, in addition to adding greater nuance to silent film plots and narratives, implied sound can also be understood to engage with significant contemporaneous events in society and the arts.

Nayar's *Seeing voices: Oral pragmatics and the silent cinema* (2009) also tackles silent film implied sound in meaningful depth. Nayar makes the case that, although silent cinema is technically mute, inaudible sound still has an important role to play in the medium. She particularly highlights the consistent presence of character dialogue in silent films and argues that the development of rudimentary cinematography and editing techniques in early cinema came about, at least in part, to better communicate the passage and content of verbal conversations in silent cinema (see Nayar, 2009: p.155). Analysis of implied sound outside of silent film character dialogue is absent in Nayar's work. Appearing to acknowledge this towards the end of her article, Nayar admits that her study is not extensive in scope, having "only scratched the surface" (Nayar, 2009: p.160) of silent film implied sound. By also exploring implied sound's presence in other areas of silent cinema, such as set design and editing, my thesis strives to broaden the ideas put forward in Nayar's article. This will hopefully allow us to appreciate that implied sound is not always restricted to one particular part of a silent picture. On the contrary, it has the power to permeate all areas within silent cinema, from the cinematography to lighting and editing to costuming.

As I mentioned earlier, Gellen's *Kafka and Noise* presents a detailed study of implied sound in Kafka's work. It builds on Julian Murphet et al.'s *Sounding Modernism: Rhythm and Sonic Mediation in Modern Literature and Film* (2017) by arguing that implied sound is a fundamental part of the writer's modernist literature (see Gellen, 2019: p.3). Although it is explored in significantly less detail than

implied sound in Kafka's writings, Gellen's analysis of silent film implied sound is the most thorough exploration of the phenomenon in the medium. In order to offer a renewed reading of Kafka's literature, Gellen frequently draws on analytical methods employed by film studies scholars and uses her investigation of inaudible sound in Kafka's work to rethink how we examine film sound.

When concepts and tools that were developed to analyze sound in film are modified and reapplied to literature, the fault lines of each medium are revealed. This helps us understand not only noise in Kafka, but the limits and potential of representing sound in literary narrative more generally. Kafka's writing in turn exposes new dimensions of how sound is used in film and theorized by film scholars (Gellen, 2019: p.8).

When discussing silent cinema specifically, Gellen argues that spectators have an important role to play in the creation of implied sound. "[T]he viewer must not only imagine visualized sounds in her mind, but also synchronize them with other images in the film. The process of mental hearing is both about imagining sounds that are not audible and about reordering what is visible onscreen" (Gellen, 2019: p.50). In my study of Weimar cinema, I hope to build on Gellen's significant text by demonstrating that our engagement with implied sound can extend beyond mere creation and synchronisation. This is because we can use the sensory phenomenon to fundamentally structure our readings of silent Weimar films. For example, in Chapter Three, which is focused on *People on Sunday*, I suggest that the implied sound located in the picture's dialogue and props is meta-cinematic because it evokes the positive and negative attitudes towards the coeval decline of silent cinema and rise of the sound film.

Rudolf Kurtz was the first critic to discuss silent Weimar cinema in significant depth. Kurtz's book *Expressionismus und Film (Expressionism and Film, 1926)*, which was written in Germany during the silent era, analyses Weimar cinema's connections to the Expressionist movement in the arts.¹⁹ He initially examines how different filmic devices, such as the camera and lighting, can help create unique Expressionistic effects in films that are not possible in other art forms. Later, he moves onto a more detailed discussion of the use of Expressionistic elements found in a variety of different silent Weimar films, including *Das Cabinet des Dr. Caligari (The Cabinet of Dr. Caligari, 1920)* and *Das Wachsfigurenkabinett (Waxworks, 1924)*. Throughout his book, Kurtz's primarily argues that Expressionistic aspects of German silent films, such as jagged set design and staccato acting, allow the audience to become more immersed in the fractured plots and unstable characters found in many Weimar films. For example, during his analysis of *Raskolnikow (Crime and Punishment, 1923)*, he contends that the Expressionistic acting and set design adds emotional depth to Wiene's characters (see Kurtz, 2016: pp.79-80). Throughout the three chapters located in this thesis, I attempt to build on Kurtz's claim by suggesting that implied sound routinely adds an extra layer of subtlety to silent Weimar film characters because it enables us to interpret their actions as symbolic references to significant real world happenings in society and the arts.

Lotte H. Eisner's study of Weimar cinema, *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt (1973b)*,

¹⁹ Kurtz's book was originally only published in German and was not made available in English until John Libbey Publishing released a translation in 2016.

is consistently discussed by scholars that examine German silent cinema.²⁰ Following the lead of Kurtz's *Expressionism and Film*, Eisner's text also focuses on the use of Expressionistic techniques in silent German cinema. However, she expands on Kurtz by linking Expressionism to earlier traditions found in nineteenth century German Romanticism and by illustrating the influence of Max Reinhardt's theatre techniques on German Expressionist cinema. Eisner also covers a wider selection of silent Weimar films than Kurtz and goes into much more detail regarding their production, distribution and exhibition.²¹ Unlike Kurtz, Eisner does occasionally refer to the presence of implied sound in her analysis of Expressionism in silent German cinema. For instance, when discussing Paul Wegener's *Der Golem, wie er in die Welt kam* (*The Golem: How He Came Into the World*, 1920), Eisner states that the film's distorted Expressionistic sets are reminiscent of "gaping maws and shrieking gullets" (Eisner, 1973b: p.23) (Figure 6).²² Although Eisner sometimes notes the existence of Weimar cinema implied sound, such as the example cited above, she is not interested in examining implied sound in detail.

The first scholar to consistently assert that Weimar films are strongly reflective of contemporaneous crises and events was Kracauer. Despite being over seventy years old and the publication of dozens of books on Weimar cinema since, Kracauer's 1947 book *From Caligari to Hitler: A Psychological History of the German Film* remains one of the most referenced texts on silent German cinema. Kracauer argues that the themes of horror and despair found in many silent films during the Weimar period were congruent with the feelings of contemporary

²⁰ Eisner's *Murnau* (1973) and *Fritz Lang* (1976) are also frequently cited by critics and considered to be important foundational texts on the respective Weimar directors F.W. Murnau and Fritz Lang. I particularly draw on the former when I analyse Murnau's *Nosferatu* in Chapter One.

²¹ This is partially due to Kurtz conducting his study in 1926 before the end of the Weimar era and the theatrical release of many films that Eisner discusses.

²² Eisner also asserts that Fritz Lang uses lighting to suggest sound in *Metropolis* despite the film being technically mute (see Eisner, 1973b: p.233).

Germans, who lived through the country's defeat in the First World War and the economic strife that followed in the late 1910s and early 1920s. To draw attention to just one example of this, Kracauer argues that German films made in the early 1920s are a "*monologue intérieur*" (Kracauer, 2004: p.60) (emphasis in original) of the country's coeval citizens. Kracauer's most significant and controversial argument is that the tyrannical villains found in many silent Weimar films, such as *Nosferatu* (Max Schreck), *Dr. Caligari* (Werner Krauss) and *Dr. Mabuse* (Rudolf Klein-Rogge), represented Weimar citizens' desire for authoritarian leadership and ultimately prefigure the rise of Adolf Hitler and Nazism in Germany (see Kracauer, 2004: pp.72-73).²³ In terms of implied sound, and unlike Eisner's limited discussion of the phenomenon, Kracauer does not explore silent cinema's implied sound at all in his text. The closest that he comes to identifying implied sound in silent cinema is his brief discussion of Walter Ruttmann's use of rhythmic editing in *Berlin* (see Kracauer, 2004: p.184). My chapter on Ruttmann's silent film expands Kracauer's analysis of *Berlin*'s editing by asserting that this form of fast-paced implied sound evokes contemporary Futurist artists' and philosophers' use of sound to articulate their opinions on modern city life.

Elsaesser's *Weimar Cinema and After* (2000) is one of the most discussed studies of silent Weimar cinema published since the turn of the twenty-first century. Elsaesser's book challenges the dominant Weimar cinema theory put forward by Kracauer that post-war German silent films reflect contemporary German citizens' desire for political dictatorship and foreshadow the rise of the Nazi party. He argues that Kracauer's work is compromised and inaccurate, at least to an extent, due to him

²³ This particular argument has drawn consistent criticism from scholars for decades because Kracauer bases this contention on a small selection of films produced during the Weimar Republic and could be considered biased as he wrote his book as a Jewish exile in the United States after fleeing the Nazi regime (see Jung and Schatzberg, 1999: p.55; Elsaesser, 2000: p.20).

writing his book as a Jewish exile in the United States during the Second World War and his first-hand knowledge of how the Nazis destroyed the culture that he was previously part of in 1920s Berlin (see Elsaesser, 2000: p.20). In contrast to Kracauer's thesis, Elsaesser contends that it is more appropriate to see Weimar cinema as an attempt to create a historical imaginary in order to reconfigure Germany's identity by manipulating the country's national heritage through film. Furthermore, Elsaesser also criticises Eisner's decision to focus on particular Weimar directors, especially Murnau and Lang, at the expense of other silent Weimar filmmakers like Ruttmann and Ernst Lubitsch, directors which Elsaesser covers in-depth in his book (see Elsaesser, 2000: p.30). Like some of the other texts on silent cinema discussed thus far, Elsaesser occasionally points to implied sound in Weimar films, such as Ellen's (Greta Schröder) "silent scream" (Elsaesser, 2000: p.238) in *Nosferatu*, but does not analyse any of the examples he cites in substantial depth. In my thesis, I have tried to follow Elsaesser's example by not limiting my analysis of Weimar cinema to the work of two of its most famous directors (Murnau and Lang) and have instead explored the use of implied sound in films made by four different filmmakers. This decision has exposed me to the varied techniques that Weimar directors used to create implied sound in their films and has allowed me to add to Elsaesser's brief discussion of implied sound by suggesting that it can be regarded as a core feature in silent Weimar cinema.

Ian Roberts' book *German Expressionist Cinema: The World of Light and Shadow* (2008) is another important reference point for my study of silent Weimar cinema. Roberts' text begins with an outline of German Expressionism's origins and then moves on to close analysis of several Weimar films, including *Die Büchse der Pandora* (*Pandora's Box*, 1929) and *Asphalt* (1929). In a similar fashion to

Kracauer, Roberts primarily focuses his analysis on Weimar cinema's symbolic connections to important events and crises in 1920s Germany. Although his argument that "Nosferatu surely prefigures the terror of the National Socialists' victims a few years later" (Roberts, 2008: p.51) aligns with Kracauer's Weimar cinema thesis, Roberts does not claim that German silent films depict Weimar citizens' desire for authoritarian leadership (see Roberts, 2008: p.51). Instead, Roberts frequently draws comparisons between Weimar film visuals and post-war crises that were affecting ordinary Germans of the period, such as the death toll of the First World War, mass unemployment and hunger, amongst other issues (see Roberts, 2008: pp.35-36). Like Eisner and Elsaesser before him, Roberts occasionally points out instances of implied sound in his scene analysis of Weimar films, but does not attempt to examine these examples in detail. For instance, Roberts is one of many scholars to highlight Murnau's creation of implied sound in a sequence from *Der Letzte Mann* (*The Last Laugh*, 1924) (see Silberman, 1995: p.26; Cousins, 2004: p.30). In a scene that involves two drunken men playing a trumpet, Roberts recognises that Murnau's use of an 'unchained camera' movement from the trumpet to the protagonist's ear is reminiscent of the passage of sound (see Roberts, 2008: p.41).²⁴ Despite the fact that Roberts rarely mentions implied sound, the symbolic visual connections that he draws between German silent cinema and contemporary events have nevertheless helped shape my thesis. For instance, in Chapter One, I suggest that Murnau's use of implied sound in *Nosferatu* is metaphorically linked to his contemporary desire to loosen cinema's creative ties to

²⁴The 'unchained camera' was a filmmaking technique that was primarily developed by director F.W. Murnau and cinematographer Karl Freund while they were working on *The Last Laugh*. It involved the removal of the camera from the tripod and the use of experimental cinematography, such as handheld camerawork and the attachment of the camera to primitive dollies and cranes (see Roberts, 2008: p.41).

other artistic media in order to enable film to craft a unique artistic identity of its own.

Shellshock Cinema: Weimar Culture and the Wounds of War (2009) by Anton Kaes is another key text in Weimar cinema scholarship that has helped build the arguments in my thesis. Following the path set by Kracauer and Roberts, Kaes also concentrates his analysis on the allegorical connections between the dark themes found in Weimar cinema and the simultaneous crises in 1920s Germany. However, in contrast to Kracauer and Roberts, who address a number of contemporaneous crises in their symbolic readings of Weimar films, Kaes, for the most part, devotes his study to the symbolic links between German silent cinema and the death and trauma of the First World War.²⁵ To illustrate this argument, Kaes coins the term ‘shell shock cinema’ to describe Weimar films that consciously or subconsciously evoke the trauma of the First World War.²⁶ Kaes admits early on that not all Weimar films should be considered examples of shell shock cinema and instead focuses on particular case studies, such as *Caligari* and *Nosferatu* (see Kaes, 2009: p.4).²⁷ Throughout the course of his book, Kaes contends that many Weimar films feature characters recovering from past trauma and focus on the emotions of fear and anger, in addition to other feelings, which were also regularly felt by ordinary Weimar citizens, who had lived through the war and were still suffering with the harsh

²⁵ Analyses of Weimar cinema published since the release of Kaes book have continued to examine the allegorical links between German cinema of the period and the First World War. Steve Choe, for instance, argues that “despite not showing realistic scenes of infantrymen in trenches or soldiers manning machine guns, the fantastic films of the early Weimar years, set in alternative worlds and historical times, are nevertheless deeply informed by this ‘culture of defeat’” (Choe, 2014: p.10).

²⁶ The term shell shock was first used during the First World War to describe the traumatic conditions developed by many soldiers who were exposed to constant shell bombardment and bloody warfare in the trenches. It is still used today to describe soldiers suffering from post-traumatic stress disorder due to their involvement in warfare.

²⁷ Unlike Kracauer, who contends that all Weimar films foreshadow fascism, Kaes states that his theory can only be applied to specific Weimar films, such as *Caligari* and *Nosferatu*.

consequences of defeat.²⁸ Kaes also links the Expressionistic elements found in Weimar cinema, such as jagged set design and abstract lighting, to the war trauma imbedded within contemporary Germans by arguing that “they mimic shock and violence on the formal level” (Kaes, 2009: p.4). Kaes’ text has minimal engagement with implied sound in German cinema of the period. He is more interested in the visual links between Weimar cinema and First World War. My study argues that, in addition to the visual parallels between silent Weimar cinema and coeval events in Germany, there are also sonic connections between the two. Through the analysis of implied sound, I hope to expand Kaes’ study by suggesting that Weimar films engaged with concurrent real world events in a multisensory manner.

My literature review demonstrates that, although scholars have written extensively on Weimar cinema and a handful of texts have analysed how silent film implied sound is created, no study has thus far provided an extensive analysis of the sensory phenomenon’s links to coeval movements and crises or the extent to which it was inspired by the employment of synaesthesia in coeval paintings. This thesis seeks to address this hole in our knowledge and show that implied sound is far more prevalent and complex than has been recognised hitherto in Weimar cinema scholarship. Building on scholars such as Roberts and Kaes, who contend that Weimar film is allegorically linked to the aftermath of the First World War, I suggest that Weimar cinema’s implied sound evokes and engages with other contemporary societal and artistic crises and movements, including the transition from silent to sound filmmaking. Furthermore, this thesis also extends the studies that have

²⁸A condition of Germany’s surrender at the end of the First World War in 1918 was their agreement to abide by the conditions of the Treaty of Versailles. Amongst other things, the treaty demanded that Germany pay war reparations to the victors, hand over portions of its territory to other countries, and refrain from deploying soldiers on certain parts of the border. The reparation payments made a significant contribution to the collapse of the German economy, which led to mass unemployment and starvation in the country. The other measures caused widespread anger among the populace because they felt that Germany’s leaders had betrayed them and humiliated the country by signing the treaty.

pinpointed examples of implied sound in certain areas of silent cinema, such as Raynauld and Szaloky's analyses of implied sound in silent film acting. Throughout the course of my study, I argue that implied sound can be located in multiple facets of silent cinema, including set design, editing and props, and has the power to fundamentally structure our interpretations of silent Weimar pictures.

Research Design

In order to improve our current understanding of silent cinema implied sound and build on the plethora of work on Weimar cinema, I put forward a number of research questions that will be answered throughout my thesis. How do Weimar cinema directors create implied sound and to what extent is it present in German silent films of the era? To what extent and how is Weimar cinema implied sound fundamentally influenced by the use of synaesthesia in contemporary paintings? To what degree and how does silent Weimar films' implied sound evoke contemporaneous societal and artistic movements? How, and by what means, is silent Weimar film implied sound reminiscent of, and indeed a commentary on, coeval artistic crises in Germany and elsewhere in the world? The first question will guide all three of my thesis chapters as it will enable me to demonstrate that implied sound is widespread throughout Weimar cinema and is created in varied and nuanced ways by different film directors. For example, for the most part implied sound is limited to acting, dialogue and set design in *Nosferatu*, whereas *Berlin's* implied sound is most heavily concentrated in the film's editing. The second question is tied to Chapter One where I examine Murnau's *Nosferatu* and paintings produced by *Der Blaue Reiter* (The Blue Rider) group. I argue that the director's approach to implied sound was strongly influenced by the Expressionist artists' attempts to synaesthetically break down the borders between the arts and senses in their early twentieth century artwork. This

interdisciplinary textual analysis will enable us to understand that painting and cinema were on a similar historical trajectory towards multisensory artistic expression. Question three will be explored in Chapter Two during my close textual analysis of the connections between *Berlin*'s fast-paced and 'loud' implied sound and contemporary Futurists' attitudes towards the modern city environment and technology, which they frequently expressed through sonic terminology in their manifestos. My historical and sociological angles in this chapter will draw out both the progressive and inhuman aspects of early twentieth century modernity, aspects which appear to have fascinated Ruttmann and contemporary Futurist artists and thinkers. The fourth question is attached to my examination of meta-cinematic implied sound in Chapter Three, which outlines *People on Sunday*'s allegorical connections to the coeval transition from silent to sound cinema, and also identifies it as a forerunner of the essay film. This symbolic and historical textual analysis of Siodmak and Ulmer's late silent film underscores the significant and varied impacts that the transition period had on filmmakers because it demonstrates that we can read contemporary pictures as critiques of this tumultuous period in the film industry. By answering the above questions, I aim to show that implied sound is not merely present in selected scenes or aspects of silent Weimar films, as has been noted by several critics.²⁹ Instead, I hope to demonstrate that the sensory phenomenon: is widespread in German silent cinema of the period, is tied to the contemporary use of synaesthetic sound in other artistic media and evokes and critiques contemporaneous movements and crises.

Thesis Structure

²⁹ Eisner's discussion of implied sound is predominantly limited to Gretchen's cry across the mountains in F.W. Murnau's *Faust*, while Tom Gunning's analysis of the phenomenon is focused on prop and editing implied sound in a train carriage scene in Fritz Lang's *Spies* (1928) (see Eisner, 1973a: p.165; Gunning, 2000: p.132).

Chapter One is concerned with Murnau's employment of implied sound in *Nosferatu*. I primarily contend that the director conceived *Nosferatu* as a multisensory silent film that could challenge, and overcome, the apparent technical limitations of his medium, particularly its lack of audible sound. Throughout the early twentieth century, modernist artists from numerous different disciplines were experimenting with synaesthetic techniques in order to expand the representational borders of their media (see Yumibe, 2009: p.166; Birtwistle, 2010: p.224; van Campen, 2013: p.633; Earl, 2020: p.466). Synaesthesia is a cross-sensory phenomenon that causes affected individuals to perceive an additional sense when confronted with an initial one (see Marks, 2000: p.213; Ward, 2013: p.50). For example, synaesthetes may discern a particular taste by looking at a certain colour. Although synaesthesia is only experienced by a relatively small section of society (see Curwen, 2018: p.94), the term is often used when artists attempt to evoke senses that are typically considered foreign to their medium of expression. Artists associated with the Expressionist group The Blue Rider, including Wassily Kandinsky, Franz Marc and Paul Klee, were particularly fascinated by the ways that they could suggest sound with certain colours in their compositions (see DÜchting, 1997: p.22; Lodder, 2006: pp.24-25; Birtwistle, 2010: p.223; Westerdale, 2010: p.154). Kandinsky was the most outspoken advocate for synaesthetic painting in the group and hoped to create "a synthesis of the arts, which involved music, painting, dance and drama and led to his stage composition *Yellow Sound*" (DÜchting, 1997: p.22), which was published in the *Der Blaue Reiter Almanach (The Blue Rider Almanac, 1912)*. While studying Art History at the University of Heidelberg in his youth, Murnau visited The Blue Rider group and met Kandinsky, Marc and Gabriele Münter (see Kalat, 2015: p.1), and became particularly good friends with Marc (see

Jackson, 2013: p.20; Massaccesi, 2016: p.25).³⁰ The time that Murnau spent with The Blue Rider in the market town of Murnau in Bavaria prompted him to change his surname from Plumpe to Murnau (see Kalat, 2015: p.1). In this chapter, I argue that Murnau's friendship and intellectual association with painters in The Blue Rider did not just merely prompt him to change his name, but also inspired him to pursue a multisensory approach to his filmmaking when he became a director after the end of the First World War. Scholars have continuously suggested that shots in Murnau's silent films, including *Nosferatu*, are inspired by particular artists and artworks that he remembered from his studies or exhibitions (see Eisner, 1973b: p.98; Smith, 2008: p.5; Massaccesi, 2016: p.74-75; Calhoon, 2021: p.187). For the most part, critics argue that Murnau regularly quotes the Romantic paintings of Caspar David Friedrich in *Nosferatu* (see Vacche, 1996: p.171; Jackson, 2013: pp.43-44; Calhoon, 2021: pp.3-4). I seek to build on these commentators by arguing that, in addition to being stimulated by particular painting compositions, Murnau's *Nosferatu* was also inspired by the synaesthetic experiments of his artistic colleagues in The Blue Rider, particularly their use of implied sound. In a similar fashion to Kandinsky's attempts to create a synthesis of the arts, I suggest that Murnau uses implied sound in his *Symphony of Horror* to break down the representational walls of his medium and create a multisensory silent film.

In Chapter Two, I explore implied sound in Ruttmann's *Berlin*. In particular, I argue that we can understand the film's implied sound as being evocative of contemporary Futurist analyses of the modern city environment and the position of new technology in early twentieth century quotidian life. Futurism, which is

³⁰ Murnau was also friends with numerous other artists during his life. Eisner notes that he had a close relationship with painter Walter Spies (see O. Plumpe, in Eisner, 1973a: p.24) and photographs taken during the filming of *Tabu: A Story of the South Seas* (1931) show that he met Henri Matisse.

regularly associated with early twentieth century fascism (see Rawson, 1991: p.254; Humphreys, 1999: p.15; Ialongo, 2013: p.394), was a modernist philosophical and artistic movement that initially emerged in Italy when Filippo Tommaso Marinetti published *The Manifesto of Futurism* (1909). The movement began to take hold in Germany in 1912 when Marinetti's above text and Umberto Boccioni et al.'s *Manifesto of Futurist Painters* (1910) were translated into German, and the first Futurist art exhibitions were held in the country (see Krauss, 2017: p.602). During my analysis of Ruttmann's film, I draw on the above Futurist philosophical and artistic writings, in addition to manifestos by Luigi Russolo (1913) and Carlo Carrá (1913), which outline the movement's obsession with the speed, danger and loudness of the modern technological city, and their disinterest in humanity's slower-paced and quieter rural existence in the past. Throughout my chapter, I argue that *Berlin's* implied sound is reminiscent of Futurists' outlooks on modernity because Ruttmann frequently creates a sense of excitement, through fast-paced editing and 'loud' implied sound, during scenes that depict high-speed modern machines and human suffering in late 1920s Berlin. Since *Berlin's* release in 1927, numerous scholars, including Béla Balázs, Kracauer and Nora M. Alter, have suggested that Ruttmann's silent film has rhythmic editing and evokes music (see Kracauer, 2004: p.184; Alter, 2009: p.196; Balázs, 2010: p.129). This chapter hopes to build on the brief discussions of *Berlin's* implied sound that the above scholars undertake by arguing that it is also possible for us to read Ruttmann's implied sound as being *in tune* with contemporary Futurist art and philosophy, which often uses the sense of sound to extol both the technological progress and danger that modernity brought to human existence.

Chapter Three focuses on Siodmak and Ulmer's use of implied sound in *People on Sunday*. My analysis suggests that we can read the film's implied sound as a meta-cinematic assessment of the contemporary transition from silent to sound filmmaking (1927-1933) in Germany and other countries around the world. *People on Sunday* emerged in the middle of the transition period between silent and sound cinema (1930) when the film industries around the world were split on whether to accept or resist the coming of sound film (see Ruttmann, 2016c: p.556). For example, some prominent silent filmmakers, including Charles Chaplin, believed that sound films were artistically inferior to silent cinema (see Chaplin, 2003: p.322) and vowed to ignore sound technology and continue making silent films. Conversely, other commentators, such as Jean Lenauer, were open to the new film medium and excited about how synchronised sound could transform cinema, such as through the elimination of pantomimic acting due to the introduction of audible dialogue (see Lenauer, 1998: p.88). Moreover, some industry figures had a mixed reaction to the death of silent cinema and birth of the sound film. Although Sergei Eisenstein, Vsevolod Pudovkin and Grigori Alexandrov were excited about the arrival of synchronised sound (see Eisenstein, Pudovkin, Alexandrov, 1988: p.235), they were also critical of early sound films for using realistic sound and argued that sound should be "*contrapuntal*" (Eisenstein, Pudovkin, Alexandrov, 1988: p.234) (emphasis in original) to film visuals. *People on Sunday*'s historical importance as a document of German life just three years prior to the arrival of the country's National Socialist government has been highlighted repeatedly by scholars (see Read and Meyer, 2000: p.232; Koepnick, 2009: p.239; Wood, 2019: p.8; Demarco, 2019: p.3). My analysis of Siodmak and Ulmer's film seeks to further develop the ideas of these critics by asserting that the film's historical significance can be further

enhanced through an analysis of implied sound, because it enables us to read *People on Sunday* as a critique of the contemporary transition from silent to sound filmmaking. Furthermore, I also regularly draw on Elodie A. Roy's recent study of *People on Sunday*, in which she identifies instances of implied sound in scenes that include the record player (see Roy, 2017: p.34). I hope to expand Roy's foundational study of implied sound in Siodmak and Ulmer's film by demonstrating that the phenomenon is present throughout the film and can be understood to comment on the debate surrounding the death of silent cinema and rise of the sound film. Building on Roy's study further, I also argue that *People on Sunday* is connected to the essay film because Siodmak and Ulmer's meta-cinematic implied sound appears to critique a contemporary crisis which was having a profound effect on all its creators' careers in the film industry.

Conclusion

To conclude, although scholars have studied German silent films from numerous different perspectives over the last seventy years, critics have not examined Weimar cinema implied sound in detail thus far. Throughout the course of this thesis, I argue that analysis of this sensory phenomenon can give us a new appreciation of German cinema of this period because we can connect its presence to the use of synaesthesia in contemporary paintings and significant coeval crises and movements within society and the arts. In an attempt to build on the pioneering work of Raynauld, Szaloky, Gellen and others over the course of the last twenty years, this study tackles implied sound in several areas of German silent cinema, including set design, dialogue and props. It demonstrates that directors and silent film musicians often approach implied sound in different ways, which can have a knock-on effect on our consumption of implied sound and our overall reception of silent film stories and

characters. Emerging just over a hundred years after many silent Weimar films were initially released in cinemas, this thesis allows us to look at German cinema of the era with fresh eyes by closely *listening* to a layer of inaudible sound that has, for the most part, remained out of our reach for decades. The emergence and popularity of home media and streaming platforms has, to a large extent, changed how we watch silent cinema. *Berlin*, *People on Sunday* and *Nosferatu* are no longer exclusively exhibited in cinemas and can instead be viewed on televisions, computer screens and mobile phones. Now that we have decided to view silent films in new ways, perhaps it is also time to *hear* them differently by studying their implied sound.

**Chapter One– The Blue Rider, F. W. Murnau and Implied Sound:
Rereading *Nosferatu: A Symphony of Horror* (1922) as a
Multisensory Silent Film**

Introduction: Synaesthesia, The Blue Rider and the Monumental Work of Art

Chapter One is concerned with F.W. Murnau's employment of implied sound in *Nosferatu, eine Symphonie des Grauens* (*Nosferatu: A Symphony of Horror*, 1922). I contend that Murnau uses this form of synaesthesia in order to produce a multisensory silent film that could break down and expand the representational borders of early twentieth century cinema. As I mentioned in the Introduction to this thesis, synaesthesia is a form of crossmodal perception that causes a small section of the world's population (see Curwen, 2018: p.94) to discern one or more additional senses when they are initially met with one (see Marks, 2000: p.213; Ward, 2013: p.50).³¹ For instance, individuals that are affected by this perceptual phenomenon could perceive a specific smell after hearing a particular sound or by looking at a certain colour. The term synaesthesia is also often applied to works of art that appear to contain senses that are usually considered alien to the discipline that they are featured in. During the late nineteenth and early twentieth century, modernist writers, painters and filmmakers continually introduced forms of synaesthesia into their respective artworks (see Yumibe, 2009: p.166; Birtwistle, 2010: p.224; van Campen, 2013: p.633; Jenkins, 2014: p.177). Painters associated with the Expressionist group *Der Blaue Reiter* (The Blue Rider, 1911-1914), such as Wassily Kandinsky, Franz Marc and Paul Klee, were particularly fascinated by the synaesthetic possibilities of art (see Vergo, 1977: p.10; Kandinsky, 1994e: p.159; DÜchting, 1997: p.22; Westerdale, 2010: p.154) and routinely created the phenomenon in their monumental

³¹ The word "synaesthesia" has Greek language origins and first appeared in an 1874 "medical dictionary" (Doran, 2009: p.240).

works of art, which attempted to unify the arts and senses in one mode of creative expression (see Kandinsky, 1994b: p.88; Düchting, 1997: pp.10-11) like a stage play. The Blue Rider group's pursuit of the monumental work of art was a vehicle for their desire to fundamentally break down and reshape the established boundaries of artistic expression (see Lankheit, 1974a: p.38; Lindsay and Vergo, 1994: p.15) in order to create spiritual art that was directed by the artist's soul (see Kandinsky and Marc, 1974: p.250; Macke, 1974: p.85; Casini, 2017: p.5). In connection to this, Murnau, who changed his name from Plumpe to Murnau after meeting and befriending Kandinsky and Marc in the Bavarian market town of Murnau (see Kalat, 2015: p.1; Jackson, 2013: p.20; Massaccesi, 2016: p.25), was eager to demolish the traditional artistic framework of silent cinema to ensure that the medium could blossom into a unique artistic mode of expression that was less reliant on older art forms like literature and theatre (see Lang and Murnau, 2016: p.499; Murnau, 2016: p.77). Despite this fact, critical discussion of Murnau's films, including *Nosferatu*, is regularly focused on their links to pre-existing artwork, particularly paintings that the director likely encountered while studying Art History at the University of Heidelberg or in Berlin's art galleries (see Eisner, 1973b: p.98; Smith, 2008: p.5; Massaccesi, 2016: p.74-75; Calhoon, 2021: p.187). For instance, commentators frequently contend that *Nosferatu*'s shots are inspired by Caspar David Friedrich's Romantic paintings (see Vacche, 1996: p.171; Jackson, 2013: pp.43-44; Calhoon, 2021: pp.3-4). Moreover, Angela Dalle Vacche argues that *Nosferatu* and paintings produced by The Blue Rider, both contain a "longing for something impossible or forever lost" (Vacche, 1996: p.167). In contrast to the significant research on *Nosferatu*'s apparent links to paintings, scholarly exploration of the film's implied sound is very limited, as most critics only highlight the musical connotations of the

film's subtitle (*A Symphony of Horror*) (see Unrau, 1996: p.234; Silver and Ursini, 1997: p.64; Roberts, 2008: pp.42-43; Laner, 2012: p.31; Massaccesi, 2016: pp.91-92).³² In this chapter, I try to expand commentators' examinations of *Nosferatu*'s links to paintings and their brief discussions of implied sound in the film by arguing that Murnau's use of the sensory phenomenon was an attempt to produce a synaesthetic silent film that could break down and remould the artistic parameters of cinema in order to enable the medium to divorce itself from other art forms and build a unique identity of its own. As Murnau developed close intellectual and personal relationships with members of The Blue Rider during the 1910s, while they were using synaesthetic sound to demolish and reshape artistic boundaries in their monumental works of art, I suggest that the director's multisensory approach to *Nosferatu* was directly influenced by the Expressionist group's contemporary artistic philosophy.

Along with *Das Cabinet des Dr. Caligari* (*The Cabinet of Dr. Caligari*, 1920), *Nosferatu* is often highlighted as one of the first, and most influential, horror films ever made (see Roberts, 2008: p.45). It is also the earliest film based on Bram Stoker's book *Dracula* (1897) and was an inspiration for the many adaptations and other vampire stories that followed the film's initial release in 1922 (see Frayling, 2001: *Nosferatu* Blu-ray; Kaes, 2009: p.105; Massaccesi, 2016: p.103). Although *Nosferatu* is the first film version of Stoker's vampire novel, and resembles its source material in many areas, it also significantly departs from the author's text, as screenwriter Henrik Galeen renamed the characters, chose new narrative settings and

³² Several other silent films produced in the 1920s also have musical subtitles. For instance, we find the word "song" in *Sunrise: a Song of Two Humans* (1927) and the term "symphony" in Walter Ruttmann's *Berlin: Die Sinfonie der Grosstadt* (*Berlin: Symphony of a Great City*, 1927).

altered the structure and content of *Dracula*'s plot.³³ To summarise, *Nosferatu* is set in the fictional German city of Wisborg in the year 1838. Hutter (Gustav von Wangenheim), an estate agent, is tasked by his employer Knock (Alexander Granach) to leave Wisborg and journey east to Count Orlok's (Max Schreck) castle in the Carpathian Mountains, in order to offer him the abandoned building that sits opposite Hutter and his wife Ellen's (Greta Schröder) house. When Hutter reaches the Carpathian Mountains he breaks his journey at an inn. During his stay, Hutter causes great distress to the locals when he states that he will be visiting Count Orlok's castle. Hutter soon arrives at the fortress and meets the decrepit and monstrous aristocrat. Count Orlok quickly becomes sexually interested in Ellen when he sees her portrait and creepily tells Hutter "your wife has a lovely throat". Meanwhile, Ellen seems to develop a mysterious illness that manifests itself at night and motivates her to sleepwalk and use telepathic communication. After being repeatedly attacked by his host, Hutter eventually realises that Count Orlok is a vampire. Thankfully for Hutter, Ellen saves her hapless husband by using telepathy. This act motivates Nosferatu (also Max Schreck) to sail to Wisborg on the Empusa in order to claim Ellen, while Hutter races the vampire to his wife on land. Although Hutter arrives in Wisborg before Nosferatu, the vampire spreads bubonic plague through the town. After reading an occult book on vampirism, Ellen summons Count Orlok to her room and sacrifices herself, in order to kill the vampire and save Wisborg's remaining healthy citizens.

³³ Galeen made these changes in an attempt to avoid *Nosferatu*'s production company, Prana Film, being required to pay the deceased author's estate for the film rights to *Dracula*. After *Nosferatu*'s initial release in 1922, Florence Stoker, Bram's widow, became aware of the existence of Murnau's film and sued Prana Film for breach of copyright (see Kalat, 2015: pp.3-5; St. Pierre, 2016: p.107). The court eventually ruled in the Stoker estate's favour and ordered the destruction of *Nosferatu*'s negative and any prints that could be located (see Frayling, 2001: *Nosferatu* Blu-ray; Jackson, 2013: p.95). Despite the court's decision, prints of *Nosferatu* managed to evade the authorities and the film appears to survive in its entirety today.

Throughout my study of implied sound in *Nosferatu*, I aim to answer a number of research questions. How is implied sound created in *Nosferatu* and to what degree is the phenomenon present in the film? To what length and how does Murnau's use of implied sound in *Nosferatu* evoke The Blue Rider artists' contemporary attempts to synaesthetically break down and reshape the representational borders of their artistic media? To what extent and how is Murnau's employment of implied sound in *Nosferatu* reminiscent of The Blue Rider artists' desire to merge the arts and the senses into monumental works of art in the early twentieth century? The questions that I intend to answer in this chapter are connected to my principal thesis question on the extent to which silent Weimar cinema implied sound is fundamentally influenced by the use of synaesthesia in contemporary paintings. In my later thesis chapters, I discuss how Weimar filmmakers' employment of implied sound evokes contemporaneous movements and crises in society and the arts. For example, in the chapter on *Berlin: Die Sinfonie der Grosstadt* (*Berlin: Symphony of a Great City*, 1927), I argue that Walter Ruttmann's implied sound is reminiscent of coeval Futurist positions on modern urban existence and technology. This chapter on *Nosferatu* adds a unique dimension to my thesis as it seeks to demonstrate that, besides offering us a window into broad coeval movements and crises, silent Weimar cinema implied sound is also influenced by The Blue Rider group's contemporary synaesthetic experiments that aimed to expand art's representational borders by amalgamating the senses in monumental works of art.

To aid me in answering my research questions, I have divided my chapter into three separate parts. In the introductory section, I explore neurological synaesthesia, our ability to perceive the cross sensory experience in everyday life

and its consistent presence in early twentieth century modernist art, such as implied sound in silent cinema. In particular, I survey the extensive use of synaesthesia in paintings produced by artists associated with The Blue Rider group, including Kandinsky and Marc, and Murnau's frequent employment of implied senses (touch, taste, smell and sound) in his lost and surviving films like *Der Bucklige und die Tänzerin* (*The Hunchback and the Dancer*, 1920), *Schloß Vogelöd* (*The Haunted Castle*, 1921) and *Faust: Eine deutsche Volkssage* (*Faust: A German Folk Tale*, 1926). Throughout this section, I connect The Blue Rider's use of synaesthesia to their attempts to eliminate and expand the representational borders of artistic media by producing monumental works of art that synthesised the arts and senses. I also suggest that the regular presence of synaesthesia in Murnau's silent films denotes the director's contemporary desire to demolish cinema's reliance on techniques associated with the other arts and to help it build a unique identity of its own. Since Murnau developed and maintained personal and intellectual relationships with several key members of The Blue Rider before he became a filmmaker, this section also begins to suggest that Murnau's multisensory approach to *Nosferatu* was directly influenced by the group's use of synaesthesia to fundamentally reshape the boundaries of artistic media. In the second part of my chapter, I analyse three scenes from *Nosferatu* that feature implied sound invading and exiting Murnau's camera frame and draw comparisons with similar employments of the phenomenon in paintings produced by artists associated with The Blue Rider. I argue that Murnau and the artists use this form of synaesthesia to physically break down the frames (camera and canvas) of their artworks (*Nosferatu* and paintings) and to metaphorically indicate a broader desire to reconfigure the parameters of art through the synthesis of the senses. The third and final portion of this chapter studies the

‘loud’ implied sound that is frequently created by vehicular travel in *Nosferatu* and the paintings of The Blue Rider group. Throughout this section, I suggest that we can interpret these synaesthetic journeys as metaphors for Murnau’s and the artists’ desire to *transport* their artistic media in new creative directions.

As I explained at the beginning of this chapter, Synaesthesia is a cross-sensory phenomenon that causes those affected by the condition to experience further senses when perceiving an initial one (see Marks, 2000: p.213; Ward, 2013: p.50; Mollaghan, 2015: p.10; Earl, 2020: p.467).³⁴ A synaesthete, for example, could detect a particular smell when confronted with a specific sound or, alternatively, discern a distinct taste when they touch a certain object.³⁵ Although this neurological condition is only manifest in an extremely small portion of society (see Simner, 2012: p.1; Ward, 2013: p.50), as little as “four percent of the population” (Curwen, 2018: p.94), non-synaesthetes can often experience the phenomenon (see van Campen, 2013: p.635) in a variety of different circumstances and emotional states. In connection to this, Silvia Casini states that humans:

can feel goose bumps not only when it is chilly but also in the presence of disturbing or emotional images or when hearing the sudden scratch of chalk across the blackboard. This means that we are all synesthetes, albeit not in a strictly neurological sense (Casini, 2017: pp.1-2).³⁶

³⁴ The condition can be present throughout the course of a person’s life or develop later due to a particular circumstance like the loss of sight or hearing (see Ward, 2013: p.51).

³⁵ Although synaesthesia is typically considered to be strictly sense-based, the condition can also affect individuals in other ways (see Simner, 2012: p.2; Ward, 2013: p.50). In connection to this, Caroline Curwen notes that “some common forms [of synaesthesia] result in an experience of colours and spatial layouts in association with days of the week or calendar months; neither months, nor days of the week, can be described as delivering any sensory input, *per se*” (Curwen, 2018: p.94).

³⁶ Moreover, in everyday life, colours are often described in a haptic or sonic fashion despite not having any obvious ties to the senses of touch and sound. For instance, we may say that specific colours are ‘warm’ or ‘cold’ and call particularly striking colours ‘loud’.

Since most people have experienced goose bumps or another form of synaesthetic perception during their lifetimes, it is no surprise that the phenomenon has been consistently studied for thousands of years. For instance, prominent thinkers from the Age of Antiquity, including Pythagoras, were fascinated with the connections that colours and sounds seem to share (see DÜchting, 1997: p.12; Casini, 2017: p.5).³⁷ Philosophical, scientific and artistic interest in synaesthetic perception grew substantially during the 1800s and at the start of the 1900s as part of a backlash against “positivist epistemologies that venerated quantifiable data” (Yumibe, 2009: p.165). During this period, artists viewed synaesthesia as a tool that could help them investigate “inner, nonrational, and subjective consciousness” (Earl, 2020: p.464). The sensory phenomenon also gave them the opportunity to challenge the contemporary isolation of the senses in new media like the telephone (sound) and cinema (vision). Synaesthesia is particularly prevalent in late nineteenth century Symbolist art, including the illusory and dreamlike poetry of Charles Baudelaire and Arthur Rimbaud.³⁸ For example, in the former’s *Correspondances* (*Correspondences*, 1857), he states that the noises of a tranquil forest are “[s]weet like an oboe” (Baudelaire, 2019: p.10), which implies that sounds have the power to stimulate tastes.³⁹ Furthermore, since “[m]ysterious music tumbles from the golden stars” (Rimbaud, 2001: p.31) in the latter’s *Ophelia* (1870), the poet seems to

³⁷ As Joshua Yumibe notes, many of these ancient philosophers held the belief that colours “have the potential to provoke one physiologically to hear music, even in silence” (Yumibe, 2009: p.164).

³⁸ Synaesthesia has also been observed in the work of many other writers from this era, including the poems of Arpad Toth (see Szaloky, 2002: p.113) and the plays by August Strindberg (see Bjorkin, 2001: p.35). The sensory phenomenon is particularly apparent in the modernist writings of Virginia Woolf, such as her novels *Mrs Dalloway* (1925) and *To the Lighthouse* (1927). For example, in the former text, Woolf refers to the booming sounds of Big Ben’s bells as “leaden circles” (Woolf, 2012: p.1171), which implies that these noises are somehow heavy and thus tangible. Holly Earl notes that Woolf’s use of synaesthesia could be read as a “unified alternative to the atomization of the human senses under the conditions of modernity, countering the capacity of the new sensory technology [(telephones, phonographs and other forms of new media)] to ‘reproduce the real’ via a prosthesis” (Earl, 2020: p.464).

³⁹ In *Ophelia*, Rimbaud also suggests that sound is fundamentally linked to taste. “Ophelia has moved down the long black river. A thousand years or more her sweet song Of madness has charmed the evening air” (Rimbaud, 2001: p.29).

suggest that colours have the capacity to induce sound. In addition to Baudelaire's and Rimbaud's writings, synaesthesia is also apparent in Symbolist paintings, such as those created by the Norwegian artist Edvard Munch. In *Skrik (The Scream, 1893)* (Figure 7), for instance, Munch visually implies sound to the spectator through the warped open-mouthed contortion of the canvas' central figure.⁴⁰

To a greater extent than the Symbolist artists discussed above, painters associated with The Blue Rider group routinely imbued their artwork with forms of synaesthesia. The Expressionist organisation was formed by Kandinsky, Marc and Gabriele Münter in Munich (see Massaccesi, 2016: pp.17-18) after the trio broke away from the *Neue Künstlervereinigung München (N.K.V.M.)* exhibiting group in 1911, due to members barring Kandinsky's abstract painting *Komposition V* (*Composition V, 1911b*) from exhibition (see Lankheit, 1974a; p.13; Zweite, 1992: p.13).⁴¹ Besides Kandinsky, Marc and Münter, The Blue Rider was also home to other creative personnel, such as the painters Klee, August Macke and Marianne von Werefkin, the dancer Clotilde von Derp and the composer Arnold Schoenberg. In addition to having members from several different artistic modes of expression, The Blue Rider artists that worked within the same discipline also used different creative techniques and thus produced contrasting artwork. As Peter Vergo notes,

Münter's paintings are lyrical and uncomplicated; throughout her long life, her art remained firmly rooted in the world of natural appearances.

⁴⁰ Helen Groth, Julian Murphet and Penelope Hone link the creature's warped screaming face to the significant impact that technological sounds had on everyday life during modernity. "Let Edvard Munch's great painting *The Scream* stand as an indicative aesthetic testimony to the prodigious affective impact of auditory phenomena wound to the pitch of mental crisis across this entire period" (Groth, Murphet, Hone, 2017: p.1).

⁴¹ *Composition V* was exhibited at The Blue Rider's first public showcase on 18th December 1911 in Munich. In addition to featuring artwork from Kandinsky, the showcase also contained paintings from Marc, Macke, Münter, Schoenberg and many other artists. The exhibition moved on to other German galleries soon after its debut in Munich and eventually travelled abroad in 1914 (see Lankheit, 1974a: p.14; Lindsay and Vergo, 1994: p.110).

Kandinsky's work of the Blue Rider period is highly abstracted, and of a deeply religious, even mystical, significance. [...] Abstraction and mysticism, remained essentially foreign to both Marc and Macke. Marc's aim was what he called the 'animalization of art', rendering nature as perceived through animals' eyes (Vergo, 1977: p.10).

Since members of the circle came from different creative disciplines and had dissimilar expressive techniques, critics often argue that The Blue Rider group does not have a homogenous artistic style, unlike contemporary factions like *Die Brücke* (The Bridge) (see Overy, 1969: p.19; Carroll, 2010: p.3), an Expressionist group of German artists. However, one tenet that does bind many of The Blue Rider painters together, and the members of the N.K.V.M. for that matter, is their desire to break down and reshape the traditional creative parameters of the arts (see Lankheit, 1974a: pp.11-13; Vergo, 1977: p.3). In connection to this, Marc claims that they were involved in a "great struggle for a new art [...] [and fought] like disorganized 'savages' against an old, established power" (Marc, 1974: p.61).⁴² For Kandinsky, materialism represented the most significant obstacle for artists to overcome because he believed that it discounted the innate spiritual currents in life and the arts.

Barriers destroy freedom and thereby prevent the possibility of hearing the new revelation of the spirit.

These barriers are continually being made out of those new values which have overturned the barriers of the past. [...]

⁴² Marc's archaic remarks reflect early twentieth century racial prejudices. I do not endorse his discriminatory language.

Thus one sees that it is not in the form (materialism) that the absolute is to be sought (Kandinsky, 1994d: pp.236-237).⁴³

Kandinsky's firm desire to demolish art's materialist "barriers" is particularly apparent in his many mystical paintings that feature the horse and rider motif, which is often interpreted as a symbolic representation of the artist's (rider) creative control over their medium (horse) (see Butler, 1994: pp.38-39; Lindsay and Vergo, 1994: p.23). In Kandinsky's *Cover-Design für Der Blaue Reiter Almanach (Cover Design for The Blue Almanac, 1911a)* (Figure 8), an ethereal white horse with a humanlike figure atop it vertically gallops into a sea of garish colours and patterns. If we accept the above interpretation of the artist's use of the horse and rider theme and apply it to this painting, we could infer that Kandinsky (the humanlike rider) is attempting to manoeuvre painting (the ethereal horse) towards abstraction (the garish colours and patterns), thus dismantling the medium's materialist barriers.

Another element that ties The Blue Rider artists together, and demonstrates their desire to break down the representational walls of the arts, is their consistent creation of synaesthetic paintings. This is especially true of The Blue Rider work produced by Marc and Kandinsky, who commentators widely acknowledge as the driving forces behind The Blue Rider organisation (see Overy, 1969: p.19; Lankheit, 1974a: p.15; Vergo, 1977: p.3) throughout its three year lifespan (1911-1914). For example, Marc's *Der Traum (The Dream, 1912b)* (Figure 9a) and *Caliban (aus Shakespeares Der Sturm) (Caliban (from Shakespeare's The Tempest), 1914)* (Figure 9b) respectively depict an open-mouthed lion and a human-like monster,

⁴³ Ironically, although Kandinsky and Marc were determined to demolish barriers in the arts while part of the N.K.V.M. and The Blue Rider, critics and the general public attempted to 'wall off' the groups' paintings as they found them to be profoundly offensive and degenerate when they were exhibited in the years leading up to the start of the First World War (see Vergo, 1977: p.4). Recalling the reactions to the groups' showcases later in life, Kandinsky notes that "in those days, the public 'raised walls' and was agitated to the very depth of its soul [...]. People felt reviled, better still, they spat on our works" (Kandinsky, 1994c: p.795).

which suggest roaring and screaming sounds to the beholders of the artworks. Furthermore, in many of Kandinsky's abstract paintings from The Blue Rider period, such as *Improvisation 26* (1912) (Figure 10a) and *Komposition VI* (*Composition VI*, 1913) (Figure 10b), the artist inserts six closely-aligned long lines amongst the assortment of garish shapes and colours on his canvases, which visually resemble the strings found on traditional six string guitars. Consequently, the presence of guitar-like strings, the elements of the instrument that produce noises through vibration, visually implies the existence of musical sounds in Kandinsky's paintings.⁴⁴ Although it is difficult to determine whether Kandinsky intended these guitar-like strings to be synaesthetic, the abstract artist was convinced that he could create "the rhythmic, melodic and harmonic energy of music" (Overy, 1969: p.61) through his use of colour on his canvases, because he believed it has the innate capacity to "influence the entire human body" (Kandinsky, 1994e: p.159) and not just the eyes. For instance, Kandinsky claims that certain colours can be linked to particular musical instruments. "[L]ight blue resembles the flute, dark blue the 'cello, darker still the wonderful sounds of the double bass; while in deep, solemn from the sound of blue can be compared to that of the deep notes of the organ" (Kandinsky,

⁴⁴ In addition to building friendships with The Blue Rider artists, Murnau was also a close companion (see O. Plumpe, in Eisner, 1973a: p.24) and housemate of the painter, dancer and musician (see Berriatúa, 2007: *Faust* Blu-ray) Walter Spies during his filmmaking career in Germany. Spies belonged to the *Novembergruppe* (The November Group) (see Berriatúa, 2007: *Nosferatu* Blu-ray), which, like The Blue Rider, contained members from a variety of different creative disciplines, including painting, music and sculpture. Furthermore, in connection to Blue Rider painters like Kandinsky and Marc, many of Spies' paintings, including *Das Karusell* (*The Merry-go-round*, 1922) and *Balinesische legende* (*Balinese Legend*, 1929), contain synaesthetic sound. The mural of a deer hunt that Spies painted on Murnau's office wall in their home (see Diekmann, in Berriatúa, 2008: *Early Murnau* Blu-ray) also contains this particular form of synaesthesia as the deer and horses are galloping in the scene. Spies was employed as an "artistic advisor" on *Nosferatu* and was responsible for introducing Murnau to Hans Erdmann, the composer of the film (see Berriatúa, 2007: *Nosferatu* Blu-ray).

1994e: p.182).⁴⁵ In connection to this, when describing his painting *Alte Stadt (Old Town II, 1902)* (Figure 11), he states that:

[t]he sun dissolves the whole of Moscow into a single spot, which, like a wild tuba, sets all one's soul vibrating. No, this red fusion is not the most beautiful hour! It is only the final chord of the symphony, which brings every color vividly to life, which allows and forces the whole of Moscow to resound like the *fff* of a giant orchestra. Pink, lilac, yellow, white, blue, pistachio green, flame red houses, churches, each an independent song—the garish green of the grass, the deeper tremolo of the trees, the singing snow with its thousand voices, or the *allegretto* of the bare branches, the red, stiff, silent ring of the Kremlin walls, and above, towering over everything, like a shout of triumph, like a self-oblivious hallelujah, the long, white, graceful, serious line of the Bell Tower of Ivan the Great (Kandinsky, 1994f: p.360) (emphasis in original).

The Russian artist also asserts that colours are tangible as they can induce a wide variety of touch sensations.

Many colors have an uneven, prickly appearance, while others feel smooth, like velvet, so that one wants to stroke them (dark ultramarine, chrome-oxide green, madder). Even the distinction between cold and warm tones depends upon this sensation. There are also colors that appear soft (madder), others

⁴⁵ Another member of The Blue Rider, the composer Schoenberg, concurred with Kandinsky's argument that colours are comparable with music. In a letter to Kandinsky dated 14th December 1911, Schoenberg states "[y]ou are certainly right about so many things, particularly what you say about color in comparison to musical timbre. That is in accord with my own perceptions" (Schoenberg, 1911, in Kandinsky and Schoenberg, 1984: p.38). Although he was not directly affiliated with The Blue Rider, the contemporary composer Alexander Scriabin also contended that colours were linked to music. For his tone poem *Poema Ognya (Prometheus: The Poem of Fire, 1911)*, the composer used a *clavier à lumières* (colour organ) to match specific keys with particular colours. When the keys were pressed during a performance, the corresponding colours were made visible to the audience (see Sabaneiev, 1974: pp.131-133).

that always strike one as hard (cobalt green, green-blue oxide) (Kandinsky, 1994e: p.159).

In addition to the synaesthetic power of colours, Kandinsky also suggests that written words are able to create specific taste sensations when read. In a letter to the Schoenberg regarding one of the composer's articles, *Probleme des Kunstunterrichts* (*Problems in Teaching Art*, 1911), Kandinsky said "[t]he beginning of 'Teaching' is unbelievably fine[.] [...] One would like much more of that: it tastes so good" (Kandinsky, 1911, in Kandinsky and Schoenberg, 1984: pp.32-34). Since Kandinsky firmly believed that visual phenomena (colours and words) have the inherent ability to stimulate the senses of sound, touch and taste, critics have consistently argued that he was an undiagnosed synaesthete (see DÜchting, 1997: pp.19-20; Vergo, 2003: p.53; Birtwistle, 2010: p.223; Just, 2017: p.447). Although this theory could be accurate, Kandinsky's, and other Blue Rider artists', interest in synaesthesia "was often inflected by idealist and/or occult desires to experience the spiritual through the sensual" (Yumibe, 2009: p.173).⁴⁶ In relation to this point, Macke, Kandinsky's Blue Rider colleague, argues that "[t]he senses are our bridge between the incomprehensible and the comprehensible" (Macke, 1974: p.85). As I outline in detail below, and although they did not connect synaesthesia to spiritualism and occultism, German silent film directors, including Murnau, shared The Blue Rider group's fascination with the sensory experience, particularly synaesthetic sound (implied sound), as they continually utilised it to develop new and creative storytelling techniques throughout the 1920s, which fundamentally reshaped the expressive parameters of the cinematic medium.

⁴⁶ Kandinsky heavily criticised artists that sought to accurately depict the material world as their work did not attempt to explore arts connections to spiritualism (see Kandinsky, 1994g: p.98).

Concrete discussions surrounding the synaesthetic potential of silent cinema began to surface in Germany during the three-year Blue Rider period. In 1913, the German film producer Julius Pinschewer, who made numerous silent advertising films, argued that cinema “is capable of showing [...] how chocolate tastes” (Pinschewer, 1913, in Goergen, 1996: p.169). We can observe Pinschewer attempting to prove this sensory assertion in many of the animated adverts that he produced in collaboration with director Walter Ruttmann during the 1920s. In *Das Wunder (The Wonder, 1922)*, for instance, which advertises *Kantorowicz-Liköre* (an alcoholic drink), the filmmakers use their visuals to suggest the senses of sound and taste to their audience. Two large animated male heads photographed in a close-up profile shot stare at each other sternly and move their mouths up and down quickly in turn as if they are shouting at each other, until they each drink from a bottle of liquor and begin to smile before kissing one another, which implies that the beverage has a pleasant taste (Figure 12).⁴⁷ Just three years after Pinschewer claimed that silent film could produce synaesthetic tastes, his compatriot, the psychologist Hugo Münsterberg, recognised the presence of synaesthetic sound (implied sound) in cinema. Münsterberg condemned theater managers that used audible sound effects during exhibition arguing that:

they ought to be ruled out as intrusions from another sphere. We might just as well improve the painting of a rose garden by bathing it in rose perfume in order that the spectators might get the odor of the roses together with the

⁴⁷ Another silent animated commercial created by Pinschewer and Ruttmann that prominently features synaesthesia is *Der Aufstieg (The Climb, 1926)*, which was made to promote the 1926 GESOLEI trade fair in Düsseldorf. Towards the start of the advert, the filmmakers repeatedly insert brief animated yellow flashing shapes to mimic the explosions of shells on First World War battlefields, which create several ‘loud’ implied sounds. Later on in the film, Pinschewer and Ruttmann create synaesthetic taste when a glum animated man suddenly begins to smile as he is spoon-fed some soup, as this close-up profile shot visually suggests that the food tastes good.

sight of them. The limitations of an art are in reality its strength and to overstep its boundaries means to weaken it (Münsterberg, 1916: p.87).

With this statement, the psychologist appears to suggest that the medium did not need audible sound effects as silent film implied sound already offered spectators a rich experience since it gave them the freedom to craft their own internal impressions of visual noises depicted on the cinema screen, an assertion that I examine in more detail in the Conclusion to this thesis. Several other commentators have also highlighted the presence of the sensory phenomenon in silent German films, especially those produced during the Weimar Republic (see Jenkins, 2014: p.177). In connection to this, Rudolf Kurtz and Siegfried Kracauer consider the rhythmic movement of shapes in Ruttmann's animated *Opus* films (1921-1925) to be profoundly musical (see Kracauer, 2004: p.68; Kurtz, 2016: p.107). Paul Coates also argues that Fritz Lang's *Metropolis* (1927) has "the synaesthetic power [...] to enable one to hear with one's eyes" (Coates, 1991: pp.43-44). One of the most obvious examples of synaesthesia (sound and touch) in *Metropolis* occurs towards the end of the film in a shot that depicts an explosion in a worker tenement building. As Freder (Gustav Fröhlich) and Maria (Brigitte Helm) climb flights of stairs in order to escape rising flood water in the workers' underground city, they are abruptly thrown to the ground by a blast from below. Lang visually emphasises the physical force and noise of the explosion by synchronising it with an 'unchained' camera movement that floors Freder and Maria as it swings towards them at great speed from the direction of the blast.⁴⁸ Although synaesthesia is present in many pictures produced in Weimar

⁴⁸ Synaesthesia is routinely present in many of Lang's other silent films, including the *Die Nibelungen* (*The Nibelungen*, 1924) film series. For instance when one of the film's principal characters, Siegfried (Paul Richter), is killed by a spear wielded by the villainous Hagen (Hans Adalbert Schlettow), Lang visually highlights the senses of touch and sound simultaneously as Siegfried screams and writhes around in agony for over thirty seconds of screen time before finally succumbing to his grievous wounds.

Germany, including *Metropolis* and Ruttmann's animated films, it is particularly prevalent and noticeable in the silent pictures that Murnau directed throughout his short lived career and life, which I will outline in detail soon.

A primary reason for Murnau's filmic fascination with synaesthetic perception could be due to him possessing particularly sensitive and expressive sensory organs. Murnau's niece, Eva Diekmann, recalls that her grandmother (Otilie Plumpe), Murnau's mother, "used to say that his hearing was excellent" (Diekmann, in Berriatúa, 2008: *Tabu* Blu-ray). Furthermore, Camilla Horn, who plays Gretchen in Murnau's *Faust*, wrote in her 1985 autobiography that she "was spellbound by his lips, his eyes" (Horn, 1985, in Berriatúa, 2007: *Faust* Blu-ray) during the shooting of his final German film. In addition to this, and in contrast to many other contemporary filmmakers, Murnau tightly controlled the noise present on his silent film sets. Robert Herlth, who regularly worked on Murnau's silent films as an art director, remembered that when he first arrived on one of the director's sets he:

was very much surprised at how quiet it was. For in the days of silent films it was the custom to build sets while the shooting was actually going on, while there was usually a crowd of people talking at the tops of their voices, people who were there simply out of curiosity and had nothing to do with the actual shooting. But here there was no one to be seen but the cameramen and one of the actors, Alfred Abel, and also, standing in the dark out of the way, a tall slim gentleman in his white work-coat, issuing directions in a very low voice.

This was Murnau (Herlth, in Eisner, 1973a: p.59).⁴⁹

⁴⁹ The film will have been *Der Brennende Acker* (*The Burning Soil*, 1922), *Phantom* (1922) or *Die Finanzen des Großherzogs* (*The Finances of the Grand Duke*, 1924) as these are the only Murnau films that feature Abel as an actor. Herlth was an art director on *The Last Laugh*, *Tartuffe* and *Faust*. He was also the production designer on Murnau's lost Hollywood film *4 Devils* (1928).

Although he limited the noise on set in-between takes, as Herlth notes above, Murnau routinely used music to guide the performances of his actors when the cameras started rolling. In relation to this point, the anonymous writer of the *Sunrise: a Song of Two Humans* (1927) pressbook, which is available at British Film Institute (BFI) Reuben Library, notes that:

[m]usic was used while the cameras were grinding. These musical selections were carefully chosen to fit the emotional shadings of the scenes, and incorporated into the synchronisation of the Fox Movietone. In this way the emotional effects transmitted to the players while working and by them reflected on the screen are likewise transferred to the movie audiences (Fox Film Corporation, c.1927: p.4).⁵⁰

Murnau's close supervision of the sensory atmosphere on his sets was keenly felt by some of his actors, who believed that his approach to silent film direction was fundamentally underpinned by the senses. For instance, Janet Gaynor, who played the female lead (the Woman) in *Sunrise*, stated that "[m]any a day, after leaving the studio while I was working on 'Sunrise,' I went home with my senses numb and utterly weary after what the cameras, to speak figuratively, drew from me" (Gaynor, c.1927, in Fox Film Corporation: p.4). Although it is thought to no longer survive, Murnau's sensory outlook on filmmaking, which Gaynor notes, and particularly his penchant for synaesthetic perception, was first apparent in *The Hunchback and the Dancer*, a silent film that was structured around the sense of smell. As Luciano

⁵⁰ Music was also utilised as a means to shape actors' performances in the silent films that Murnau directed in Germany. Luciano Berriatúa states that the filmmaker used Johann Sebastian Bach's music to extract a sorrowful performance from Horn in *Faust* (see Berriatúa, 2007: *Faust* Blu-ray). Many other silent film filmmakers also used on-set music to help their actors inhabit the characters that they were playing (see Milsome, 1979: p.121). For instance, Thea von Harbou, Lang's wife and regular screenwriter for his films, often played the piano on the set of *Metropolis* (see Kettelhut, in McGilligan, 1997: p.92). The film's composer, Gottfried Huppertz also played the piano during shooting and used the opportunity to organically develop the film's score as it was being filmed (see Audissino, 2016: p.49).

Berriatúa notes, the film focused on a male Kyphosis sufferer, James Wilton (John Gottowt), who uncovers a Javanese diamond mine and then tries to seduce a dancer, Gina (Sascha Gura), with a South East Asian perfume of his own creation (see Berriatúa, 2007: *Nosferatu* Blu-ray). An anonymous coeval *Film-Kurier* journalist praises Murnau's direction in the film because he "makes you believe you can actually smell the odour emanating from the hunchback's Javanese perfume" (Anon, 1920, in Elsaesser, 2000: p.225).⁵¹ Besides synaesthetic smell, Murnau also uses his silent film visuals to suggest the sense of taste to his audience. The most obvious examples of this form of synaesthesia in Murnau's cinematic oeuvre can be found in *Nosferatu*, as the film heavily revolves around Count Orlok's and Knock's insatiable appetite for human and animal blood. For instance, during Knock's captivity in Wisborg's insane asylum, the estate agent, who is seemingly in Count Orlok's power throughout the film, repeatedly plucks flies out of the air and consumes them with a smile in medium shot, which implies that he approves of the insects' taste. Touch synaesthesia also plays a significant role throughout Murnau's *Nosferatu*. Towards the end of the film when Ellen is cornered by Count Orlok in her bedroom, the vampire's hand reaches forward in shadow and grasps the heroine's heart (the left side of her chest) in a medium shot, which seemingly paralyses her body and allows him to begin feeding on her blood, and directly leads to his downfall in the rays of the morning shortly thereafter (Figure 13).⁵² Although synaesthetic smell, taste and touch have important functions in Murnau's work, implied sound is the most

⁵¹ Murnau also imbued his later silent work with synaesthetic smell. When viewing the relatively recent restoration of *Tabu: A Story of the South Seas* (1931), Murnau's last picture, Scott Eyman states that "you can practically smell the frangipani blossoms emanating from the [screen]" (Eyman, 2013: p.20).

⁵² Many other less significant examples of visually implied touch sensations are perceptible in other silent films directed by Murnau. For example, in *The Haunted Castle*, one of Murnau's earliest surviving films, a monstrous gigantic hand abducts a minor character (Julius Falkenstein) from his bed and carries him out of a window during a brief nightmare sequence.

common and significant form of synaesthesia in his silent films as the director routinely uses it as a device to develop his characters and to introduce new plot points to the audience. Melinda Szaloky recognises that “[e]very significant moment in [*Sunrise*’s] narrative is expressed acoustically” (Szaloky, 2002: p.127) to the audience. In connection to this, Laura Marcus has recently noted that the Woman from the City’s (Margaret Livingston) whistle to the Man (George O’Brien) towards the start of *Sunrise* significantly develops Murnau’s plot. This is because the implied sound motivates the character to leave the company of the Woman (Janet Gaynor), his wife, and meet the Woman from the City in order to plot his spouse’s death and their subsequent elopement (see Marcus, 2022: p.113).⁵³ Moreover, in Murnau’s *Der Letzte Mann* (*The Last Laugh*, 1924) the scream of the doorman’s (Emil Jannings) neighbour (Emmy Wyda) upon realising that he has been demoted to the hotel’s washroom attendant, which is communicated by an ‘unchained’ camera movement towards her open mouth, is the catalyst for the misery and shame that he is mired in for most of the film’s second half, as the neighbour’s shock prompts her to spread the embarrassing news to all their friends and family.⁵⁴ Furthermore, for the duration of most of *City Girl*’s (1930) runtime, the father (David Torrence) of the protagonist

⁵³ Another example of implied sound that contributes to character development in Murnau’s *Sunrise* occurs shortly after the Man has stopped himself from killing the Woman in order to elope with the Woman from the City. Once aboard a trolleybus that is bound for the city, the married couple stand in complete silence and do not notice the conductor tapping on their cabin’s glass for several seconds. The couple’s failure to register the conductor’s implied sound demonstrates their new preoccupations with feelings of guilt and terror, which will pervade for a substantial portion of the film’s remaining runtime.

⁵⁴ As many scholars, including Mark Cousins, Ian Roberts and Marcus have recognised, Murnau creates implied sound on several other occasions in *The Last Laugh* through ‘unchained’ camera movements. The most widely discussed examples of the phenomenon in the film are those found in the scenes that depict the drunken trumpet blowing (see Cousins, 2004: p.30; Roberts, 2008: p.41) and the gossip between the tenement neighbours regarding the demotion of the doorman to washroom attendant at the hotel (see Marcus, 2022: pp.110-111). Murnau’s implied sound also plays a significant narrative role in *Faust*. As I mentioned in the Introduction to this thesis, Gretchen (Camilla Horne) screams for her lover Faust’s (Gösta Ekman) help towards the end of the film as she lays freezing with their baby in the winter snow. Her superimposed wailing face flies across a mountain range until it reaches Faust and alerts him to her dire straits, which prompts his unsuccessful attempt to save her from death at the hands of a town mob that want to burn her at the stake for ‘deliberately’ killing the baby in the snowy wastes.

Lem (Charles Farrell) is cantankerous to most characters that he comes into contact with, especially his son who he views as an imbecile that is incapable of carrying out his duties as a member of a farming family. However, towards the end of the picture, when Lem's father is deserted by his farmhands at a crucial moment during the harvest, the character suddenly changes his temperament (becoming caring and warm) after hearing Lem scream "FATHER" (the word speeds towards the audience in an intertitle) when being mistaken for a deserter and targeted by his father's rifle fire, which is inaccurate and leaves Lem uninjured (Figure 14). Consequently, the protagonist's 'loud' and panic-stricken implied sound, which we infer through Murnau's use of capital letters and animation, is responsible for fundamentally transforming the *character* of Lem's father. As the above evidence illustrates, both Murnau and the artists associated with The Blue Rider routinely used forms of synaesthesia in their respective early twentieth century artworks (silent films and paintings). Throughout this chapter, as I mentioned earlier, I argue that Murnau's employment of the sensory phenomenon began to take shape in *Nosferatu* and was heavily influenced by the synaesthetic art and philosophy of The Blue Rider painters, particularly Kandinsky and Marc, who he met and befriended (see Vacche, 1996: p.163; Jackson, 2013: p.20; Massaccesi, 2016: p.25) in the Bavarian market town Murnau, while studying Art History at the University of Heidelberg (1905-1910) before the start of his filmmaking career (see R. Plumpe, in Eisner, 1973a: p.16; Kalat, 2015: p.1).⁵⁵ In addition to directly motivating him to change his surname

⁵⁵ Münter and Kandinsky lived together in a small house that she owned in Murnau during this period. Many members of The Blue Rider would visit them there, including von Werefkin and Alexei von Jawlensky (see Overy, 1969: p.20; Lankheit, 1974a: p.40; Vergo, 1977: p.3; Golleck, 1979: p.11). The scenery and atmosphere in the town inspired the artists paintings and their changing styles in the years leading up to the formation of The Blue Rider in 1911 (see Overy, 1969: p.61; Vergo, 1977: p.3) and was where they continued to paint and discuss ideas as a group from 1911-1914 (see Lankheit, 1974a: p.18). As Rosel Golleck notes, their residency in Murnau was "a time of transition and a search for new forms of expression" (Golleck, 1979: p.11). Anton Kaes and Berriatúa claim that Murnau was introduced to the artists by the poet Hans Ehrenbaum-Degele (see Kaes, 2009: p.92;

from Plumpe to Murnau in 1910 (see Elsaesser, 2001: p.3; Berriatúa, 2007: *Nosferatu* Blu-ray; Jackson, 2013: p.21), I suggest that the time he spent with the artists in the town encouraged him to use implied sound in *Nosferatu* to challenge cinema's traditional reliance on older art forms and to help the medium craft a unique artistic identity of its own, which, as I explain below, is rooted in sensory synthesis.

The practice of synthesising the arts and senses into one homogenous form of creative expression dates back to the Age of Antiquity (see van Campen, 2013: p.633). In Ancient Greece, for example, potters routinely painted people playing woodwind and string instruments on the sides of their vases (see Hahn, 2015: p.35) and playwrights combined music and stage aesthetics to produce tragedies (see Stein, 1960: p.3), such as *Antigone* (c.441 BC) and *Oedipus Rex* (c.429 BC) by Sophocles. During the eighteenth and nineteenth century, Romantic artists and philosophers became increasingly interested in the creative possibilities that artistic synthesis could potentially provide. As Jack Madison Stein notes:

[t]he Romantics longed for a synthesis of the arts, and [Ludwig] Tieck, [Wilhelm Heinrich] Wackenroder, Novalis, [Franz] Brentano, [E. T. A.] Hoffmann, [Philipp Otto] Runge and others either theorized about synthesis or experimented in it with mixed results (Stein, 1960: p.5).

During this historical period, the German Romantic composer and theatre director Richard Wagner was the leading figure in the revival of theatre-based synthetic art

Berriatúa, 2007: *Nosferatu* Blu-ray). Kandinsky, Marc, Münter may have been part of the aforementioned N.K.V.M. (1909-1912) organisation when they initially met Murnau at some point before the start of the First World War. It is unclear how much time Murnau spent with the artists once they formed The Blue Rider in 1912. However, it is likely that he visited them, or at least corresponded with the group, since he developed a particularly close friendship with Marc during his time as a student (1905-1910) (see R. Plumpe, in Eisner, 1973a: p.16; Vacche, 1996: p.163; Jackson, 2013: p.20; Massaccesi, 2016: p.25).

(see Collier, 1988: p.23). Wagner wanted to unite the arts because he believed that these collective art works “would create an overall impression more powerful than that produced by each individual art in isolation” (Vergo, 2003: p.53).⁵⁶ In his mid nineteenth century texts *Die Kunst und die Revolution* (*Art and Revolution*, 1849b) and *Das Kunstwerk der Zukunft* (*The Artwork of the Future*, 1849a), Wagner introduces the term *Gesamtkunstwerk* (total work of art) to describe his desire to merge the arts, including theatre, dance and music, into a single artistic entity (see Dobrenko, 2016: p.209; Brown and Dissanayake, 2018: p.1).⁵⁷ Besides fusing the arts into one cohesive creative product, Wagner also claimed that the total work of art should amalgamate the senses because human perception of the world is entirely grounded in the five senses (see Collier, 1988: pp.25-26; Halliday, 2013: p.10). The creative possibilities that Wagner’s conception of the total work of art opened up inspired new generations of artists in the late nineteenth and early twentieth century to pursue the full or partial synthesis of the arts and senses (see Vergo, 1977: p.6). For instance, as Robert Michael Brain notes “Symbolist artists smitten with Wagner’s ideal developed aesthetic techniques to produce fusions between senses, especially the eye and ear” (Brain, 2010: p.16). Furthermore, painters from a variety of other movements from this period, such as Claude Monet (Impressionism) Vincent Van Gogh and Paul Gauguin (Post-Impressionism), Piet Mondrian (De Stijl) and Robert Delaunay (Orphism), followed Wagnerian artistic philosophy by attempting to imbue their canvases with the essence of music (see Kagan, 1983:

⁵⁶ Jo Leslie Collier argues that Wagner’s pursuit of synthetic art was also “the logical expression of romanticism’s belief in the unity of all creation” (Collier, 1988: p.159).

⁵⁷ Thomas S. Grey argues that Wagner’s four music dramas collectively known as *Der Ring des Nibelungen* (*The Ring of the Nibelung*, 1869-1878) can be considered the closest that Wagner got in his fifty year career to creating an authentic total work of art that fit the ideals that he outlined in his earlier writings on the subject (see Grey, 2008: p.86).

p.19; Vergo, 2003: p.50; van Campen, 2013: p.633).⁵⁸ In addition to these artists, many of the painters associated with The Blue Rider also sought to incorporate musical elements into their canvases after being exposed to Wagner's total works of art.⁵⁹ For instance, after watching Wagner's opera *Lohengrin* (1850) in 1896, Kandinsky "realized that music can evoke pictorial images, colors, and moods. This experience united painting and music for Kandinsky" (Dabrowski, 1995: p.11) and demonstrated that the "traditional territorial boundaries between art forms [had] become subject to challenge" (Birtwistle, 2010: p.224).⁶⁰ Besides seeing Wagner's influence in Kandinsky's regular inclusion of guitar-like strings in his artwork, and the artist's attempts to create visual music through his use of colour on his canvases, which I discussed earlier, we can also find it in Marc's use of flowing brushstrokes to create melodic rhythms in paintings like *Blaues Pferd* (*Blue Horses*, 1911b) (Figure 15a) and *Rotwild II* (*Red Deer II*, 1912e) (Figure 15b).⁶¹ Klee was also cognisant of potential connections between painting and music during this period

⁵⁸ For example, in many of Van Gogh's paintings, such as *De Sterrennacht* (*The Starry Night*, 1889a) and *Korenveld met cipres* (*Wheat Field with Cypresses*, 1889b), the Dutch artist employs lots of long flowing brushstrokes that are quasimusical in their disposition. Murnau visited Gauguin's grave in Tahiti before the shooting of *Tabu* commenced and was friends with one of his sons (see Berriatúa, 2008: *Tabu* Blu-ray). A photograph that Murnau took of his grave is published in *Friedrich Wilhelm Murnau: Die privaten Fotografien 1926-1931* (2013).

⁵⁹ The synthesis of painting and music that was achieved by The Blue Rider artists in their canvases can be traced to their personal fascination with both art forms. Besides painting, Kandinsky was also intrigued by music throughout his life, which saw him befriend composers like Thomas von Hartmann and Schoenberg, and become a proficient cellist (see Overy, 1969: p.18; Vergo, 2003: p.50). Furthermore, Klee was deeply immersed in music from a young age as his father taught music and his mother had professional singing coaching (see Düchting, 1997: p.7). The painter was also considered to be an accomplished violinist while at school (see Düchting, 1997: p.7) and went on to marry a pianist as an adult (see Kagan, 1983: pp.19-21). Moreover, the composer Schoenberg produced numerous paintings during The Blue Rider period. Three of these were exhibited at the group's first showcase in the winter of 1911 and two were published in the almanac the following year (see Lindsay and Vergo, 1994: p.221).

⁶⁰ Kandinsky was particularly fascinated by the way that Wagner blended the senses of vision and sound in his music dramas. "The heroes of his operas are expressed not only by material form, but also by sound—the *leitmotif*. [...] [E]ach Wagnerian hero 'sounds' in his own way" (Kandinsky, 1994g: p.101) (emphasis in original).

⁶¹ The connections that music and painting share were often discussed by Kandinsky and Schoenberg in their written correspondence during this period. For example, in a letter dated 24th January 1911, Schoenberg tells Kandinsky "I am sure that our work has much in common" (Schoenberg, 1911, in Kandinsky and Schoenberg, 1984: p.23). Furthermore, Marc and Macke considered the links between music and colour in letters that the pair exchanged (see Düchting, 1997: p.22).

(see Klee in Düchting, 1997: p.9) and, like Kandinsky, gave sonic titles to many of his paintings, such as *Polyfonie (Polyphony, 1932)* and *Neue Harmonie (New Harmony, 1936)*, in his later years as an artist.⁶²

Although The Blue Rider's understanding of artistic synthesis was essentially the same as Wagner's earlier conception of the total work of art, Kandinsky preferred to use the term "monumental work of art" to describe the union of the arts and senses in a single artwork (see Kandinsky, 1994b: p.88; Casini, 2017: p.5), which was a topic that fundamentally motivated Kandinsky, Marc and Macke to conceive and publish the *Der Blaue Reiter Almanach (The Blue Rider Almanac, 1912)* (see Overy, 1969: p.19; Lankheit, 1974a: p.16; Lindsay and Vergo, 1994: p.109).⁶³ As the "[e]xpansion of the traditional boundaries of artistic expression was put forth as a 'basic tendency' of the [text's] editors [(Kandinsky and Marc)]" (Lankheit, 1974a: p.38), the *Almanac* contains several essays that promote the fusion of the arts and senses in monumental works of art. For instance, in the article *Scriabin's Prometheus (1912)*, Leonid Sabaneiev argues that "[t]he time for the *reunification* of the separate arts has arrived. [...] All the arts, each of which has achieved an enormous development individually, must be united in one work" (Sabaneiev, 1974: pp.130-131) (emphasis in original). In keeping with the essays that discuss the relationships between the arts and promote artistic synthesis, the rest of the *Almanac* is made up of works of art from a variety of different creative disciplines. Kandinsky recalled that he and Marc agreed that the text should "have a painter, a musician, a poet, a dancer, etc., work[ing] side by side, and it was with this

⁶² Many notable composers of the mid-late twentieth century, including Hans Werner Henze and David Diamond, stated that Klee's paintings had inspired their musical pieces (see Kagan, 1983: p.21).

⁶³ The *almanac* is often considered to be one of the most significant artistic manifestos of the early twentieth century (see Lankheit, 1974b: p.8). In connection this, Russian filmmaker Sergei Eisenstein states that it had "considerable influence in the subsequent tendencies of modern European art" (Eisenstein, 1986: p.93).

purpose in mind that I wanted to ask artists in their separate ‘boxes’ to collaborate on the projected book” (Kandinsky, 1994c: p.796).⁶⁴ Consequently, amongst other works of art, the *Almanac* features poetry produced by Mikhail Kuzmin, songs written by Schoenberg, Alban Berg and Anton Webern, paintings created by Blue Rider artists, Paul Cézanne and Henri Matisse, in addition to Kandinsky’s experimental stage play *Der Gelbe Klang* (*Yellow Sound*, 1909a), which represents the artist’s most deliberate and concerted attempt to produce a monumental work of art (see Vergo, 1977: p.6; Eisenstein, 1986: p.93) as it seeks to combine the arts of theatre, painting and music in one form of creative expression.⁶⁵ Throughout the one-act play, Kandinsky consistently tries to create synaesthetic effects through music and colour combinations, which are described in minute detail by the artist in the play’s stage directions in the *Almanac*.⁶⁶

Besides late nineteenth and early twentieth century painting, literature, music and theatre, cinema is also linked to Wagnerian artistic philosophy because it amalgamates existing artistic media. In the early 1900s, film was “hailed as a new ‘*Gesamtkunstwerk*’” (Laner, 2012: p.28) (my emphasis) and considered a legitimate threat to the supremacy of pre-existing art forms (see Kaes and Levin, 1987: p.7).

German silent filmmakers were particularly eager to emphasise cinema’s

⁶⁴ Although the *Almanac* was edited by two painters (Kandinsky and Marc), Vergo claims that they initially planned to allow musical content to be the dominant force in the book, with “no less than eight articles on music, compared with only six on painting” (Vergo, 1977: p.5).

⁶⁵ The Kuzmin poem that is included in the almanac is entitled *Venok Vesny* (*The Wreath of Spring*, 1912). Furthermore, the songs are Berg’s *Aus Dem Glühenden von Alfred Mombert* (*From the Glowing by Alfred Mombert*, 1912) and Webern’s *Ihr tratet zu dem herde* (*You Joined the Herd*, 1908-1909). In addition to many other paintings, the book features Kandinsky’s aforementioned *Cover Design for The Blue Rider Almanac*, Marc’s *Der Stier* (*The Bull*, 1912a), Macke’s *Der Sturm* (*The Storm*, 1911), Cézanne’s *Les Quatre Saisons, L’automne* (*The Four Seasons, Autumn*, 1861) and Matisse’s *La Danse* (*The Dance*, 1910). In keeping with the *Almanac*’s Wagnerian philosophy, *The Dance* combines the arts of painting, dance and music as it features people rhythmically dancing in a circle. Murnau met Matisse in Tahiti before he started filming *Tabu* (see Berriatúa, 2008: *Tabu* Blu-ray) and several photographs of the encounter are published in the book *Friedrich Wilhelm Murnau: Die privaten Fotografien 1926-1931*.

⁶⁶ Kandinsky’s *Yellow Sound* was not performed in public until after the artist’s death (see Lindsay and Vergo, 1994: p.231). Since the year 2000, several major productions of the play have been performed around the world, including at London’s Tate Modern in 2011.

connections to theatre and literature in order to charm the country's intelligentsia, who initially resisted the new medium due to its mass appeal. Directors did this by adapting prominent novels for the screen, hiring notable theatre actors to star in their films and persuading famous authors, such as Gerhart Hauptmann, to become screenwriters (see Kaes, 1990: p.246). To a greater extent than other contemporary German silent film directors, Murnau is considered to be firmly aligned with Wagner's beliefs concerning artistic synthesis (see Collier, 1988: p.5).⁶⁷ Helmut Schanze describes Murnau's *Faust* as a "*Gesamtkunstwerk* [that] demonstrates [...] the individual powers of the different arts" (Schanze, 2003: p.230) (my emphasis). Like Murnau's earlier film *Herr Tartüff* (*Tartuffe*, 1925), which is based on the 1664 Molière play of the same name, and in keeping with the Wagnerian conception of artistic unity, *Faust* combines the arts of film and theatre in a single mode of creative expression as it is a filmic adaptation of Johann Wolfgang von Goethe's *Faust* (1808).⁶⁸

Since Murnau served as an actor and assistant director in theatre impresario Max Reinhardt's company before becoming a filmmaker (see Collier, 1988: p.132; Jackson, 2013: *Nosferatu* Blu-ray), critics often argue that he consciously attempted to utilise theatrical acting, lighting and camera techniques in the films that he subsequently made (see Berriatúa, 2008: *Tabu* Blu-ray; Rayns, 2006: *Faust* Blu-ray). In addition to theatre, literature is also considered to be a major influence on Murnau's approach to filmmaking as he was an avid reader (see Diekmann in

⁶⁷ Jo Leslie Collier suggests that "the resemblances between the works of the two artists are so pronounced that it is possible to find a correlate for each of Wagner's operas among Murnau's films" (Collier, 1988: p.106).

⁶⁸ Murnau's Hollywood film *City Girl* is also an adaptation of a play – *The Mud Turtle* (1925) by Elliott Lester. The director's niece notes that he was fascinated with the theatre from an early age and would often go to see plays and then stage new versions of them at his house (see Diekmann, 2007: *Nosferatu* Blu-ray). Besides William Shakespeare's plays, he was particularly interested in Goethe's and Molière's work (Diekmann, 2008: *Tabu* Blu-ray), which is reflected in his decisions to adapt *Tartuffe* and *Faust* when he became a film director after the First World War.

Berriatúa, 2007: *Nosferatu* Blu-ray) and seven of the twenty-one silent films that he directed, including *Der Januskopf* (*The Head of Janus*, 1920) *Nosferatu* and *Sunrise*, are adaptations of short stories or novels (see Laner, 2012: pp.30-32).⁶⁹ Moreover, commentators also routinely contend that music fundamentally determined the core framework of Murnau's silent films (see Haas, 1920, in Eisner, 1973a: p.90; Collier, 1988: p.150).⁷⁰ This is because the director: was fascinated by music (see Diekmann in Berriatúa, 2008: *Tabu* Blu-ray), often worked in close collaboration with composers on their scores for his films (see Hansen, in Eisner, 1973a: p.86; Berriatúa, 2008: *Tabu* Blu-ray; Becce, 2016: p.516), including with Hans Erdmann on his *Nosferatu* accompaniment (see Patalas, 2002: p.30), and gave musical subtitles to *Nosferatu* (see Unrau, 1996: p.234; Laner, 2012: p.33; Jackson, 2013: p.69) and *Sunrise*.⁷¹

Murnau conceived of his films in musical terms as can be seen from the subtitles he gave some of them: *Nosferatu* is *A Symphony of Horror* and

⁶⁹ During his youth, Murnau's brother, Robert Plumpe, recalled that the director studied several literary figures, such as Henrik Ibsen and Fyodor Dostoevsky (see R. Plumpe in Eisner, 1973a: p.15). In his German cinematic oeuvre, *The Head of Janus* is an adaptation of Robert Louis Stevenson's novel *The Strange Case of Dr Jekyll and Mr Hyde* (1886), *The Haunted Castle*, *Phantom* and *The Finances of the Grand Duke* are based on novels with the same titles by Rudolf Stratz, Hauptmann and Frank Heller and *Nosferatu* is an unauthorized film version of Stoker's *Dracula*. Furthermore, in Murnau's Hollywood career, *Sunrise* was derived from Hermann Sudermann's short story *Litauische Geschichten* (*The Excursion to Tilsit*, 1917) and *4 Devils* was adapted from Herman Bang's *Les Quatre Diables* (*The Four Devils*, 1890).

⁷⁰ Towards the start of Murnau's career as a filmmaker in the early 1920s, commentators regularly tied silent cinema to music (see Westerdale, 2010: p.153). For example, after viewing one of Ruttman's silent animations, Bernhard Diebold proclaimed that "[t]here now exists a form of *music for the eyes*" (Diebold, 2016: p.454) (emphasis in original). The connections between the mediums have also often been noted in the decades since. In the 1950s, Rudolf Arnheim stated that "[t]here was musical purity and beauty in the graceful leaps of Douglas Fairbanks and the heavy stamping of Paul Wegener's [*The*] *Golem*" (Arnheim, 1983: p.152) (my emphasis). This "musical purity" that Arnheim refers to in relation to Fairbanks is particularly apparent in the actor's rhythmic movements in *The Mark of Zorro* (1920) and *Robin Hood* (1922).

⁷¹ Although other silent film directors, such as Eisenstein (see Eisenstein, 1949: p.177), were involved in the creation of the scores that accompanied their pictures, close collaboration between directors and composers was rare throughout the silent era (see Patalas, 2002: pp.29-30). In addition to *Nosferatu*, there is evidence to suggest that Murnau also cooperated with his composers on the scores for *The Burning Soil* (see Berriatúa, 2008: *Tabu* Blu-ray), *The Last Laugh*, *Tartuffe* (see Patalas, 2002: p.30), *Faust* (see Berriatúa, 2007: *Faust* Blu-ray), *Sunrise* (see Becce, 2016: p.516), *4 Devils* (see Hansen, in Eisner, 1973a: p.86) and *Tabu* (see Berriatúa, 2008: *Tabu* Blu-ray).

Sunrise is A Song of Two Humans. He strived as his theatrical predecessors had before him to create a visual equivalent of music (Collier, 1988: pp.149-150).⁷²

To a greater extent than theatre, literature and music, scholars continually argue that Murnau's silent films are inspired by his passion for the art of painting (see Elsaesser, 2000: p.224; Smith, 2008: pp.6-7; Massaccesi, 2016: p.90), which he developed during his youth while doing an Art History (see Smith, 2008: p.5) doctorate (see Jackson, 2013: p.20) at the University of Heidelberg (see R. Plumpe, in Eisner, 1973a: p.16; Sadowski, 2017: p.136).⁷³ During this period, Murnau experimented with painting, but felt that his talent was lacking and decided to pursue filmmaking instead (see Berriatúa, 2007: *Nosferatu* Blu-ray). In connection to this, Herlth's daughter states that Murnau "said he felt like a Raphael without hands. He [saw] it but [could not] paint it" (Herlth, in Berriatúa 2007: *Nosferatu* Blu-ray).⁷⁴ When discussing the links between Murnau's cinema and painting, scholars often point out that his directorial debut, *Der Knabe in Blau* (*The Boy in Blue*, 1919), which is now believed to be lost, was inspired by the eighteenth century Thomas

⁷² Murnau's interest in music during his youth was so strong that he even "expressed the ambition to be a composer" (Jackson, 2013: p.69) before choosing silent filmmaking after the end of the First World War. This musical passion could have been fostered initially by his mother because Diekmann notes that she was a "wonderful pianist [that] could sing very well" (Diekmann in Berriatúa, 2007: *Nosferatu* Blu-ray). The filmmaker's fascination with music was in stark contrast to his fellow director Lang, who described himself as "a musical ignoramus" (McGilligan, 1997: p.16).

⁷³ Murnau studied many painters at university, such as Albrecht Dürer, Hans Holbein and Matthias Grünewald (see Sadowski, 2017: p.136). The director's mother notes that he also studied literature during his time at the University of Heidelberg (see O. Plumpe, in Eisner, 1973a: p.17). Although he was regularly called "Herr Doctor" while on set as a film director, Murnau did not complete his doctorate at Heidelberg as he left in 1911 to join Reinhardt's theatre group (see Jackson, 2013: p.20). Like Murnau Kandinsky also abandoned his academic studies before becoming an artist (see Vergo, 1977: p.3). Academia's positivism prompted Kandinsky to abandon his studies (see Kandinsky, 1994a: p.343) and pursue painting, which allowed him to explore his aforementioned spiritualist beliefs.

⁷⁴ Murnau's inability to paint to a satisfactory level was in stark contrast to one of his older half sisters as she had a natural gift for painting, which she honed by painting the family's garden on a daily basis (see R. Plumpe, in Eisner, 1973a: p.14). Furthermore, unlike Murnau, several other Weimar film directors, including Lang and Paul Leni, were able to forge careers as painters prior to becoming filmmakers (see Barsacq, 1976: pp.31-34).

Gainsborough painting *The Blue Boy* (1770) (see Jackson, 2013: p.23; Kalat, 2015: p.2).⁷⁵ Commentators also argue that *Faust* was designed using medieval paintings, such as those produced by Albrecht Dürer (see Rayns, 2006: *Faust* Blu-ray) and Albrecht Altdorfer (see Herlth, in Eisner, 1973a: p.68).⁷⁶ Although many Murnau films, including *The Blue Boy* and *Faust*, are thought to be heavily inspired by paintings, *Nosferatu* has received the most critical attention in this regard as scholars have consistently linked it to Baroque, German Romantic, Symbolist and Expressionist artwork.⁷⁷ For example, the scene that depicts Dr. Sievers (Gustav Botz) and Wisborg town officials examining the body of the ship's captain (Max Nemetz) (Figure 16a) is often compared with Rembrandt's Baroque artwork *Anatomische les van Dr. Nicolaes Tulp* (*The Anatomy Lesson of Dr. Nicolaes Tulp*, 1632) (Figure 16b) (see Vacche, 1996: p.170; Massaccesi, 2016: pp.74-75). Commentators also regularly argue that Murnau's framing and landscape shots in *Nosferatu* are strongly influenced by German Romantic art, particularly Friedrich's early nineteenth century canvases (see Frayling, 2001: *Nosferatu* Blu-ray; Jackson, 2013: p.50; Sadowski, 2017: pp.135-136; Calhoon, 2021: p.123).⁷⁸ In relation to this, Vacche notes that Friedrich's trademark use of the Rückenfigur motif, a compositional device that commonly shows a figure from behind standing in the

⁷⁵ A replica of Gainsborough's painting was created for the film with the lead actor's (Ernst Hofmann) face replacing the original model's visage (see Eisner, 1973a: p.122).

⁷⁶ Besides medieval paintings, Berriatúa suggests that *Faust* was also inspired by August von Kreling's nineteenth century illustrations (see Berriatúa, 2007: *Faust* Blu-ray).

⁷⁷ To a lesser extent than paintings from these movements, *Nosferatu* has also drawn comparisons with Gothic and Metaphysical works of art produced by Hugo Steiner-Prag (see Massaccesi, 2016: pp.22-23) and Giorgio De Chirico (see Vacche, 1996: pp.169-170; Jackson, 2013: pp.38-44; Massaccesi, 2016: pp.9-10) respectively. For instance, Jackson and Sadowski both claim that *Nosferatu*'s/Count Orlok's appearance was partially inspired by Steiner-Prag's drawings for Gustav Meyrink's novel *Der Golem* (*The Golem*, 1915) (see Jackson, 2013: p.30; Sadowski, 2017: p.135).

⁷⁸ A large collection of Friedrich's work was shown in Berlin's *Nationalgalerie* (National Gallery) in 1906 as part of retrospective of paintings produced in the nineteenth century (see Vacche, 1996: p.163). Murnau was an Art History student at the time and could have attended the exhibition in person. In addition to *Nosferatu*, Murnau's *Der Gang in die Nacht* (*Journey into the Night*, 1921) and *Faust* have also been linked to Friedrich's paintings (see Berriatúa, 2007: *Nosferatu* Blu-ray; Calhoon, 2021: p.187).

foreground and looking at a sprawling landscape in front of them, is replicated in several scenes from *Nosferatu*. For instance, the Rückenfiguren found in Friedrich's *Jäger in het bos* (*Hunter in the Forest*, c.1814) and *Der Wanderer über dem Nebelmeer* (*Wanderer above the Sea of Fog*, c.1818) (Figure 17a) are reminiscent of Ellen as she sits on a bench by the seaside and stares into the distance with her back to the camera in several shots from *Nosferatu* (see Vacche, 1996: p.172) (Figure 17b). Besides Baroque and German Romantic art, *Nosferatu* is regularly tied to Symbolist paintings like Arnold Böcklin's *Die Toteninsel* (*Isle of the Dead*, 1883), which shares similarities with the shot of *Nosferatu* slowly drifting towards Wisborg's abandoned mill on a rowing boat towards the end of the film (see Vacche, 1996: pp.169-170; Massaccesi, 2016: p.74-75). To a lesser extent than paintings from the above art movements, Expressionist canvases have also been associated with Murnau's silent film, including *Der Rote Turm in Halle* (*The Red Tower in Halle*, 1915) by Ernst Ludwig Kirchner, which resembles the high-angle opening shot of *Nosferatu* looking down on Wisborg's church and streets (see Vacche, 1996: p.175). Although scholars have positioned Murnau as a director that wholeheartedly embraced traditions and influences from theatre, literature, music and painting, he was, in actual fact, critical of the medium's reliance on traditional art forms and determined to help it craft a unique identity of its own.⁷⁹ In a two-part article that features separate statements from him and Lang, Murnau writes:

[w]ere the other arts not to exist, film would have been forced long ago to find its own techniques [...].

⁷⁹ During this period, the medium slowly began to distance itself from material and techniques traditionally associated with literature and strived to find "a language [that was] specific to film" (Kaes and Levin, 1987: p.9).

Still lacking any techniques of its own, film does everything on the basis of a false model. It makes use of the means of the novella, the novel, and the play; it borrows all the techniques from the other arts (Lang and Murnau, 2016: p.499).

In order to maximise cinema's creative potential as a new artistic medium, Murnau argues that "[t]he film director must divorce himself from every tradition, theatrical or literary" (Murnau, 2016: p.77). Throughout my analysis of *Nosferatu's* implied sound, I suggest that, instead of attempting to amalgamate the arts, Murnau tries to challenge cinema's traditional artistic framework and give the medium a new and distinctive identity that is rooted in synaesthetic perception. Since Murnau built close friendships with key members of The Blue Rider before the First World War, when the painters were using implied sound to break down and reshape the borders of the arts and senses, I argue that the director's multisensory approach to silent filmmaking was significantly influenced by the group's synaesthetic techniques and philosophy. As I explain in more detail later, on numerous occasions in *Nosferatu*, the borders of Murnau's camera frame are psychically attacked and invaded by actions and movements that produce implied sound. Similar assaults and synaesthetic penetrations also occur in the early twentieth century paintings produced by the director's friends and artistic colleagues in The Blue Rider Group. For example, in Kandinsky's *Das Lied von der Wolga (Volga Song, 1906)* (Figure 18a) and Marc's *Wiesel Spielen (Playing Weasels, 1909)* (Figure 18b) the boatmen and weasel probe and punch the edges of the canvases that they are encased within. Furthermore, in *Landschaft mit einer Dampflok (Landscape with a Steam Locomotive, 1909b)* (Figure 19a) and *Springender Hund Schlick (Jumping Dog Schlick, 1908)* (Figure 19b) the steam train and sprinting dog physically break down

the borders of Kandinsky's and Marc's artwork and infuse their paintings with implied sound. I argue that Murnau's and the artists' attempts to physically demolish the borders or their artworks through the use of implied sound is metaphorically connected to their shared desire to break down and reshape the boundaries of the arts. In addition to the implied sound created by invasions of the frame, vehicular forms of transport, such as horses and carriages, regularly imbue *Nosferatu* and Blue Rider paintings with the synaesthetic phenomenon. For example, in Kandinsky's *Der blaue Berg* (*The Blue Mountain*, 1908) (Figure 20a) and *Amazonen mit Löwen* (*Amazon with Lions*, 1918) (Figure 20b) the galloping horses and riders spread 'loud' implied sound throughout the artworks. Since The Blue Rider typically used the horse and rider motif to represent the artist's (rider) control over their work of art (the horse), I suggest that we can interpret these multisensory depictions of travel as metaphors for Murnau and The Blue Rider's collective aim to *transport* their modes of creative expression in new artistic directions.

***Nosferatu* and The Blue Rider: Breaking Down and Synaesthetically Reshaping the Traditional Artistic Borders of Cinema and Painting**

This second segment of my *Nosferatu* chapter is concerned with implied sound that physically penetrates the frame of Murnau's silent film and the perimeters of paintings produced by artists associated with The Blue Rider group. Throughout this analysis section, I assert that these specific examples of synaesthesia can be read as metaphors for the filmmaker's and painters' shared desire to fundamentally break down and reshape the representational borders of their respective forms of artistic expression. An early scene featuring implied sound that repeatedly pierces Murnau's frame takes place shortly after Hutter decides to break his journey to Count Orlok's Transylvanian fortress by spending the night at a tavern situated in the Carpathian

Mountains. In a long shot taken from Hutter's point of view as he looks at the grassland outside his bedroom window, four horses gallop through the left-hand side of the middle ground after being spooked by the presence of a nearby werewolf.⁸⁰ Towards the end of the shot, another horse suddenly invades the foreground of the composition and proceeds to repeatedly buck against the right-hand edge of Murnau's frame as if it was attempting to attack it with its powerful hind legs. The fast-paced movement of the middle ground horses and the repetitive bucking motions of the horse situated in the foreground of the shot generate 'loud' and rhythmic thudding implied sounds throughout the shot's duration. This hoof-based implied sound is also present the following morning during a similar long shot of the field filmed from Hutter's perspective as he gazes out of his bedroom window. In this shot, the horses emerge from behind a mound in the middle ground of the composition and canter towards the foreground before several of the animals penetrate the right-hand side of the frame and exit entirely (Figure 21). The implied sound that the horses create as they pierce the perimeters of Murnau's shots in this scene from *Nosferatu* is strikingly similar to the synaesthetic sound that breaks down the borders of Marc's early twentieth century Blue Rider paintings. For instance, like the horse that bucks against the right-hand perimeter of Murnau's composition in *Nosferatu*, the yellow cows located in Marc's *Die Gelbe Kuh* (*The Yellow Cow*, 1911c) (Figure 22a) and *Kühe, rot, grün, gelb* (*Cows, Yellow-Red-Green*, 1912d) (Figure 22b) kick their hind legs towards the left-hand borders of the artist's paintings in an aggressive manner. In the former canvas, the heifer's back legs fall just short of striking Marc's frame and in the latter the cow's rear ankles successfully penetrate the edge of the artwork. Since both paintings capture the moment that the

⁸⁰ A hyena that Murnau borrowed from a zoo plays the part of the werewolf in this scene (see Jackson, 2013: p.51).

muscle-bound beasts' front hooves, which bear the majority of the bucking animals' weight, hit the ground, we can interpret that the cows' hooves generate 'loud' thudding implied sounds that are akin to those created by the kicking horse in *Nosferatu*'s tavern scene. Furthermore, in a similar fashion to the horses that gallop out of Murnau's frame in the morning scene set at the Carpathian Mountains inn, a yellow and black dog depicted in Marc's *Hunde spielen* (*Playing Dogs*, 1912c) (Figure 22c) breaks through the perimeter of the artwork and produces synaesthetic sound. The animal's bent running posture as it heads towards the left-hand side of the frame and the position of its left hind leg, which is partially cut off by the right-hand side of Marc's frame, suggests that the dog has invaded the canvas and is subsequently creating 'quiet' rhythmic implied sound with the fast-paced movement of its legs.

The implied sound that breaks into Murnau's shots in the *Nosferatu* tavern scene and the frames of the three aforementioned paintings produced by The Blue Rider group is metaphorically connected to Murnau and the artists' joint aim to demolish and reconfigure the representational parameters of their respective artistic media. For example, in *Nosferatu*, the horse that invades the foreground of Murnau's shot and starts to aggressively buck against his frame can be linked to the director's aforementioned goal to restructure the artistic framework of cinema by *kicking out* influences associated with other artistic media like literature and theater. The animal attacks cinema's borders (the camera frame) as if it was trying to break them down or expand them beyond their current limits, which suggests that the medium's current artistic parameters are insufficient. Since it creates 'loud' implied sound during its physical assault on the borders of Murnau's composition, we can interpret that the animal's actions represent Murnau's desire to demolish and reshape

cinema's representational parameters by infusing them with synaesthesia in the form of implied sound. Furthermore, after Hutter has awoken the following morning, the horses that immediately gallop towards and penetrate the boundaries of *Nosferatu's* frame also visually and sonically evoke Murnau's eager *pursuit* of a new creative identity for silent film. As I noted earlier, in order for cinema to truly develop unique expressive techniques of its own, Murnau suggested that the medium must *break free* from the constrictions imposed on it by techniques that were fundamental components of other art forms. In connection to Murnau's desire to liberate silent film from its artistic shackles, the horses in the tavern scene seem desperate to break out of the borders that surround them since they canter through the frame at high speed. During their flight from the cinematic constraints (the camera frame) that bind them, the horses produce 'loud' thudding 'noises' that imbue *Nosferatu's* frame with synaesthesia. This implied sound that the horses create as they sprint out of frame links to Murnau's claim that film would only be able to fashion a distinct artistic identity when it fully committed to liberating itself from the limitations placed on it by other modes of creative expression. In a similar fashion to the horse that kicks the frame in this tavern scene from *Nosferatu*, the aforementioned cows that buck against the borders of Marc's *The Yellow Cow* and *Cows, Yellow-Red-Green* can be metaphorically tied to Blue Rider artists' coeval desire to eliminate the walls that exist between the arts and the senses so that they could be amalgamated in monumental works of art. We can come to this conclusion because the animals directly attack the representational borders of painting (the frame), which strongly implies that they are trying to knock down or extend the edges of the canvases that they are encased within. Since these assaults on the perimeters of the paintings create 'loud' implied sound, Marc fundamentally ties the destruction of artistic boundaries

to the amalgamation of vision and sound in a single work of art, which links to the Blue Rider's contemporary pursuit of the monumental work of art. Besides these two paintings, the synaesthetic sound located in Marc's *Playing Dogs* can also be connected to the Expressionist group's quest for sensory unity in their artwork. During the process of invading the right-hand side of the artwork, a yellow and black dog creates 'quiet' implied sound with its forward movements. Therefore, in addition to breaking down the borders of Marc's frame with its visual presence, the animal also transports implied sound into the painting, which once again unifies the sense of sight and sound in a Blue Rider canvas and ties to the group's yearning for monumental art.

The implied sound contained in Murnau's prolonged close-up of choppy waves around Wisborg's coastline is another example of synaesthesia that breaks down the boundaries of *Nosferatu's* frame (Figure 23). The fifteen-second tight shot appears at the beginning of Act IV during the crosscutting sequence that depicts Hutter and Nosferatu racing each other to Wisborg by land and sea while Ellen sleepwalks in the moonlight cast on Harding's (George H. Schnell) balcony. Using a camera iris to darken the four corners of his composition, Murnau focuses our attention on numerous powerful and fast-moving waves that repeatedly invade and exit the shot. The waves continually build up near the camera's position and proceed to, quite literally, *break* through the frame, until a particularly large wave douses the lens in sea water at the end of the shot. The fast pace and aggressive nature of the waves, in addition to our close proximity to them, produces 'loud' roaring and crashing 'noises' throughout the course of the lengthy close-up. In a similar fashion to the waves that are present in this scene from *Nosferatu*, many of the animals that are featured in Blue Rider canvases visually and sonically pierce the boundaries of

their frames. For example, in Marc's *Drei Katzen* (*Three Cats*, 1913a) (Figure 24a), the black and white cat that is situated in the foreground of the composition appears to have leaped through the border on the right-hand side of the painting. We can come to this conclusion because the cat's back limbs are stretched high in the air while its front legs are firmly planted on the ground, which suggests that the animal is about to complete a jumping motion that likely began outside the confines of Marc's canvas. As the creature's body position seems to depict the moment that its paws impact the ground, the leaping cat creates 'quiet' thudding implied sound immediately after it invades the border of the composition. Moreover, like the aggressive multidirectional waves in *Nosferatu*, the groups of animals that move from right to left in Marc's *Eselfries* (*Donkey Frieze*, 1911d) (Figure 24b) and *Affenfries* (*Monkey Frieze*, 1911a) (Figure 24c) break through multiple edges of the artworks' frames. In the former painting, the donkeys' body parts each breach a different side of Marc's frame. A head and abdomen pierce the left-hand border, a neck invades the right-hand boundary, ears puncture the upper extremity and legs penetrate the lower periphery. In the latter frieze, the left-hand side of the canvas is ruptured by a monkey's head and torso while the right-hand edge is breached by one of the animal's rear legs. Since the donkeys and monkeys are moving through Marc's respective artworks as collective units, we can interpret that their footfall produces rhythmic thudding implied sounds when their bodies pierce the borders of the friezes.

The implied sounds that invade and exit the *Nosferatu* water close-up and the three Blue Rider paintings discussed above can be read as symbolic representations of Murnau and the artists' contemporary desire to fundamentally break down and reshape the expressive boundaries in cinema and painting respectively. In the shot

that involves the waves *breaking* through the frame in *Nosferatu*, the water visually and sonically evokes Murnau's contention that film must divorce itself from expressive techniques that are related to other creative media in order to find its own unique artistic voice. In connection to Murnau's belief that film should start afresh and *flush* out theatre, literature and other established art forms, the waves in *Nosferatu* repeatedly gush through the director's shot as if they are attempting to bathe cinema in order to cleanse and revitalise it. Besides physically drenching *Nosferatu's* close-up, the large and aggressive waves also wash the composition with 'loud' and repetitive crashing and roaring implied sounds. The synaesthetic baptism that this shot receives from waves that have broken down the borders of *Nosferatu's* frame symbolically ties to Murnau's argument that film would be unable to give *birth* to a unique artistic identity until filmmakers *wash* their hands of constrictive techniques associated with other art forms. Moreover, the animals that break through the boundaries of the Blue Rider paintings *Three Cats*, *Donkey Frieze* and *Monkey Frieze* are once again evocative of the Expressionist group's coeval aim to demolish the borders that separate the arts and the senses. In all three paintings, the paws and hooves of the animals arriving from outside the walls of Marc's canvases immediately imbue their frames with implied sound. Consequently, in connection to the Blue Rider's contemporary pursuit of the monumental work of art, the cat, donkeys and monkeys break down and reshape artistic boundaries by penetrating the borders of their paintings and amalgamating of the senses of sight and sound.

In the night time crosscutting sequence that revolves around Ellen's use of supernatural powers to save Hutter from the vampire's murderous advance, Murnau once again inserts implied sound that penetrates the borders of *Nosferatu's* frame. It takes place after a terrified Hutter spies the ominous figure of Count Orlok outside

his citadel bed chamber in Transylvania and attempts to shield himself from danger by closing the room's door and hiding underneath his bed sheets. As Nosferatu's menacing shadow begins to slowly engulf Hutter's body in medium shot, we cut to a long shot of Ellen in Wisborg that depicts her awakening with a start and staring intently at the left-hand side of the frame while screaming the word "Hutter!!!" The action is then transported back to Transylvania with medium shots that show Count Orlok's shadow withdrawing from Hutter's body and the vampire slowly turning his head towards the right-hand side of the frame, which, as Roberts notes, builds an eyeline bridge between Nosferatu and Ellen (see Roberts, 2008: p.48).⁸¹ This crosscutting sequence strongly suggests that, despite being hundreds of miles away from her location, Count Orlok has heard Ellen shrieking Hutter's name. Therefore, the heroine's verbal implied sound appears to have penetrated the perimeters of Murnau's frame on multiple occasions (in the shots set in Wisborg and Transylvania) and broken down the geographical borders that separate Germany and Romania in the film's narrative (Figure 25).⁸² In a similar fashion to this crosscutting sequence from *Nosferatu*, Blue Rider artworks produced by Münter and Marc also feature synaesthetic sound that both invades and exits the borders of their artwork. In *Beim Malen (While Painting, 1911)* (Figure 26a), for example, an artist's arm breaks through the left-hand side of the frame in order to apply paint to a canvas that is seemingly situated outside of Münter's composition. These exterior brushstrokes create muffled scratching 'noises' that penetrate the boundaries of the Blue Rider

⁸¹ Murnau prolongs Ellen and Nosferatu's eye contact by crosscutting between additional medium shots of the characters staring at each other, before bringing the sequence to a close with a long shot of Count Orlok leaving Hutter's bed chamber. Since the vampire leaves Hutter unharmed after sharing intense eye contact with his wife, Murnau strongly implies that Ellen has used telepathic communication to compel the vampire to spare the protagonist's life.

⁸² Several scholars have briefly noted the implied sound that Ellen's "silent scream" (Elsaesser, 2000: p.238) creates (see Perez, 2013: p.14). For instance, Laner claims that "[t]elling examples of how Murnau invokes sound on the level of visualization of sound are Ellen's expressions and gestures when she screams her husband's name" (Laner, 2012: p.33).

painting and imbue the figure's immediate environment with 'quiet' implied sound. However, because the painter is seated next to an open window that is partially cut off by the right-hand side of the frame, the synaesthetic sound of the brushstrokes also exits the figure's vicinity and Münter's overall composition. Moreover, in Marc's *Zwei blaue Pferde* (*Two Blue Horses*, 1913b) (Figure 26b), the horse located in the middle ground strains its neck and neighs towards the canvas' left-hand border while the other one gazes intently in the same direction from its position in the foreground. As the neighing horse's body is exerted during its vocalisation, we can interpret that it produces 'loud' implied sound that has the capacity to break through the composition's boundaries and travel a significant distance beyond the immediate vicinity of the animals. In addition to this, since the other horse simultaneously stares at the same side of the artwork's perimeter, Marc indicates that verbal implied sound originating from outside of his frame has invaded the painting and been heard by the animals within, which suggests that the neighing horse is attempting to communicate with the mysterious exterior creature.

The implied sound that penetrates and exits Murnau's frame during the crosscutting scene between Germany and Romania in *Nosferatu*, in addition to the two canvases produced by Münter and Marc, symbolically reflects the director and Blue Rider artists' desire to break down and restructure the expressive boundaries of cinema and painting in the early twentieth century. In *Nosferatu*, the passage of Ellen's verbal implied sound from Wisborg to Transylvania is metaphorically linked to Murnau's contemporary argument that cinema must abandon its close aesthetic relationship with other artistic media, such as literature and theatre, in order to find its own distinctive creative identity. Ellen's scream in this scene is not constrained by cinematic borders (Murnau's shots) or the bodily limitations that prevent human

beings from conversing over long distances. Therefore, our heroine has seemingly found an entirely new way of communicating that is fundamentally incompatible with normal artistic and organic conventions. The only character in the film that is able to fully comprehend the supernatural power of her cry is Nosferatu, who is seemingly fascinated and magnetised by her unique expressive capabilities. The use of implied sound in this scene metaphorically suggests that Murnau realised that the incorporation of synaesthetic techniques into silent film was one way that cinema could craft a dominant and distinct artistic *voice* of its own that is far removed from the expressive identities of other art forms. Moreover, in *While Painting* and *Two Blue Horses*, the implied sound that invades the frame from outside the boundaries of the canvases can be symbolically connected to The Blue Rider's belief that there are no firm borders between the arts and the senses. Since the implied sound produced by the figure's brushstrokes and the mysterious animal cannot be physically seen, we must use our imagination, which has no strict boundaries, to internally produce these 'noises'. Although the creation of implied sound always relies on the imagination to an extent, Münter and Marc give us significantly more freedom to interpret a key component (synaesthetic sound) of their art by concealing sound sources outside the frame. The Blue Rider artists' use of implied sound in their two paintings demonstrates that the borders between the arts and senses are easily broken and that this fluidity can significantly enrich the expressive capabilities of art.

***Nosferatu* and The Blue Rider: Transporting Silent Cinema and Painting in New Multisensory Directions**

In this third section of my *Nosferatu* chapter, I no longer interpret implied sound that physically breaks down Murnau's and Blue Rider artists' frames (camera and

canvas) as being indicative of their respective desires to demolish and reshape the representational borders of silent cinema and painting. Instead, I focus on forms of transport that infuse *Nosferatu* and Blue Rider paintings with ‘loud’ implied sound and contend that we can perceive these synaesthetic examples as being symbolic of Murnau’s and the artists’ respective *journeys* towards multisensory silent cinema and monumental art. The magical carriage that Count Orlok uses to transport Hutter to his Transylvanian castle is an early example of a vehicle that imbues *Nosferatu* with ‘loud’ implied sound. Shortly before he encounters *Nosferatu*’s horse-drawn coach for the first time in a forest clearing, Hutter is deserted by superstitious peasants that were transporting him to Count Orlok’s castle and is forced to continue his journey on foot. After briefly photographing Count Orlok’s castle in a low-angle long shot, which confirms that the protagonist is nearing his destination, Murnau inserts a long shot of *Nosferatu*’s carriage weaving its way through the Transylvanian wilderness with unearthly speed and momentum.⁸³ The contraption’s supernatural pace and jerky rhythm suggests that the horses’ hooves and the vehicle’s wheels produce repetitive thudding and rattling implied sounds that are particularly fast-paced and ‘loud’, unlike those created by the slow-moving non-magical horse-drawn coach that transports Hutter eastwards earlier on in the film. The ‘loud’ noises generated by the magical carriage temporarily dissipate and are replaced with ‘quiet’ implied sound when Murnau cuts to a brief long shot of Hutter briskly walking along a nearby mountain path in profile. We can interpret this implied sound as being ‘quiet’

⁸³ Murnau’s cinematographers created the paranormal speed and rhythm of *Nosferatu*’s coach by under-cranking the camera in shots that show the vehicle in motion (see Eisner, 1973b: p.105; Calhoun, 2001: p.157; Kaes, 2009: pp.103-105). These special effects have been negatively received by some scholars because they deem the movements of the carriage to be comical rather than terrifying (see Barlow, 1982: p.86; Frayling, 2001: *Nosferatu* Blu-ray). Murnau also uses the under-cranking technique in the scene that depicts Count Orlok loading coffins onto a cart in the courtyard of his castle at great speed before journeying to Wisborg to claim Ellen and infect the town with plague.

because the protagonist (the sound source) is photographed from a significant distance and is performing an action (walking) that typically only produces faint noise in real life. In the following long shot that depicts Count Orlok and Hutter meeting each other in a forest clearing, the uneven thudding and rattling noises of the vampire's paranormal contraption resume once again. Immediately after Hutter walks into the foreground of Murnau's composition, Nosferatu's coach emerges from the tree line in the background of the shot and swiftly manoeuvres through the middle ground before coming to a sudden halt beside Hutter on the right-hand side of the frame. Once the protagonist has boarded the carriage at the behest of the thinly disguised Count Orlok (a scarf partially obscures his face), the paranormal vehicle quickly exits the forest clearing and continues to imbue *Nosferatu* with 'loud' implied sound as it speeds through the Transylvanian countryside in a series of four long shots. This sequence of shots is briefly intercut with a close-up of Hutter grimacing while hanging his head out of the coach's window, which seems to communicate that the carriage's intense speed and 'noise' is making the character feel nauseous (Figure 27). In connection to the 'loud' 'noises' that are generated by Count Orlok's supernatural contraption in this scene from *Nosferatu*, many of the canvases produced by Kandinsky during the Blue Rider era, and in the years leading up to the group's formation, contain vehicles that infuse his artwork with 'loud' synaesthetic sound. For instance, in *Der Blaue Reiter (The Blue Rider, 1903)* (Figure 28a), the horse ridden by the blue hooded figure nullifies the 'quiet' 'noises' of its countryside surroundings with the 'loud' and rhythmic thudding implied sounds that its galloping hooves create. We can interpret the field and forest as being particularly 'quiet' because the grass and trees are not in motion, which suggests that speed and 'noise' of the wind is very low. Therefore, the sprinting horse is the main sound

source in Kandinsky's canvas and infuses the whole composition with 'loud' synaesthetic sound. Furthermore, in the artist's avant-garde painting *Lyrisch* (*Lyrical*, 1911c) (Figure 28b), the jockey-ridden racehorse creates 'loud' pulsing hoof-based implied sound due to the extreme speed at which its outstretched body appears to be travelling through the frame. This 'loud' synaesthetic sound permeates the entire canvas because the racehorse and jockey are surrounded by abstract lines and shapes that do not seem to have the capacity to produce 'noise'. The vehicular journeys that imbue *Nosferatu*'s carriage scene and Kandinsky's two works of art with 'loud' implied sound can be read as metaphors for Murnau and the artist's shared coeval aim to *transport* film and painting in new artistic directions.

The sequence that depicts Nosferatu assuming command of the Empusa after systematically eliminating the vessel's maritime crew also features 'loud' implied sound created by vehicular travel. We are initially introduced to the ship following Hutter's departure from the hospital that has been treating him for the minor injuries that he suffered during his daring escape from Count Orlok's citadel. In a half profile long shot photographed from the deck of another mobile vessel, the camera moves progressively closer to the Empusa until it slowly glides out of frame in medium shot. Similar profile shots of the ship, which are intercut with Hutter journeying to Wisborg and Knock learning of the plague's presence in Baltic Sea ports, succeed this and show the Empusa drifting through the frame as water gently laps against its large wooden hull. Since the vessel's slow movements continually create small waves we can infer that it produces 'quiet' rippling implied sounds throughout the duration of these shots. Once the first mate (Wolfgang Heinz) has abandoned ship upon discovering Nosferatu in the vessel's hold and the rest of the crew, including the captain, have been killed by the vampire, the Empusa's implied sound undergoes

a radical transformation. Shortly after an intertitle confirms that “[t]he ship of death had acquired its new captain” (*Nosferatu*), Murnau inserts two identical medium shots filmed from the Empusa’s deck, which are intercut with shots of Ellen sleepwalking and Hutter arriving in Wisborg, that depict the bowsprit rising and falling violently. These dramatic bowsprit movements suggest that the vessel is now travelling at high speed and creating substantial waves that produce ‘loud’ crashing and roaring implied sounds. In a long shot that appears to be from Knock’s point of view in his asylum cell, the sequence comes to a close as the Empusa arrives in Wisborg’s harbour and pierces the tower of the town’s cathedral with its bowsprit, which imbues Murnau’s frame with ‘loud’ implied sound in the form of jangling bells (Figure 29). The ‘loud’ implied sound that the vessel produces once it is under the command of Count Orlok is comparable with the synaesthetic ‘noise’ that vehicular transport creates in Kandinsky’s works of art, including *St. George und der Drache* (*St. George and the Dragon*, 1915) (Figure 30). In this painting, St. George’s galloping horse generates ‘loud’ thudding implied sounds as its back legs impact the stony ground surrounding the dragon’s lair with significant force. This ‘din’ comprehensively dominates the composition’s soundscape because there does not appear to be any other ‘noises’ in the vicinity of St. George and the dragon’s battle in the foreground of Kandinsky’s painting. The ‘loud’ vehicle-based implied sound that is created in *Nosferatu*’s Empusa sequence and Kandinsky’s canvas depicting St. George and the dragon is symbolically connected to Murnau and The Blue Rider’s contemporary intention to *transport* their art forms in new creative directions.

Conclusion

To conclude, this chapter has read Murnau's employment of implied sound in *Nosferatu* as an attempt to create a synaesthetic silent film that could demolish the representational parameters of cinema and create a new identity for the medium that was less reliant on techniques traditionally associated with other art forms. Since many of the artists associated with The Blue Rider, such as Kandinsky and Marc, had regularly used synaesthetic sound to break down and expand the boundaries of artistic media in their monumental works of art, and were close associates and friends of the filmmaker, I suggested that they directly inspired Murnau's multisensory approach to cinema. Throughout *Nosferatu*, and a large portion of The Blue Rider artists' work, implied sound consistently invades and exists the frame, which physically challenges the traditional parameters of their artworks (camera frame and canvas) and connotes the filmmaker's and artists' wider goal to synaesthetically reshape the borders of the arts. Furthermore, as the horse and rider motif is widely considered to be a representation of the artist's control over their medium in paintings produced by The Blue Rider group, I read the frequent presence of transport-based implied sound in *Nosferatu* and Blue Rider artwork as being symbolic of the filmmaker's and group's shared desire to take their artistic media along new creative avenues. Scholarly analyses of implied sound in *Nosferatu*, such as those performed by Unrau and Elsaesser, have been hitherto limited to brief discussions of the film's musical subtitle (*A Symphony of Horror*) and the scene involving Ellen's scream to Hutter towards the midpoint of Murnau's picture, which I discussed in the first section of this chapter. Moreover, critics have regularly highlighted connections between Murnau's approach to filmmaking and existing artwork, particularly the paintings created by Romantic artists like Friedrich and Spitzweg. This chapter has tried to show that we can significantly build on these

brief discussions of implied sound in *Nosferatu*, and the more developed analyses of the impact that paintings had on Murnau's silent filmmaking, by exploring the apparent influence that the Blue Rider artists' experimentation with synaesthesia had on Murnau's employment of implied sound throughout *Nosferatu*. In a similar manner to how Kandinsky and his colleagues attempted to destroy and redesign the representational walls of the arts by synthesising the senses in their monumental works of art, I argue that Murnau employs implied sound in his *Symphony of Horror* in order to breakdown and reshape the sensory boundaries of silent cinema.

Although scholars have contended that Murnau often sought to combine the arts in his silent films, including *Nosferatu*, the director was firmly committed to reducing the medium's reliance on older art forms, such as literature and theatre, and wanted to see cinema build a new artistic identity for itself. This chapter has argued that Murnau tried to accomplish this goal by using implied sound to create a multisensory silent film (*Nosferatu*) that highlighted the unique expressive qualities of the cinematic medium. It makes a unique contribution to my thesis because, unlike my later chapters on *Berlin* and *Menschen am Sonntag* (*People on Sunday*, 1930), which are concerned with the sensory phenomenon's links to large-scale societal and artistic movements and crises, it demonstrates that Weimar cinema implied sound was also closely aligned with The Blue Rider group's contemporary synaesthetic experiments, which aimed to fundamentally reshape the representational borders of the arts.

**Chapter Two—A Futurist Evaluation of the Modern City:
Rethinking the Role of Sound in Walter Ruttmann’s *Berlin:
Symphony of a Great City* (1927)**

Introduction: Modernity, City Noise and Futurism

This chapter focuses on the use of implied sound in Walter Ruttmann’s *Berlin: Die Sinfonie der Grosstadt* (*Berlin: Symphony of a Great City*, 1927). I argue that Ruttmann’s implied sound evokes Futurists’ philosophical critiques of modernity that initially emerged in the early twentieth century. Futurism, which is regularly associated with Italian fascism (see Rawson, 1991: p.254; Humphreys, 1999: p.15; Ialongo, 2013: p.394), was a modernist artistic and social movement that began to materialise after the appearance of Filippo Tommaso Marinetti’s *The Manifesto of Futurism* (1909) in a Bolognan newspaper. Following the publication of German translations of several Futurist texts, including Marinetti’s manifesto, in *Der Sturm* (*The Storm*) magazine in 1912, and two German exhibitions of the movement’s art that year (see Krauss, 2017: p.602), interest in Futurism grew substantially in the country’s artistic circles (see Gay, 1974: p.7; Humphreys, 1999: p.63). Throughout Marinetti’s Futurist manifesto, and the other contemporary writings and art produced by his colleagues, such as Luigi Russolo and Umberto Boccioni et al., the noise, speed and liveliness of modern urban existence is aggressively extolled, despite the increased danger that humans found themselves in as a direct result of mechanisation. When it was initially released, Ruttmann’s film quickly “became a national and international success and was screened widely in commercial cinemas” (Hielscher, 2019: p.219). In the decades since, *Berlin* has often been highlighted as a significant German silent picture (see Manvell and Fraenkel, 1971: p.45; Schobert, 2003: p.244). For instance, Siegfried Kracauer refers to it as “one of the most

remarkable achievements of the [Weimar] period” (Kracauer, 2004: p.136). Critics that have analysed *Berlin* frequently argue that its high-tempo rhythmic cutting suggests inaudible music (see Cousins, 2004: pp.109-110; Marcus, 2007: p.186; Schwartz, 2018: p.15). This argument emerged in the early 1930s when Béla Balázs described Ruttmann’s montage editing as a form of “optical music” (Balázs, 2010, p.129). In connection to this, Laura Marcus and Nora M. Alter recognise that *Berlin* has a musical subtitle (*Symphony of a Great City*), which suggests for them that, although silent, Ruttmann’s film was designed as a visual representation of audible music (see Marcus, 2007: p.186; Alter, 2009: p.208). Moreover, Daniel Schwartz briefly notes that, due to Ruttmann’s frequent shots of machinery, *Berlin* is connected to Futurist championing of technology (see Schwartz, 2018: p.9). Throughout this chapter, I attempt to build on the work of critics that briefly highlight the musical feel of Ruttmann’s silent film and its links to Futurist ideology. As I will explain in more detail later, I seek to accomplish these tasks by arguing that Ruttmann consistently uses fast-paced rhythmic implied sound to present the new technological possibilities of urban life, in addition to its inherent dangers and suffering, as exciting and glorious aspects of modernity.

Unlike most silent Weimar pictures, *Berlin* was predominantly shot on real city streets, features avant-garde documentary filmmaking techniques such as covert filming, contains fast-paced montage editing, and does not have a conventional narrative structure or characters.⁸⁴ Instead, it presents a day in the life of city dwellers as they undertake work and enjoy leisure activities from dawn until dusk.

⁸⁴ According to Siegfried Kracauer, *Berlin*’s cinematographer, Karl Freund, “would drive in a half-enclosed truck with slots in the sides for the lens or he would walk about with the camera in a box that looked like an innocent suitcase. No one ever suspected that he was taking pictures” (Kracauer, 2004: p.183). In the same year that *Berlin* was shot, Soviet director Dziga Vertov described this furtive filmmaking technique as life “caught unawares” (Vertov, 1984: p.57), and went on to use it extensively in his film *Man with a Movie Camera*.

Consequently, as Steven Jacobs, Anthony Kinik and Eva Hielscher note, the city of Berlin, itself, could be considered “the protagonist of the film” (Jacobs, Kinik and Hielscher, 2019: p.3). The city’s important role in Ruttmann’s film is immediately apparent in its first major scene which depicts a fast-moving steam train speeding through the countryside until it arrives in central Berlin in the early hours of the morning. When we reach the city streets there is initially no evidence of human or mechanical activity and Ruttmann’s camera focuses on architecture, debris blowing around the roads and cats patrolling the pavement. Gradually, the city begins to awaken from its temporary slumber as people emerge from their homes and head to work. Increased human activity in Berlin comes hand in hand with the presence of machines, including cars, trains and trams, which soon flood the now bustling streets of the German capital. The working day quickly begins as shop shutters are retracted, office workers unpack their typewriters and complex factory machines are started up. Work proceeds at a feverish pace, which Ruttmann typically communicates through fast-paced editing and special effects. Workers are rewarded with temporary respite at lunch and eventual freedom from their duties in the late afternoon at the end of the working day. As nightfall arrives, most workers are free to pursue leisure activities, including sports, theatre, and nightclubs, which all cater to the various levels of German society. The film comes to a close rather abruptly with shots of fireworks in the night sky above Berlin and a shot of the newly finished *Funkturm* Berlin (Berlin Radio Tower).

Through examination of implied sound in Ruttmann’s *Berlin*, I aim to answer a number of research questions. How does Ruttmann create implied sound in *Berlin* and to what extent is the phenomenon present in the film? In what ways and how is *Berlin*’s implied sound evocative of Futurists’ contemporary excitement for modern

urban life and their contempt for the rural past? To what length and how is Ruttmann's implied sound reminiscent of Futurists' coeval passion for the destruction, violence and death that modern technology enabled in the early twentieth century? The questions that I consider in this chapter are tied to my overarching thesis research question concerning the extent to which silent Weimar pictures' implied sound evoke contemporary societal and artistic movements. In my previous chapter on *Nosferatu, eine Symphonie des Grauens* (*Nosferatu: A Symphony of Horror*, 1922), I examined how F. W. Murnau's use of implied sound suggests that he was inspired by the synaesthetic techniques of his friends and colleagues in the Expressionist *Der Blaue Reiter* (The Blue Rider) group. This chapter endeavours to expand on my discussions of implied sound in the above-mentioned film by demonstrating that, in addition to being tied to contemporary artistic experiments, the phenomenon can also be linked to coeval social critiques of modernity.

To help me address my research questions, I have split my chapter into three sections. Firstly, I explore the development of the modern city in the eighteenth, nineteenth and twentieth century and the invention of technologies that fundamentally changed the way humans lived, including their relationship with sound, during this period. In addition to this, I outline *Berlin*'s connections to the 'City Symphony' silent film genre and early twentieth century Futurist music.⁸⁵ This section also begins to demonstrate how we can link Futurist philosophy, such as the glorification of speed and technology, to Ruttmann's use of fast-paced rhythmic implied sound in *Berlin*. After this introductory section, I analyse implied sound in

⁸⁵ These silent avant-garde documentary films were primarily released in the 1920s and early 1930s and typically follow ordinary city dwellers as they go about their daily routines at work or during leisure time. To a large extent, and despite the fact that they contain no synchronised sound, 'City Symphonies' have a musical structure that is created by editing and movement within the frame.

several scenes from *Berlin* and suggest that we can read it as being broadly reminiscent of the Futurists' enthusiasm for city life and humanity's technological progress since the start of the Industrial Revolution. In the next part of my chapter, I discuss how Ruttmann's implied sound also echoes Futurism's adoration of brutality, death and destruction that the modern technologically-driven world fostered. Throughout my study of *Berlin*, I put forward the argument that, by studying Ruttmann's implied sound, we can interpret the film's depiction of contemporary urban existence as being strikingly similar to Futurists' passion for technology and their disregard for the human suffering that it brought about. On balance, I suggest that Ruttmann's film extols the new opportunities that the modern world brings, such as high-speed transport, yet also celebrates the physical and psychological trauma that it can cause to human life, due to the danger that machines pose to both the body and mind.

At the end of the eighteenth and start of the nineteenth century, the Industrial Revolution brought profound changes to human life in advanced countries around the world, including Germany. Capital cities across Europe, in particular, saw exponential growth and this led to cities and modernity "being used to describe or to explain [each] other" (Jacobs, Kinik, Hielscher, 2019: p.31). Following Germany's unification in 1871, many citizens left the countryside for the city in order to pursue factory-based employment.⁸⁶ Consequently, Berlin experienced a tremendous population swell and become one of the largest cities in the world, behind London and Paris (see McFarlane, 1991: pp.106-107; Schönfeld, 2002: p.184; Rowe, 2007:

⁸⁶ Although many Germans abandoned their rural lives for the urban opportunities of cities such as Berlin, Chris Harman recognises that the country "was still relatively backward [...] [because a] third of the population still lived on the land" (Harman, 1997: p.20) before the start of the First World War, which was highly unusual for developed countries in the early twentieth century.

p.201).⁸⁷ After initially failing to implement modern social reforms and adopt new technologies, Germany developed both of these infrastructures significantly from the late nineteenth century until the outbreak of the First World War in 1914 (see Guerin, 2005: pp.xxi-1).⁸⁸ Dorothy Rowe notes that, during this period, “Berlin was successfully transforming itself from an ordinary *Großstadt* (big city) to a thriving new *Weltstadt* (world city)” (Rowe, 2007: p.201) (my emphasis). Although the country experienced noteworthy modernisation in this era, the ultra-modern Berlin that we see in Ruttmann’s eponymous silent documentary film was not fully actualised until shortly before the film was shot in the late 1920s. Piotr Sadowski recognises that,

[w]hile in 1914 only 5 percent of Berlin households had electricity, this had increased to 50 percent by the end of the 1920s. Electricity accelerated the spread of information by telegraph, telephone, and radio. It also altered the mobility of the urban dweller (Sadowski, 2017: p.198).

A number of years before he directed *Berlin*, it is clear that Ruttmann had a keen interest in modern technology and was cognisant of the many ways that it enabled the “accelerated [...] spread of information” that Sadowski refers to.

Telegraphy, express trains, stenography, photography, high-speed presses, and so on—although not cultural achievements in and of themselves—have resulted in a previously unknown velocity in the transmission of intellectual information (Ruttmann, 2016a: p.451).

⁸⁷ The mass exodus from the countryside to the city in Germany caused significant overcrowding and great suffering for those that were underprivileged (see Bullock, 1991: p.61).

⁸⁸ Unlike most other significant contemporary European countries, Germany had extremely limited democratic structures in place in the nineteenth century and was, for the most part, still ruled by a monarchical system (see Harman, 1997: pp.13-14).

In addition to containing numerous electrically-powered communication instruments, such as telephones and radio, *Berlin* features several forms of modern transportation. Throughout the film, Ruttmann consistently captures shots of trains, cars, trams and, to a lesser extent, aeroplanes, as they carry passengers from one place to another. Furthermore, we are also presented with shots of construction machinery (diggers and cranes), office technology (typewriters) and entertainment media (cinema). Besides revolutionising the way we communicate, travel, work and relax, these modern forms of technology also fundamentally changed the soundscape of major cities, including the German capital (see Steward and Cowan, 2007: p.2). Karin Bijsterveld states that “[t]he ambient level of noise [in cities] increased in terms of decibels, and was extended in terms of frequencies. Machines created everlasting, continuous noises: drones, the flat lines in sound” (Bijsterveld, 2001: p.37). With regard to Berlin specifically, Rowe notes that “[t]he noise of the city was a recurrent theme in much of the critical discussion of the experience of Berlin” (Rowe, 2007: p.208).⁸⁹ Since many of the new loud city-based noises that Bijsterveld and Rowe refer to were created by dangerous forms of modern technology, such as cars, trains and factory machinery, that regularly caused serious injuries and death (see Whissel, 2008: p.2), people quickly learned their distinct mechanical sounds in order to counteract the threats that they posed to human welfare (see Killen, 2006: p.1; Steward and Cowan, 2007: p.14).⁹⁰ In relation to this point, Rick Altman claims

⁸⁹ In connection to this, during the first decade of the twentieth century, various organisations were set up in Germany to try to tackle the noise pollution created by modern technology. Bijsterveld states that “the ‘German Association for Protection from Noise’ (*Deutscher Lärmschutzverband*) was founded [...]. The Association became generally known as the ‘Anti-Noise Society’ (*Antilärmverein*) and published a journal called *Antirowdy: Right to Silence*” (Bijsterveld, 2001: p.50) (emphasis in original).

⁹⁰ Sensory adjustment was also required on the modern battlefield to give oneself the best chance of evading the new and deadly weapons of war that emerged in the early twentieth century. As Holly Earl notes, “[t]he Great War saw the introduction of machine guns, high explosive shells, poison gas, and radio to the battlefield, and these developments demanded radical sensory specialization” (Earl, 2020: p.472).

that “[i]n order to survive [...] soaring city populations learned to recognize and react to the sound of a cable car, factory workers learned to steer clear of dangerous machines, and country dwellers learned to gauge the distance of a steam locomotive” (Altman, 2004: pp.27-28). Although many people found ways to cope with the speed, noise and danger of the modern world, others, including Weimar citizens, seemingly felt completely overwhelmed by twentieth century city life. “Berlin was seen as a breeding ground of nervous and mental illness; and the problem of ‘growing nervousness,’ as a harbinger of national decline” (Killen, 2006: p.2). According to German reports made during the 1920s, “individuals appeared to kill themselves because modern life itself assumed an overwhelming quality” (Föllmer, 2009: p.207). As I will explain in more detail later in this chapter, *Berlin*’s implied sound predominantly consists of modern technological city-based noises, such as those outlined above. This has also been noted by Schwartz who argues that Ruttmann “uses a visual sound notation to bring the sounds of the street to life” (Schwartz, 2018: p.22). I build on this by arguing that the film’s implied sound, which evokes the real life sounds of the contemporary city, appears to directly address the revolutionary advances machines enabled and the psychological and psychological threats that they posed to humans. Through fast-paced montage editing, I suggest that Ruttmann regularly transforms these individual mechanical implied sounds into rhythmic visual music, which glorifies Berlin’s technological progress and the dangers and stresses that were present in the modern workplace and on city streets. Consequently, as I outline below, Ruttmann’s rhythmic implied sound enables us to not only tie *Berlin* to the ‘City Symphony’ silent film genre, but also read it as a Futurist critique of modernity that draws on both the movement’s artistic and social philosophy.

Since Ruttmann's aforementioned avant-garde filmmaking techniques, such as his use of covert shooting on real city streets, are all fundamental to films that belong to the contemporary 'City Symphony' genre, scholars have regularly identified *Berlin* as an archetypal example of this silent documentary film type (see Alter, 2009: p.196; Stein, 2013: p.3; Marcus, 2014: p.89; Hielscher, 2019: p.218). Although 'City Symphonies' were, for the most part, only produced during the 1920s and early 1930s, a number of them emerged around the world during this period, including *Manhatta* (1921) (United States), *Chelovek s kino-apparatom* (*Man with a Movie Camera*, 1929) (Soviet Union) and *Rien que les heures* (*Nothing but Time*, 1926) and *A Propos de Nice* (*About Nice*, 1930) (France).⁹¹ 'City Symphony' films, including *Berlin* and those mentioned above, are also intrinsically bound together through their strong ties to music, hence the word "Symphony" in the genre's name and in Ruttmann's subtitle (*Symphony of a Great City*).⁹² Marcus recognises that 'City Symphonies' "often include images of dance and music, including orchestration. Their symphonic dimensions are also structural – they are often divided into movements which correspond to parts of the day – and rhythmic" (Marcus, 2014: p.90).⁹³ This statement has also been echoed recently by Kenneth S. Calhoun with regard to Ruttmann's 'City Symphony' in particular. "[*Berlin* has] 'symphonic' movements, each with its own tempo and temperament and each

⁹¹ Despite city symphonies becoming effectively extinct by the end of the early 1930s, the genre has recently been resurrected in the United Kingdom with the release of *London Symphony* (2017). Alex Barrett's black and white silent film adopts the rhythmic editing found in many 1920s 'City Symphonies', including *Berlin*, to examine London's cosmopolitan and hectic everyday life in the early twenty-first century.

⁹² Jacobs, Kinik and Hielscher claim that *Berlin*'s musical subtitle was responsible for coining the term 'City Symphony' (see Jacobs, Kinik and Hielscher, 2019: p.6). As I discussed in my thesis Introduction and Chapter One, several other silent films, including *Nosferatu*, had already been given sonic titles prior to the release of Ruttmann's silent picture.

⁹³ In connection to this, Jacobs, Kinik and Hielscher argue that "[s]hots [in 'City Symphony' films] were treated like musical notes, sequences were organized as if they were chords or melodies" (Jacobs, Kinik and Hielscher, 2019: p.4).

corresponding to a time of day” (Calhoon, 2021: p.190).⁹⁴ The rhythmic quality of the film’s visuals, which the above scholars refer to, in addition to Edmund Meisel’s original score for *Berlin*, appear to have been inspired by the new noises of the modern city. Carl Mayer, *Berlin*’s screenwriter, began to conceptualise the film in the mid-1920s when he was struck by the technological sounds of Germany’s capital city. “In 1925, standing amid the whirling traffic of the Ufa Palast am Zoo, he conceived the idea of a City Symphony. He saw a ‘melody of pictures’ and began to write the treatment of *Berlin*” (Rotha, 1938, in Kracauer, 2004: p.182). As Mayer specifically wanted to create a ‘City Symphony’ and was particularly motivated to start working on *Berlin* after seeing “a melody of pictures”, it seems likely that city-based implied sound was in the forefront of his mind as he conceptualised the film in treatment form. Like Mayer, composer Meisel was also profoundly interested in the modern sounds of everyday urban life, and sought to deliberately recreate them in his *Berlin* score, which he produced in partnership with Ruttmann (see Manvell and Fraenkel, 1971: p.45; Kracauer, 2004: p.183).⁹⁵

Meisel conceived of his musical score as an assemblage of noises that characterize a cosmopolitan center. The expectation was that the urban spectator would recognize in the ‘symphony’ sounds that emanated from, and resonated with, the sonic environment of quotidian life in the metropolis (Alter, 2009: p.196).

⁹⁴ In connection to this point from Calhoon, Michael Cowan and Hielscher have also claimed that *Berlin*’s five acts have their own distinct musical style which mirror the individual movements of a musical symphony (see Cowan, 2014: p.55; Hielscher, 2019: p.219).

⁹⁵ As I explained in Chapter One during my discussion of Murnau’s various partnerships with his composers, it was unusual for silent film directors to closely collaborate on the scores for their pictures. However, Ruttmann, like Murnau, had a strong interest in, and knowledge of, music during his life. For instance, Fulks notes that “Ruttmann manifested a remarkable musical aptitude as a child, developing considerable proficiency on the cello at an early age” (Fulks, 1982: p.98). Consequently, Ruttmann would have likely been well equipped to assist Meisel with his musical accompaniment for *Berlin*.

Although my chapter is not concerned with the city-based noises that are present in Meisel's original *Berlin* score, as I strictly concern myself with Ruttmann's use of implied sound, it is worth briefly identifying them in the composition in order to show that real life modern sound was a fundamental part of the film's design. For instance, in the first scene of the film involving a train speeding through the countryside, which I explore in more depth later, Meisel's rhythmic use of percussion and brass instruments is reminiscent of the real life mechanical sounds of a fast-moving train. Mayer's and Meisel's attempts to recreate Berlin's soundscape, through implied and audible sound respectively, is reminiscent of Russolo's desire "to attune and regulate [the] tremendous variety of [city-based] noises harmonically and rhythmically" (Russolo, 1973: p.85) in his Futurist compositions.⁹⁶ Among other sounds, Russolo hoped to be able to recreate the noises of modern transport, such as cars and trains, and the machines found in contemporary factories. In a 1913 letter to fellow Futurist Francesco Balilla Pratella, Russolo termed his approach to music "the Art of Noises" (Russolo, 1973: p.74). Richard Humphreys notes that, in order "[t]o achieve his 'art of noise'[,] Russolo devised a new form of [musical] notation and invented a range of machines that would reproduce the six varieties of noises he had defined in his manifesto" (Humphreys, 1999: p.44).⁹⁷ In connection to this discussion of *Berlin*'s implied sound and Russolo's compositions, Schwartz has

⁹⁶ Besides *Berlin* and Russolo's Futurist compositions, many other contemporary modernist texts focused on city life, and particularly the modern sounds found therein (see Metzger, 2017: p.70; Jacobs, Kinik and Hielscher, 2019: p.31). Alfred Döblin's novel *Berlin Alexanderplatz* (1929), for example, is set in 1920s Berlin and features a significant amount of city-based sound. Early in the text, he refers to "the terrible din" (Döblin, 2018: p.7) of the city and the "[t]raffic [that] hooted and honked" (Döblin, 2018: p.7) around him. In addition to modern noises, Döblin's book also contains numerous other sound effects that are implied to the reader. For instance, when a cow is being slaughtered, the author describes the act in great sonic detail. "Then *skkrkk*, right across the throat he pulls the knife, through the windpipe, all the cartilage, the air escapes, through the neck muscles, the head has no more support, it lolls against the bench" (Döblin, 2018: p.137) (emphasis in original).

⁹⁷ Numerous different kinds of noises are attributed to six "*families of noises*" (Russolo, 1973: p.86) (emphasis in original) that Russolo lays out in his *The Art of Noises*. For instance, non-verbal human sounds belong to family two and animal noises are part of family six (see Russolo, 1973: p.86).

already briefly recognised that “Ruttmann’s inaudible sound techniques reveal a concern with the management of noise and aural environments – a concern [...] [he] share[s] with Futurist and avant-garde composers” (Schwartz, 2018: p.14). However, as I aim to demonstrate below, *Berlin*’s links to Futurism, through implied sound, are not simply limited to the shared surface-level depictions of modern city noises in Ruttmann’s film and Futurist art. On the contrary, we can also find numerous links between *Berlin*’s implied sound and Futurism’s broader philosophical discussions, particularly Futurists’ fascination with the machine-driven present and rejection of the past, in addition to their passion for brutality, destruction and even death.

To a large extent, Futurists glorified twentieth century urban existence because they were captivated by the profound changes that modern technology brought to everyday life, particularly the speed, dynamism and sound that machines generated. Marinetti, for instance, exclaimed that “the world’s magnificence has been enriched by a new beauty: the beauty of speed” (Marinetti, 1973b: p.21). Artists, including Boccioni, Carlo Carrá, Giacomo Balla and Gino Severini, concurred with Marinetti and aimed to capture, and highlight, modernity’s fast pace and energy in their Futurist paintings and sculptures.

Our growing need of truth is no longer satisfied with Form and Color as they have been understood hitherto.

The gesture which we would reproduce on canvas shall no longer be a fixed *moment* in universal dynamism. It shall simply be the *dynamic sensation* itself (Boccioni et al., 1973: p.27) (emphasis in original).

Like his fellow Futurist artists, Russolo was also uninterested in representing “fixed *moment[s]*” in his music and instead wished to extol the dynamism of the modern city by recreating the discordant sounds of mechanical motion in his compositions.

Let us cross a great modern capital with our ears more alert than our eyes, and we will get enjoyment from distinguishing the eddying of water, air and gas in metal pipes, the grumbling of noises that breathe and pulse with indisputable animality, the palpitation of valves, the coming and going of pistons, the howl of mechanical saws, the jolting of a tram on its rails, the cracking of whips, the flapping of curtains and flags. We enjoy creating mental orchestrations of the crashing down of metal shop blinds, slamming doors, the hubbub and shuffling of crowds, the variety of din, from stations, railways, iron foundries, spinning mills, printing works, electric power stations and underground railways (Russolo, 1973: p.85).

In connection to this discussion of Futurists' passion for the technologically-driven speed, sound and vitality of the modern world, Marcus notes that, in 'City Symphonies', "there is [...] frequently an absorption in, and an identification with, the energies of the city as machine" (Marcus, 2014: p.90). In relation to *Berlin* specifically, Jefferson Hunter argues that Ruttmann's film displays an "obvious fascination with the beauty of stainless-steel mechanisms in relentless operation" (Hunter, 2013: p.196).⁹⁸ Furthermore, Kracauer contends that Ruttmann's depiction of moving machines in *Berlin* is inherently musical. "Machine parts in motion are shot and cut in such a manner that they turn into dynamic displays of an almost abstract character. These may symbolize what has been called the 'tempo' of Berlin" (Kracauer, 2004: p.184). Ruttmann's apparent fascination with mechanical speed and sound in *Berlin*, which he shared with contemporary Futurists, is particularly apparent if we study his essay *How I Made my Berlin Film* (1927), that was

⁹⁸ This "fascination" with machines is also particularly apparent in Ruttmann's Nazi propaganda film *Deutsche Panzer* (*German Panzer*, 1940), which he directed during the Second World War. Throughout this wartime sound film, Ruttmann glorifies the production of a German Panzer tank by bathing it in light and creating musical rhythm with his fast-paced editing.

published less than a month after the initial theatrical release of his ‘City Symphony’ in Germany. The director states that,

[d]uring the editing, it became evident how difficult it was to visualize the symphonic curve I envisioned. Many of the most beautiful shots had to go, since I did not want to produce a picture book but rather something like the structure of a complex machine, which can only come into full swing if every tiny piece fits into the next one with the utmost precision (Ruttman, 2016b: p.464).

Ruttman’s statement makes it clear that the director intended to consistently create implied sound (“visualize the symphonic curve”) in *Berlin* by making his cutting resemble “the structure of a complex machine”. In order to do this, he suggests that each musical shot had to follow the next in a precise machine-like rhythm, even if that meant that many “beautiful shots had to go” during post-production. I suggest this demonstrates that, like Futurists, Ruttman was profoundly interested in the efficiency of modern technology, and strove to emphasise this through the use of mechanical implied sound and the creation of machine-like rhythm in *Berlin*’s fast-paced editing.

In order to fully take advantage of the new possibilities that modernity’s speed and dynamism afforded, Futurists routinely argued that society and art must reject concepts forged in the past and instead embrace modern ways of thinking about, and depicting, the world (see Humphreys, 1999: p.9). For example, Marinetti stated that:

[w]e stand on the last promontory of the centuries! . . . Why should we look back, when what we want is to break down the mysterious doors of the Impossible? Time and Space died yesterday. We already live in the absolute,

because we have created eternal, omnipresent speed (Marinetti, 1973b: pp.21-22).

Pratella, a Futurist musician, echoed Marinetti's sentiments a year later in the *Manifesto of Futurist Musicians* (1910).

Futurism, the rebellion of the life of intuition and feeling, quivering and impetuous spring, declares inexorable war on doctrines, individuals and works that repeat, prolong or exalt the past at the expense of the future (Pratella, 1973: p.34).

Like Marinetti and Pratella, Russolo also contends that the past should be forgotten and the mechanical present welcomed in his Futurist manifesto *The Art of Noises*. However, the composer principally makes this argument because he deems the past to be quiet and dull, and the present to be loud and exciting.

Ancient life was all silence. In the nineteenth century, with the invention of the machine, Noise was born. Today, Noise triumphs and reigns supreme over the sensibility of men. For many centuries life went by in silence, or at most in muted tones. The strongest noises which interrupted this silence were not intense or prolonged or varied. If we overlook such exceptional movements as earthquakes, hurricanes, storms, avalanches and waterfalls, nature is silent (Russolo, 1973: p.74).⁹⁹

Russolo shows contempt for past and particularly associates it with quietness (“[a]ncient life was all silence”) and goes on to proudly state that “[n]oise was born”

⁹⁹ As the presence of sound was relatively limited in the ancient times, especially when compared to the modern world, Russolo notes that early humans often worshipped sound. “[T]he first *sounds* that man drew from a pierced reed or stretched string were regarded with amazement as new and marvellous things. Primitive races attributed *sound* to the gods; it was considered sacred and reserved for priests” (Russolo, 1973: p.74) (emphasis in original). Russolo's language in this quotation is representative of early twentieth century racial prejudice and is not endorsed by me.

thanks to the initial arrival of machines in the nineteenth century. In connection to Russolo's excitement for the loud mechanical noise of modern cities, Alter claims that Ruttmann's *Berlin* "celebrates a booming metropolis of the early twentieth century" (Alter, 2009: p.206). Although Alter is seemingly using the words "booming metropolis" to refer to the economic prosperity that is apparent in many of *Berlin*'s shots, we can also use this phrase to describe Ruttmann's consistent use of 'loud' rhythmic implied sound, which, like Russolo's Futurist music, glorifies the new and loud sounds of modernity. As I explain in more depth in the next section of this chapter, Ruttmann typically forms this 'loud' implied sound by employing close-ups of machine parts in motion, such as the individual mechanical components of the fast-moving train in the film's opening scene, which I mentioned earlier. Furthermore, particularly at the start of *Berlin*, Ruttmann also contrasts the loudness of modern urban existence to the relative silence of the past by using wide-angle shots of rural landscapes to create 'quiet' implied sound. This demonstrates that Futurists' disinterest in the past and excitement for the future, which Russolo expresses through his distaste for the silent past and love for modern city-based noise, can also be located in Ruttmann's *Berlin*, through the director's employment of 'quiet' and 'loud' implied sound.

Besides extolling the speed, vitality and noise of modern technology, due to the significant advancements that machines brought about, Futurists also routinely celebrated the violence, destruction and death that modernity enabled. For example, Marinetti stated that Futurism wished to "glorify War – the world's only hygiene – militarism, patriotism, the destructive gesture of freedom-bringers, beautiful ideas worth dying for" (Marinetti, 1973b: p.22). Since Marinetti intended his movement to "glorify War", it is unsurprising that he, and many of his Futurist colleagues,

“organize[d] noisy pro-war demonstrations” (Willett, 1996: p.25) when the First World War broke out in 1914, and quickly volunteered for active service when Italy joined the conflict in 1915 (see Humphreys, 1999: p.65). Futurists’ passion for war and bloodshed was also shared by many in Germany at the start of the First World War. Ernst Jünger, for instance, later claimed in *Storm of Steel* (1920) that he and his friends:

were enraptured by war. We had set out in a rain of flowers, in a drunken atmosphere of blood and roses. Surely the war had to supply us with what we wanted; the great, the overwhelming, the hallowed experience. We thought of it as manly, as action, a merry duelling party on flowered, blood-bedewed meadows. ‘No finer death in all the world than...’ Anything to participate (Jünger, 2004: p.5).¹⁰⁰

In connection to Marinetti’s and Jünger’s statements, the Futurists Boccioni et al. argued that human suffering should not be taken seriously in modern art and society.

Our renovated consciousness[es] [do] not permit us to look upon man as the centre of universal life. The suffering of a man is of the same interest to us as the suffering of an electric lamp, which, with spasmodic starts, shrieks out the most heartrending expressions of colour. The harmony of the lines and folds of modern dress works upon our sensitiveness with the same emotional and symbolical power as did the nude upon the sensitiveness of the old masters (Boccioni et al., 1973: p.29).

¹⁰⁰ Like Jünger, Marinetti, and many other Futurists, Ruttmann also served in the armed forces during the First World War (see Alter, 2009: p.194). Barry Allan Fulks notes that Ruttmann was “an officer on the Eastern Front [...] [and was] [d]ischarged in 1917 due to a nervous condition” (Fulks, 1982: p.99). Although it is unclear whether the director shared their passion for brutality, ruination and death, Ruttmann will have been aware of the dangers that modern battlefield machines, such as the machinegun, posed to human life.

Boccioni et al. put forward an unsympathetic view of human suffering in their Futurist manifesto, arguing that “[t]he suffering of a man is of the same interest to us as the suffering of an electric lamp”. They equate human pain with damage suffered by an inanimate mass-produced modern object (“electric lamp”), which suggests that they see human life as being plentiful and disposable.

Futurist artists’ disinterest in human welfare, and Marinetti’s obsession with violence, destruction and death, is fundamentally linked to Italian fascism of the period (see Rawson, 1991: p.254). High-profile followers of Futurism, such as Marinetti, had strong links to prominent fascist leaders and organisations (see Ialongo, 2013: p.396), including Benito Mussolini and his far-right political party. Mark Antliff points out that, shortly after the end of the First World War, Marinetti’s Futurist Party “entered into an alliance with [...] Mussolini’s Battle Fases (Fasci di Combattimento) to embark on a campaign for national revolution outside the parliamentary framework” (Antliff, 2002: p.150). In connection to Futurists’ association with Mussolini, Ruttmann made a film in 1930s fascist Italy called *Acciaio* (*Steel*, 1933), which focuses on the harsh lives of steel refinery workers in a small town. The director also produced numerous propaganda films for the Nazi regime in Germany before the Second World War and during the first half of the conflict. For example, before his death in 1941, Ruttmann co-wrote *Triumph des Willens* (*The Triumph of the Will*, 1935) with Leni Riefenstahl and Eberhard Taubert, and directed the aforementioned film *German Panzer*. Although Ruttmann’s work on these propaganda films appears to link him to ardent Futurist fascists like Marinetti, who extensively collaborated with far-right governments in Italy, “[t]here is conflicting information about whether Ruttmann ever joined the

Nazi party” (Alter, 2009: p.195).¹⁰¹ It is unclear whether Ruttmann was seriously committed to Nazi ideology outside of the films he made for the National Socialist regime. Consequently, during my analysis of *Berlin*, I do not suggest that the director’s apparent veneration of brutality, destruction and death, which he communicates through fast-paced rhythmic implied sound in *Berlin*, is necessarily reflective of an affinity for far-right politics. Instead, I simply note that Ruttmann’s implied sound appears to brand the above elements as exciting and beautiful parts of modernity, which aligns him with Futurists such as Marinetti and Boccioni et al., who all expressed similar disturbing sentiments in their philosophy and art. Towards the end of his life, Rudolf Leonhard, who met Marinetti in Berlin in 1913, recollected that Futurism’s founder “liked Berlin enormously. It was as if this were a special Berlin, his Berlin, his domain, as if Berlin had been made ready for him, as if it were suddenly full of him” (Leonhard, 1974: p.116). In the analysis that follows, I aim to show that, whether Ruttmann was conscious of it or not, *Berlin*’s implied sound is “full of” the Futurist ideology that Marinetti initially espoused in the first decade of the twentieth century. Throughout the film, the director’s fast-paced and rhythmic implied sound consistently highlights mechanical efficiency and venerates the hazards, destruction and violence of the modern city, which firmly positions Ruttmann’s *Berlin* as the “domain” of Futurist social and artistic philosophy.

***Berlin*’s Implied Sound and Futurists’ Glorification of Modernity and Condemnation of the Past**

In this second section of my study of Ruttmann’s *Berlin*, I focus my attention on the director’s employment of ‘loud’ and ‘quiet’ implied sound in three scenes from his

¹⁰¹ Despite Ruttmann’s commitment to Nazism being in doubt, Fulks argues that *Berlin* can be linked to National Socialism because it idealises modern reality (see Fulks, 1982: p.103).

silent film. As previously discussed in the introductory portion of this chapter, I suggest that Ruttmann's use of these two distinct forms of implied sound can be linked to Futurists' adoration of the machine-powered urban present and their condemnation of ideas and approaches associated with the rural past. The first scene in *Berlin* that appears to mirror Futurist excitement for the speed, dynamism and noise of modernity, through 'loud' rhythmic implied sound, depicts a steam train journey from the German countryside to the centre of Berlin at the start of the film. This begins with a dramatic medium low-angle shot of the locomotive as it speeds past the camera in profile, which, as Calhoon notes, is reminiscent of Auguste and Louis Lumière's shot of a train arriving at a station in *L'arrivée d'un train en gare de La Ciotat* (*The Arrival of a Train at La Ciotat Station*, 1896) (see Calhoon, 2021: p.191). By filming this introductory shot from a height that is roughly comparable with that of a small child, Ruttmann immediately draws attention to the imposing size of the machine and encourages the audience to look up at it with childlike wonder as it flies past us with great velocity. This shot also visually suggests several 'loud' and rhythmic real life steam train sounds that emphasise the intense speed, energy and din that *Berlin*'s locomotive creates. The steam that billows out of the vehicle's chimney in quick bursts implies a constant puffing noise, the frenetic rhythmic motion of the vehicle's wheels suggests a sharp grinding sound and the carriages' swift movement through the frame seem to produce a rattling sensation.¹⁰² Although all of these mechanically-induced implied sounds are naturally noisy when they are heard in real life, Ruttmann is able to make them appear particularly 'loud'

¹⁰² The implied sounds in this shot are particularly evocative of those that are found in Carrá's *Stazione a Milano* (*Milan Station*, 1909). Like the train in *Berlin*, Carrá's painting contains a plume of smoke aggressively spouting from the locomotive's chimney and he alludes to the sound of train wheels by transforming the railway track in front of the train into a river-like blur. In connection to this, Carrá stated that he consciously attempted to reproduce the sounds "found in theatres, music-halls, cinemas, brothels, railway stations, ports, garages, hospitals [and] workshops" (Carrá, 1973: p.114) in his Futurist paintings.

in *Berlin* by placing us extremely near to them in medium shot. This ‘loudness’, and our general closeness to the fast-moving train, produces a sense of excitement surrounding mechanical speed, dynamism and noise that sets the *tone* for the rest of Ruttmann’s scene. This is because the shot is immediately followed by a quick-paced rhythmic close-up montage sequence of individual train components that weaves their distinct implied sounds together in a musical fashion (Figure 31). Besides numerous close-ups of train wheels and carriages that appear to respectively produce the same grinding and rattling implied sounds that feature in the scene’s first shot, the sequence also contains tight shots of train couplings, which rub together and suggest a harsh scraping noise. Ruttmann repeatedly juxtaposes this trio of different ‘loud’ metallic implied sounds throughout the scene using high-tempo montage editing of the aforementioned close-ups, which quickly causes the individual noises associated with the train components to amalgamate into something that we could term ‘mechanical music’. In connection to this, it seems clear that Ruttmann intended to visually imply this form of discordant music during some scenes in *Berlin*:

After each attempt at editing, I saw what was still missing: here an image for a gentle crescendo, there an andante, a metallic sound or a flute note. And thus I was able to continually determine what new shots were needed and what motifs I should look for. Again and again, throughout the production, I modified the form of the manuscript (Ruttmann, 2016b: pp.463-464).

Since Ruttmann states that he specifically pursued “metallic sound” in *Berlin*, we can firmly tie the implied ‘mechanical music’ located in the film’s train scene to the musical approach that Russolo advocates in his Futurist manifesto *The Art of Noises*. As I discussed in the introductory section of this chapter, Russolo argued that

musicians should incorporate machine-like sounds into their compositions in order to show how modernity had transformed city soundscapes.

Today music, as it becomes continually more complicated, strives to amalgamate the most dissonant, strange and harsh sounds. In this way we come ever closer to *noise-sound*.

This musical evolution is paralleled by the multiplication of machines, which collaborate with man on every front. Not only in the roaring atmosphere of major cities, but in the country too, which until yesterday was normally silent, the machine today has created such a variety and rivalry of noises that pure sound, in its exiguity and monotony, no longer arouses any feeling (Russolo, 1973: p.75) (emphasis in original).

Russolo's concept of "noise-sound" shows us that, although modernity's sounds, such as those suggested by *Berlin's* steam locomotive, were rather "dissonant, strange and harsh", they were also fundamentally exciting because they brought a new "variety and rivalry of noises" to human existence. For him, the loud and discordant sounds of modernity trumpeted the significant progress that humankind had been able to make thanks to the development of new technology, which is precisely what he hoped to capture in his Futurist music. Like Russolo's "noise-sound", Ruttmann's implied 'mechanical music' in *Berlin's* train montage sequence also appears to sonically celebrate the significant effects that mechanisation had on the modern world. Throughout this sequence, the director's use of 'loud' rhythmic fast-paced implied sound draws our attention to the intense noise, dynamism and speed of machines, which, as I discussed earlier, Futurists, including Marinetti and Boccioni et al., frequently extolled in their manifestos. By using swift montage editing to amalgamate the locomotive's individual implied sounds into 'mechanical

music', Ruttmann appears to suggest that trains visually and sonically epitomise the efficiency and 'beauty' of modern technological existence.

Ruttmann's Futurist-like glorification of modernity's pace, energy and noise in the train scene becomes even more evident if we juxtapose its 'loud' 'mechanical music' with the 'quiet' implied sound that is located in *Berlin*'s opening scene, which immediately precedes the locomotive's journey from the countryside to the centre of the city. Taken together, these adjacent scenes appear to visually and sonically evoke Futurists' disavowal of humanity's remote past and their enthusiasm for early twentieth century life. In order to illustrate this reading of *Berlin*'s opening scenes, and before turning to implied sound and Futurism, it would be helpful to outline Ruttmann's visual design of the first sequence and how it appears to suggest the passage of time. This begins with medium and close-up shots of water that gently ripples towards the camera and out of frame. These shots are followed by a short animated sequence that contains flickering horizontal rectangular stripes and a semi-circle shape rising and falling in an anti-clockwise direction. The movement of these shapes gets faster and faster until rectangles fall down through the frame and we transition to live action shots of a level crossing and the aforementioned first shot of the fast-paced train from the next scene. Erica Stein contends that this sequence "alludes to the city's prehistoric origins" (Stein, 2013: p.3). Matthew Malsky goes into greater detail on this point by suggesting that these shots depict "a historical or even evolutionary path from a watery genesis to urban modernity" (Malsky, 2016: p.160). The notion that the water and train represent entirely different eras of history becomes clearer if we examine the movement of the semi-circle during the animation that is situated directly between those two shots. As Bryony Dixon notes, the circular trajectory of this shape is reminiscent of a "sun" (Dixon, 2011: p.27) when it rises in

the morning and falls in the evening. Therefore, as Ruttmann's "sun" performs this action numerous times at great speed, we could infer that centuries, or even millennia, have passed between the water and train shots (Figure 32), despite them only being separated by a twenty-five second animation.

As I discussed above, and besides generally depicting the passage of time, *Berlin's* opening two scenes seem to present Futuristic contempt for the distant past and excitement for the ultra-modern present. To a large extent, this is accomplished through Ruttmann's cutting speed, the liveliness of objects within the frame and the director's distinct use of 'quiet' and 'loud' implied sound. At the start of the two-scene sequence, when we are presented with the aforementioned shots of water, which I read as representations of the remote past, Ruttmann's editing is extremely slow-paced, as each shot lasts for approximately seven seconds. In addition to this, beyond a very gentle rippling movement in the water, *Berlin's* opening two shots do not feature any noticeable motion within the frame. Consequently, we are encouraged to perceive lengthy 'quiet' babbling implied sounds when we are confronted with these aquatic images. Since these close-ups of water have a sedate cutting speed, feature little movement and contain only 'quiet' noises, Ruttmann appears to present humanity's distant past as a wholly uninteresting period. This firmly aligns him with Futurists, including Marinetti and Russolo, who I discussed at the start of this chapter, because they regularly dismissed the pre-modern era for being lethargic, slow and soundless, especially when compared to the early twentieth century present. Although Ruttmann does not increase the tempo of his cutting in the adjoining twenty seconds long shape-based animation, which, as I previously discussed, appears to portray the passage of time from ancient times up to the start of the twentieth century, there is significantly more motion within the director's frame

than in the preceding water close-ups. The horizontal flickering rectangles and the semicircle ‘sun’, which continually rises and falls, become progressively faster, rhythmical and melodic throughout the duration of the animation until their movements visually imply high-tempo music.¹⁰³ Since rhythmic motion and musical implied sound becomes more and more prevalent and intense as the ‘sun’ shape performs its repetitive circular trajectory, Ruttmann appears to enthusiastically celebrate humanity’s transition from the slow and quiet past to the fast-paced and loud present. This once again links Ruttmann to contemporary Futurists, particularly Marinetti and Russolo, because, as I discussed earlier, they were fascinated by the gradual development of speed and noise throughout history and highlighted their cultivation as glorious achievements for humanity. The brief shot of level crossing barriers falling through the frame and thudding into position abruptly brings *Berlin*’s animated sequence to an end and sees Ruttmann return to live action photography for the remainder of the film’s runtime. The level crossing poles visually close off the quiet past (the earlier shots of water) and sonically herald the beginning of the noisy present (the train scene that immediately follows it) with the ‘loud’ metallic implied sound of the barrier hitting its holder.¹⁰⁴ Ruttmann’s approach in this shot reminds us of Marinetti’s and Pratella’s statements regarding the need to forget ideas and approaches associated with past traditions in order to fully embrace the new and exciting opportunities of the present.¹⁰⁵ Our journey from the ancient past to the

¹⁰³ The movements of shapes in *Berlin*’s opening sequence is strongly reminiscent of those found in Ruttmann’s earlier animated silent films, particularly the aforementioned *Opus* series (1921-1925).

¹⁰⁴ After metaphorically barring the distant past in *Berlin*’s opening scene, Ruttmann never returns to any object or location that could be linked to the pre-modern world again in his silent film. From that moment on, the director’s camera strictly focuses on the city’s urban environments and particularly the place of technology in everyday life. Like Futurists who argued that the past should be ignored in order to allow the present to properly blossom, Ruttmann ignores the past throughout most of *Berlin*’s runtime and instead aggressively promotes the new technological and industrial possibilities that modernity enabled in Germany’s capital city.

¹⁰⁵ In connection to this, after meeting Marinetti in 1913, Leonhard claims that he “understood and believed, [that Futurists] were trying to replace the land of Art Galleries with one which was alive and

early twentieth century present is completed when the previously discussed steam locomotive montage scene succeeds the level crossing shot. As I discussed earlier in this chapter, the scene features fast-paced cutting, swift movement of train carriages and components within the frame and ‘loud’ repetitive implied sounds that soon amalgamate into rhythmic ‘mechanical music’, thanks to the use of repetitive montage editing throughout. In this second scene in *Berlin*’s opening sequence, the intense pace, energy and implied sound of the train depicts modern existence as an enthralling dynamic sensory adventure, which is the antithesis of the slow, sluggish and quiet past that the earlier water shots seem to represent. Therefore, Ruttmann’s contrasting portrayal of the past and present in *Berlin*’s opening two scenes is strongly reminiscent of Marinetti’s and Russolo’s previously mentioned Futurist argument that modernity’s speed, dynamism and noise are beautiful and exciting phenomena that should be celebrated for liberating the world from its dull, lifeless and mute past.

Futuristic adoration of the speed, dynamism and noise of modern existence can also be located in the final scene of Ruttmann’s silent film that mainly consists of a firework display and shots of the newly built Berlin Radio Tower. The night time sequence opens with a spinning medium shot of the city that quickly morphs into low-angle close-ups of a Catherine Wheel turning at great speed against the night sky (Figure 33). Our knowledge of the intense noise that Catherine Wheels produce when in motion, in addition to our closeness to the object via Ruttmann’s camera placement, encourage us to internally create a ‘loud’ crackling noise when confronted with these shots. This ‘loud’ implied sound is further enhanced by the

vital” (Leonhard, 1974: p.115). Leonhard’s recollection is backed up by Marinetti’s earlier *Manifesto of Futurism* where he states that “we establish *Futurism* [...] because we want to free this land from its smelly gangrene of professors, archaeologists, *ciceroni* and antiquarians” (Marinetti, 1973b: p.22) (emphasis in original).

sparks that continually shoot out of the firework, as they ensure that every corner of the director's frame is filled with the particles that are directly responsible for the Catherine Wheel's crackling sound. As the Catherine Wheel consistently moves at a fast pace and continually produces 'loud' implied sound, Ruttmann's shots create a sense of visual and sonic excitement, which is akin to what spectators typically experience at firework displays in real life outside of the cinema. Moreover, since pyrotechnics have been traditionally used by humans to commemorate significant events and dates for approximately six centuries (see Steward and Cowan, 2007: p.14), the presence of the firework in this scene can also be seen in a celebratory context. By juxtaposing the revolving firework with the rotating shot of the city that precedes it, Ruttmann suggests that the speed, dynamism and noise of Germany's capital city are enthralling elements of modern existence that should be celebrated. Although Ori Levin recognises that 'City Symphony' films are generally considered to be "celebration[s] of modernity" (Levin, 2018: p.229), we can better understand *Berlin's* veneration of modernity by specifically examining how Ruttmann's juxtaposition of the Catherine Wheel and the modern city is connected to Futurist glorification of urban existence. In relation to this point, Marinetti declares that:

[w]e will sing of great crowds excited by work, by pleasure, and by riot; we will sing of the multicoloured, polyphonic tides of revolution in the modern capitals; we will sing of the vibrant nightly fervour of arsenals and shipyards blazing with violent electric moons; greedy railway stations that devour smoke-plumed serpents; factories hung on clouds by the crooked lines of their smoke; [...] deep-chested locomotives whose wheels paw the tracks like the hooves of enormous steel horses bridled by tubing; and the sleek flight of

planes whose propellers chatter in the wind like banners and seem to cheer like an enthusiastic crowd (Marinetti, 1973b: p.22).

Throughout this statement, Marinetti uses sound (song) to celebrate the pace, dynamism and noise of early twentieth century metropolises. For instance, he claims that he and his fellow Futurists will “sing of”: the “polyphonic tides of revolution in the modern capitals”, “the vibrant nightly fervour of arsenals and shipyards” and the “the sleek flight of planes whose propellers chatter in the wind”. Like Marinetti, Ruttmann also extols the modern city’s speed, liveliness and noise through celebratory sound (crackling implied sound) when he juxtaposes the spinning shot of Berlin and the revolving close-up of the Catherine Wheel in his silent film. By fusing the crackling implied sound of the firework with the adjacent fast-paced rotating close-up of Germany’s capital city, Ruttmann suggests that Berlin’s intense speed and energy is sonically reminiscent of a live Catherine Wheel, which implies that modernity is profoundly exciting and stimulating to the senses.

Berlin’s Implied Sound and Futurists’ Passion for Destruction, Brutality and Death in the Modern World

In this third section of my *Berlin* chapter, I move on from discussing how Ruttmann’s rhythmic implied sound is reminiscent of Futurists’ enthusiasm for modernity’s pace, dynamism and noise, and their disinterest in ideas and institutions that are associated with the past. Instead, I shift my attention to how we can read the film’s fast-paced and ‘loud’ implied sound as a reflection of Futurism’s adoration of destruction, violence and death. *Berlin’s* connections to the movement’s glorification of destruction and violence, in particular, is first apparent in the implied sound that is present in the brief office scene that takes place near the beginning of Ruttmann’s film. The scene begins with a sequence of close-ups that show the office being

prepared for the working day: cabinets are unlocked, a desk is uncovered, sleeves are rolled up, a ledger is opened and a typewriter case is removed. Once this sequence is concluded, Ruttmann uses extremely fast-paced montage editing to cut between numerous brief shots of secretaries frenetically working at their typewriters, which create several aggressive and ‘loud’ mechanical implied sounds (Figure 34). We can consider them to be hostile and ‘loud’ because, as I will explain below, they are all jarring noises created by abrupt impact-based repetitive movements that are mostly captured by Ruttmann in close-ups, which place us extremely near to the sources of these implied sounds. For instance, Schwartz states that the many fast-paced shots of the typists’ fingers tapping on their keytops consistently suggest “staccato-like clacking” (Schwartz, 2018: p.7) noises. In addition to the “clacking” of the typewriter keys, that Schwartz refers to, Ruttmann’s medium and close-up shots of gliding typewriter carriage returns visually imply the scraping and dinging sounds that they create in quotidian life outside of the cinema. Furthermore, the four extreme close-ups of the machines’ type bars, that speedily hammer black ink onto white pages throughout this sequence, suggest the dull thudding noise that they routinely produce during typewriter operation in the real world. In connection to these jarring implied sounds in Ruttmann’s office scene, critics often consider typewriter noises and movements to be generally discordant and even hostile. For example, Helen Groth, Julian Murphet and Penelope Hone state that typewriter keys produce a “mechanical clatter” (Groth, Murphet and Hone, 2017: p.5) when they are repeatedly struck by people’s fingers. Friedrich A. Kittler further explores the notion that these machines created a discordant “clatter” in his book *Gramophone, Film, Typewriter* (1999).

The typewriter became a discursive machine-gun. A technology whose basic action not coincidentally consists of strikes and triggers proceeds in automated and discrete steps, as does ammunitions transport in a revolver and a machine-gun, or celluloid transport in a film projector (Kittler, 1999: p.191).

The notion that typewriters resemble “machine-gun[s]” is particularly apparent in the office scene in *Berlin*. Like a machine-gun, or any other type of automatic weapon for that matter, Ruttmann’s scene discharges *shots*, which are sonically ‘loud’ and aggressive, in a fast and rhythmic manner.¹⁰⁶ The visual and sonic qualities of these bullet-like shots, in a similar fashion to the devastating power of real weapon-based ammunition, appear to be directly responsible for destroying or killing the mind of one of the typists at the end of *Berlin*’s office scene.¹⁰⁷ This would seem to be suggested because Ruttmann employs dramatic blurring and spinning special effects in an extreme close-up of a typewriter keytop, from the perspective of one of the seated typists, after the sequence that depicts the secretaries’ frenetic working pace and the ‘loud’ and discordant implied sounds that are created by it. The psychological breakdown that the typist seems to experience, due to the brutal pace and incessant discordant sound of the modern workplace, is reminiscent of the sensory trauma that Jünger and other soldiers developed during their service in the First World War.

¹⁰⁶ In connection to the *Berlin* office scene’s links to modern weapons, and without specifically discussing implied sound, Mary M. Brodnax points out that the word “Torpedo” appears to be branded on the side of all the secretaries’ typewriters in this sequence (see Brodnax, 2001: p.85).

¹⁰⁷ Although he does not mention the typewriter specifically, Marinetti recognises that modern technology can have a debilitating effect on people’s mental health.

Those people who today make use of [modern technology] [...] do not realize that these various means of communication, transportation and information have a decisive influence on their psyches (Marinetti, 1973a: p.96).

That it had [...] an effect on me was instanced by numerous auditory hallucinations, so that I would mistake the trundling of a passing cart, say, for the ominous whirring of the deadly shell.

This was something that was to accompany us all through the war, that habit of jumping at any sudden and unexpected noise. Whether it was a train clattering past, a book falling onto the floor, or a shout in the night – on each occasion, the heart would stop with a sense of mortal dread (Jünger, 2004: pp.7-8).

Unlike Jünger, who associated the jarring sounds of modern conflict with “mortal dread”, Marinetti, Futurism’s founder, “loved and worshipped war, [precisely] because it made a noise and because he had no desire to know what else it did” (Leonhard, 1974: p.117). This links to Ruttmann’s depiction of the deterioration of the typist’s mind in *Berlin* because the director uses special effects to frame her breakdown, which is caused by the intense speed and noise of her work, as an enthralling event and shows no empathy for her suffering. Besides visually resembling objects of entertainment that appear later in Ruttmann’s film, such as the Catherine Wheel and casino roulette wheel, the frenetic rotations of the blurred typewriter keys also carry another *sense* of excitement, as they blend the preceding distinct ‘loud’ bullet-like noises of the typewriter components into a cacophony of metallic implied sound, which acts as a sonic climax to Ruttmann’s office scene. In connection to this point, shortly after the initial release of *Berlin*, Ruttmann described the film’s shoot as “[a] constant and thrilling fever of the hunt—constant excitement” (Ruttmann, 2016b: p.463). Like Marinetti, and other Futurists, who were enthused by the ‘loud’ and destructive sounds of modern warfare regardless of the suffering they caused, Ruttmann was seemingly fascinated by the feverish

qualities of Berliners' everyday lives despite the physical and mental stresses they were under. Consequently, besides capturing the "thrilling fever" that Ruttmann experienced while shooting *Berlin*, the typist's breakdown in the film's office scene also visually and sonically exposes its links to contemporary Futurists' passion for destruction and violence and their disinterest in the human suffering that it caused.

In addition to evoking Futurists' fascination with destruction and violence, Ruttmann's implied sound in *Berlin* can also be linked to the movement's obsession with danger and death. This is particularly apparent in the scene that depicts the suicide of a young woman towards the end of the daytime sequence in *Berlin*.¹⁰⁸ The scene opens with two 'loud' and distinct mechanical city-based implied sounds created by fast-moving vehicles. The first of these implied sounds is a grinding noise that is visually suggested by a train that moves through, and partially exits, the frame in medium shot. The second is a rattling implied sound of a descending rollercoaster that Ruttmann creates by fixing his camera to the front of the vehicle and framing a close-up of the tracks. It appears that the woman hears both of these noises as they are intercut with medium shots of her standing on a bridge looking down at a swirling body of water and close-ups of her anguished expressions (Figure 35). With each shot of the woman in this sequence, Ruttmann's framing gets tighter and tighter until we are confronted with two dramatic extreme close-ups of the woman's eyes bulging in abject terror, which suggests that the presence of the vehicles have caused her severe psychological damage. When discussing this particular sequence in *Berlin*, Hunter argues that the footage Ruttmann intercuts with the shots of the woman represent "emblems, no doubt, of the frantic and accelerating pace of big-city

¹⁰⁸ Scholars often point out that, unlike the vast majority of *Berlin*'s footage that captures Berliners naturally going about their daily business, this suicide scene was obviously staged by Ruttmann and his film crew (see Cowan, 2014: p.79; Hielscher, 2019: p.219). Alter, for instance, notes that "[t]his sequence stands out because it is the single obviously staged fictional scene within the entire film. It ruptures the nonfiction convention in a significant way" (Alter, 2009: p.204).

activity, or perhaps of the dizzying ups and downs of economic life in the Weimar Republic, and these have seemingly led the young woman to her crisis” (Hunter, 2013: p.202). Furthermore, Moritz Föllmer identifies the suicide as “an individual’s answer to capitalist exploitation” (Föllmer, 2009: p.195).¹⁰⁹ In addition to the elements that Hunter and Föllmer highlight as causes for the woman’s mental breakdown, we can also make the case that the noise of the train and rollercoaster prompt her loss of grip on reality. As I discussed in the introductory section of this chapter, in order to protect themselves from the potential dangers of modern technology, such as cars and factory machinery, city dwellers had to memorise their loud and distinctive mechanical sounds. However, knowledge of dangerous machines’ noises did not necessarily allay people’s worries surrounding technology. In connection to this, Marcus, for instance, claims that there was a prevalent “fear of the railway accident[.] [...] The 1860s saw a proliferation of medical literature on the manifestations of railway-related fear and nervous disorder” (Marcus. 2014: p.42). Therefore, in Ruttmann’s scene, we could interpret that the woman experiences extreme psychological stress upon being confronted by the sounds of the train and rollercoaster because they automatically forewarn the woman that her physical safety could be in danger. Furthermore, although people fear rollercoasters due to their intense speed and sound, and the potential dangers they pose to us, these three elements are also inherently exciting, which is why rollercoasters are often popular attractions at fairs and theme parks around the world. Consequently, by juxtaposing the shots of the rollercoaster with the woman as she has a mental breakdown and prepares to commit suicide, Ruttmann portrays her suffering as an exciting sensuous experience that is akin to a rollercoaster ride. Ruttmann also paints the woman’s

¹⁰⁹ Furthermore, as I mentioned in my introduction to this chapter, suicide was a prevalent issue in Weimar Germany, particularly in Berlin. As a result of this, Föllmer notes that suicide was a common theme in German films, novels and other coeval media (see Föllmer, 2009: p.198).

mental crisis as an enthralling occurrence, through implied sound, by gradually increasing the tempo of his cutting and our closeness to the woman's face.

Throughout the brief scene, the aforementioned distinct grinding and rattling implied sounds of the train and rollercoaster become progressively 'louder' and more cacophonous because they are swiftly intercut with increasingly tighter close-ups of the woman's anguished eyes, which intensifies their implied sound and blends them together into one 'loud' discordant noise. The speed of Ruttmann's cutting and the din of his implied sound, which have gradually been built up during the sequence, climax at the moment that the woman commits suicide by jumping into the frothing water below the bridge. As a result of this, *Berlin's* visuals and implied sound, once again, appear to frame the woman's death as a thrilling event rather than a troubling incident. This links to my discussion of Futurists' obsession with modern danger and death at the beginning of this chapter. Prominent early twentieth century followers of the movement, including Marinetti and Boccioni et al., expressed clear disinterest in the human suffering that modernity created and often glorified modern warfare because it had the power to destroy environments and kill people with great ease. Like Futurists, Ruttmann unsentimentally highlights the death and destruction that is prevalent in the modern world during the scene involving the woman's suicide by suggesting, through 'loud' cacophonous implied sound, that it is an exciting part of modern everyday urban existence.

After the woman has jumped to her death, Ruttmann further enhances the scene's enthralling atmosphere by inserting low-angle long and medium shots of the same bridge featuring a crowd that appear to have been watching the suicide unfold throughout. At no point during the crowd sequence do the bystanders seriously

attempt to help the woman after she has plunged herself into the swirling water below the bridge. In connection to this, Hunter argues that:

[p]eople notice and are shocked by the drowning, of course, but again, they do nothing to help. That is presumably one of Ruttmann's points. In Berlin, [...] no one belongs to anyone else, and no one feels anything resembling agenbite.¹¹⁰ As viewers of the scene we feel ourselves to be definitively in the twentieth century; vicariously, we stand by the by-standing Berliners, watching but disconnected, intrigued (or excited) but uncomprehending (Hunter, 2013: p.204).

Since the crowd run and aggressively jostle together while pointing and shouting at the water underneath them, I suggest that they are not merely “intrigued (or excited)”, as Hunter asserts, but thoroughly enraptured by the whole experience of the woman’s dramatic suicide. Their frenzied behaviour on the bridge creates constant ‘loud’ implied sound throughout the sequence that is reminiscent of the noise created by a crowd at a sports game, such as a football match. In fact, the conduct of the city dwellers in this scene is very similar to that of the crowds gathered for the tennis match and horse race that feature later in *Berlin’s* runtime. Consequently, Ruttmann portrays the woman’s tragic suicide as a captivating spectator sport that induces the same frenetic visual and sonic behaviour from onlookers as after work inconsequential pastimes do. This apparent morbid excitement that the suicide onlookers experience, which Ruttmann expresses through implied sound, is evocative of Futurists’ passion for destruction and death. Upon Italy’s entrance into the First World War in 1915, as I discussed earlier, Marinetti and many of his Futurist colleagues were eager to join up and take part in the

¹¹⁰ “Agenbite” is an archaic word that means conscience or remorse.

conflict. Their seeming eagerness to see horrific violence, and the resulting death it causes, unfold on the war's modern battlefields is strongly reminiscent of *Berlin*'s city dwellers' apparent fascination with the woman's death. Of all the major Italian Futurists, one feels that Marinetti, in particular, would have been comfortable if he was amongst the wild shouting crowd during the suicide scene in *Berlin* because he consistently declared his "love of danger" (Marinetti, 1973a: p.96) in his published work from the early twentieth century. However, as Jünger shows on multiple occasions in *Storm of Steel*, obsessions with destruction, death and danger were certainly not limited to Italian Futurists like Marinetti. For instance, when discussing the thoughts that he and his comrades had before they were faced with the grim realities of the First World War battlefield, Jünger states that "we shared a yearning for danger, for the experience of the extraordinary" (Jünger, 2004: p.5). As we can read the suicide bystanders' 'loud' implied sound (their frenzied footsteps and shouts) as a sonic reflection of the enthrallment that they feel during the woman's death in *Berlin*, Ruttmann's film appears to share Jünger's "yearning for danger", which suggests that reflections of Futurism's dark fascination with violence and death can be located in both pre-war Wilhelmine and post-war Weimar German culture.

Conclusion

To conclude, this chapter has argued that *Berlin*'s implied sound is evocative of early twentieth century Futurism's rejection of the rural past and fascination with the contemporary machine-driven city, in addition to the movement's adoration of the destructive, brutal and deadly aspects of modern life. We can form this sonic reading of *Berlin*'s connections to Futurism's artistic and social philosophy for two primary reasons. Firstly, Ruttmann's representation of sluggish and 'quiet' implied sound

characterises Germany's countryside as a near-static, boring and lifeless terrain, while his swift, musical and 'loud' implied sound routinely presents urban existence as a fast-paced, dynamic and exciting experience. Secondly, during scenes which appear to depict modern life causing mental deterioration, violence and death in *Berlin*, Ruttmann's rhythmic and 'loud' implied sound seems to highlight and celebrate these disturbing occurrences. Critical analysis of implied sound in *Berlin*, by scholars such as Marcus, has predominantly focused on Ruttmann's quasimusical editing and the film's sonic subtitle. Furthermore, Schwartz has noted that *Berlin* is linked to Futurism because it frequently features machines and contains implied sound that is reminiscent of Russolo's Futurist musical compositions. This chapter has attempted to demonstrate that these existing discussions of *Berlin*'s musical implied sound, and its ties to Futurism, can be significantly expanded if we compare Ruttmann's complex implied sound with the social philosophy contained in Futurist manifestos published in the early twentieth century. Like The Futurist writings produced by Marinetti, Boccioni et al., Russolo and others, Ruttmann's varied employment of 'quiet' and 'loud' implied sound seems to exhibit disdain for the past and an obsession with the sound, pace, vitality, brutality, destruction and deadliness of modern existence. Although Lucia Re notes that "very few futurist films were actually made" (Re, 2008: p.125) and it is unclear how closely Ruttmann studied Futurist ideology during his lifetime, *Berlin*, nevertheless, resembles a Futurist manifesto in film form, thanks to the director's nuanced employment of implied sound throughout his silent documentary. Building on the discussion of implied sound's links to contemporary synaesthetic paintings in my previous chapter on *Nosferatu*, this chapter on *Berlin* adds a new facet to my thesis because it shows that

Weimar film implied sound can also be connected to contemporary Futurist doctrines concerning art and society.

Chapter Three–The Silent Film’s Last Stand: Silent Protest and Sound Acquiescence in Robert Siodmak and Edgar G. Ulmer’s *People on Sunday* (1930)

Introduction: The Transition from Silent to Sound Filmmaking, Meta-cinema and the Essay Film

In this chapter, I read *Menschen am Sonntag*’s (*People on Sunday*, 1930) implied sound as an ambiguous critique of the rise of the sound film and the impending death of silent cinema in the late 1920s and early 1930s. I argue that the silent film’s implied sound suggests this through techniques that would later become associated with the essay film, such as meta-cinema and the combination of fiction and documentary filmmaking. *People on Sunday* was produced on a miniature budget by a team made up of relatively inexperienced and unknown filmmakers (see Chandler, 2002: p.48), who later went on to have successful careers in Hollywood.¹¹¹ Robert Siodmak (*The Killers*, 1946; *The Dark Mirror*, 1946) and Edgar G. Ulmer (*The Black Cat*, 1934; *Detour*, 1945) were the film’s co-directors, Billy Wilder (*The Lost Weekend*, 1945; *The Apartment*, 1960) wrote the screenplay and Fred Zinnemann (*High Noon*, 1952; *A Man for All Seasons*, 1966) was a camera assistant on the film.¹¹² The picture was “well received by critics and the public alike” (Read and Meyer, 2000: p.232) when it was released in the middle of the transition period

¹¹¹ The film did not receive any financial backing from a major German studio (see Isenberg, 2014: p.35). Wilder claims that the budget was just 5,000 Reichsmarks (see Wilder in Chandler, 2002: p.47).

¹¹² Ulmer and cinematographer Eugen Schüfftan were the most experienced filmmakers involved with the filming of *People on Sunday*. Ulmer had previously worked as a set designer, production designer and assistant director on silent Weimar films. His confirmed credits include F.W. Murnau’s *Der Letzte Man* (*The Last Laugh*, 1924) and G.W. Pabst’s *Die freudlose Gasse* (*Joyless Street*, 1925). Schüfftan had substantial technical experience as a silent film visual effects artist. He was responsible for trick photography in Fritz Lang’s *Die Nibelungen* (*The Nibelungen*, 1924) and *Metropolis* (1927), Abel Gance’s *Napoléon vu par Abel Gance* (*Napoleon*, 1927) and several other silent films. Zinnemann confessed that he had a very minor role in the production of *People on Sunday*. “The sum total of my contribution was to carry the camera around and to stay out of trouble” (Zinnemann, 1992: p.16).

(1927-1933) from silent to sound filmmaking. Throughout this six-year spell, critics, filmmakers, actors and the public had conflicting opinions on whether the film industry should continue making silent films or exclusively produce sound pictures (see Gellen, 2019: p.88). The majority of critics that have discussed *People on Sunday* do not analyse the film's narrative and characters in-depth and instead typically refer to the film in passing when analysing the successful later careers of the film's creators, such as Wilder (see Chandler, 2002; Hopp, 2003; Simsolo, 2011). Scholars also frequently contend that the film is of important historical value because it depicts ordinary German life shortly before the formation of the Nazi state in 1933 (see Read and Meyer, 2000: p.232; Wood, 2019: p.8). Elodie A. Roy is the only critic that has analysed *People on Sunday*'s implied sound in meaningful detail hitherto. For the most part, she focuses her analysis of the phenomenon on its presence in scenes that depict the record player (see Roy, 2017: p.34). In this chapter, I aim to expand on the critical examination of *People on Sunday* as a historical document by arguing that, in addition to displaying pre-Nazi everyday German life, the film's implied sound also evokes both sides of the contemporaneous debate surrounding the transition period in the film industry. Furthermore, I build on Roy's discussion of the film's implied sound in scenes that involve the record player by demonstrating that the phenomenon is also present in many other scenes in Siodmak and Ulmer's film, and has a fundamental role in *People on Sunday*'s narrative and characterisations.

People on Sunday follows the activities of four young Germans as they enjoy a leisurely Sunday excursion to the Berlin countryside.¹¹³ At the beginning of the

¹¹³ Although the film focuses on the activities of four characters throughout much of the film, there are frequent cutaway sequences that capture other Germans working in Berlin city centre and

film, the directors insert an intertitle which reveals that the film does not contain any professional actors and that the five principal characters have the same jobs in real life.¹¹⁴ Erwin (Erwin Splettstößer) is a taxi driver, Brigitte (Brigitte Borchert) works in a record store, Wolfgang (Wolfgang von Waltershausen) is a wine merchant, Christl (Christl Ehlers) is a film extra and Annie (Annie Schreyer) is a model. In a scene that seems to take place on a bustling street in the centre of Berlin, Wolfgang notices a woman (Christl) standing alone in the crowds of people. He quickly befriends her, takes her on an impromptu date and arranges to meet her again the next day, Sunday. Meanwhile, Erwin has finished work and returns home to his girlfriend Annie. The pair show disdain for each other from the start and soon begin to quarrel until Erwin's friend, Wolfgang, arrives and defuses the situation. The next morning, Erwin leaves Annie asleep in bed and goes to meet Wolfgang, Brigitte and Christl in order to travel to the countryside for the day. The group of four soon arrive at a body of water in the wilderness and go swimming. Wolfgang attempts to aggressively seduce Christl in the water and is abruptly rejected by her. This causes Wolfgang to immediately start pursuing Christl's friend, Brigitte, who is more receptive to his flirtatious behaviour, much to the annoyance of the now jealous Christl. A romantic chase soon begins as Christl and Brigitte both run away and hide from Wolfgang. He quickly catches Brigitte and embraces her as the camera pans away. Christl is irritated by her friend's romance with Wolfgang, but eventually seems to come to terms with the relationship as the group travel back to the city by pedal boat. The quartet arrives back to the city and the friends agree to meet again the following weekend before parting ways. The film ends in comical fashion as

enjoying various leisure activities, including sports, swimming and sunbathing, in the nearby countryside.

¹¹⁴ Recalling the production of *People on Sunday* later in life, Wilder remembered that all of the actors and crew "had to work at other jobs all week [...] and only had Sunday to shoot. So, the people behind the camera were people on Sunday, too" (Wilder in Chandler, 2002: p.47).

Erwin arrives home in the late afternoon to find Annie still in bed and believing that it is now morning and time for them to leave for their trip to the countryside.

In order to structure my analysis of implied sound in *People on Sunday*, I plan to answer a number of questions. How is implied sound created in *People on Sunday* and to what extent is it present in the film? To what degree and how is the film's meta-cinematic implied sound allegorically linked to the contemporary debate surrounding the transition from silent to sound filmmaking? How and to what length can *People on Sunday*'s use of implied sound be read under the rubric of the essay film? The questions that I ask in this chapter primarily contribute to answering my overarching thesis question regarding the extent to which Weimar cinema implied sound metaphorically addresses contemporary artistic crises. This chapter aims to build on my studies of *Nosferatu, eine Symphonie des Grauens* (*Nosferatu: A Symphony of Horror*, 1922) and *Berlin: Die Sinfonie der Grosstadt* (*Berlin: A Symphony of a Great City*, 1927) by demonstrating that, in addition to seemingly being inspired by contemporaneous synaesthetic experiments and movements in other art forms, Weimar cinema implied sound can also be read as an allegorical critique of crises that were particular to the film industry, namely the conversion from silent to sound filmmaking.

The chapter is divided into four distinct sections. In the first part, I outline our current scholarly understanding of *People on Sunday*, and particularly focus on the limited critical discussion of implied sound in the film. Following this, I examine implied sound in key scenes featuring Erwin and suggest that his aversion to sound, plus his frequent inability to converse with other characters, can be understood as meta-cinematic links to the coeval debate on the transition from silent to sound filmmaking. I then move on to analyse the presence of Brigitte's record player

during the characters' trip to the countryside and argue that the use of implied sound in these scenes paints sound cinema in a positive light, by alluding to the popularity that the new film medium enjoyed among many spectators, filmmakers and critics. In the final section of my chapter, I focus on the relationship troubles of Erwin and his girlfriend Annie. Their frequent failure to communicate, which is expressed through broken implied sound and silence, is evocative of the late 1920s-early 1930s argument that silent cinema was dying and that filmmakers should abandon it for sound film.

The release of the part-talking picture *The Jazz Singer* (1927) was the catalyst that started the six-year transition period, which gradually saw most film industries around the world stop producing silent films entirely (see Walker, 1978: p.vii; Milsome, 1979: p.32; Nicoletta and Soister, 2012: p.325) and instead focus solely on sound filmmaking. As Jessica Taylor notes, "the transition was a period of upheaval" (Taylor, 2009: p.5) because actors and filmmakers had to adjust to working with sound film technology and cinemas needed to be refitted with expensive audio hardware, in addition to many other alterations to filmmaking practice (see Hake, 2001: p.57; Gellen, 2019: p.87). Before sound cinema achieved dominance and silent cinema fell into decline, commentators and filmmakers engaged in a significant and passionate worldwide debate regarding the future direction of the film industry. Kata Gellen states that "[s]ome [people] were very enthusiastic, others highly critical, but almost no one remained neutral" (Gellen, 2019: p.88). At the beginning of the transition period in Germany, many filmmaking personnel were reluctant to fully embrace sound cinema (see Wahl, 2010: p.235; Ruttman, 2016c: p.556). "Although eventually sound came to be accepted as a *modus operandi* in the late Weimar years, the coming of sound initially was perceived as a crisis not only for commercial films

but also for avant-garde cinema” (Hales, Petrescu and Weinstein, 2016: p.9).¹¹⁵

Those that resisted the arrival of the sound film in Germany, and elsewhere, put forward a variety of reasons as to why the silent film should remain cinema’s primary mode of expression. One of the most common contemporary criticisms levelled at the sound film was that it represented an artistic regression for filmmaking because it abandoned the cinematographic advances that had been achieved in silent cinema (see Brownlow and Kobal, 1979: p.221; Ashkenazi, 2010: p.249). In connection to this point, Weimar film cinematographer Carl Hoffmann lamented the fact that many early sound films did not contain any mobile camera shots.

Poor camera! Alas! [N]o more of your graceful movements, no more of your happy-go-lucky shifts? Are you again condemned to the same bondage and chains which you commenced breaking ten years ago? (Hoffmann, 1929, in Kracauer, 2004: p.205).¹¹⁶

The “graceful movements” and “happy-go-lucky shifts” of the camera that Hoffmann refers to were, to a large extent, pioneered by silent Weimar filmmakers, including F.W. Murnau and Karl Freund.¹¹⁷ As I mentioned in my thesis Introduction, the pair’s use of handheld and mobile cinematography in *Der Letzte Man* (*The Last Laugh*, 1924) led to the creation of the term ‘unchained’ camera,

¹¹⁵ Despite having misgivings about sound cinema, Germany nevertheless quickly developed an original optical sound film system that was called Tri-Ergon in order to try and prevent the United States from flooding the German market with sound films (see Kaganovsky, 2018: p.7).

¹¹⁶ Weimar cinema actor Emil Jannings was also critical of sound film’s arrival because it forced filmmakers to abandon the visual techniques that they had carefully crafted during the silent period. “[T]he most valuable and characteristic element of film—the art of framing, changing, and moving images—fell by the wayside” (Jannings, 2016: p.143).

¹¹⁷ Mobile camerawork is also apparent in numerous other silent Weimar films, such as Paul Wegener’s *Der Golem* (*The Golem*, 1920) and Ruttman’s *Berlin*. Hoffmann, himself, also employs complex moving camera techniques in Murnau’s *Faust: Eine deutsche Volkssage* (*Faust*, 1926). The most ambitious are the lengthy aerial shots of models that see the camera fly across various land forms.

which is used to describe moving camerawork that is performed without the aid of a conventional tripod (see Herlth, in Eisner, 1973a: p.65; Roberts, 2008: p.41). The primary reason that mobile cinematography was absent from early sound films, and that the camera was returned to the tripod, its “bondage and chains” as Hoffmann calls it, is because directors were forced to isolate their cameras in static soundproof booths in order to avoid microphones picking up the sound of it being cranked (see Walker, 1978: p.10; Milsome, 1979: p.34).¹¹⁸ In addition to the artistic concerns regarding the arrival of sound filmmaking, critics also argued that the inclusion of audible language brought an end to cinema’s ability to transcend national borders and be understood by all (see Hake, 2001: p.57). Silent film actor and filmmaker Charles Chaplin remembered his feelings on the transition period in later life. “A good silent picture had universal appeal [...]. Now it was all to be lost” (Chaplin, 2003: p.322) due to sound cinema’s arrival.¹¹⁹ The loss of “universal appeal” in cinema, which Chaplin refers to, forced studios, including those in Germany, to make multiple language versions (see Robinson, 1973: p.170; Wahl, 2010: p.235) of many of their early sound pictures in order to avoid losing the profits that they had previously enjoyed from screening their films in international territories.

In contrast to the dismissal of sound cinema outlined above, some contemporary filmmakers, scholars and audiences, including those in Germany, were excited about the emergence of synchronised sound technology (see Pudovkin, 1988: p.282; Ashkenazi, 2010: p.249). Sabine Hake claims that “[t]he first screening of a [German] sound film, in 1929, caused great excitement and curiosity among

¹¹⁸ Ernst Hugo Correll notes that the presence of sound film microphones also stopped directors verbally-coaching their actors through scenes, which had been a common practice in silent filmmaking (see Correll, 2016: p.562).

¹¹⁹ Gellen suggests that Chaplin’s negative opinion of sound cinema made an impact on his contemporary cinema. She reads his final silent film, *Modern Times* (1936), as “a direct and explicit rejection of the new sound film” (Gellen, 2019: p.123) as the film’s powerful characters speak through technology and the protagonists communicate with their bodies (see Gellen, 2019: p.123).

audiences” (Hake, 2001: p.57). The film in question, *Atlantik* (*Atlantic*, 1929), was made in the United Kingdom but features German language throughout.¹²⁰ In their *Statement on Sound* (1928), Soviet silent film directors Sergei Eisenstein, Vsevolod Pudovkin and Grigori Alexandrov were also enthusiastic about the emergence of sound cinema. However, they criticised early sound films as well for routinely pursuing realistic dialogue and sound effects (see Eisenstein, Pudovkin and Alexandrov, 1988: p.234) and insisted that sound should always contrast with cinema’s visuals.

Only the contrapuntal use of sound vis-à-vis the visual fragment of montage will open up new possibilities for the development and perfection of montage.

The first experiments in sound must aim at a sharp discord with the visual images. Only such a ‘hammer and tongs’ approach will produce the necessary sensation that will result consequently in the creation of a new orchestral counterpoint of visual and sound images (Eisenstein, Pudovkin and Alexandrov, 1988: pp.234-235) (emphasis in original).

In line with filmmakers such as Eisenstein, Pudovkin and Alexandrov, the German film theorist, Rudolf Arnheim, was also ambivalent towards the arrival of synchronised sound during the transition era. For example, in 1930 he expressed excitement about the new artistic possibilities of sound cinema.

[N]ow we can include sounds from reality—the rattling of machines, the hum of giant crowds, birds’ twittering, the roar of the sea—as sound effects.

¹²⁰ The first German made sound film that was released in the country was Walter Ruttmann’s documentary *Melodie der Welt* (*Melody of the World*, 1929).

We are no longer reduced to using drums, peas, and sheet metal backstage to approximate the sound of stormy weather (Arnheim, 2016: p.570).

Conversely, in 1933, just three years later, Arnheim condemned sound film for being largely inartistic.

The introduction of sound film must be considered as the imposition of a technical novelty that did not lie on the path the best film artists were pursuing. [...] By sheer good luck, sound film is not only destructive but also offers artistic potentialities of its own (Arnheim, 1933, in Arnheim, 1983: pp.129-130).

Throughout my analysis of implied sound in *People on Sunday*, in connection to the mixed opinions on sound film's emergence outlined above, I seek to demonstrate that we can read Siodmak and Ulmer's implied sound as an ambivalent reaction to the introduction of synchronised sound that neither entirely dismisses silent film nor rejects sound cinema outright.

Since the end of the transition period, several films have focused on the upheaval that the transition period brought and the new opportunities that arose from the death of silent cinema and rise of sound film. As Gellen notes, two of the most well-known films that dissect this aspect of film history are *Singing in the Rain* (1952) and *The Artist* (2011) (see Gellen, 2019: p.100). The former highlights the technical challenges that sound film brought as a studio struggles to successfully convert their silent picture, *The Dueling Cavalier*, into a sound film using early sound film technology. Conversely, the latter is concerned with the human cost that the switch from silent to sound filmmaking brought about. *The Artist's* protagonist, silent film star George Valentin (Jean Dujardin), sees his career fall apart as he seems unable and unwilling to make the transition to sound. Although these films

present sound film in a negative light throughout their runtime, they both have a happy ending which show their characters eventually embracing sound technology and becoming successful. In contrast to *Singing in the Rain* and *The Artist*'s overt focus on the transition period in their respective narratives, I read *People on Sunday*'s examination of the move from silent to sound filmmaking as being much more subtle.¹²¹ On the surface-level, Siodmak and Ulmer's film is a record of a group of friends' trip to the countryside on their day off work. However, if we delve deeper into *People on Sunday*, by specifically examining the film's implied sound, we can understand it as a meta-cinematic analysis of cinema's contemporaneous transition period. This is because the film's implied sound is frequently reminiscent of the both the favourable and critical reactions to the birth of sound cinema, which I outlined earlier. I will discuss numerous examples of how *People on Sunday*'s implied sound connects to the discourse surrounding the transition period in more detail later in the chapter.

Meta-cinema "is manifest in films about movie-making and in films about the moviemaker" (Siska, 1979: p.285). This modernist form of filmmaking crystallised in the 1920s when many silent filmmakers, such as Buster Keaton and Chaplin, began to explore and expand the borders of cinema as a means of artistic expression (see Ames, 1997: p.9). In *Sherlock Jr.* (1924), for example, Keaton plays a cinema projectionist and dreams that he can step inside the film world, which the audience witness with the aid of special effects.¹²² Moreover, as Kenneth S. Calhoon

¹²¹ In connection to this, Gellen argues that Josef von Sternberg's early sound film *Der Blaue Engel* (*The Blue Angel*, 1930) "can be read as an allegory for the advent of sound film, even though technologized sound is not an overt theme" (Gellen, 2019: p.100). She notes that voice training is a major topic in the film and links this to the intense focus on actors' voices in early sound cinema (see Gellen, 2019: pp.100-101).

¹²² Robert Stam also highlights the meta-cinema present in Keaton's silent film *The Cameraman* (1928) and calls the actor and director "the poet-laureate of reflexivity in the silent cinema" (Stam, 1992: p.78) due to the frequent references Keaton makes to cinema in his own films.

has recently recognised, silent Weimar films also contain many self-reflexive elements that draw our attention to the filmmaking process and their identity as film objects (see Calhoun, 2021: p.88). Critics, for instance, regularly highlight meta-cinema in scenes from *Das Cabinet des Dr. Caligari* (*The Cabinet of Dr. Caligari*, 1920). Paul Cooke notes that Robert Wiene's picture "self-consciously critiques its own status as a piece of cinema" (Cooke, 2007: p.22). For the most part, scholars identify the phenomenon in the scenes set in Dr. Caligari's fairground tent, which resembles the exhibition spaces of early cinema (see Prawer, 1980: p.170; Roberts, 2004: p.183; Choe, 2014: p.1). Beyond silent cinema, meta-cinema can also often be found in many of the films that Jean Luc Godard has directed since the 1950s. To name just a few examples from Godard's oeuvre: *Le Mépris* (*Contempt*, 1963) is concerned with a screenwriter's crumbling marriage as he works on a film adaptation of Homer's *Odyssey*, *Comment ça va?* (*How is it Going?*, 1976) is a political film that centres on newspaper factory workers' bid to shoot a film and *Passion* (1982) focuses on a film director's attempts to overcome various professional and personal crises. Meta-cinematic elements can also be found in numerous other films from the 1960s and 1970s, including Federico Fellini's *8 ½* (1963), Ingmar Bergman's *En Passion* (*The Passion of Anna*, 1969) and François Truffaut's *La Nuit américaine* (*Day For Night*, 1973). In recent years, scholars have regularly argued that director Quentin Tarantino's postmodernist films, such as *Inglorious Basterds* (2009) and *Django: Unchained* (2012), contain sophisticated meta-cinematic components.¹²³ For instance, they highlight how Tarantino's films frequently reference film history through homage to famous directors' filmmaking styles (see von Dassanowsky, 2012; Speck, 2014). Like *Caligari* and the other silent and talking films mentioned

¹²³ Other relatively recent examples of meta-cinematic films include *Fight Club* (1999), *Inception* (2010) and *Hugo* (2011).

above, Siodmak and Ulmer's *People on Sunday* also consistently alludes to cinema, such as the shots of film star publicity photographs on the wall of Erwin and Annie's apartment, in addition to many other examples that I will examine later. However, if we analyse *People on Sunday*'s implied sound we can come to the conclusion that the film goes further than merely referencing the medium's existence, as it uses meta-cinema to specifically tap into the critical discourse on the move from silent to sound film production. Moreover, due to its use of meta-cinema to examine cinema's contemporary crisis, I also argue that *People on Sunday* has strong links to the essay film. Although the picture does not have the same avant-garde approach to editing and cinematography as many examples of the essay film do, such as Orson Welles' *F for Fake* (1973), *People on Sunday*'s implied sound nevertheless appears to have the same meta-cinematic and investigative qualities found in many essay films, which I will begin to explain below.

As Laura Rascaroli notes, “[t]he essay film is an open field of experimentation, sited at the crossroads of fiction, nonfiction, and experimental film” (Rascaroli, 2008: p.43). Consequently, critics often find it difficult to definitively agree on how to define essay cinema (see Arthur, 2017: p.163). For instance, Phillip Lopate claims that it is “a cinematic genre that barely exists” (Lopate, 2017: p.109) because many films with differing cinematic styles have been termed essay films. Although Lopate notes that it is hard to wholly pin down the essay film, critics generally agree that a handful of filmmakers are notable exponents of this film form. For example, amongst others, directors Chris Marker, Alain Resnais and Agnès Varda are regularly identified as film essayists (see Rascaroli, 2008: p.30). Marker's *Lettre de Sibérie* (*Letter from Siberia*, 1958) (see Bazin, 2017: p.103, Munro, 2017: p.82) and *Sans Soleil* (*Sunless*, 1983) (see Elsaesser, 2017: p.243; Alter and

Corrigan, 2017: p.5), in particular, are consistently held up as archetypal examples of the essay film. The essay film was first conceptualised in the 1940s by critics Hans Richter and Alexandre Astruc. Richter advocated for an experimental approach to documentary cinema that would enable filmmakers to capture the specific essence of an object or subject. For instance, in his text on essay cinema, Richter claims that directors cannot accurately describe how the stock market functions by carefully recording each phase of its workings in sequential order. This is because they also have to factor in “the economy, the needs of the public, market laws, supply and demand, and so on” (Richter, 2017: p.90). In order to adequately explain how something as complex as the stock market works, Richter suggests that filmmakers:

try—by whatever means necessary—to reproduce the idea of the object. [...]

In this way, documentary film is given the task of visualizing notions of the imaginary. Even that which cannot be seen has to be made visible (Richter, 2017: p.90).

Unlike Richter, who primarily rethinks filmmaking technique and is less concerned with individual artistic genius, Astruc argues that cinema will not reach the heights of older established art forms until gifted directors emerge and produce films that discuss life’s intellectual concerns (see Astruc, 2017: pp.94-95). He suggests that the majority of documentary films made up until the late 1940s have failed to engage with the audience on an academic level because they were “nothing more than entertainment” (Astruc, 2017: p.93).¹²⁴ To remedy this, and to ensure that film has a lasting future, Astruc claims that it is essential that “the camera eventually replaces the pen” (Astruc, 2017: p.96) and directors write visual essays on intellectual subject

¹²⁴ Richter also shared this particular concern as he had become disillusioned with mainstream documentary cinema’s passion for “pretty views (postcard views)” (Richter, 2017: p.89) and favoured the combination of drama and cultural study in hybrid documentary-fiction films like Robert Flaherty’s *Nanook of the North* (1922).

matters. Shortly after Richter and Astruc initially conceptualised essay cinema in the 1940s, notable early films from the ‘genre’ began to emerge such as Marker’s *Letter from Siberia* and Resnais’ *Nuit et brouillard* (*Night and Fog*, 1956). These films use meta-cinema to respectively examine the wilderness of Siberia and Nazi Germany’s use of concentration camps in the Second World War. Although essay filmmaking did not achieve widespread attention until the 1950s with the release of films by Marker, Resnais and Varda, amongst others, scholars have nevertheless argued that a selection of silent films can be seen as forerunners of the genre. For example, Thomas Elsaesser and Nora M. Alter and Timothy Corrigan suggest that the ‘City Symphonies’ *Berlin* and *Chelovek s kino-apparatom* (*Man with a Movie Camera*, 1929) foreshadow the essay film due to their use of meta-cinematic editing styles (see Elsaesser, 2017: p.241; Alter and Corrigan, 2017: pp.2-3).¹²⁵ Olivia Lory Kay adds greater legitimacy to the notion that ‘City Symphonies’ can be regarded as examples of essay cinema by noting that “[f]ilm essays tend not to follow a script, but revolve around a central idea or theme, which they meditate upon” (Kay, 2010: p.253-254). There is also strong evidence to suggest that Siodmak and Ulmer’s film did not have a fully formed script. Brigitte Borchert, one of *People on Sunday*’s principle actors, claimed in the documentary *Weekend am Wannsee* (*Weekend at the Wannsee*, 2000) that the filmmakers “didn’t have a script or anything. And that’s how it went for six weeks: we’d sit at a nearby table while they’d decide what to do that day” (Borchert, 2000).¹²⁶ Despite not having a traditional script, *People on Sunday* does have a coherent narrative that the audience can follow, which scholars

¹²⁵ *People on Sunday* has also been identified as a ‘City Symphony’ by numerous commentators (see Isenberg, 2014: p.37; Jacobs, Kinik and Hielscher, 2019: pp.12-13). As I explained in Chapter Two, this genre emerged in the 1920s and the term is typically applied to silent documentary films that are shot in large cities, filmed in an unconventional cinematographic style and use fast-paced editing.

¹²⁶ The unorthodox scripting of the film was also confirmed by Wilder who stated that “[t]here was a scarcity of paper, so when we first began talking the script, I wrote on the backs of envelopes and pieces of paper I had with me. Sometimes I used menus” (Wilder, in Chandler, 2002: p.50).

note is habitually absent in most essay films (see Elsaesser, 2017: p.241; Alter, 2018: p.6). As a result of this, and as I mentioned earlier, I do not suggest that Siodmak and Ulmer's silent film fulfils all the necessary criteria to be recognised as an essay film in the same vein as the experimental work of Varda, Marker or the silent films mentioned above. However, through analysis of the film's implied sound, which allows us to see the transition to sound filmmaking as "a central idea or theme", to use Kay's words, in *People on Sunday*, we can depart from the film's narrative revolving around the young friends' countryside adventures and observe the many characteristics it shares with the essay film. Critics routinely argue that essay films typically investigate significant contemporary issues (see Lopate, 2017: p.114). In connection to this, Alter claims that essay films "tend to appear in times of crisis. Accordingly, they may be seen to have a functional dimension, but their appearance may also be symptomatic" (Alter, 2018: p.15). These points from Lopate and Alter link to *People on Sunday*'s release in 1930 which was right in the middle of the crisis involving the conversion from silent to sound cinema. Furthermore, Kay contends that essay cinema often explores "technological innovation and always with a critical edge" (Kay, 2010: p.256), which ties to my reading of *People on Sunday* as a thorough exploration of the arrival of synchronised sound technology. In addition to this, Lopate states that "[o]ne of the natural subjects for personal essay-films is movie making itself, since it is often what the filmmaker knows and cares about most" (Lopate, 2017: p.122). Lopate's contention that essay films are habitually meta-cinematic also relates to my argument that *People on Sunday* addresses cinema's transition period through its implied sound. Although there is no direct evidence that the film's creators deliberately intended their film to be a critique of this particular moment in film history, Siodmak, Ulmer and Wilder, who were the

film's principal filmmakers, would have been well aware of the film industry's contemporary crisis surrounding the arrival of sound technology when they made *People on Sunday*. Therefore, as Lopate notes, it would only be "natural" for it to influence their work, whether they were conscious of it or not.

From its release in the silent era until the start of the twenty-first century, *People on Sunday* received very little scholarly attention, especially when compared with the other Weimar films that I analyse in this thesis (*Nosferatu* and *Berlin*). Commentators have speculated that this could be because copies of the film were difficult to find before it was restored in the late 1990s (see Collenberg-Gonzalez, 2019: p.89; Hughes, 2020: p.364). For the most part, those that did mention Siodmak and Ulmer's film during this period typically discuss it in passing and only highlight it as a curiosity or steppingstone in the careers of its famous creators, especially Wilder (see Chandler, 2002; Hopp, 2003; Simsolo, 2011), as opposed to an important film in its own right. In addition to this, scholars have regularly explored *People on Sunday*'s unconventional production (see Koepnick, 2009: p.238). As I mentioned earlier, the film was produced by a crew that largely lacked professional filmmaking experience and exclusively features amateur actors that had little to no knowledge of acting in films (see Chandler, 2002: p.50; Simsolo, 2011: p.10), which was atypical for theatrically released German silent films of the period. Although critics consistently point out that *People on Sunday* was produced in an unorthodox manner, they typically do not analyse the film's narrative or characters in significant depth. Carrie Collenberg-Gonzalez is one of the few that has examined these two elements of the film in detail. In her 2019 article, she reassesses the film in the #MeToo era and argues that *People on Sunday*'s plot "hinges on sexual violence" (Collenberg-Gonzalez, 2019: p.86). She concentrates most of her analysis on the

character of Wolfgang and his aggressive pursuit of Christl and Brigitte, which she considers to be predatory and abusive (see Collenberg-Gonzalez, 2019: p.87).

Although my reading of *People on Sunday* is markedly different to Collenberg-Gonzalez, I take inspiration from her approach because she also analyses Siodmak and Ulmer's film from a position of hindsight (#Metoo era) that allows her to view the film from a perspective that would likely have been alien to the filmmakers and audience in 1930. Other relatively recent studies of Siodmak and Ulmer's silent film explore its historical importance because it records the everyday lives of average Germans just three years before the Weimar Republic fell and the Nazis took power in 1933 (see Koepnick, 2009: p.239; Wood, 2019: p.8). Amanda Demarco argues that "People on Sunday is acutely of its era, depicting society's newest tectonic shifts" (Demarco, 2019: p.3). Furthermore, although Roy does not connect her argument to implied sound, she notes that *People on Sunday* was made as a silent film, a medium that would soon become extinct, which puts the film at odds with its focus on the lives of the modern German youth.

The film poignantly combined the soon to be archaic silent film with a defiantly modern subject matter (the ordinary rise of individualism, mass media and political extremes). *People on Sunday* depicted über-modernity through a medium (the silent film) which was already fast vanishing into the past (Roy, 2017: p.43).

Throughout my chapter, I expand on the above critics, particularly Roy, by arguing that *People on Sunday* can be considered even more historically valuable today. This is because, in addition to depicting pre-Nazi German life, the film also appears to critique the debate surrounding the benefits and drawbacks of sound film's

emergence and the death of silent cinema, through the use of meta-cinematic implied sound.

In comparison to the frequent aforementioned examinations of *People on Sunday*'s production as a low-budget experimental film, in addition to its historical importance as a document of pre-Nazi Germany, critical analysis of implied sound in Siodmak and Ulmer's film is almost entirely absent from the scholarship. In actuality, Roy is the only scholar to offer significant analysis of implied sound in Siodmak and Ulmer's film. Throughout her recent article, Roy argues that *People on Sunday* contains numerous sonic objects that are specifically designed to impact the audience's understanding of the film's plot and characters. Most of Roy's analysis is focused on the implied sound of Brigitte's phonograph which accompanies the group on their excursion to the countryside. She describes it as the "primary object [that] constitutes an entry point into the sites, issue and representation of listening in this paradoxically silent film" (Roy, 2017: p.34). In my analysis of *People on Sunday*, I aim to push her argument further by also considering the role of implied sound and its significance beyond the sonic devices in the film, such as that which is present in characters' dialogue. Decades after *People on Sunday* was produced, Wilder specifically remembered the sonic quality of the film despite it being technically mute. He retrospectively described the film as "[a] very, very simple story, quiet but full of melodies which resound in all of our ears" (Wilder in Uecker, 2012, p.165). Although Wilder acknowledges the muteness of his silent film (describing it as "quiet"), he then goes on to claim that it nevertheless somehow contains a significant amount of sound ("full of melodies"), which is apparent to the film's audience ("in all our ears"). I read Wilder's surprisingly specific statement on sound in his silent

film as further indication that implied sound is present in *People on Sunday* in numerous different ways, beyond the sonic objects that Roy refers to in her analysis.

***People on Sunday*, Implied Sound and Negative Contemporary Attitudes**

Towards Sound Cinema

Throughout the rest of my chapter, I analyse several key scenes from *People on Sunday* and argue that the implied sound found therein recalls tensions surrounding the move from silent to sound film production in the film industry. In this first section of scene analysis, I primarily focus on the character of Erwin and how his use of, and reaction to, implied sound often evokes the negative attitude that many critics and filmmakers had towards the sound film during the transition period. Unlike the majority of the other characters in *People on Sunday*, such as Wolfgang and Brigitte, Erwin rarely engages in long conversations and instead stays silent or communicates through gestures. A good example of this is the scene in Erwin's apartment when he ignores his girlfriend, Annie, for numerous onscreen minutes until an argument erupts, which I will discuss in more detail later. Furthermore, he consistently expresses anger or frustration towards objects that create implied sound, such as when he blows a raspberry at Brigitte's record player while they are in the countryside, and tries to avoid contact with them at all costs during the film. Erwin's distaste for sound and sonic objects throughout *People on Sunday* evokes the negative attitudes towards the emergence of sound cinema that were held by many critics and filmmakers around the world, which I covered in the introduction to this chapter, such as it being inartistic and uncultured. Although, we can habitually read Erwin's character as the embodiment of the film industry's resistance to sound cinema through meta-cinematic implied sound, he also appears to mirror arguments

that favour the other side of the debate as well. In her recent analysis of *People on Sunday*, Collenberg-Gonzalez notes that Erwin:

is consistently depicted throughout as a goofy, chubby, laughing, and vulnerable buffoon [...]. Numerous scenes depict him scratching himself, bending over in front of the camera, napping, giving up, and providing comic relief (Collenberg-Gonzalez, 2019: p.99).

Erwin's awkward and foolish behaviour, which Collenberg-Gonzalez recognises, encourages the audience to view Erwin as a buffoon, whose actions and opinions should not necessarily be taken seriously. Therefore, Erwin's avoidance of implied sound in the shape of vocal communication and sonic objects, which I read as a rejection of sound cinema, could also be regarded as the mistake of an idiot who failed to grasp the importance of these things (sound cinema). As I hope to show throughout this section of implied sound analysis, Erwin's connection to both sides of the transition period debate can be better understood if we examine his character through the lens of the essay film, which addresses its topics of discussion in a similar manner. In connection to this, Kay notes that the essay film "often [...] [holds] open contradictory positions" (Kay, 2010: p.254) when they discuss pertinent issues or worldly crises. Furthermore, Kim Munro states that "the voice of the essay is unsure and unstable" (Munro, 2017: p.83). Like the ambivalent discussion of issues in essay films, Erwin's implied sound does not offer definitive answers to the discourse surrounding the transition from silent to sound cinema in *People on Sunday*. If the audience read the film's potential references to the transition period through implied sound, it is up to them to engage with the film and come to their own conclusion surrounding the pros and cons of the move from silent to sound cinema.

In one of the earliest scenes in *People on Sunday*, Erwin's implied sound can be understood as a meta-cinematic reflection of the views held by industry figures that supported the continuation of silent cinema and rejected sound technology in the early 1930s. The short scene begins with a series of medium shots that depict Erwin using hand tools to maintain the underside of his taxi. Towards the end of this sequence, a colleague approaches Erwin and interrupts his work to deliver a message from Annie, Erwin's girlfriend. The colleague's intertitle says "Annie's on the phone. Do you want to go to the cinema tonight?" In close-up, still partially underneath the taxi, Erwin waves his hand in frustration and says "[w]hy's she making such a fuss? Greta Garbo is on until Tuesday!" and quickly retreats back under the car to continue his work. We never find out which Garbo film that they are referring to in this scene as it is never mentioned by name. This leaves open the possibility that it is *Anna Christie* (1930), Garbo's first talking picture, which was released in the United States on 21st February 1930, just fifteen days after *People on Sunday* was released in Germany.¹²⁷ Alternatively, it could also be some of her earlier films that just had synchronised sound effects, and had already been released in Germany when *People on Sunday* premiered in February 1930, such as *A Woman of Affairs* (1928) and *Wild Orchids* (1929). Due to *People on Sunday* releasing halfway through the transition period, it is likely that whichever Garbo film Erwin rejects is one of her pictures that contained some form of synchronised sound. Therefore, Erwin makes clear his disinterest in sound film in his first scene in Siodmak and Ulmer's film by declining to see a Garbo film and being more interested in maintaining his vehicle than discussing sound cinema. He sets the

¹²⁷ *Anna Christie* was not released in Germany until 22nd December 1930.

scene, quite literally, for the meta-cinematic attack on the sound film which emanates from his character throughout *People on Sunday*.

The negative attitude displayed by Erwin towards sound cinema in this scene recalls the position taken by many contemporary filmmakers and critics, who also argued that silent cinema was able to subtly convey stories and messages to the audience with greater ease than talkies. Paul Coates claims that despite sound technology being readily available many years before its breakthrough success in *The Jazz Singer*, filmmakers and audiences were happy to ignore it because it was “not yet required” (Coates, 1991: p.24). In relation to this point, Lilya Kaganovsky claims that “the ‘silence’ of silent film had been perceived as integral to the very art of cinematic expression” (Kaganovsky, 2018: p.5). This could be because implied sound within this “silence” allowed spectators to participate in the filmic experience through their internal creation of character dialogue and sound effects. Alexander Walker notes that “[d]uring the silent film’s ‘dialogue’, when the characters’ lips were seen moving soundlessly, filmgoers projected their own emotions on to the screen” (Walker, 1978: p.200-201). The audience had the freedom to determine the voices and verbal mannerisms of characters in silent cinema, which allowed them to read a film’s narrative and characterisations in unique ways. Furthermore, Zinnemann, the camera assistant on *People on Sunday*, argues that silent cinema was able to transcend language barriers, unlike the sound film. “[T]he era of the silent film was, most regrettably, coming to a close: it was the end of movies as a universal, worldwide language” (Zinnemann, 1992: p.16). He recognises that thanks to silent cinema’s use of gestural acting it was able to *speak* to people from all over the world, though implied sound. However, Zinnemann also contends that this “worldwide language” was destroyed when the sound film emerged, due to the

introduction of dialogue which was recorded in a specific verbal language. In connection to Zinnemann's point, Marguerite Duras recognises that the audience's ability to creatively interact with implied sound was exclusive to the silent film and was "closed off" (Duras, 1975, in Chion, 1999: p.9) to audiences when sound technology was used in films. Sound effects removed much of the ambiguity of implied sound because the audience had to accept that characters spoke in specific ways and sound effects made particular noises. When sound did arrive, some filmmakers, such as Murnau, argued that it was still not the right time to introduce synchronised sound technology to cinema.

Unfortunately, it has come too soon: we had just begun to find our way with the silent film and were beginning to exploit all the possibilities of the camera. And now here are the talkies and the camera is forgotten while people rack their brains about how to use the microphone (Murnau, in Eisner, 1973a: pp.213-214).

Although Murnau sees the potential of sound technology, he also notes that silent cinema had made significant strides since its inception, particularly when it came to the use of the camera, which, as I mentioned earlier, Murnau 'un-chained' during the making of *The Last Laugh*. The message put forward by the above critics, in addition to Murnau, broadly states that the introduction of sound into cinema was unnecessary and too soon. This links to Erwin's verbal disinterest in the Garbo sound film in *People on Sunday*. Through his intertitle dialogue, which the audience translate into implied sound, Erwin does not dismiss Garbo's sound film entirely, but indicates that he is in no hurry to see the picture ("Greta Garbo is on until Tuesday!"). Evoking Murnau, who saw sound's arrival as being premature, yet interesting, Erwin indicates through implied sound that there is no immediate need to

go and see the picture, but leaves open the possibility that they can watch it at a later date. Moreover, in addition to showing verbal indifference to Garbo's sound picture, Erwin also demonstrates his disinterest in the new medium through his actions.

Although *People on Sunday* is, for the most part, a film about worker recreation time when they can forget the pressures and mundanity of work and enjoy themselves, Erwin uses work to escape leisure by quickly sliding back under his taxi when Garbo's film is mentioned by his colleague.

Erwin once again appears to show clear displeasure towards sound shortly after the scene when he rejected going to see the aforementioned Garbo picture. As Erwin is sat at the table in his apartment eating his evening meal in medium shot, the couple's kitchen tap begins to drip repeatedly in close-up (Figure 36). Siodmak and Ulmer use cross-cutting to move back and forth between close-ups of Erwin and the tap several times until we interpret that Erwin hears the implied sound, due to the appearance of a frown on his face. The sudden implied sound of the dripping tap has broken the absolute silence of the apartment, a peaceful sound-free ambience that Erwin clearly wanted to uphold as he has continually ignored Annie. Moreover, Erwin also displays his distaste for sound again in this scene when his wardrobe continually swings open after he removes his jacket from it in medium shot. The slow movement of the door and Erwin's visual irritation implies that it makes a creaking noise, which once again breaks the silence of the apartment that Erwin has cultivated by refusing to engage in conversation with Annie. The frustration that Erwin displays towards these noises, which the audience understand through implied sound, also mirrors the contempt that many critics and filmmakers had for the sound film in the late 1920s and early 1930s. In particular, the implied sounds of the tap and wardrobe, in addition to Erwin's annoyance, evoke the contemporary argument

that the sound film was less artistic than silent cinema and threatened to eliminate some of the creative and technological advances made by filmmakers in the silent era. Silent film director Kenneth Macpherson claimed that sound films were “[b]ouldery jumble without interrelation or any specific plan, without architecture and without mortar” (Macpherson, 1998: p.90). Moreover, director René Clair expressed his worry that sound cinema’s “verbal expression [would] drive poetry off the screen” (Clair, 1972: p.75). Furthermore, film producer Erich Pommer claimed that, throughout the transition period, sound film was often considered to have brought about “the end of [...] film as the incomparable medium of culture” (Pommer, 2016: p.314). In addition to this, Arnheim states that “[t]he introduction of sound film smashed many of the forms that the film artists were using in favour of the inartistic demand for the greatest possible ‘naturalness’ (in the most superficial sense of the word)” (Arnheim, 1983: p.129-130). The positions expressed by the above critics seem to be reflected in Siodmak and Ulmer’s use of implied sound, in addition to Erwin’s angry reaction to it, in the above mentioned apartment scene in *People on Sunday*. The repetitive dripping tap, which we understand through implied sound, grates on Erwin who we see grimace at it.¹²⁸ The implied sound of the taps destroys the serenity of his ‘quiet’ apartment, in the same way that Macpherson, Clair, Pommer and Arnheim individually argue that sound technology made cinema become inelegant and uncultured. Furthermore, the use of the implied sound effects for the tap and the wardrobe in this scene is also particularly reminiscent of the use

¹²⁸ This scene is similar to one in the recent silent film *The Artist*, which shows protagonist George Valentin being haunted by the audible sound of sound cinema in his dressing room. Up until this point in the plot, Michel Hazanavicius’ film has been entirely silent, but this is broken as Valentin’s cosmetics suddenly make audible sounds as he places them on his dressing table. Valentin and the audience also hear the audible sounds of chorus girls laughing and a feather exploding when it touches the ground. At the same time that this is occurring, Valentin, himself, is unable to produce any verbal sound whatsoever, as we see him hold his throat and try and fail to speak. In this scene Hazanavicius uses audible sound in his silent film to show the looming presence of sound cinema. This is comparable with *People on Sunday*’s use of implied sound in Erwin’s apartment, which can also be read as a reflection of sound cinema’s emerging presence.

of, and critical reaction to, audible sound effects in early sound cinema. Weimar actor Emil Jannings argues that early German sound films focused almost entirely on the use of sound which was to the detriment of the visuals in these films.

The introduction of sound into film aroused so much opposition, especially among film's admirers and adherents, because the first talking pictures made the understandable mistake of relying on sound for their entire effect. They thus neglected the image, which remains, after all, the most important factor even in sound film (Jannings, 2016: p.143).

In Siodmak and Ulmer's scene in *People on Sunday*, the implied sound of the taps and wardrobe dominates the scene due to the frequent use of cross-cutting by the directors between Erwin and the sound sources. The implied sound effects are not only presented as annoying, due to Erwin's angry reaction to them, but they also take precedence over visual gesture in the scene. Therefore, this connects to Jannings' point that sound effects were often considered more important than visual storytelling in early sound films. Moreover, before sound became standard in the film industry at the end of the transition period in the mid-1930s, Walker notes that it quickly became commonplace for studios to outfit their existing silent films with audible dialogue to try and exploit the early popularity of talkies. Many silent films, including Murnau's *4 Devils* (1928) and *City Girl* (1930), were partially reshot so that they could be re-released as part-talkies, often much to the dismay of their directors (see Eisner, 1973a: p.194-198).¹²⁹ This practice commonly became known as "goat-glanding" (Walker, 1978: p.44), which was a reference to the contemporary doctor John R. Brinkley, who asserted that he could cure male impotency by

¹²⁹ Alfred Hitchcock's *Blackmail* (1929) is also regularly highlighted as an example of a film that was released in both silent and talking versions in an effort to tap into the public's interest in sound cinema in the late 1920s and early 1930s (see Telotte, 2001: p.187; McDonald, 2015: p.41).

implanting goat testes in men affected by the condition.¹³⁰ The frustration towards the implied sounds of the tap and wardrobe that Erwin displays to the audience in *People on Sunday* suggests to the audience that these sounds are jarring and out of place. This evokes the negative reaction to the practice of retooling silent films with sound effects, which Walker and Lotte H. Eisner refer to, and their frequency in early sound cinema.

People on Sunday's implied sound also seems to recall contemporary arguments against sound film in another scene that involves Erwin and takes place in the apartment that he shares with Annie. After the couple have ignored each other for almost three onscreen minutes, and have begun to get ready for their date, Erwin approaches their apartment wall, which is covered in publicity postcards of German and American film stars of the era, such as Emil Jannings and Harold Lloyd, in medium close-up. In order to try and provoke an angry reaction from his girlfriend, Erwin removes a photograph of German actor Willy Fritsch and defaces it by flicking his shaving foam at it in close-up. This act greatly angers Annie who immediately destroys a photograph of Hollywood actress Greta Garbo with scissors (Figure 37), which the film's directors also present to us in close-up. The couple soon finish dressing for their evening out and a quarrel erupts over Annie's hat and outfit. This is immediately followed by a fast-paced montage of medium shots and close-ups that depict the couple frantically ripping up the film star postcards on the wall of their apartment. When discussing this particular scene in *People on Sunday*, the narrator of the Weimar cinema documentary *Von Caligari zu Hitler: Das*

¹³⁰ Although many initially believed Brinkley's claims about the implantation of goat testes, his doctor's medical license was revoked in 1930 and he was promptly labelled a quack (see Branyan, 1991: pp.31-35). As the term 'goat-glanding' was applied to cinema in the late 1920s (see Belton, 1999: p.235) (before Brinkley was branded a charlatan), one would assume that it was chosen to indicate that, in order to stimulate cinema spectators, audible dialogue must be transplanted into existing silent films.

deutsche Kino im Zeitalter der Massen (From Caligari to Hitler: German Cinema in the Age of the Masses, 2014) argues that the couple's assault on the photographs "ironically mocks the celebrity cinema culture of its time".¹³¹ Moreover, Jon Hughes notes that Erwin and Annie's home is "a site of domestic tension, confinement, and petty frustrations at the end of the working week" (Hughes, 2020: p.370). We can extend these points further if we recognise that the destruction of the film star photographs specifically evokes the negative tension surrounding the transition from silent to sound cinema in the late 1920s-early 1930s. One of the main reasons that I have come to this conclusion is because Willy Fritsch, the actor whose photograph is initially destroyed by Erwin, plays the lead role in Germany's first high-profile sound film, *Melodie des Herzens (Melody of the Heart, 1929)*. Furthermore, Greta Garbo, whose photograph is ruined by Annie, had also recently finished her first sound picture, *Anna Christie*, as I mentioned earlier. Consequently, we can read both Erwin and Annie's destruction of these two photographs as an attack on the sound film and its stars. This becomes even more evident if we examine the methods that the characters use to ruin the two photographs in question. In Erwin's close-up destruction of Fritsch's photograph, he flicks shaving foam over the actor's face, leaving only his mouth uncovered. This could suggest that sound cinema is only concerned with the voice and that an actor's face, the primary tool of expression in silent cinema, has become irrelevant. Moreover, in the close-up of Annie's subsequent defacement of Garbo's photograph, she uses scissors that slice through the centre of the postcard horizontally. By choosing this cutting angle, Annie cuts directly across Garbo's mouth. As Annie specifically targets the organ (the mouth)

¹³¹ The documentary inaccurately identifies the photograph destroyed by Annie in close-up as actress Lillian Harvey. "[I]t's not just any stars being mauled by shaving cream and curling tongs. They are Willy Fritsch and Lillian Harvey, the era's dream film couple". The 2019 Blu-ray release of *People on Sunday* shows us that the name under the photograph ruined by Annie clearly reads "Greta Garbo".

which was so fundamental to the sound film, we can also understand her attack on the photograph as a meta-cinematic assault on the new film form and its stars. In addition to reading this scene as a meta-cinematic attack on sound cinema, we can also link *People on Sunday*'s film star portraits to the essay film. André Bazin notes that still images, in particular, are a common storytelling device in Marker's essay films (see Bazin, 2017: p.104), including *La Jetée (The Pier, 1962)* and *Sunless*. Marker uses them, in combination with self-referential voice over that acknowledges their place as filmed subjects, to draw the audience's attention to the fact that they are watching a film. In connection to this, *People on Sunday*'s use of film star photographic postcards also reminds Siodmak and Ulmer's audience that they are watching a film by directing their attention towards real life film stars that they would have recognised from other films of the period. Furthermore, Kay argues that essay films often generally repurpose material that was initially designed for another purpose.

The history of the essay film is a history of [...] reworking existing sources into new things. [...] Much of this 'orphan' material is material that has been shot for one purpose but the essayist uses it for another (Kay, 2010: p.255).

The photographs in Erwin and Annie's apartment were initially intended to promote contemporary film stars and the studios that they were contracted to. However, when they are destroyed by Erwin and Annie in the specific manners that I described above, we could interpret that this "orphan material", as Kay describes it, is used in order to highlight the sustained attack that sound cinema was under in Germany and elsewhere during the transition period.

My reading of the scene involving Erwin and Annie destroying photographs is also informed by analysis of meta-cinematic implied sound. Towards the end of

the scene, after the Fritsch and Garbo pictures are ruined, the couple engage in a furious tearing war as they deface numerous photographs of film stars at once. Throughout this passage, Erwin and Annie consistently create ‘loud’ and aggressive implied sound as they rip and tear the postcards on the wall. This is communicated to the audience visually through fast-paced montage editing that combines several medium shots of Annie and Erwin snatching photographs and tearing them to shreds. Among those destroyed are photographs of Hollywood film stars Harold Lloyd and Gloria Swanson. Like many other established silent film stars (see Eyman, 1997: p.22), such as married couple Douglas Fairbanks and Mary Pickford, Lloyd and Swanson both fell out of favour after the arrival of sound film and were unable to recapture the success they enjoyed during the silent period again.¹³² Consequently, the abrupt and ‘loud’ implied sound that is created by the destruction of their photographs in *People on Sunday* could be read as a meta-cinematic reflection of the sudden and brutal effects that the emergence of sound cinema had on their careers, and those of other silent film actors.¹³³ Furthermore, Swanson’s annihilation in picture form in Siodmak and Ulmer’s film also points forward to her role in *Sunset Boulevard* (1950), which was written and directed by *People on Sunday*’s writer, Wilder. In *Sunset Boulevard*, Swanson plays the washed-up fictional former silent film actress Norma Desmond, who remains bitter about the arrival of the sound film long after the end of the silent era.¹³⁴ The film notes the destructive influence that the sound film had on film stars’ careers, whilst also recognising the benefits of the

¹³² Pickford remembered in later life that silent film stars were often horrified by the sounds of their own voice when they heard it and studios were terrified that they would lose their most profitable stars due to their ‘imperfect’ voices (see Pickford in Eyman, 1997: p.181).

¹³³ Cinema musicians also suffered greatly at the birth of sound film because their services as accompanists were no longer required. Therefore, they were made redundant on a huge scale during the transition period (see Geduld, 1975: p.254).

¹³⁴ Swanson is joined by several other former silent film actors and directors in *Sunset Boulevard*, including Keaton, Erich von Stroheim and Cecil B. DeMille.

additional filmmaking tools that sound cinema brought to the table, such as audible dialogue and sound effects. Therefore, in addition to featuring Swanson and being written by Wilder, *Sunset Boulevard* also seems to mirror *People on Sunday* because it features a mixed critique of the transition from silent to sound filmmaking.

Before moving on to another scene, I would like to briefly refer back to a contention that I made earlier in the chapter, namely that Erwin's meta-cinematic connection to the debate surrounding the transition period in *People on Sunday* can often be read as both a positive and negative critique of the move from silent to sound filmmaking. Although we can read Erwin and Annie's destruction of the photographs in the apartment as an attack on sound cinema's preference for the voice over the face, we can also interpret the pairs' attack as being juvenile and pointless. This is due to the fact that the photograph defacements only take place due to the petty tit for tat relationship that Erwin and Annie have. In this reading, the aggressive and 'loud' implied sound of the tearing, in addition to the rubbish that it creates, evokes the prolonged and bitter conflict that was caused by the arrival of sound cinema which prevented the film industry from making a smooth transition from silent to sound film. Therefore, we can also understand this scene as being in positive alignment with the rise of sound film and as a negative critique of those who found fault with the transition from silent to sound filmmaking. This links to Rascaroli's understanding of essay films because she claims that cinema from this 'genre' does not offer any definitive messages on topics that they highlight and discuss. "The essayist does not pretend to discover truths to which he holds the key, but allows the answers to emerge somewhere else, precisely in the position occupied by the embodied spectator" (Rascaroli, 2009: p.36). Consequently, if we read this scene's implied sound through the optic of how essay film's present their topics of

discussion, we can see that Siodmak and Ulmer's implied sound offers an ambivalent view on the contemporary debate in the film industry surrounding the transition from silent to sound filmmaking in this scene in Erwin and Annie's apartment.

Implied sound that links to the contemporary disdain for the coming of sound can also be located in scenes that feature Erwin during the countryside excursion in *People on Sunday*. Towards the end of the friends' trip, after the romance has developed between Wolfgang and Brigitte, Erwin, Christl and Wolfgang sit in the grass and wait for Brigitte to join them. Christl turns Brigitte's gramophone on in a close-up and Erwin responds to this immediately, in another close-up, by blowing a raspberry in the direction of the musical device. His disdainful implied sound in this scene is reminiscent of the coeval argument that the sound film should not be taken seriously by filmmakers and critics as it was nothing more than a temporary novelty, unlike the "mature" (Balázs, 2016b: p.517) silent film that had been carefully crafted into an art form over the course of thirty years. Pudovkin remembered that he initially dismissed sound cinema because he considered it to be a passing fad that had "no future", beyond a limited period of commercial exploitation (Pudovkin, 1988: p.264) (emphasis in original). This position on the future of the sound film was also taken by Metro Goldwyn Mayer's (MGM) Irving Thalberg. Although we know with hindsight that *The Jazz Singer* was the catalyst that led to sound film permanently replacing silent cinema in the late 1920s and early 1930s, Thalberg considered the film's use of synchronised sound to be "a good gimmick" (Thalberg in Fleming, 2004, p.78) and little else. Erwin's abrupt juvenile raspberry directed at the record player, which we understand through implied sound, is congruent with Pudovkin's, Thalberg's and others' haste to dismiss sound technology soon after it

arrived. By using a raspberry and not words to display his displeasure towards the phonograph, Erwin suggests that he has no respect for the machine. The character's implied sound indicates that he views the gramophone with both amusement and contempt, which is reminiscent of Thalberg's decision to describe synchronised sound as a "gimmick". In a similar fashion to the photograph tearing scene that I discussed earlier, we can also read Erwin's scornful implied sound in this scene as being in support of sound cinema's arrival. By blowing a raspberry at the record player, Erwin could be viewed as crude and juvenile by the audience. Therefore, Erwin's disdainful implied sound in this scene could also be read as a stinging meta-cinematic attack on the critics that opposed sound cinema's arrival, by linking their negative criticism of the new medium, through implied sound, with the uncultured noises of disapproval used by children, such as raspberries.

Implied sound that evokes the negative contemporary reactions to the transition period can also be perceived in another scene featuring Erwin that takes place during the friends' trip to the countryside. The scene opens with Erwin lying alone and asleep on the grass next to Brigitte's open gramophone in medium shot (Figure 38). He remains there for a substantial period of screen time (around twenty-five seconds) until he is awoken by the arrival of Christl. Unlike the other main characters in *People on Sunday*, such as Christl and Brigitte, who turn on the record player to provide entertainment during their trip, Erwin retreats into himself (is *turned off*) and falls asleep when he is left alone with the device. Erwin's palpable disinterest in the recorded music of the phonograph, which we understand through implied sound, is meta-cinematically connected to many filmmakers' reluctance to convert to sound filmmaking in the late 1920s and early 1930s. Although some silent film directors, such as Alan Crossland and Lloyd Bacon, were quick to embrace

sound filmmaking, many others were indifferent to sound technology and carried on making silent films for a number of years after the release of *The Jazz Singer* in 1927. For example, Murnau continued directing silent films until his death in a road accident in 1931 and Chaplin's first sound film was *The Great Dictator* (1940).¹³⁵ Furthermore, all of *People on Sunday*'s creators temporarily ignored the new medium by not participating in sound film projects before their film was released in 1930.¹³⁶ By not engaging with sound technology when it initially emerged, Murnau and Chaplin, in addition to the other above mentioned filmmakers, metaphorically *slumbered* during the birth of sound cinema, which links to Erwin's decision to physically sleep through the implied sound of the recorded music on Brigitte's record player in *People on Sunday*.

The scene that depicts Erwin asleep next to the record player is also reminiscent of the contemporaneous argument that sound cinema's approach to storytelling was less sophisticated than silent film. Discussing sound cinema during the transition period, Béla Balázs argues that the new medium's tools of expression were crude and comparable to the early experiments that were made at the birth of silent cinema over thirty years prior.

The image of the actor appears on-screen. Not an image of his voice but rather the voice itself, which is simply passed on mechanically, as with a telephone. Think of a painting on which no light was painted but which gleams from a nearby lamp!

¹³⁵ In truth, Chaplin's decision to ignore sound until 1940 was far more extreme than most high-profile directors. Most filmmakers converted to sound at some point before the transition period came to an end in 1933.

¹³⁶ Siodmak's first sound film was *Abschied (Farewell)*, (1930). Ulmer's *Damaged Lives* (1933) was his first sound picture. Wilder's first sound film writing credit was *Ein Burschenlied aus Heidelberg (A Student's Song of Heidelberg)*, (1930).

The impossibility of tone adjustment also of course prevents any sort of visual adjustments to the source of the sound. If a sentence, in order to be heard clearly, is recorded in a simple and direct fashion, there is little room to play with the speaker's head in any interesting way. Visual techniques in sound films will become primitive again, like they were years ago (Balázs, 2016b: pp.518-519).

Balázs argues that sound cinema's use of recorded sound is unsophisticated because it is less ambiguous than silent cinema. Unlike the ambiguity that arises from implied sound in silent cinema, recorded dialogue does not allow the audience to "play with the speaker's head", as Balázs puts it. Therefore, he contends that the audience are left with a rather "primitive" cinematic experience when they watch a sound film. In *People on Sunday*, Erwin's slumber next to the gramophone can be read as a meta-cinematic link to the position put forward by Balázs, in addition to other critics. By deciding to sleep next to the record player, instead of listening to its recorded sound intently like the other characters in Siodmak and Ulmer's film, Erwin indicates that he finds the implied sound of the record player to be boring, to the point of it being sleep-inducing. The character's disinterest in the implied phonograph music in this scene could be put down to the inherent limitations of vinyl records, which are only capable of storing a small amount of recorded sound. This likely means that Erwin could have been forced to listen to the same songs repeatedly by his friends during their day in the countryside. In connection to this point, Brigitte Borchert, one of *People on Sunday's* stars, confirmed that the song *Little Pastry Shop* was continually playing on the phonograph during the filming of *People on Sunday* in 1929 (Borchert, 2000). Erwin is only able to break away from the repetitive music, which we understand through implied sound, by sleeping

through it. The technical limitations of the record player in *People on Sunday*, which perhaps encourage Erwin to fall asleep, evoke Balázs' complaint that sound films are mundane because they contain unambiguous recorded sound.

***People on Sunday*, Implied Sound and the Positive Coeval Reception of the Sound Film**

Following my discussion of how *People on Sunday*'s implied sound is aligned with criticism of the rise of the sound film, I now change direction by highlighting how the film's meta-cinematic implied sound is also reminiscent of positive coeval reactions to the emergence of sound cinema. Numerous filmmakers and critics were optimistic about the artistic potential of sound cinema, despite the concerns of others such as Chaplin and Hoffmann, which I highlighted earlier. In the late 1920s, Walter Ruttmann argued that "for artistic purposes, great possibilities abound" (Ruttmann, 2016c: p.556) for the sound film. In addition to this, Balázs claimed that cinema's adoption of sound technology brought about the creation of a "great new art form [that] [...] will educate our sense of hearing just as optical film has trained our eyes" (Balázs, 2016a: p.559). Weimar filmmaker G.W. Pabst goes further than Ruttmann and Balázs by contending that sound film's technical advantages would allow it to surpass the silent film. "Ever since the sound film has learned to reproduce human voices and environments completely, as in *Broadway Melody*, it can transcend the limitations and constraints of both theater and silent film" (Pabst, 2016: p.564) (emphasis in original).¹³⁷ The enthusiasm for sound cinema shown by Ruttmann, Balázs and Pabst demonstrates that, in spite of being rejected by some critics and directors, there was also significant contemporary critical interest in sound

¹³⁷ This opinion was shared by other leading Weimar cinema personnel including actor Emil Jannings (see Jannings, 2016: p.143).

filmmaking. *People on Sunday*'s implied sound appears to meta-cinematically evoke contemporary support for sound cinema in scenes that feature all four principal characters. However, for the most part, I focus on sequences that involve the record player during the friends' trip to the countryside in the second act of Siodmak and Ulmer's film. This is because I read the gramophone as a meta-cinematic embodiment of synchronised sound technology due to its shared characteristics with sound cinema, particularly its function as a device that plays recorded sound. In fact, disc-based sound was the first dominant technology that was used for sound synchronisation during the exhibition of talkies. The first successful sound feature film, *The Jazz Singer*, used the Vitaphone sound-on-disc system to achieve synchronisation between sound and image. The film's soundtrack, which consists of sound effects and dialogue, would have been given to cinemas on phonograph records and played backstage during the exhibition of Crossland's film. Therefore, the consistent presence of disc-based recorded sound (Brigitte's record player) in *People on Sunday* can be viewed as a meta-cinematic link to the rise of the sound film and impending death of silent cinema. The effects that the gramophone's implied sound has on the film's characters is also heavily reminiscent of many of the late 1920s-early 1930s arguments that supported the rise of the sound film, which I will discuss in much more detail later.

Before I begin to examine how *People on Sunday*'s implied sound is evocative of positive critical discussion of sound cinema during the transition period, I will first outline filmmakers' and spectators' relationship with sound film technology prior to the beginning of the transition period in the film industry. Although synchronised sound did not elicit substantial curiosity from scholars and spectators before the late 1920s, a number of inventors and filmmakers were

experimenting with sound film technology in the late nineteenth and early twentieth century (see Cousins, 2004: p.118). For instance, the brothers August and Louis Lumière, who are often considered to have been the first to project a film for a paying audience, contemplated synchronising their silent films with a phonograph as early as the 1890s (see Robinson, 1973: p.155; Milsome, 1979: p.30). Inventor and film pioneer Thomas Edison also expressed strong interest in pairing audible sound with silent film in the same decade as the Lumière brothers. Edison managed to do this by equipping some of his Kinetoscope film-viewing machines with sound technology and headphones (see Robinson, 1973: p.155). In the early 1900s, German filmmaker Oskar Messter also experimented with sound technology and screened Germany's first synchronised sound film in 1903 (see Noack, 1929: npg; Manvell and Fraenkel, 1971: p.50; Robinson, 1973: p.86). In addition to this, *Hale's Tours*, a film experience that housed spectators inside a mock train carriage, made use of sound technology to create sound effects for a steam train and gunshots, amongst many other things (see Rabinovitz, 2001: p.167-168). In fact, by the beginning of the twentieth century, there were numerous different synchronised sound machines that were readily available to filmmakers (see Walker, 1978: p.7). The significant research and development that had gone into sound technology in France, Germany and the United States in the decades prior to the transition period enabled sound cinema to quickly usurp silent film and become the primary form of expression in the medium. In 1930, the same year that *People on Sunday* was released, Viktor Shklovsky stated that "[t]he sound film is making a noise. Assiduously. Everyone knows that silent cinema existed and that sound has now emerged" (Shklovsky, 1988b: p.305). Shklovsky's description of sound cinema's positive buzz amongst spectators in the late 1920s is reminiscent of how the record player is treated in

People on Sunday. Throughout the countryside excursion, the record player's implied sound is consistently present as the machine accompanies the four friends and ultimately appears in dozens of shots in the film. Curt Siodmak, who came up with the initial concept for *People on Sunday*'s narrative, claims that the presence of the record player had significant meaning in the film's narrative and was meant to represent the artificiality of the city that they had left behind for the nature of the countryside. "The idea was: The city goes out to the country and takes the people along. Then the city goes back. They didn't have any weekend" (C. Siodmak, 2000). Roy has a similar reading and claims that:

the gramophone itself functions as a sign of urban life transposed into a rural setting. Through public and private modes of locomotion (car, train) and mobile technological objects (including the gramophone but also the radio), nature itself seems to become an extension and mirror of urban culture rather than its fundamental 'other' (Roy, 2017: p.39).

Roy's point can be extended to consider how the constant implied sound and presence of the record player is also evocative of the ever increasing popularity of sound cinema in the late 1920s and early 1930s. Siodmak and Roy both note that *People on Sunday*'s characters are unable to escape the record player, which they claim represents the city, as it follows them wherever they go. That said, Erwin, Brigitte, Christl and Wolfgang's attachment to the record player can also be read as a meta-cinematic reflection of the contemporaneous dominance that the sound film was exerting on the film industry. In the same year that *People on Sunday* was released, Balázs stated that "[s]ound films have taken over the cinemas" (Balázs, 2016b: p.517). Furthermore, Roger Manvell and Heinrich Fraenkel note that the number of sound films produced in Germany grew substantially from 1929-1930.

“The progressive ratio of the production of sound to silent film in German studios is interesting: September 1929, 3 per cent sound; January 1930, 30 per cent sound; September 1930, 84 per cent sound” (Manvell and Fraenkel, 1971: p.51).¹³⁸ Balázs and Manvell and Fraenkel both demonstrate that by the time *People on Sunday* premiered in the middle of the transition period, sound cinema was quickly replacing silent cinema and becoming unavoidable for spectators. In the same way that *People on Sunday*'s characters could not avoid the constant implied sound of the record player, audiences around the world, including in Germany, could no longer keep away from the sound film.

The first scene in *People on Sunday* that prominently features the phonograph takes place shortly after the group of friends arrive at a lake in the countryside. They quickly get changed and start swimming, but not before Brigitte sets up her record player in the bushes near the water's edge in close-up. Up to this point, the characters have had very little interaction with each other beyond the low-key polite greetings that they gave before they left for the countryside. In fact, a number of them, such as Brigitte and Wolfgang, have only just been formally introduced to each other for the first time. However, once the friends arrive at the lake, and the record player is turned on, their mood and behaviour towards each other changes dramatically. The even-paced editing that the film exhibits up to this point is suddenly replaced with fast-paced cutting. As soon as Wolfgang enters the water, he begins to swim after Christl in medium shot. Siodmak and Ulmer repeatedly cross-cut between Wolfgang's pursuit of Christl and a medium shot of Erwin aggressively clapping as he watches the chase unfold. When Wolfgang

¹³⁸ By the end of 1932, Helmers notes that Germany had stopped producing silent films altogether (see Helmers, 2018: p.123). This means that Germany's silent film production declined by a staggering 87% in just over three years from 1929-1932.

reaches Christl he unsuccessfully tries to seduce her in medium and close-up shots by kissing her. Christl immediately rejects Wolfgang's lustful embrace and slaps him in the face. This causes Wolfgang to turn his attention to Brigitte, who is more open to his romantic advances than her friend Christl. Wolfgang abruptly picks up Brigitte in his arms in medium shot and holds her above the water as she pretends to swim, which causes them both to smile and laugh. Brigitte's acceptance of Wolfgang's flirtatious behaviour encourages Christl to become jealous as she stares at the couple from a distance. Erwin spies Christl's dejection and unsuccessfully tries to cheer her up by stealthily approaching under water and then dunking and splashing her body. As the sudden explosion of excitement in this scene immediately follows the record player being turned on, we can treat the device's implied sound as a meta-cinematic link to contemporary spectators' enthusiasm for the sound film. In connection to this point, Maike Helmers claims that "[o]nce the industry made the jump [to sound], Germany's first full-length sound features immediately delighted audiences" (Helmets, 2018: p.123), and left them eager to see more talkies in their native tongue. The record player's implied sound, which is reminiscent of sound film technology, replaces the rather stiff and awkward atmosphere that was present when they initially met with gaiety, romance and friendship at the lakeside. Wolfgang's determined and sudden romantic pursuit of Christl and Brigitte in the water, while the implied sound of the gramophone is present, is evocative of sound cinema's ability to quickly attract and enthrall spectators, which Helmers acknowledges. Although Wolfgang is turned down by Christl in *People on Sunday* this does not deter him romantically as he immediately turns his attention to Brigitte, who is more appreciative of his affections. We can also consider the abrupt rejection and acceptance that Wolfgang receives from the respective women as a link to the rise of

sound cinema. This is because, as I mentioned previously, many critics were initially against sound technology, but others, such as the spectators that Helmers mentions, were more than happy to welcome its arrival and say goodbye to silent cinema.

Furthermore, the love triangle that develops in this scene between Wolfgang, Brigitte and Christl is the main focus of Siodmak and Ulmer's narrative for the film's remaining runtime. Therefore, the implied sound of the record player in this scene, which coincides with the creation of the love triangle, could be regarded as the catalyst for the development of *People on Sunday*'s main plot point.

Another scene in *People on Sunday* that features implied sound that enables us to read the record player as an example of cinema self-reflexivity takes place directly after the friends go swimming in the lake. Shortly after the love triangle has developed between Wolfgang, Brigitte and Christl, all four characters exit the water. Christl and Erwin prepare a picnic in the grass by the lake as Brigitte and Wolfgang carry the phonograph over to them and sit down to eat (Figure 39). At the beginning of the scene as the friends prepare their picnic, Christl's anger at Wolfgang for his forceful advances, and at Brigitte for welcoming his subsequent flirtatious behaviour, is apparent through her curt monosyllabic conversations with the pair in Siodmak and Ulmer's medium shots. We can understand this specific manner of speaking by observing Christl's brief and abrupt mouth movements as she speaks to the other characters at the lakeside. After being in the presence of the record player's implied sound for a short period of screen time, Christl's behaviour abruptly changes towards her friends. She no longer sulks and instead becomes jovial in medium and close-up shots as she laughs and jokes with the other characters. The record player seems to have played a leading role in healing the divisions in the group and promoting lasting harmony amongst the characters. In relation to this point, Roy contends that:

[t]he gramophone of *People on Sunday* acts as a medium, literally a go-between for the protagonists: as a tool of shared conviviality, it reinforces and enhances a social situation. On a metaphorical level, it visually expresses the hitherto hidden social and emotional bounds which link the characters together (Roy, 2017: p.40).

I agree with Roy's point and suggest that the implied sound of the record player's music is directly responsible for the dramatic positive shift in Christl's temperament and her attitude towards the other characters in the lakeside picnic scene. However, I build on Roy by arguing that the harmony which the implied sound of the phonograph seems to inspire in *People on Sunday* is meta-cinematically linked to the contemporaneous argument that sound cinema could help unite people around the world. Jean Lenauer for instance, argued that, despite being made in a specific language, "[t]he sound film will be as international as the silent one" (Lenauer, 1998: p.88) because sound cinema's visuals remain universal. While discussing post-First World War diplomacy, American filmmaker Cecil B. DeMille argued that sound technology could help foster greater understanding between people around the world. Although he does not explain why this is the case, DeMille claims that "the [sound] movie and the radio will bring people together. They will make for unity and a certain great oneness in the world" (DeMille, 1927, in Eyman, 1997: p.23).¹³⁹

Brigitte's gramophone and its recorded implied sound appear to have a pacifying effect on Christl as she ceases her hostility to her companions, which is reminiscent of DeMille's coeval hope that sound cinema would encourage "unity" and "oneness"

¹³⁹ DeMille's hopes regarding the diplomatic possibilities of sound cinema seem positively utopian and unrealistic. However, prior to the emergence of sound film, silent cinema was also often considered to be a universal language (see Walker, 1978: p.7; Balázs, 2010: p.14) that was capable of healing international tensions (see Hake, 2001: p.57). In silent cinema's case, this feeling was partially fuelled by the contemporary emergence of international languages, such as Esperanto and Ido, which were expected to foster greater understanding amongst peoples of the world, particularly in the realm of politics (see Israel, 2017: p.2).

around the world. Furthermore, the implied sound of the record player by the lakeside in *People on Sunday* encourages collective conversation among the group. Christl's aforementioned terse rebukes of the other characters, which dominate the start of the scene, are soon replaced by group laughter and shared conversation while they are in the presence of the record player. Therefore, the shift from one character dominating the conversation to collective discussion in this scene, which features the implied sound of the record player, could be regarded as another meta-cinematic connection to DeMille's, and other critics', utopian argument that sound cinema had the power to unite people.

***People on Sunday*, Implied Sound and the Inevitability of Silent Film's Death and Sound Cinema's Triumph**

In addition to interpreting implied sound as being evocative of the coeval positive and negative attitudes towards the sound film in *People on Sunday*, we can also link it to the contemporary argument that the death of silent cinema is inevitable and that filmmakers must switch to sound cinema. This is most evident in the relationship, and interactions between, Erwin and Annie throughout the film. Despite seemingly being in a romantic relationship and living together, they both regularly show disdain for each other and appear either unwilling or unable to communicate with their respective partner. This is primarily displayed to the audience through broken implied sound and silence when they ignore each other. Implied sound appears to be broken in these scenes involving Annie and Erwin because Siodmak and Ulmer typically only use intertitles to translate one side of the pair's verbal conversations. As a result of this, either Annie's or Erwin's dialogue is habitually unknown to the audience during these sequences. A good example of this occurs in the last scene of *People on Sunday* when Erwin returns home from the countryside excursion and

finds Annie still in bed, despite her promise to accompany him on the trip. Annie is completely unaware that she has missed the outing and believes that they are about to set off. In an intertitle, she says to Erwin “I’ll just get dressed. We have a date”. Erwin reacts to this in medium shot by holding his head in frustration, but also responds to her verbally. However, Siodmak and Ulmer do not make it clear what Erwin says to Annie in reply because the directors do not insert an intertitle containing his dialogue. As the audience are only given one side of the characters’ verbal discussion, it is hard for them to fully understand the pair’s relationship. Spectators are disconnected from the characters in a similar way to how Erwin and Annie appear to be detached from each other emotionally. Collenberg-Gonzalez briefly mentions the relationship between Annie and Erwin, deeming it to be “fraught and illusory” (Collenberg-Gonzalez, 2019: p.99). I concur with her assessment, but argue that the miscommunication between Erwin and Annie, and their inability to converse at all in some scenes, is far more significant than has been noted hitherto. This is because the fractious relationship between them, in addition to their broken implied sound communication, is meta-cinematically tied to the decline of silent cinema’s modes of communication, namely gestural acting and intertitles. These methods of expression were quickly becoming outdated as they were mostly abandoned by contemporary sound films in favour of more naturalistic acting and audible sound effects and dialogue. In a similar fashion to how Siodmak and Ulmer avoid prolonged intertitle and gesture-based conversations between Annie and Erwin, which leads to the creation of broken implied sound, contemporary sound filmmakers removed silent cinema’s expressive modes from their films because they were no longer compatible with a medium that embraced synchronised sound effects and dialogue.

Annie and Erwin's struggle to converse with each other can be understood as a meta-cinematic reflection of the contemporary critical argument that filmmakers had no choice but to convert to sound as it represented the future of the film medium. For instance, in the late 1920s, film composer Vladimir Messman recognised that silent cinema's death was imminent and urged directors to engage with sound cinema quickly in order to survive the transition. "Sound cinema is something we can and must work on straight away" (Messman, 1988: p.237). This is similar to the view of director Murnau who, despite not making any sound pictures before his premature death in 1931, claimed to be deeply interested in the new film medium and wanted to experiment with it as soon as possible.

I'd like to study the development and technique of talking pictures in Germany, France, England, and the United States. I was far away from civilization when the talkies came in, and I must inform myself about the situation and the direction in which they are developing.

It is ridiculous to say that talking pictures will disappear again. No invention that shows itself to be of value will ever be rejected. The talking picture represents a great step forward in the cinema (Murnau, in Eisner, 1973a: p.213).

Murnau notes that sound films will not "disappear" and that they represented the future of filmmaking. Therefore, he "must inform" himself about them in order to survive as a filmmaker. An anonymous early 1930s critic is even more certain that filmmakers would have no path forward if they refused to convert to sound cinema. "[E]veryone will have to submit to this: whoever is reticent will not stay the course" (Anon, 1931, in Helmers, 2018: p.125). The couple's failure to connect through silent cinema's language (intertitles and gesture) in this late silent film appears to

mirror the coeval attitudes put forward by Messman, Murnau and the anonymous critic, amongst many other commentators, regarding the need for all filmmakers to embrace sound or be left behind. The clumsy communication that intertitles and gestures facilitate in conversations between Annie and Erwin seems to suggest that silent cinema's language is no longer fit for purpose and interrupts the audience's engagement with the narrative and characters.

Erwin and Annie's inability to communicate with each other is at the forefront of the pair's first scene together, which takes place in their shared Berlin apartment towards the beginning of *People on Sunday*. After Erwin has arrived home from work, he and Annie ignore each other entirely and do not engage in direct conversation for a number of screen minutes. For most of the scene, which primarily consists of medium shots, Annie lies on her bed and fiddles with her nails while Erwin reads the paper and eats his evening meal at the table. This leaves us to interpret that most of the scene takes place in complete silence, except for the dripping tap and creaky wardrobe that I mentioned earlier. The prolonged period of silence without dialogue in this scene is unusual as silent film characters, including those in *People on Sunday*, typically talk to each other frequently despite the fact that their words are technically inaudible to us. The scene's silence is eventually shattered with broken implied sound dialogue, after almost three minutes has elapsed, when Erwin and Annie have an argument over her outfit for their date. In a similar fashion to the scene at the end of *People on Sunday* that involves Erwin and Annie that I described earlier, Siodmak and Ulmer only use intertitles to translate one side of the pair's conversation. On this occasion, they confirm that Erwin says "leave the brim down, or else" as we see him take hold of her upturned hat brim and pull it down over her forehead. Annie returns her hat brim to its upright position and

verbally responds to Erwin's dialogue, but her words remain unknown as they are not delivered to us on an intertitle. As a result of this, Erwin and Annie's conversation appears awkward and uneven which adds greater dysfunction to their relationship. Furthermore, once Erwin and Annie do speak to each other in this scene, via implied sound dialogue, it is only to disagree and argue. They seem incapable of coming to an understanding and improving their relationship by talking and listening to one another. The extended presence of silence in this scene, in addition to the use of broken implied sound dialogue, meta-cinematically evokes contemporary filmmakers' opinion that sound cinema's dialogue offered new and exciting expressive possibilities for the medium. For example, Wilder, who wrote *People on Sunday's* screenplay, frequently claimed that he welcomed the arrival of audible dialogue and had been keen to make sound films as soon as possible. "[S]ound was good for me. I liked dialogue. I always had a lot of dialogue in my head for the characters, and with sound, I could get it out" (Wilder, in Chandler, 2002: p.54). Furthermore, Helmers argues that sound film revolutionised character dialogue. "Sound gave writers the opportunity to experiment with more complex character development as well as with semantics and the shaping of dialogue lines" (Helmers, 2018: p.126). The greater artistic freedom and sophistication that Wilder and Helmers claim audible dialogue brought to cinema contrasts sharply with the dysfunctional effects that Erwin and Annie's broken implied sound dialogue has in *People on Sunday*. Therefore, we can interpret Erwin and Annie's incapacity to communicate verbally as a meta-cinematic reference to silent cinema's inability to match the "complex" benefits that audible dialogue brought to narrative and character development. By claiming that sound cinema allowed him to "get [dialogue] out" of his head, Wilder suggests that silent films, including *People on*

Sunday, prevented him from achieving that. The director implies that silent cinema is an incomplete medium because it does not contain audible dialogue. This once again connects to the dysfunctional role that broken implied sound dialogue has in the conversations between Annie and Erwin in *People on Sunday*. Its presence feels incomplete and unnatural because, as we see in the aforementioned apartment scene, it causes a breakdown in the characters' relationship and prevents us from understanding their thoughts and feelings. In the same way that Wilder felt that he could not express himself in silent film due to the absence of audible dialogue, Erwin and Annie are incapable of adequately articulating their feelings to each other, and the audience, through broken implied sound dialogue in *People on Sunday*.

Erwin and Annie's inability to converse with each other through implied sound in *People on Sunday* is also apparent in the scene when Erwin leaves his apartment for the countryside. Although Annie also intends to come on the trip, Erwin is unable to rouse her when he gets up and Siodmak and Ulmer insert a close-up of her asleep in bed as Erwin prepares to leave. Just before he exits the apartment, Erwin leaves Annie a note with instructions on how to meet up with the group when she wakes up. An intertitle confirms that the note reads "[c]ome at 10 to Nikolassee". However, as previously mentioned, when Erwin returns home at the end of the film he finds that Annie is still in bed and never read his note (Figure 40). Consequently, the note represents another failed form of communication between the pair in *People on Sunday*. Their inability to converse through the note, which we convert into intertitle implied sound, is evocative of Germany's slow adoption of sound cinema and perseverance with silent film. As I discussed earlier, unlike Hollywood which had produced several high-profile sound films between 1927 and 1928, Germany did

not release its first sound pictures until 1929.¹⁴⁰ Moreover, Hollywood was also quickly moving towards exclusive sound film production, whereas Germany did not install sound technology in most of its cinemas until 1935 (see Nicolella and Soister, 2012: p.325).¹⁴¹ Helmers argues that Germany was slow to transition to sound because “the country’s film industry appeared reluctant to tamper with a cinematic format that was generating considerable successes both at home and abroad” (Helmers, 2018: p.123). In addition to the comfort they found in silent cinema, which Helmers points out, the German film industry was also hesitant to transition to sound cinema due to the large economic costs that it would entail (see Napper, 2017: p.6). Klaus Kreimeier claims that, when the country did decide to fully embrace the sound film, it cost “more than 50 million marks” (Kreimeier, 1999: p.182) to rewire German cinemas for sound films. Erwin’s inability to communicate with Annie through the note on Siodmak and Ulmer’s intertitle meta-cinematically reflects Germany’s reliance on silent cinema and reluctance to embrace sound films, which the above critics outline.

Since intertitles were one of the key communication tools of silent cinema, and Erwin’s note fails to reach Annie and inform her of the group’s plans, silent film is depicted as an archaic medium that no longer has the power to communicate effectively. Erwin’s attempts to use the expressive tools (intertitles and inaudible dialogue) that are available to him in silent film have now both failed completely. Erwin, like the German silent film industry in the late 1920s, is severely hamstrung

¹⁴⁰ Barbara Hales, Mihaela Petrescu and Valerie Weinstein suggest that Germany’s prolonged conversion to sound cinema was, at least in part, due to the upheaval caused by Alfred Hugenberg’s takeover of Ufa, the country’s largest film studio, in 1927, right at the start of the transition period (see Hales, Petrescu, Weinstein, 2016: p.8).

¹⁴¹ The most popular early German sound film pictures amongst Weimar spectators were *Ich küsse Ihre Hand (I Kiss your Hand, Madame, 1929)* and *Melody of the Heart* (see Manvell and Fraenkel, 1971: p.51; Kreimeier, 1999: p.182).

by the communication tools at his disposal. He is unable to rouse Annie and inform her about the meeting place with the intertitle. In connection to this, as I mentioned earlier, many German filmmakers were forced to continue making silent films during the 1930s, due to the country's slow conversion to sound cinema. This gave their American counterparts the chance to experiment with cinema's new modes of expression, while they remained shackled to silent film's familiar forms of communication, which were swiftly becoming as irrelevant as Erwin's note to Annie in *People in Sunday*.

Conclusion

In conclusion, this chapter has proposed that *People on Sunday*'s implied sound often functions as a meta-cinematic critique of the film industry's contemporary transition from silent to sound filmmaking in Germany and elsewhere in the world. Siodmak and Ulmer's implied sound offers a mixed reaction to the transition period by seemingly evoking both positive and negative coeval reactions to the rise of sound cinema and decline of silent film. As meta-cinema is strongly associated with essay films produced since the 1950s, *People on Sunday* can be considered a forerunner of the essay film that laid the groundwork for future examples from the genre, such as Marker's *Sunless*. Scholarly discussion of *People on Sunday*, by critics such as Lutz Koepnick, has mainly focused on the film's unorthodox production and its historical significance as a record of everyday German life before the Nazis came to power in 1933. Analysis of Siodmak and Ulmer's meta-cinematic implied sound allows us to build on *People on Sunday*'s reputation as a historically valuable film because we can interpret it as a coeval critique of the move from silent to sound film production. Erwin's use of, and reaction to, implied sound frequently reflects critics' and filmmakers' arguments against the rise of the sound

film, such as the notion that sound cinema was inartistic and a passing fad. Conversely, implied sound present in scenes that contain Brigitte's phonograph can be linked to arguments of commentators that supported sound cinema's emergence in the late 1920s and early 1930s, including those that felt that sound technology could bring a new dimension to the film medium. The use of implied sound in scenes that depict Erwin and Annie's inability to communicate effectively is also evocative of coeval arguments from pragmatic critics, who argued that silent cinema was doomed to extinction and sound film represented the future of the medium. In the two chapters that precede this final one, I position Weimar film implied sound as a reflection of, or a reaction to, the use of synaesthetic sound in contemporary paintings and contemporaneous movements in the arts and society that were initially exterior to filmmaking. This chapter adds a new dimension to my thesis because it specifically argues that, in addition to being perceived as a tool that filmmakers use to engage with wider culture and society, Weimar cinema implied sound can also be read as an evaluation of significant crises that were particular to the film medium, namely the coeval transition from silent to sound cinema.

Conclusion: ‘Listening’ to Silent Cinema

Silent Weimar Film and Implied Sound Today

This thesis has closely analysed the use of implied sound in three German silent films produced in the Weimar Republic. It has attempted to demonstrate that, although silent cinema does not contain any audible sound effects or dialogue, Weimar filmmakers had an acute understanding of the filmic possibilities of sound and regularly suggest it to their spectators through a variety of techniques, including intertitle text, fast-paced rhythmic editing and musical props. Besides establishing how silent Weimar film directors create implied sound in their work, my principal aims have been to examine: the extent to which the sensory phenomenon was influenced by synaesthetic sound located in contemporary paintings and to what length it evokes and critiques societal and artistic movements and crises of the era. Although critics have consistently explored silent Weimar cinema from numerous different angles since the publication of Siegfried Kracauer’s *From Caligari to Hitler: A Psychological History of the German Film* (1947) shortly after the end of the Second World War, this thesis has tried to illustrate that we can view these German films in a new light by carefully ‘listening’ to their implied sound, which has, for the most part, been neglected by scholars hitherto. Many silent Weimar pictures, such as *Das Cabinet des Dr. Caligari* (*The Cabinet of Dr. Caligari*, 1920), *Nosferatu, eine Symphonie des Grauens* (*Nosferatu: A Symphony of Horror*, 1922), *Berlin: Die Sinfonie der Grosstadt’s* (*Berlin Symphony of a Great City*, 1927), and *Menschen am Sonntag* (*People on Sunday*, 1930), are currently more accessible than they have ever been, including during the silent era. In addition to attending screenings of these films in cinema auditoriums, we also have the freedom to watch

them at our leisure on home media (DVD and Blu-ray) and through free and premium streaming services like YouTube and BFI Player. Now that we have elected to watch silent films in different ways, it is also time to embrace a new analytical method that enables us to penetrate the subtle layer of inaudible sound in the medium and ‘listen’ to silent cinema.

As I discussed in detail during my introductory chapter, numerous commentators, including Melinda Szaloky and Kata Gellen, have noted the existence of implied sound in silent film (see Szaloky, 2002: p.109; Gellen, 2019: p.23). In connection to this, Isabelle Raynauld states that “writers and filmmakers found a chorus of strategies to make sound be *heard inside* the story and be seen on the screen” (Raynauld, 2001: p.70) (emphasis in original). In *Nosferatu*, for example, critics routinely note that Ellen’s (Greta Schröder) aforementioned scream to Hutter (Gustav von Wangenheim) contains implied sound as Count Orlok (Max Schreck) appears to hear her voice despite the vast geographical distance that separates the heroine and *Nosferatu* (also Max Schreck) (see Kracauer, 2004: p.78; Calhoun, 2005: p.645; Roberts, 2008: p.48; Laner, 2012: p.31; Perez, 2013: p.14). For the most part, scholars that identify silent film implied sound focus on how it allows spectators to internally construct sound effects and characters’ voices during exhibition (see Williams, 1992: p.136; Stock, 2012: p.46). This thesis has attempted to build on critics that have highlighted implied sound’s presence in silent cinema by arguing that Weimar directors often use the sensory phenomenon to fundamentally structure their silent pictures. In relation to this point, several German films from this era, including *Nosferatu* and *Berlin*, have sonic subtitles and contain fast-paced rhythmic cutting that visually resembles music. Furthermore, through the study of implied sound located in Weimar cinema, we can also gain an insight into its links to

contemporary synaesthetic experiments in painting and discover connections to significant coeval crises and movements in society and the arts. This approach expands the existing critical discussions of the visual connections between Weimar pictures and notable contemporary events, such as the First World War, by scholars like Ian Roberts and Anton Kaes, as it demonstrates that silent Weimar films also evoke and critique modern civilisation through the use of implied sound.

My thesis is timely because it follows a prolonged resurgence of interest in silent cinema discussion, exhibition and restoration that initially began to take shape in the 1970s (see Cooke, 2010: p.4) during the New Film History movement in film studies, which systematically rethought and reconceptualised our understanding of early cinema history.¹⁴² The movement was significantly enhanced by the 1978 Brighton Congress of the International Federation of Film Archives (FIAF) because it gave attendees unprecedented access to hundreds of rediscovered silent films and helped form lasting partnerships between silent film academics and archivists from around the world.¹⁴³ During the following two decades, academic and public interest in silent cinema grew substantially due to high profile theatrical and VHS re-releases of silent films, such as *Napoléon vu par Abel Gance* (*Napoleon*, 1927) and *Metropolis* (1927). The former was paired with new compositions written by Carl Davis (UK market) and Carmine Coppola (US market) and helped to reintroduce orchestral music (Figure 41) as the traditional form of accompaniment for silent

¹⁴² Noël Burch's book *Theory of Film Practice* (1973) was an influential part of this movement. It analyses a number of silent films, including Alexander Dovzhenko's *Zemlya* (*Earth*, 1930), in significant depth.

¹⁴³ In the years that have followed FIAF's congress in Brighton, many other silent film events have united critics and archivists around the world. For example, since 1982, the annual *Le Giornate del cinema muto* (Pordenone Silent Film Festival) has screened new restorations of silent films that have continually enriched our understanding of silent cinema.

cinema (see Bellano, 2014: p.208; Usai, 2019: p.317).¹⁴⁴ Conversely, the latter was partnered with Giorgio Moroder's electronic score, which paved the way for future avant-garde silent film musical accompaniments (see Smith, 2016: p.108).¹⁴⁵ Since the beginning of this millennium, the widespread availability of silent films on home media (DVD and Blu-ray) and the internet (streaming services) has caused silent film's profile to expand further. The archival and independent restorations that have been launched on these platforms have exposed the public to numerous silent films that were previously lost, including *The Cameraman* (1928) and *La passion de Jeanne d'Arc* (*The Passion of Joan of Arc*, 1928), and vastly improved the viewing experience of ever-present pictures, such as *Bronenosets Potemkin* (*Battleship Potemkin*, 1925) and *Sunrise: A Song of Two Humans* (1927), by removing or masking age-related celluloid damage and debris.¹⁴⁶ Furthermore, over the course of the last three years, Eureka Video home media releases of *Der Golem, wie er in die Welt kam* (*The Golem: How He Came Into the World*, 1920) and *Das Indische Grabmal* (*The Indian Tomb*, 1921), which coincided with their respective

¹⁴⁴ *Napoleon* was restored by Thames Television in the UK and paired with Davis' score when it was released in cinemas in 1980 and on VHS sometime later. This reconstruction was soon recut by Francis Ford Coppola's production company and paired with his father's composition for theatrical and home cinema release in the USA.

¹⁴⁵ Moroder's composition features music from Queen, Madonna, Adam Ant and many other contemporary musicians. Besides *Napoleon* and *Metropolis*, numerous other silent films were also commercially released on tape cassettes in the 1980s and 1990s. For instance, Janus Films and the Voyager Company published *Caligari* on VHS in 1980. During the same year, Hollywood Home Theatre launched *Nosferatu* on VHS with an original electronic score by David Ichikawa. In the following decade, video tapes of D. W. Griffith's *The Birth of a Nation* (1915) and *Broken Blossoms* (1919) were released by Thames Television in 1993 and 1991 respectively.

¹⁴⁶ *The Cameraman* was believed to be lost until prints of the film were found in 1968 and 1991 (see Harvey, 2012). A 4K restoration of the film undertaken by Cineteca di Bologna was released by Criterion on UK Blu-ray in 2020. Moreover, after being lost for many years, Carl Theodor Dreyer's *Joan of Arc* was rediscovered in a Norwegian asylum in 1981 (see Hall, 2016: p.176). In the UK, it was restored in high-definition by London-based company Deluxe SoHo and distributed by Eureka Video on DVD and Blu-ray in 2012. *Battleship Potemkin*'s visual fidelity was greatly improved by Transit Film's 4K restoration of the film that was supervised by the Deutsche Kinemathek. A UK DVD and Blu-ray release of this reconstruction was put on the market by the British Film Institute (BFI) in 2012. Furthermore, the 2003 BFI restoration of *Sunrise* outshines earlier versions of the picture because it is made up of the finest footage from several different surviving prints of Murnau's silent film (see Pierce, 2011: p.6-9). A 2008 Telecine HD transfer of this restoration was released in the UK on home media by Eureka Video in 2011.

centenaries, have drawn significant attention to Weimar film.¹⁴⁷ Besides these two Blu-rays, public awareness of silent Weimar cinema has been boosted by screenings, exhibitions and location tours that acknowledge, and celebrate, the one hundred year anniversaries of German films produced in the early years of the Weimar Republic (1919-1922). For instance, in October 2020, Canada's University of King's College organised a live-stream screening of the 2018 F.W. Murnau Stiftung restoration of *The Golem*, which is included on the aforementioned Eureka Video release of the film, to recognise the centenary of Carl Boese and Paul Wegener's picture (see Anon, 2020b).¹⁴⁸ During the same year, the one hundred year anniversary of *Caligari's* initial German release was marked in Singapore by frequent screenings of the film at the ArtScience Museum (see Anon, 2020c).¹⁴⁹ In addition to these commemorative Southeast Asian showings of *Caligari*, the Deutsche Kinemathek's *Be Caligari! – The Virtual Cabinet* also celebrated the film's centennial in Berlin. Running from February 2020-August 2021, the exhibition explored the production of Robert Wiene's silent picture and also featured a virtual reality component, *Der Traum des Cesare (Cesare's Dream)*, which enabled visitors to walk around a computer simulation of the film's original sets (see Anon, c.2020a).¹⁵⁰ More recently, in August 2022, *Oravský Hrad* (Orava Castle), where exterior shots of Count Orlok's castle were filmed for *Nosferatu* (Figure 42), organised night tours of

¹⁴⁷ *The Golem* was released by Eureka Video on 18th November 2019 and features the 2018 F. W. Murnau Stiftung 4K restoration of the film. A special feature on the Blu-ray disc compares the 2018 and 2003 restorations of *The Golem*. It illustrates the significant visual improvements that the 2018 reconstruction implemented, such as saturation reduction and the removal of widespread scratches and dirt. A 2K F. W. Murnau Stiftung restoration of Joe May's *The Indian Tomb* was launched on Blu-ray on 21st February 2022. It reconstructed the film's original intertitles and adds the tinting and colours that were present when the film was initially released in late 1921.

¹⁴⁸ An advertisement on the university's website refers to the event as a "celebration of the 100th anniversary of the classic film" (Anon, 2020b). The live-stream was held via Zoom on 29th October 2020.

¹⁴⁹ Wiene's silent film was screened at the venue from 10th October-6th November 2020 (see Anon, 2020c).

¹⁵⁰ The German exhibition also allowed attendees to watch the 2014 F. W. Murnau Stiftung 4K restoration of *Caligari*.

the premises and screenings of F. W. Murnau's film in order to acknowledge the century that has passed since its German premiere in 1922 (see *Oravský Hrad*, 2022b).¹⁵¹ The steady resurgence of interest in silent cinema over the last fifty years and the recent worldwide celebrations of Weimar film demonstrate the current relevance of a thesis concerning German cinema from the 1920s. However, as I outline in more detail below, the timeliness of this study stretches beyond these occurrences because my analysis of silent Weimar filmmakers' employment of implied sound coincides with the popular trend of pairing existing silent pictures with synchronised sound, which can significantly impact our reception of films during exhibition as it cancels out visual and textual implied sound.

To a large extent, Moroder's aforementioned *Metropolis* (1984) re-release was the catalyst for the contemporary movement towards integrating audible sound effects and dialogue into films made during the silent period. Throughout this version of *Metropolis*, the composer synchronises Fritz Lang's original visuals with musical sound effects that give the film an otherworldly atmosphere. In the machine halls scene at the start of the picture, Moroder uses a synthesiser to pair the movements of a clock's second hand and the blowing of a whistle with loud electronic notes. These noises nullify Lang's implied sound as they give the objects specific audible sounds. Consequently, spectators are unable to internally determine their own sonic impressions of these items during exhibition, which limits their capacity to build unique readings of the world that is presented onscreen. Since the beginning of the twenty-first century, incorporating synchronised sound into silent films has become increasingly popular and is now commonly known as 'remixing'

¹⁵¹ Orava Castle also marked the centenary of *Nosferatu* by serving as a blood donation centre on 23rd August 2022. A post on the fortress' official Instagram account (@oravskyhrad) features an actor in character as *Nosferatu* promoting the event (see *Oravský Hrad*, 2022a).

because composers “apply DJ techniques to [silent] film” (DJ Spooky, 2015).¹⁵² For instance, during this period, filmmakers Jeff Cooper (2008) and Strephon Taylor (2010) paired *Nosferatu* with sound effects and English dialogue, before releasing their versions of the film on home media.¹⁵³ More recently, Getty Images Brasil produced a ‘remix’ of Murnau’s picture entitled *The Nonsilent Film* (2017), which features Spanish dialogue and “thousands of different audio samples” (Reid, 2018) taken from their vast digital library.¹⁵⁴ Besides adding audible sound to silent pictures, some ‘remixes’ also colourise, rescore, re-edit and partially reshoot existing silent films. In connection to this, Peter Jackson’s *They Shall Not Grow Old* (2018) reworks black and white silent films of the First World War by integrating audible sound, colour and music composed by Plan 9.¹⁵⁵ The film’s added sound primarily

¹⁵² To a lesser extent than silent film ‘remixes’, audible sound effects and dialogue were also paired with films during the silent period. Musicians, machines or theatre employees would attempt to synchronise sound effects with onscreen events during exhibition (see Chion, 2009: p.7; Behlmer, 2010: p.30; Elsaesser and Hagener, 2015: p.149). However, for the most part, the use of audible sound effects in the silent era was infrequent and was typically reserved for loud or significant sounds, such as gunshots or thunderstorms (see Milsome, 1979: p.30; Rabinovitz, 2001: p.176; Chion, 2009: p.7). In relation to this point, Eisenstein notes that he and his composer Edmund Meisel agreed to limit the use of audible sound effects in *Battleship Potemkin* to scenes involving machines in the final act of the film (see Eisenstein, 1949: p.177). Like sound effects, audible dialogue was occasionally present in cinema auditoriums during the silent era. It was predominantly created by actors known as ‘lecturers’ (United Kingdom and United States), ‘Benshis’ (Japan) and ‘Spielers’ (Germany). ‘Lecturers’ typically stood in front of silent cinema screens and spoke character dialogue, in addition to narrating plot points for spectators (see Praver, 1980: pp.29-30; Chion, 1999: p.8; Trezise, 2019: p.8; Usai, 2019: p.191). Some cinemas also hired performers to sing songs or to dub characters’ dialogue, while standing out of view of the audience in the wings or behind the screen (see Leprohon, 1966: p.10; Abel and Altman, 2001: p.xi). Before becoming a silent film actor, Oliver Hardy was part of a four-man ensemble that sang songs for cinema spectators while concealed from their view (see Robinson, 1973: p.157).

¹⁵³ The DVD releases of both *Nosferatu* versions were exclusive to the United States. However, Taylor’s subsequent ‘remixes’ of *Caligari* (2011) and *The Golem* (2013) were also launched on Amazon Prime Video in the United Kingdom.

¹⁵⁴ In addition to being regularly ‘remixed’ in the twenty-first century, *Nosferatu* was also extensively reworked during the transition period between silent and sound filmmaking. Released under the title *Die Zwölfte Stunde: Eine Nacht des Grauens* (*The Twelfth Hour: A Night of Horror*, 1930), the film reorders and shortens much of the material found in Murnau’s original cut of *Nosferatu* and also features footage shot by Dr. Waldemar Roger, who is credited as *The Twelfth Hour*’s director (see Eisner, 1973a: p.115; Patalas, 2002: p.27). The picture was accompanied by gramophone discs containing a new score and numerous audible sound effects (see Eisner, 1973a: pp.115-116; Reid, 2019). Prints of *The Twelfth Hour* survive in Cinémathèque Française, but the sound discs are believed to be lost (see Reid, 2019).

¹⁵⁵ Like *They Shall Not Grow Old*, DJ Spooky’s remix of Griffith’s *The Birth of a Nation* adds colour and a new score to an existing silent film. DJ Spooky also re-edits the picture by cutting its original runtime in half. This version of Griffith’s film is known as *Rebirth of a Nation* (2007) and is an

consists of oral testimony from First World War veterans and dialogue spoken by actors, which is matched with the lip movements of the onscreen servicemen.¹⁵⁶ This synchronised dialogue routinely removes the implied sound that is present in the original silent footage as it determines the exact content of the soldiers' speech. Approximately midway through *They Shall not Grow Old*, a British officer addresses his troops in a built-up area away from the frontlines (Figure 43). At the start of his proclamation, the commander says "I wish to impress on all ranks the importance of the operation that is about to commence", before proceeding to say that it will be the brigade's "first battle". This dialogue definitively confirms that the officer is giving a pre-battle speech and thus rules out other potential scenarios that could be interpreted if implied sound remained intact. For example, if audible speech was not present in this scene, spectators could also infer that the officer is reading a list of soldiers that were recently killed in action or informing his troops that they will soon be granted leave from combat duties. Therefore, Jackson's removal of implied sound ushers spectators towards a particular reading of the scene and stops them from creatively interacting with the film during exhibition. Modern musicians and filmmakers, like Moroder and Jackson, typically 'remix' silent pictures with synchronised sound because they deem them to be intrinsically soundless and unappealing to twenty-first century filmgoers.¹⁵⁷ In connection to this, the Pet Shop Boys, who attached sound

attempt to explore its racist themes and racial identity in the United States during the early twenty-first century (see Donnelly, 2015: p.34; DJ Spooky, 2015).

¹⁵⁶ The oral interviews were sourced from the collection of London's Imperial War Museum. During the production of the film, Jackson hired professional lip readers to determine the conversations that are taking place in the original silent footage (see Meyer, 2019: p.1790), before recording and synchronising the speech with the soldiers' mouth movements (see Robson, 2019: p.1794).

¹⁵⁷ In relation to this point, during the late 1920s, film studios regularly outfitted their existing silent films with audible sound because they believed that sound films were more appealing to spectators. For example, Murnau's *4 Devils* (1928) and *City Girl* (1930) were released in both silent and sound versions in the United States by Fox Studios (see Eisner, 1973a: p.194-198). This process was commonly known as 'goat-glanding' (see Walker, 1978: p.44), which was a reference to the famous contemporary doctor John R. Brinkley, who asserted that he could cure male impotency by implanting goat testes in men affected by the condition (see Reid, 2019). Although many believed Brinkley's

effects to Sergei Eisenstein's *Battleship Potemkin* (Figure 44) in 2004, state that "[o]ne of the most interesting aspects about writing the soundtrack to a silent film is that you can provide not just the music but all the sound" (Pet Shop Boys, in Carroll, 2016: p.132). The Pet Shop Boys imply that films produced during the silent era, including *Battleship Potemkin*, are inherently noiseless and thus entirely reliant on composers or accompanists for music and sound effects. Moreover, David Fisher, who used green screen technology to film modern actors delivering audible dialogue on *Caligari*'s original sets, (Figure 45), argues that Wiene's picture "is not accessible to modern audiences. [...] [I]t is a slow-plotting, older movie, and it is silent. [...] I began to think how nice it would be if the movie were updated" (Fisher, in Moltenbrey, 2007: p.28).¹⁵⁸ This statement from Fisher suggests that the original version of *Caligari* is deficient and outdated because it does not contain any synchronised sound effects and dialogue. In order to be considered legitimate and entertaining today, he insinuates that Wiene's picture must visually and sonically resemble present-day films. Both the Pet Shop Boys and Fisher seem to be unaware of implied sound's existence in silent films, including *Battleship Potemkin* and *Caligari*, and the significant limitations that audible sound can place on the audience's ability to creatively interact with them during exhibition. Emerging at a pertinent time during the burgeoning 'remix' movement in silent cinema, my thesis has challenged the notions that silent films are intrinsically soundless and deficient without the aid of synchronised sound by arguing that silent Weimar filmmakers had a sophisticated understanding of the cinematic possibilities of implied sound. As I explain in more depth in the next section of this Conclusion, I have principally demonstrated this by suggesting that Weimar cinema implied sound was influenced

claims, the doctor's medical license was revoked in 1930 and he was labelled a quack (see Branyan, 1991: pp.31-35).

¹⁵⁸ Fisher's *The Cabinet of Dr. Caligari* (2005) is available on DVD in the UK.

by the use of synaesthetic techniques in contemporary paintings, and discussing the ways that the sensory phenomenon evokes and critiques coeval artistic and societal crises and movements.

Summary of Thesis Chapter Findings

In Chapter One, I interpreted Murnau's use of implied sound in *Nosferatu* as an attempt to create a multisensory silent picture that could fundamentally reshape cinema's artistic boundaries and help the medium distance itself from the creative influence of older and more established art forms, including literature and theatre. Since Murnau became closely involved with key members of *Der Blaue Reiter* (The Blue Rider) in the early twentieth century, when the group were reconfiguring the artistic borders of the arts with synaesthetic monumental works of art, such as *Der Gelbe Klang* (*Yellow Sound*, 1909a), I contended that the filmmaker's use of implied sound in *Nosferatu* was guided by The Blue Rider's coeval ideology surrounding the unification of the senses in the arts. Over the course of the last thirty years, commentators have often noted that *Nosferatu*'s subtitle (*A Symphony of Horror*) appears to suggest that Murnau's film contains visual music (see Unrau, 1996: p.234; Silver and Ursini, 1997: p.64; Roberts, 2008: pp.42-43; Laner, 2012: p.31; Massaccesi, 2016: pp.91-92). Critics also assert that Murnau's cinematography in his silent films, including *Nosferatu*, is inspired by paintings (see Eisner, 1973b: p.98; Smith, 2008: pp.6-7; Massaccesi, 2016: p.74-75; Calhoon, 2021: p.187). To a large extent, scholarly discussion of connections between *Nosferatu* and existing artwork is focused on the film's links to the Romantic early nineteenth century paintings of Caspar David Friedrich (see Vacche, 1996: p.171; Jackson, 2013: pp.43-44; Calhoon, 2021: pp.3-4). I tried to build on these critics by arguing that, besides being inspired by landscape paintings, Murnau's approach to *Nosferatu* was also

stimulated by the synaesthetic monumental works of art produced by his friends and colleagues in The Blue Rider. In *Nosferatu*, and many Blue Rider paintings, implied sound regularly penetrates and exits the frame. I suggested that this employment of the sensory phenomenon physically breaks down the traditional borders of their arts and metaphorically alludes to Murnau and The Blue Rider's shared desire to fundamentally reshape the artistic parameters of cinema and painting. In connection to this, I also read the frequent presence of vehicular implied sound in *Nosferatu* and The Blue Rider's artwork as symbolic representations of Murnau and the painters' aim to transport their artistic media in new creative directions.

Chapter Two suggested that Walter Ruttmann uses 'loud' and rhythmic implied sound in *Berlin* to celebrate the significant impact that modern technology had on everyday urban life, including the physical and mental torment that it inflicted on people. Throughout the chapter, I noted that Ruttmann's approach evokes the work of contemporary Futurist philosophers and artists, such as Luigi Russolo and Filippo Tommaso Marinetti, who continually glorified modernity's speed, dynamism and noise, and particularly extolled the destruction, violence and death that it enabled. Since *Berlin's* premiere in 1927, critics, such as Béla Balázs, Kracauer and Nora M. Alter, have repeatedly contended that *Berlin's* rhythmic editing creates visual music (see Kracauer, 2004; p.184; Alter, 2009: p.196; Balázs, 2010: p.129). Moreover, Daniel Schwartz argues that Ruttmann's apparent fascination with machines in *Berlin* is reminiscent of Futurist veneration of modern technology in the early twentieth century (see Schwartz, 2018: p.9). My study strove to develop these brief explorations of *Berlin's* implied sound and its connections to Futurism by suggesting that Ruttmann uses the sensory phenomenon to celebrate technological progress and the dangers that this brought to everyday existence in

cities, which firmly aligns him with contemporary Futurist philosophy surrounding the promotion of destruction, violence and death in the modern world. One of the reasons that I formed this interpretation of *Berlin* is because Ruttmann often appears to represent the past as being slow-paced, ‘quiet’ and boring, while depicting the present as a ‘loud’, energetic and exciting environment. Moreover, in sequences that seem to show modernity causing mental breakdowns, brutality and loss of life, the director uses fast-paced editing and ‘loud’ implied sound, which gives the impression that he is celebrating these deeply unsettling events.

Chapter Three interpreted Robert Siodmak and Edgar G. Ulmer’s employment of implied sound in *People on Sunday* as an equivocal meta-cinematic critique of the rise of the sound film and decline of silent cinema during the late 1920s and early 1930s. Since the co-directors appear to use implied sound to directly address a crisis in the film industry, I argued that *People on Sunday* can be read under the rubric of the essay film. Commentators frequently contend that Siodmak and Ulmer’s silent film is a valuable document of pre-Nazi life as it was released in Germany just three years before Adolf Hitler came to power in 1933 (see Read and Meyer, 2000: p.232; Koepnick, 2009: p.239; Wood, 2019: p.8; Demarco, 2019: p.3). Furthermore, Elodie A. Roy repeatedly identifies implied sound in scenes that feature Brigitte’s (Brigitte Borchert) record player and suggests that the audience have the power to creatively interact with the film by imagining the sound produced by the device (see Roy, 2017: p.37). Throughout my analysis of *People on Sunday*, I sought to expand the work of these scholars by suggesting that we can also consider the film to be of historical importance because its implied sound seems to meta-cinematically reflect on the crisis that erupted during the coeval transition from silent to sound filmmaking. I argued that Siodmak and Ulmer’s use of the sensory

phenomenon presents an ambivalent critique of cinema's transition period because it seems to evoke both positive and negative contemporary evaluations of the quandary. For instance, Erwin's (Erwin Splettstößer) employment of, and response to, implied sound connects the character to sound film's detractors, who routinely deemed it to be crude and an impermanent fixture in film. In contrast to this, the implied sound located in scenes that feature the record player often evokes the excitement that filmgoers felt for the arrival of sound cinema in the late 1920s and early 1930s, in addition to the contemporary belief that sound films could help unite people around the world. Besides being redolent of positive and negative assessments of the transition period in cinema, I also noted that the implied sound that is present in scenes that depict Erwin and Annie failing to converse with each other is also reminiscent of pragmatic coeval commentators, who suggested that sound film's pre-eminence and silent cinema's decline was unavoidable, and urged filmmakers to embrace audible sound effects and dialogue in order to survive in the industry.

Project Limitations and Scope for Further Research

Although my thesis has substantially built on existing examinations of implied sound in silent cinema, it is important to acknowledge that it is not a definitive and comprehensive analysis of the sensory phenomenon's presence in the medium. Instead, my study represents a foundational exploration of silent film implied sound that that can be significantly expanded with further research that addresses its limitations. An obvious constraint of my work is that it hinges on four directors' (Murnau, Ruttmann, Siodmak and Ulmer) use of implied sound in three of their silent Weimar films (*Nosferatu*, *Berlin* and *People on Sunday*). As I discussed in my thesis Introduction, silent film implied sound is certainly not limited to just

Nosferatu, *Berlin* and *People on Sunday*. On the contrary, the sensory phenomenon is present in most silent pictures, including those produced in Weimar Germany, and often fundamentally shapes our understanding of their plots and characters. For example, in Murnau's *Der Letzte Mann* (*The Last Laugh*, 1924), the doorman (Emil Jannings), our protagonist, who has recently been demoted to hotel washroom attendant, begins to lose his grip on reality when he hears two drunken men playing a trumpet outside his tenement building. The trumpet's implied sound, which Murnau visually enhances with an 'unchained' camera movement from the trumpet's bell to the doorman's tenement window (Figure 46), is followed by a hallucinatory sequence that depicts the protagonist using superhuman strength to juggle suitcases in front of an adoring crowd while dressed in his doorman attire. The grandeur that is traditionally associated with trumpet playing appears to encourage the doorman to repress his recent humiliating workplace demotion and perceive himself as a godlike figure of authority and respect, a delusion that he partially preserves until his true circumstances are exposed by a neighbour (Emmy Wyda) the following day.¹⁵⁹ In addition to having a significant role in pictures produced by the filmmakers studied in this thesis, implied sound also has integral functions in silent films directed by other Weimar cinema directors, such as Wiene, Wegener, Boese and Lang. Towards the end of *Heut' spielt der Strauss* (*Strauss is Playing Today*, 1928), which was helmed by Wiene (writer) and his younger brother Conrad Wiene (director), Johann Strauss II (Imre Ráday) finally wins the approval of his abrasive father, and fellow composer, Johann Strauss I (Alfred Abel) when he plays the violin for him next to his deathbed. Consequently, musical implied sound is the primary catalyst for the

¹⁵⁹ Implied sound also has a consistent and structural presence in many of Ruttmann's silent films beyond *Berlin*. For example, as I mentioned in Chapter Two, *Opus I-IV* (1921-1925) all contain musical implied sound that is produced by the rhythmic movement of animated shapes and lines. Discussion of implied sound in other films directed by Siodmak and Ulmer is impossible as the pair exclusively made sound pictures after *People on Sunday*, their debut film.

emotional reconciliation that takes place between Strauss senior and junior.¹⁶⁰

Furthermore, in Wegener and Boese's *The Golem*, Rabbi Loew (Albert Steinrück) fashions a golem (Paul Wegener) out of clay in order to defend the Jewish people from religious persecution. Loew and his assistant (Ernst Deutsch) soon learn how to animate the manmade creature when they summon the underworld demon Astaroth and hear him speak the magic word "Aemaet", which creates disjointed and breathy implied sound as the text crawls out of his smoking mouth one letter at a time.

Although the golem manages to stop the Jews from being expelled from the Prague ghetto by saving the king (Otto Gebühr) and his courtiers from being crushed inside their castle hall, he also burns down the Jewish quarter and almost kills Loew's daughter (Lyda Salmonova) at the end of the picture. Therefore, the demon's verbalisation of the magic word, which Loew uses to bring the golem to life, directly brings about the most significant events in the film's plot. Moreover, towards the beginning of Lang's *Metropolis*, Freder (Gustav Fröhlich) discovers that the luxury city that he calls home is powered by workers that are forced to toil in brutal and inhumane conditions below ground by his father, Joh Fredersen (Alfred Abel), the master of Metropolis. Shortly after Freder begins to investigate the below ground machine halls, a gigantic explosion occurs due to a pressure overload, injuring many workers and blowing Freder off his feet. Lang visually emphasises the physical force and sound of the blast with an 'unchained' camera movement that shows Freder stumbling backwards and covering his ears as the camera flies towards him at great

¹⁶⁰ As I noted in my thesis Introduction, implied sound also has a key storytelling function in Robert Wiene's *Orlacs Hände* (*The Hands of Orlac*, 1924). The protagonist Paul Orlac (Conrad Veidt), a celebrated pianist, loses the ability to play his instrument after a horrific injury that he suffers to his hands during a train accident. Towards the beginning of the film, after being released from hospital, Orlac tries to play the piano, but the fear in his face and the anguished expression of his wife (Alexandra Sorina) confirms that the instrument's implied sound is unpleasant and not befitting of a professional pianist. This revelation leads the character towards a downward spiral that sees his mentality slowly disintegrate until his fortunes are reversed at the end of the picture.

speed from the direction of the machine (Figure 47). The deafening noise of the explosion, which we understand through implied sound, and the physical damage that it causes to the workers, motivates Freder to rebel against the aboveground elites by pursuing the interests of Metropolis' repressed underclass.¹⁶¹ These examples demonstrate that implied sound has major narrative roles in many silent Weimar pictures that have not been analysed in this thesis. Besides the opportunity to examine the use of implied sound in the silent oeuvre of Murnau, Ruttmann, Siodmak and Ulmer, there is also scope for future research on the sensory phenomenon's existence in silent pictures directed by other Weimar filmmakers, such as Wiene, Wegener, Boese and Lang. These areas of study would build on my thesis by granting us a broader comprehension of implied sound's prevalence in German silent cinema and the contrasting ways that Weimar directors employ it as a storytelling device.

On top of the study of implied sound in a wider selection of silent Weimar pictures, the findings of this thesis can also be expanded through examination of the sensory phenomenon's presence in silent films made in other countries around the world. Many British, French, American and Soviet films produced during the silent era feature implied sound that fundamentally shapes our comprehension of their narratives. For example, in *That Fatal Sneeze* (1907), one of the many British films released by the Hepworth Manufacturing Company, a mischievous nephew (Gertie Potter) tricks his uncle (Thurston Harris) into inhaling a copious amount of ground

¹⁶¹ To a lesser extent than *The Golem* and *Metropolis*, the silent Weimar films *Der Scheintote Chinese* (*The Death Feigning Chinaman*, 1928) and *Tagebuch einer Verlorenen* (*Diary of a Lost Girl*, 1929) also contain implied sound that is integral to our understanding of character and plot. In Lotte Reiniger's *The Death Feigning Chinaman*, the emperor mourns the death of Ping Pong, his friend, by playing a song that he wrote for him on a woodwind instrument at the end of the animated short film. Furthermore, the austere staff at the women's reformatory that Thymian (Louise Brooks) is sent to in G. W. Pabst's *Diary of a Lost Girl* consistently use the noise created by sticks and gongs to control the women's behaviour in the institution.

pepper, which causes him to sneeze uncontrollably and violently for the rest of the film's runtime. The act consistently produces 'loud' implied sound due to the uncle's exaggerated body movements and the significant damage that the sneezes inflict on the character's surroundings. In addition to destroying private and public property, the force and loudness of the uncle's sneezes also appears to generate an earthquake, as the act is followed by aggressive camera tilting while the character desperately clings to a lamp post (Figure 48). As the title of Lewin Fitzhamon's short film suggests, the sneezes ultimately bring about the uncle's death during a particularly intense fit that sees him explode in a cloud of white smoke in the street.¹⁶² Moreover, like many of his other French silent pictures from the late nineteenth and early twentieth century, Georges Méliès' *L'homme orchestre* (*The One-Man Band*, 1900) revolves around the production of implied sound. At the beginning of the short film, a magical bandleader (Georges Méliès) repeatedly multiplies his body on stage in order to create a seven-piece ensemble for a performance.¹⁶³ The group create cacophonous musical implied sound by playing a mixture of woodwind, brass and percussion instruments in an exaggerated manner, before the supernatural duplicate musicians merge with each other and are absorbed by the bandleader at the end of the concert.¹⁶⁴ Furthermore, like the plots of many contemporary feature-length European pictures, including *The Golem* and *Metropolis*, the plot of *City Lights*

¹⁶² Towards the end of the silent period in Britain, implied sound also has a storytelling role in *A Cottage on Dartmoor* (1929). At the beginning of Anthony Asquith's silent film, Sally (Norah Baring) finds Joe (Uno Henning) in her cellar and calls out "Joe" in surprise. Sally's implied sound triggers a flashback sequence which reveals that Joe is infatuated with Sally and was sent to prison for jealously attacking another man she was with.

¹⁶³ Méliès achieved this result by using multiple exposures of his character's body in the scene. Many of the film pioneer's other silent films, including *Homme de têtes* (*The Four Troublesome Heads*, 1898), contain the same special effects technique.

¹⁶⁴ Although Méliès' pictures are often heavily structured around the use of implied sound, many other French silent films also employ the sensory phenomenon as a tool to impact our reception of characters. For instance, in *The Passion of Joan of Arc*, Dreyer regularly frames Joan of Arc (Renée Jeanne Falconetti) in close-up as she cries in a French ecclesiastical court. Our close proximity to Joan intensifies the implied sound of her sobs and thus encourages us to sympathise with her hopeless plight.

(1931), an American silent film, makes implied sound its focal point. Towards the start of Charles Chaplin's narrative, a car is parked next to a blind girl (Virginia Cherrill) who is attempting to sell flowers to passersby in the street. In order to escape the attention of a policeman, a tramp (Charles Chaplin) enters the parked car from the side facing the road and exits it on the pavement. The implied sound that the vehicle door creates when closed causes the blind girl to mistake the destitute character for a rich man and target him as a potential buyer. After purchasing one of the flowers, the protagonist quickly becomes enamoured with the blind girl and is determined to improve her desperate circumstances. To avoid potentially being rejected by the blind girl, the tramp plays along with her assumption that he is wealthy and spends the rest of the film settling her debts and finding money to pay for her eye surgery, which brings about the girl's realisation that her friend and benefactor is actually a vagabond.¹⁶⁵ Unlike their European and American counterparts, Soviet filmmakers often use implied sound to deliver propagandistic messages to their audience. At the beginning of Eisenstein's *Oktyabr' Desyat' dney kotorye potryasli mir* (*October: Ten Days that Shook the World*, 1927), Tsarist troops use a rooftop machine gun to kill peaceful Bolshevik agitators as they attempt to flee from Nevsky Square. During the massacre, Eisenstein repeatedly intercuts close-ups of the machine gun and a soldier's grinning face. The fast-paced and rhythmic intercutting of these close-ups evokes a machine gun's distinctive rate of fire and the loud pulsing rat-a-tat-tat noise that the weapon produces when

¹⁶⁵ In addition to having a significant narrative role in Chaplin's late silent films, implied sound is also used as a comedic device in the early pictures that he made for Essanay Film Manufacturing Company during the First World War. In *His New Job* (1915), for instance, an auditioning actor (Charles Chaplin) causes a film producer (Robert Bolder) great discomfort by shouting and tipping cigarette ash into his ear trumpet. Furthermore, *The Bank* (1915) features a scene in which a caretaker (Charles Chaplin) fails to understand a man's speech because he is trying to talk while eating at the same time. The caretaker fixes this issue by opening the man's mouth and removing the offending food with his own hand.

discharged. Furthermore, since long shots of the Bolsheviks fleeing Nevsky Square repeatedly follow these tight shots, it appears that the demonstrators' panic is primarily induced by the 'loud' implied sound of the machine gun. Consequently, in addition to equating the Tsarist servicemen with an inanimate object that kills (the machine gun), the juxtaposed close-ups also portray the government soldiers as bloodthirsty sadists because they appear to enjoy scaring and murdering unarmed Bolsheviks in the streets below.¹⁶⁶

Besides exploring implied sound's presence in a wider selection of Weimar films and silent pictures produced in other countries around the world, future studies can also build on my thesis by examining the presence of different implied senses in silent cinema. As I discussed in the Introduction to this thesis, commentators that have analysed senses in film, including Laura U. Marks (2000) and Thomas Elsaesser and Malte Hagener (2015), primarily focus their attention on their depiction in sound pictures. Therefore, like implied sound, silent film taste, smell and touch sensations have not been surveyed in detail by scholars hitherto. For obvious reasons, implied taste is particularly apparent in silent films that depict the consumption of food, such as Edward F. Cline and Buster Keaton's *The Scarecrow* (1920). Towards the beginning of this American comedy, two farmhands (Buster Keaton and Joe Roberts) sit down at the kitchen table to eat their dinner. In order to improve the taste of their food, the characters repeatedly use condiments that are attached to strings overhead and inside a hand cranked contraption on the table. For example, in a medium shot, Roberts' character pours a large amount of salt onto a

¹⁶⁶ Before *October*'s production in the late 1920s, Eisenstein had already used implied sound for propaganda purposes in *Battleship Potemkin*. In the aforementioned Odessa steps scene, the director repeatedly frames the Tsarist troops' rifle fire and the screams of the unarmed civilians in close-up. These 'loud' implied sounds emphasise the brutality of the government's soldiers and the helplessness of the ordinary Russian people that are caught in their crosshairs.

sausage and then proceeds to devour it in one bite. Since most spectators have eaten meat and salt during their everyday lives, they are able to internally create these distinct flavours when the said foodstuffs are consumed in *The Scarecrow*.

Conversely, if actors eat unconventional food that does not have a familiar taste, silent filmmakers routinely use characters' facial expressions to communicate implied tastes to the audience. In *The Gold Rush* (1925), Big Jim McKay (Mack Swain) and *The Lone Prospector* (Charles Chaplin) independently journey to Alaska in order to hunt for gold, but are soon forced to take shelter from a blizzard in the same cabin. Since the pair has no other form of sustenance in the isolated cabin, they are forced to cook and eat the components of a leather boot. Big Jim quickly seizes the portion that contains the shoe's leather and grimaces while he reluctantly consumes the material in close-up shots. This immediately communicates to the audience, through implied taste, that the leather has a very unpleasant flavour and thus adds a degree of schadenfreude to the already comic scenario of boot eating. Unlike Big Jim, *The Lone Prospector* appears to enjoy the taste of his shoe-based meal, which consists of a rubber sole, metal nails and fabric laces. This can be understood through the subtle nod and raised eyebrow look that the character gives Big Jim as he bites into the boot's rubber sole. Furthermore, since *The Lone Prospector* proceeds to twist the laces around his fork like spaghetti before consuming them and sucks the nails as if they were animal bones, Chaplin implies that the inedible objects also taste like the palatable foods that they visually resemble, which adds further comedy to the scene.¹⁶⁷ In contrast to visualised tastes

¹⁶⁷ Besides American films, implied taste is also frequently present in European pictures from the silent era. For example, during a dream sequence in *La Lune à un metre* (*The Astronomer's Dream*, 1898), a moon with a human face appears before an astronomer (Georges Méliès) and proceeds to eat his possessions. As the moon consumes the protagonist's belongings, it smiles and raises its eyebrows, which implies that the objects have a pleasant taste. Furthermore, as I noted in my exploration of implied sound in Chapter One, implied taste has a major role in Murnau's *Nosferatu*.

in silent cinema, implied smell is located in a wide variety of onscreen scenarios and is often used for storytelling purposes. The sensory phenomenon is particularly apparent at the end of Eisenstein's *Stachka* (*Strike*, 1925) when the director repeatedly crosscuts between cows being slaughtered for their meat and the Russian military murdering striking workers. After being stabbed repeatedly with a knife, a cow lies dead on the ground with blood gushing out of its neck in close-up. Throughout this tight shot, steam continually rises towards the camera from the cow's gaping wound, which visually suggests the potent odour of blood to the audience.¹⁶⁸ This rank smell of death also pervades the wider shots of the massacred strikers that are intercut with the animals' carcasses as thin vapour gently wafts over the many lifeless bodies lying in the field. By crosscutting between the cows and the humans being killed, Eisenstein suggests that the strikers have been slaughtered like livestock and that their corpses are now akin to reeking dead animals sprawled on abattoir floors. In addition to this example from Soviet silent cinema, implied smell is also perceptible in many American silent films, including *The Great Train Robbery* (1903). In the last shot of Edwin S. Porter's picture, a cowboy (Justus D. Barnes) aims a pistol at the camera's lens and discharges it twice in close-up, which causes clouds of smoke to cover his face (Figure 49). Our close proximity to the gunfire via the director's shot size, and the smoke that the weapon produces, creates 'loud' implied sound and suggests a strong gunpowder smell to spectators.¹⁶⁹ On top

Throughout the film, the vampire, Count Orlok/Nosferatu, tastes and consumes the blood of numerous characters, including Hutter and Ellen, until his blood lust brings about his death at the end of the picture.

¹⁶⁸ In connection to this, Tom Gunning argues that "one can almost smell" (Gunning, 2000: p.370) the dead cow that is washed away in Lang's sound picture *House by the River* (1950).

¹⁶⁹ As Paul Merton notes, "[a] great deal of silent comedy [also] revolves around smells" (Merton, 2007: p.76). In *The Tramp* (1915), for instance, the eponymous character (Charles Chaplin) helps a farmer (Ernest Van Pelt) remove his shoes. After completing this task, the tramp lifts his head high and opens a window, which suggests that the shoes have an unpleasant odour. As I discussed in Chapter One, silent era scholars have also argued that implied smell was present in Murnau's lost silent film *Der Bucklige und die Tänzerin* (*The Hunchback and the Dancer*, 1920). In the picture, our

of implied smell and sound, touch sensations are also detectible in this shot because the audience appear to be on the receiving end of the cowboy's bullets due to him aiming directly at the camera. We are the bandits' final victims in the film and thus see, 'hear', 'smell' and 'feel' the gunshots during exhibition. Implied touch also plays a major role throughout *Sunrise* as it often symbolises the control that the Woman from the City (Margaret Livingstone) has over the Man (George O'Brien) during their romantic affair. For instance, when the Man sits on his bed in medium shot and contemplates murdering his wife, the Woman (Janet Gaynor), an apparition of the seductress suddenly appears behind him and grasps his chest. Immediately after this, two other ghostlike images of his mistress materialise beside him and proceed to kiss his lips and forehead (Figure 50). These passionate forms of touch help paralyse the doubts that were forming in the Man's mind surrounding his affair with the Woman from the City and demonstrate that the temptress has a psychological *hold* on the protagonist and a meaningful *hand* in shaping his resolution to murder the Woman, which ultimately does not come to pass in Murnau's film.¹⁷⁰

Conclusion

protagonist, James Wilton (John Gottowt), uses a Javanese perfume to seduce Gina (Sascha Gura), a dancer (see Berriatúa, 2007: *Nosferatu* Blu-ray). A contemporary commentator states that the film "makes you believe you can actually smell the odour emanating from the hunchback's Javanese perfume" (Anon, 1920, in Elsaesser, 2000: p.225).

¹⁷⁰ Implied touch can also be found in numerous other pictures produced during the silent era. It has a particularly important narrative function in *Rescued by Rover* (1905) as it leads to a father (Cecil M. Hepworth) retrieving his abducted daughter (Barbara Hepworth). After the child is kidnapped at the start of the film, the family's dog, Rover (Blair), discovers her whereabouts and tries to alert his master by repeatedly pawing and bunting the man's body. This touch-based communication proves to be successful as the man follows the dog to his daughter's location and frees her from the gypsy (Lindsay Gray) that was keeping her captive. Moreover, the sensory phenomenon is also apparent in contemporary films directed by Méliès. For instance, in *Le Voyage dans la lune* (*A Trip to the Moon*, 1902) a spaceship crashes directly into the eye of the man in the moon. The impact causes the moon's eye to bleed profusely and a grimace soon appears on its face, which suggests that it is experiencing intense pain.

In conclusion, emerging just over a century after many Weimar films were initially released in cinemas, this thesis provides us with a new understanding of silent German cinema through close analysis of implied sound. Throughout the course of my investigation, I have tried to build on scholars that have highlighted the sensory phenomenon's existence by arguing that Weimar cinema implied sound is influenced by the employment of synaesthetic sound in contemporary paintings and appears to evoke and analyse coeval movements and crises in society and the arts. Therefore, this study takes issue with present-day filmmakers and musicians, such as Fisher and the Pet Shop Boys, that consider silent pictures to be deficient and unappealing if they are not synchronised with audible sound effects and dialogue. Although this thesis is primarily concerned with 'listening' to silent film, it acknowledges that spectators also have the ability to 'taste', 'smell' and 'touch' pictures that were released during the silent era. Consequently, in addition to expanding our understanding of implied sound by analysing its presence in more silent films, there is also scope for future studies to investigate the presence of other senses in silent cinema. This will enable us to robustly challenge the notion that silent cinema is exclusively visual in nature and to instead frame it as a multisensory medium that uses implied sound, taste, smell and touch as fundamental storytelling tools that can significantly impact our comprehension of silent film narratives and characters.

Illustrations

Introduction

Figure 1. *Metropolis* (1927) – Fritz Lang creates implied sound by ejecting smoke through the factory whistles at the start of the film [Film Screenshots].



Figure 2. *Faust: Eine deutsche Volkssage* (*Faust: A German Folktale*, 1926) – The superimposition of Gretchen's (Camilla Horn) screaming face creates implied sound as it flies across the mountains and informs Faust (Gösta Ekman) that she is in danger [Film Screenshots].

*"Faust... Faust... help
your Gretchen!"*



Figure 3. *Nosferatu: Eine Symphonie des Grauens* (*Nosferatu a Symphony of Horror*, 1922) – The consistent presence of ellipses in Knock’s (Alexander Granach) intertitles suggests that the implied sound of the character’s speech is broken and unnatural [Film Screenshots].

“Count Orlok – his Lordship
 ... from Transylvania
 ... would like to purchase
 ... a nice house
 ... in our small town.”



Figure 4. *Orlacs Hände* (*The Hands of Orlac*, 1924) – The implied sound of Paul Orlac’s (Conrad Veidt) piano playing confirms to the audience that the professional pianist has lost his musical abilities after the rail accident that injured his hands [Film Screenshots].





Figure 5. *Sunrise: A Song of Two Humans* (1927) – The Woman from the City (Margaret Livingston) encourages the Man (George O’Brien) to elope with her by conjuring a vision of a wild jazz band, which creates ‘loud’ implied sound. Furthermore, ‘loud’ implied sound is also produced when The Man shouts directly into the camera while searching for the Woman (Janet Gaynor) on the lake at the end of the film [Film Screenshots].

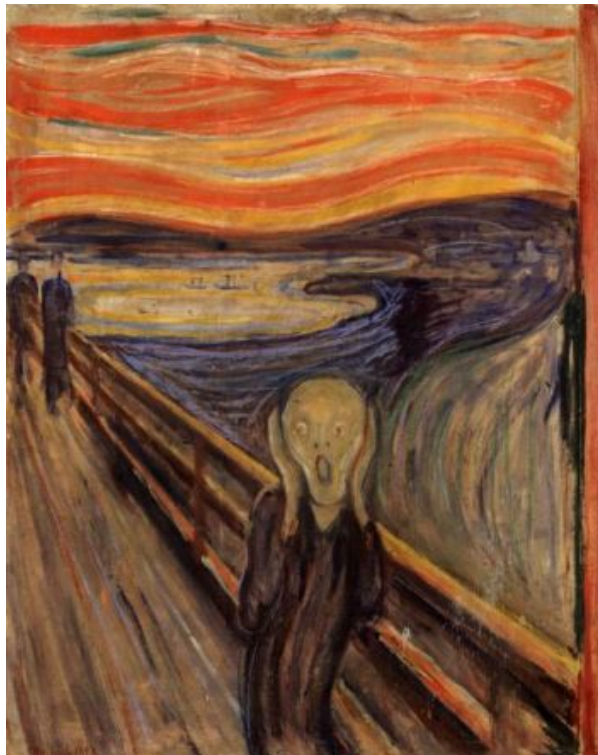


Figure 6. *Der Golem, wie er in die Welt kam* (*The Golem: How He Came Into the World*, 1920) – Director Paul Wegener’s sets frequently suggest implied sound as they feature Expressionist shapes that resemble throats or open mouths [Film Screenshot].



Chapter One

Figure 7. *Skrik (The Scream, 1893)* – Edvard Munch produces implied sound with the open-mouthed expression that is etched on the face of the humanlike figure in the centre of his canvas [Painting Screenshot].



Munch's *The Scream*

Figure 8. *Cover-Design für Der Blaue Reiter Almanach (Cover Design for The Blue Almanac, 1911a)* – *Der Blaue Reiter*'s (The Blue Rider)'s use of the horse and rider motif is often considered to be a representation of the artist's (the rider) creative control over their chosen media (the horse) [Painting Screenshot].



**Wassily Kandinsky's Cover
Design for *The Blue Almanac***

Figure 9. *Der Traum (The Dream, 1912b)* and *Caliban (aus Shakespeares Der Sturm) (Caliban (from Shakespeare's The Tempest), 1914)* – These Blue Rider paintings create implied sound through the presence of the open-mouthed lion and humanlike monster [Paintings Screenshots].

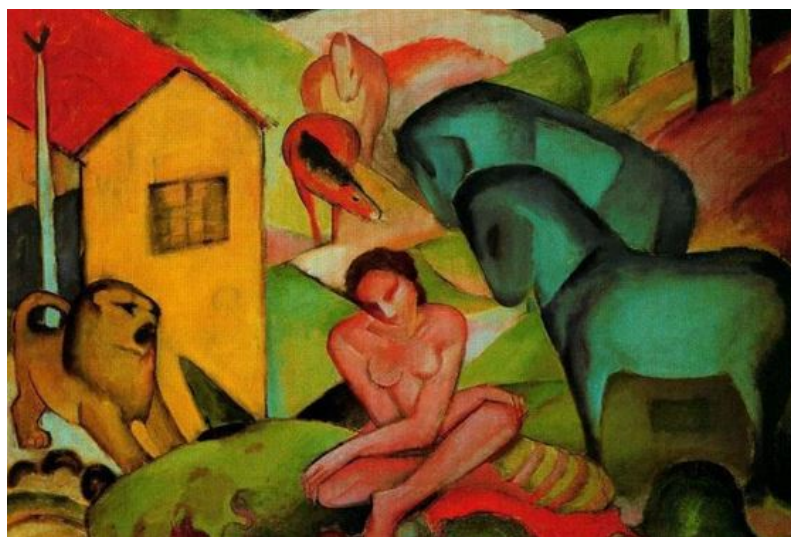
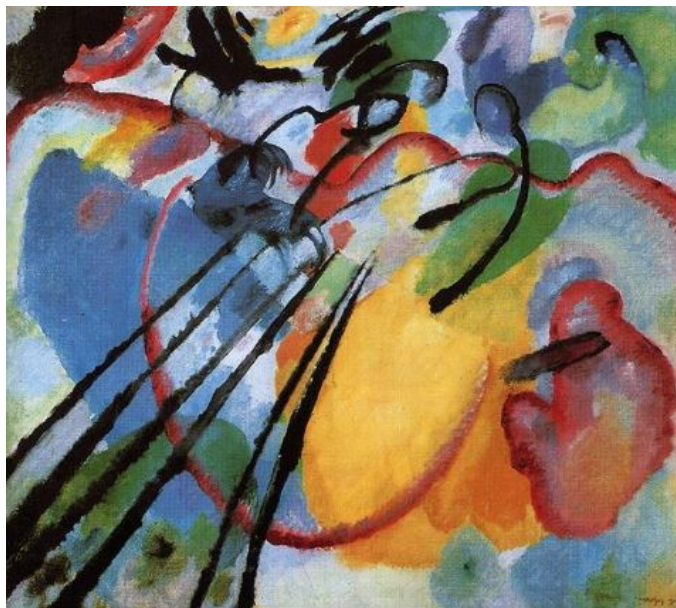


Figure 9a – Franz Marc's *The Dream*



**Figure 9b – Marc's *Caliban* (from
Shakespeare's The Tempest)**

Figure 10. *Improvisation 26* (1912) and *Komposition VI* (*Composition VI*, 1913) – The guitar-like strings in Kandinsky's abstract paintings suggest musical implied sound to the beholder [Paintings Screenshots].



**Figure 10a – Kandinsky's
*Improvisation 26***



**Figure 10b – Kandinsky's
*Composition VI***

Figure 11. *Alte Stadt (Old Town II, 1902)* – Kandinsky believed that the colours he used in this painting were reminiscent of a range of different musical effects and instruments [Painting Screenshot].



Kandinsky's *Old Town II*

Figure 12. *Das Wunder (The Wonder, 1922)* – The animated male heads in Julius Pinschewer and Walter Ruttmann's animation produce synaesthetic sound and taste when they argue and drink an alcoholic beverage [Film Screenshots].





Figure 13. *Nosferatu* – Synaesthetic touch is apparent when Nosferatu’s (Max Schreck) hand grasps Ellen’s (Greta Schröder) heart in shadow. The act paralyses her body and allows the vampire to feed on her blood, before being destroyed by the rays of the morning sun thereafter [Film Screenshots].



Figure 14. *City Girl* (1930) – The demeanour of Lem’s Father (David Torrence) is dramatically altered when he mistakenly fires his gun at Lem (Charles Farrell) and hears his son scream in terror, which we understand through implied sound [Film Screenshots].





Figure 15. *Blaues Pferd (Blue Horses, 1911b)* and *Rotwild II (Red Deer II, 1912e)* – Marc's Blue Rider paintings have musical rhythm thanks to the artist's use of rhythmic flowing brushstrokes. [Paintings Screenshots].



Figure 15a – Marc's *Blue Horses*

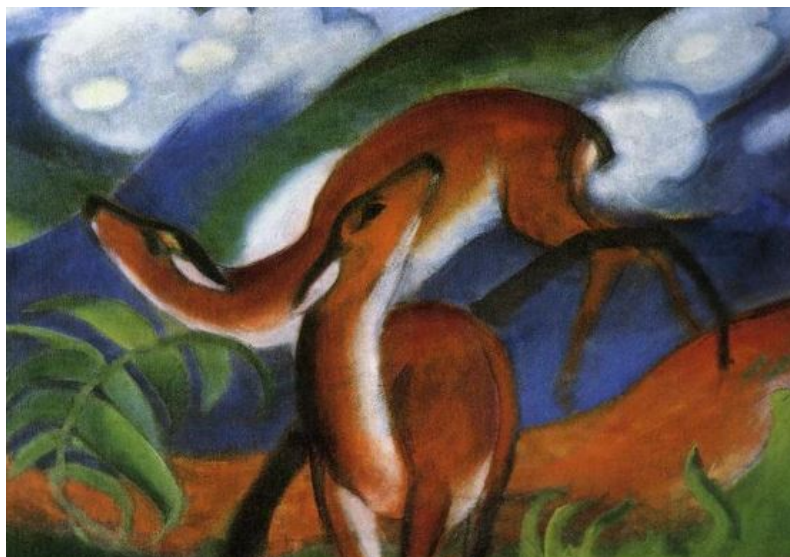


Figure 15b – Marc's *Red Deer II*

Figure 16. *Nosferatu* and *Anatomische les van Dr. Nicolaes Tulp* (*The Anatomy Lesson of Dr. Nicolaes Tulp*, 1632) – The *Nosferatu* scene that depicts Dr. Sievers (Gustav Botz) and other Wisborg dignitaries examining the body of the ship's captain (Max Nemetz) visually resembles Rembrandt's Baroque painting [Film and Painting Screenshots].



Figure 16a – Murnau's *Nosferatu*



Figure 16b – Rembrandt's *The Anatomy Lesson of Dr. Nicolaes Tulp*

Figure 17. *Der Wanderer über dem Nebelmeer* (*Wanderer above the Sea of Fog*, c.1818) and *Nosferatu* – The Rückenfigur in Caspar David Friedrich's German Romantic painting is reminiscent of Ellen looking out to sea in Murnau's silent film [Painting and Film Screenshots].



**Figure 17a – Friedrich's
*Wanderer above the Sea of Fog***



Figure 17b – Murnau's *Nosferatu*

Figure 18. *Das Lied von der Wolga* (*Volga Song*, 1906) and *Wiesel Spielen* (*Playing Weasels*, 1909) – The boatmen and weasel probe and attack the borders of the artwork that they are encased within. We can link their assaults on the paintings' frames to The Blue Rider group's broader desire to demolish the barriers between the arts and pursue synaesthetic monumental works of art [Paintings Screenshots].

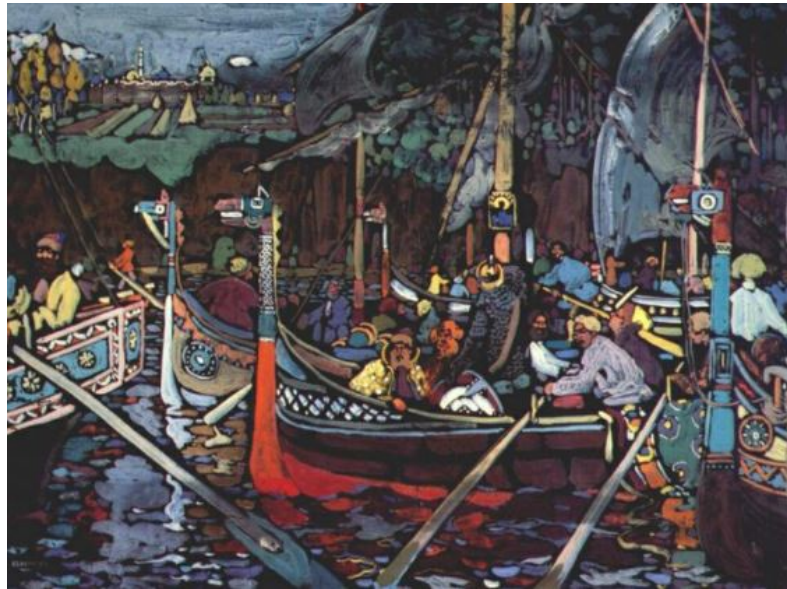


Figure 18a – Kandinsky’s *Volga Song*

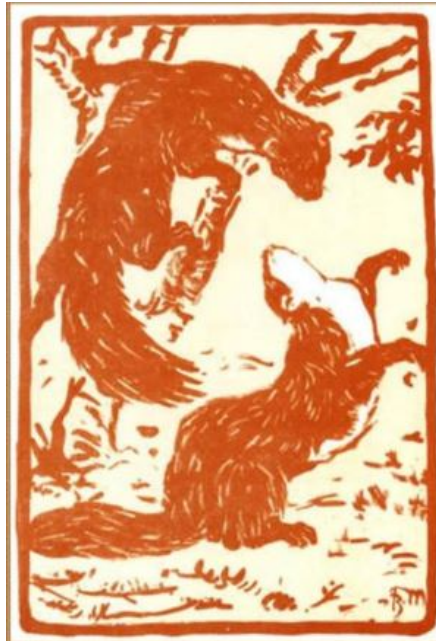
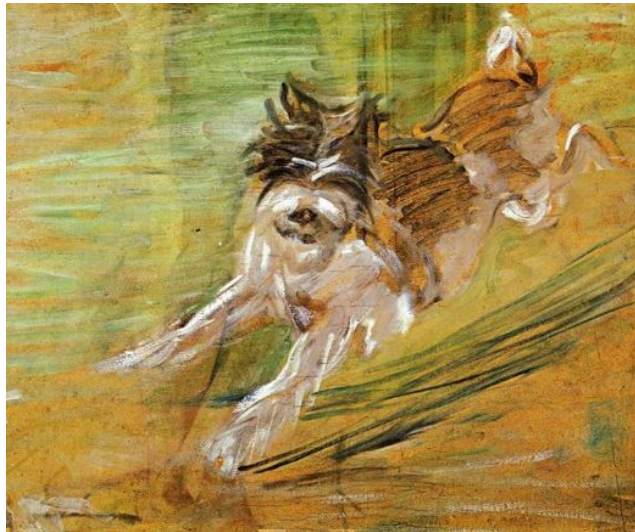


Figure 18b – Marc’s *Playing Weasels*

Figure 19. *Landschaft mit einer Dampfloek (Landscape with a Steam Locomotive, 1909b)* and *Springender Hund Schlick (Jumping Dog Schlick, 1908)* – The implied sound of the steam train and sprinting dog physically breaks down the borders of Kandinsky’s and Marc’s paintings and metaphorically alludes to their wider desire to demolish the barriers between the arts and the senses in their Blue Rider artwork [Paintings Screenshots].

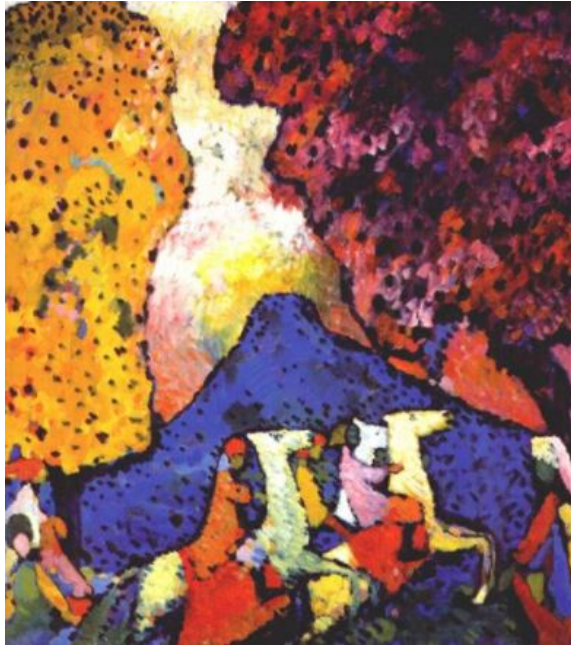


**Figure 19a – Kandinsky's
*Landscape with a Steam Locomotive***

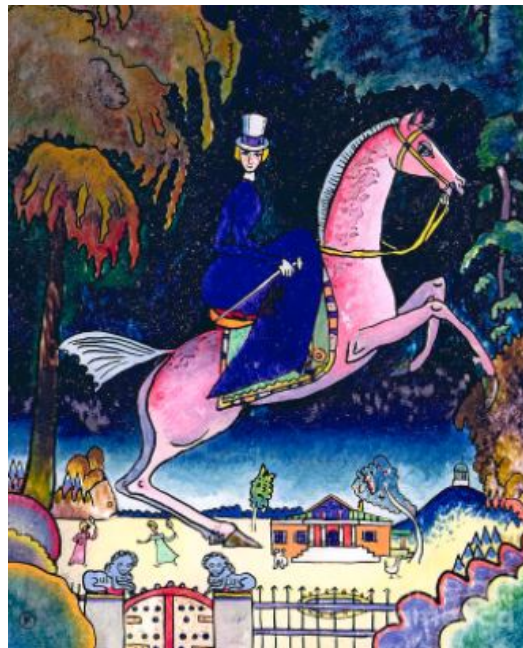


**Figure 19b – Marc's *Jumping Dog*
*Schlick***

Figure 20. Kandinsky's *Der blaue Berg* (*The Blue Mountain*, 1908) and *Amazone mit Löwen* (*Amazon with Lions*, 1918) – The riders appear eager to escape the confines of their paintings and the horses' clattering hooves produce 'loud' implied sound. This links to the Blue Rider group's (the riders) desire to take the arts (the horses) in a new multisensory direction in their monumental works of art [Paintings Screenshots].



**Figure 20a – Kandinsky's
*The Blue Mountain***



**Figure 20b – Kandinsky's *Amazon
with Lions***

Figure 21. *Nosferatu* – The horses in the Carpathian Mountains tavern sequence continually invade and exit Murnau's shots and one of the animals kicks the edge of the frame. These actions create implied sound and physically break down the borders of *Nosferatu's* frame [Film Screenshots].





Figure 22. *Die Gelbe Kuh* (*The Yellow Cow*, 1911c), *Kühe, rot, grün, gelb* (*Cows, Yellow-Red-Green*, 1912d) and *Hunde spielen* (*Playing Dogs*, 1912c) – Like the horses in Murnau’s scene from *Nosferatu*, the animals in Marc’s paintings often break down the borders of their frames and create implied sound with their bodily movements [Paintings Screenshots].



Figure 22a – Marc’s *The Yellow Cow*

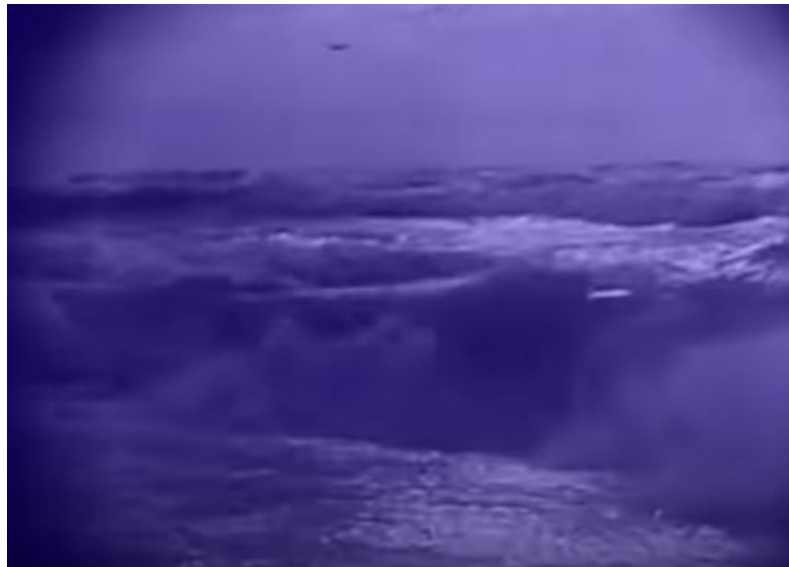


Figure 22b – Marc’s *Cows, Yellow-Red-Green*



Figure 22c – Marc's *Playing Dogs*

Figure 23. *Nosferatu* – The large waves off the coast of Wisborg aggressively *break* through the boundaries of Murnau's composition and imbue it with 'loud' crashing implied sounds [Film Screenshots].



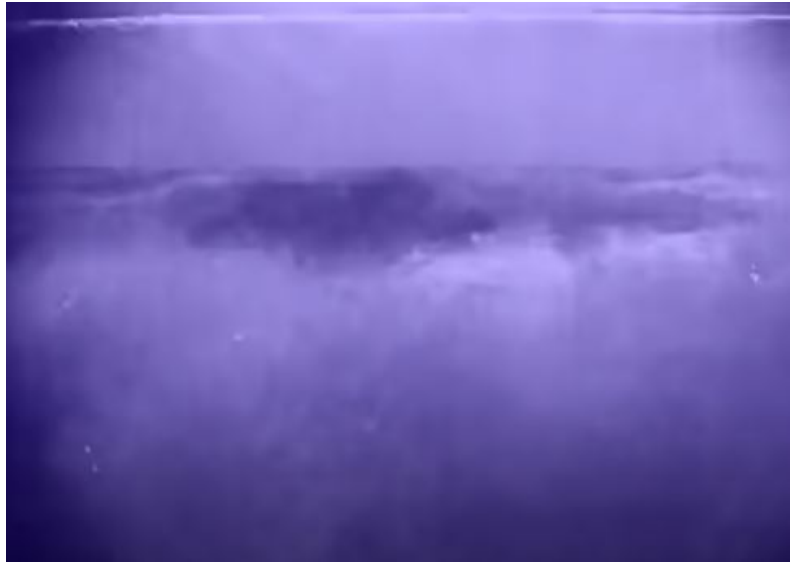


Figure 24. *Drei Katzen* (*Three Cats*, 1913a), *Eselfries* (*Donkey Frieze*, 1911d), *Affenfries* (*Monkey Frieze*, 1911a) – The animals in these Blue Rider paintings by Marc penetrate the perimeters of their canvases and produce implied sound [Paintings Screenshots].



Figure 24a – Marc's *Three Cats*



Figure 24b – Marc's *Donkey Frieze*



Figure 24c – Marc's *Monkey Frieze*

Figure 25. *Nosferatu* – Ellen's scream exits Murnau's frame in Wisborg and re-enters it in Transylvania. Therefore, her verbal implied sound demolishes both filmic and geographical borders [Film Screenshots].



Figure 26. *Beim Malen* (*While Painting*, 1911) and *Zwei blaue Pferde* (*Two Blue Horses*, 1913b) – Gabriele Münter and Marc visually and sonically penetrate the borders of their paintings. The actions performed in these works of art also suggest the existence of implied sound outside the boundaries of their frames [Paintings Screenshots].



Figure 26a – Münter's *While Painting*



Figure 26b – Marc's *Two Blue Horses*

Figure 27. *Nosferatu* – Count Orlok’s magical coach consistently infuses Murnau’s frame with ‘loud’ rattling and thudding implied sounds. It drowns out the ‘quiet’ implied sound created by Hutter’s footfall and contributes to the sensory overload that Hutter appears to experience during his journey to the vampire’s fortress [Film Screenshots].





Figure 28. *Der Blaue Reiter* (*The Blue Rider*, 1903) and *Lyrisch* (*Lyrical*, 1911c) – Kandinsky’s horses and riders imbue their ‘quiet’ and ‘soundless’ environments with ‘loud’ implied sound [Paintings Screenshots].



Figure 28a – Kandinsky’s *The Blue Rider*



Figure 28b – Kandinsky's *Lyrical*

Figure 29. *Nosferatu* – Shortly after Nosferatu takes command of the Empusa, the ship's 'quietness' is replaced with crashing, roaring and ringing implied sounds [Film Screenshots].







Figure 30. *St. George und der Drache* (*St. George and the Dragon*, 1915) – The horse and rider create ‘loud’ thudding implied sounds that dominate the painting’s soundscape [Painting Screenshot].



Kandinsky's *St. George and the Dragon*

Chapter Two

Figure 31. *Berlin: Die Sinfonie der Grosstadt* (*Berlin: Symphony of a Great City*, 1927) – Ruttmann presents mechanical speed, dynamism and noise as exciting aspects of modernity through the creation of implied ‘mechanical music’ [Film Screenshots].



Figure 32. *Berlin* – Ruttmann suggests the passage of time from the distant past to the early twentieth century present with three shots at the start of the film [Film Screenshots].



Figure 33. *Berlin* – Ruttmann juxtaposes a shot of the spinning city with a Catherine wheel firework. This suggests that the city is exciting and should be celebrated because it is fast-paced, dynamic and loud [Film Screenshots].



Figure 34. *Berlin* – The pace of the secretaries' work and the 'loud' implied sound of their typewriters destroy their minds. Ruttmann allies himself with contemporary Futurists by presenting the mental deterioration of the workers as an exciting event with fast-paced cutting and special effects [Film Screenshots].



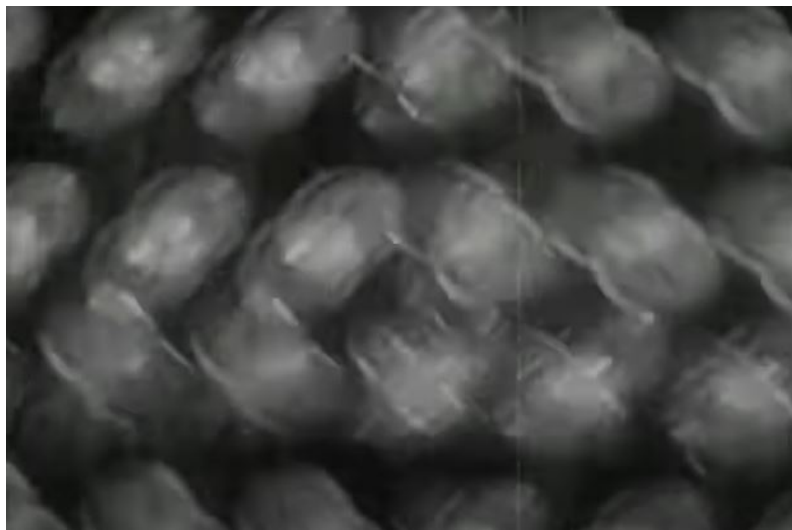


Figure 35. *Berlin* – The ‘loud’ implied sounds of the train and rollercoaster appear to motivate the woman’s suicide. Ruttmann depicts her death as an enthralling event with fast-paced cutting and loud implied sound, which links the scene to Futurists’ morbid obsession with death [Film Screenshots].





Chapter Three

Figure 36. *Menschen am Sonntag* (*People on Sunday*, 1930) – Erwin (Erwin Splettstößer) shows distaste for sound throughout this scene. The implied sounds interrupt the ‘quiet’ tranquil environment of his home. This links to contemporary disdain for the arrival of sound cinema in Germany and abroad [Film Screenshots].





Figure 37. *People on Sunday* – Erwin and Annie (Annie Schreyer) destroy photographs of Willy Fritsch and Greta Garbo, two prominent silent film actors that had recently transitioned to sound filmmaking. Later on in the scene, they create ‘loud’ implied sound as they rip up numerous film star photographs [Film Screenshots].





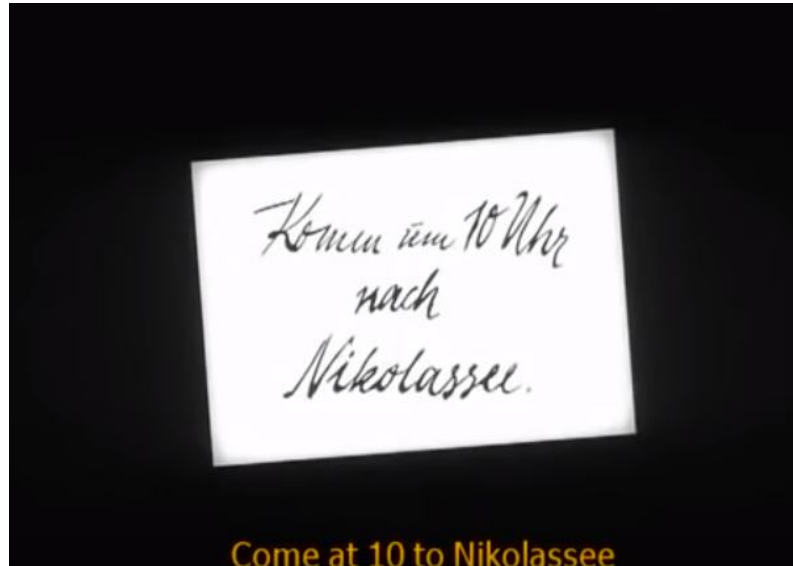
Figure 38. *People on Sunday* – Erwin falls asleep to the implied sound of Brigitte’s (Brigitte Borchert) record player. This connects to contemporary silent filmmakers’ disinterest in the arrival of sound cinema [Film Screenshots].



Figure 39. *People on Sunday* – The implied music of Brigitte’s record player dramatically alters Christl’s (Christl Ehlers) mood. We can connect this to contemporary arguments that the sound film was capable of unifying people around the world [Film Screenshots].



Figure 40. *People on Sunday* – Erwin’s note fails to inform Annie of the group’s plans for the weekend. This failure is reminiscent of the decline of silent cinema’s storytelling tools, including the intertitle [Film Screenshots].



Conclusion

Figure 41. *Chelovek s kino-apparatom* (*Man with a Movie Camera*, 1929) – A silent era orchestra accompanying a film in a Russian cinema [Film Screenshot].



Figure 42. *Oravský Hrad* (Orava Castle) – Two *Nosferatu* locations as they appeared in 1922 and 2015. The 2015 images were taken during the author's guided tour of the Slovakian fortress [Film Screenshots and Personal Photographs].



1922



2015



1922



2015

Figure 43. *They Shall Not Grow Old* (2018) – By pairing newly-recorded synchronised dialogue with First World War footage of an officer addressing his troops, Jackson removes the scene’s implied sound and encourages a one-dimensional reading of the sequence [Film Screenshot].



Figure 44. *Bronenosets Potemkin* (*Battleship Potemkin*, 1925) – The Pet Shop Boys added audible sound effects, including gun shots, to Sergei Eisenstein’s silent film in 2004 [Film Screenshot].



Figure 45. *The Cabinet of Dr. Caligari* (2005) – David Lee Fisher comprehensively ‘remixed’ Wiene’s *Caligari* by reshooting the film with different actors and adding sound effects and dialogue. Using green screen technology, he inserted Wiene’s original sets during post-production [Film Screenshot].



Figure 46. *Der Letzte Mann* (*The Last Laugh*, 1924) –.Two men drunkenly play trumpets outside the doorman’s (Emil Jannings) tenement block. Murnau emphasises the sound of the trumpet by initially photographing it being blown in close-up and then pulling the camera backwards towards the doorman’s open window, which suggests the trajectory of the noise [Film Screenshots].



Figure 47. *Metropolis* – The explosion in the machine city knocks Freder (Gustav Fröhlich) to the ground. Lang creates implied sound by using the ‘unchained’ camera technique to swing the camera towards Freder from the direction of the explosion, which simulates the force and noise of the blast [Film Screenshots].



Figure 48. *That Fatal Sneeze* (1907) – British director Lewis Fitzhamon creates ‘loud’ implied sound with the protagonist’s (Thurston Harris) dramatic sneeze, which appears to cause an earthquake [Film Screenshots].





Figure 49. *The Great Train Robbery* (1903) – Edwin S. Porter produces implied sound, smell and touch in the shot at the end of the film when a cowboy (Justus D. Barnes) shoots directly into the camera [Film Screenshots].



Figure 50. *Sunrise* – Through implied touch, the ghostly doubles of the Woman from the City manipulate the Man’s affections and persuade him to attempt his wife’s murder [Film Screenshots].



Bibliography

4 Devils. 1928. [Film]. F.W. Murnau. dir. USA: Fox Film Corporation.

8 1/2. 1963. [Film]. Federico Fellini. Dir. Italy: Cineriz and Francinex.

15-Minute German Documentary about Tabu by Luciano Berriatúa. 2008. [Eureka *Tabu* Blu-ray Extra]. Luciano Berriatúa. Dir. Germany: [No Production Company].

Abel, R. and Altman, R. 2001. *Introduction*. In: Abel, R. and Altman, R. Eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.xi-xvi.

Abel, R. and Altman, R. 2001. Eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press

Abschied (Farewell). 1930. [Film]. Robert Siodmak. dir. Germany: Ufa.

Acciaio (Steel). 1933. [Film]. Walter Ruttmann. dir. Italy: Società Italiana Cines.

A Cottage on Dartmoor. 1929. [Film]. Anthony Asquith. Dir. UK: British Instructional Films (BIF).

Altendorf, G, Sudendorf, W., Theis, W. 2013. *Friedrich Wilhelm Murnau: Die Privaten Fotografien 1926-1931: Berlin, Amerika, Südsee*. [No Place]: Schirmer/Mosel.

Alter, N. M. 2009. *Berlin, Symphony of a Great City (1927): City, Image, Sound*. In: Isenberg, N. ed. *An Essential Guide to Classic Films of the Era: Weimar Cinema*. New York: Columbia University Press, pp.193-216.

Alter, N. M. 2018. *The Essay Film After Fact and Fiction*. New York: Columbia University Press

Alter, N. M. and Corrigan, T. 2017. *Introduction*. In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.1-20.

Altman, R. 1996. The Silence of Silents. [Online]. *The Musical Quarterly*, 80(4), pp.648-718. [Accessed: 4th November 2021]. Available from:
<https://www.jstor.org/stable/742402>

Altman, R. 2004. *Silent Film Sound*. New York: Columbia University Press.

Ames, C. 1997. *Movies about the Movies: Hollywood Reflected*. Lexington: The University Press of Kentucky.

Anderson, G. B. 1988. *Music for Silent Films, 1894-1929: a guide*. Washington: Library of Congress.

Anna Christie. 1930. [Film]. Clarence Brown. dir. USA: MGM.

Anon. c.2020a. *Be Caligari! – The Virtual Cabinet*. [Online]. [Accessed 12th August 2022]. Available from: <https://www.deutsche-kinemathek.de/en/visit/exhibitions/be-caligari-virtual-cabinet>

Anon. 2020b. *Live-stream Presentation of “The Golem”*. [Online]. [Accessed: 11th August 2022]. Available from: <https://ukings.ca/events/live-stream-presentation-of-the-golem/>

Anon. 2020c. *Special Event: ArtScience on Scream*. [Online]. [Accessed: 11th August 2022]. Available from:
<https://www.marinabaysands.com/museum/events/artscience-on-scream.html>

Antliff, M. 2002. Fascism, Modernism, and Modernity. [Online]. *The Art Bulletin*, 84(1), pp. 148-169. [Accessed: 12th June 2018]. Available from:

<https://doi.org/10.2307/3177257>

Apartment, The. 1960. [Film]. Billy Wilder. Dir. USA: The Mirisch Corporation

A Propos de Nice (About Nice). 1930. [Film]. Boris Kaufman and Jean Vigo. Dirs. France: Pathé-Natan.

Arnheim, R. 1983. *Film as Art*. London: Faber and Faber.

Arnheim, R. 2016. *A Commentary on the Crisis Facing Montage*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.569-572.

Arthur, P. 2017. *Essay Questions*. In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.161-171.

Artist, The. 2011. [Film]. Michel Hazanavicius. Dir. France: La Petite Reine et al.

Ashkenazi, O. 2010. "A New Era of Peace and Understanding": *The Integration of Sound Film into German Popular Cinema, 1929-1932*. In: Rogowski, C. ed. *The Many Faces of Weimar Cinema: Rediscovering Germany's Filmic Legacy*. New York: Camden House, pp.249-267.

Asphalt. 1929. [Film]. Joe May. dir. Germany: Ufa.

Astruc, A. 2017. *The Future of Cinema*, In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.93-101.

Atlantik (Atlantic). 1929. [Film]. Ewald André Dupont. Dir. UK: British International Pictures.

Audissino, E. 2016. *Gottfried Huppertz's Metropolis: The Acme of 'Cinema Music'*. In: Donnelly, K.J. and Wallengren, A.K. Eds. *Today's Sounds for Yesterday's Films*. New York: Palgrave Macmillan, pp. 45-63.

Aufstieg, Der (Climb, The). 1926. [Film]. Walter Ruttmann. dir. Germany: Werebfilm GmbH Julius Pinschewer

Balázs, B. 2010. *Béla Balázs: Early Film Theory*. Carter, E. Ed. New York: Berghahn Books

Balázs, B. 2016a. *A Conviction: An Initial View of a New Art Form's Perspectives and Limitations*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.559-561.

Balázs, B. 2016b. *Farewell to Silent Film*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.517-519.

Bang, H. 1890. *Les Quatre Diables (The Four Devils)*. Denmark: Independent
Bank, The. 1915. [Film]. Charles Chaplin. Dir. USA: The Essanay Film Manufacturing Company.

Barlow, J. D. 1982. *German Expressionist Film*. Boston: Twayne Publishers

Barsacq, L. 1976. *Caligari's Cabinet and other Grand Illusions: A History of Film Design*. Boston: New York Graphic Design

Baudelaire, C. 1857. *Correspondances (Correspondences)*. France: [No Publisher].

- Baudelaire, C. 2019. *Correspondances (Correspondences)*. In: Metcalfe, S. D. ed. *Translated works of Baudelaire, Rimbaud et. al, and Selected Poems*. Sydney: C. L. Wriggs Publishing House, pp.9-10.
- Bazin, A. 2017. *Bazin on Marker*. In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.102-105.
- Becce, G. 2016. *Film and Music: Illustration or Composition?* In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.515-517.
- Behlmer, R. 2010. *An Interview with Gaylord Carter, "Dean of Theater Organists" (1989)*. In: Cooke, M. ed. *The Hollywood Film Music Reader*. Oxford: Oxford University Press, pp.29-38
- Bellano, M. 2014. *The Tradition of Novelty – Comparative Studies of Silent Film Scores: Perspectives, Challenges, Proposals*. In: Tieber, C and Windisch, A. K. Eds. *The Sounds of Silent Films: New Perspectives on History, Theory and Practice*. Basingstoke: Palgrave Macmillan, pp.208-220
- Belton, J. 1999. Awkward Transitions: Hitchcock's "*Blackmail*" and the Dynamics of Early Sound. [Online]. *The Musical Quarterly*, 83(2), pp.227-246. [Accessed 17th August 2021]. Available from: <https://www.jstor.org/stable/742294>
- Berg, A. 1912. *Aus Dem Glühenden von Alfred Mombert (From the Glowing by Alfred Mombert)*. [Song]. Austria
- Berlin: Die Sinfonie der Grosstadt (Berlin: Symphony of a Great City)*. 1927. [Film]. Walter Ruttmann. dir. Germany: Fox Europa.

Bijsterveld, K. 2001. The Diabolical Symphony of the Mechanical Age: Technology and Symbolism of Sound in European and North American Noise Abatement Campaigns, 1900-1940. [Online]. *Social Studies of Science*, 31(1), pp.37-70.

[Accessed: 5th November 2021]. Available from:

<https://doi.org/10.1177/030631201031001003>

Birth of a Nation, The. 1915. [Film]. D. W. Griffith. Dir. USA: David W. Griffith Corp

Birtwistle, A. 2010. *Cinesonica: Sounding Film and Video*. Manchester: Manchester University Press.

Bjorkin, M. 2001. *Remarks on Writing and Technologies of Sound In Early Cinema*. In: Abel, R. and Altman, R. Eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.32-38

Black Cat, The. 1934. [Film]. Edgar G. Ulmer. Dir. USA: Universal Pictures

Blackmail. 1929. [Film]. Alfred Hitchcock. Dir. UK: British International Pictures.

Blaue Engel, Der. (Blue Angel, The). 1930. [Film]. Josef von Sternberg. Dir. Germany: Ufa

Boccioni, U., Carrá, C., Russolo, L., Balla, G., Severini, G. 1910. *Manifesto of Futurist Painters*. Italy

Boccioni, U., Carrá, C., Russolo, L., Balla, G., Severini, G. 1973. *Futurist Painting: Technical Manifesto 1910*. In: Apollonio, U. ed. *Futurist Manifestos*. Boston: MFA Publications, pp.27-30

Böcklin, A. 1883. *Die Toteninsel (Isle of the Dead)*. [Oil on Canvas]. Germany: Nationalgalerie

Brain, R. M. 2010. How Edvard Munch and August Strindberg Contracted Protoplasmania: Memory, Synesthesia, and the Vibratory Organism in Fin-de-Siècle Europe. [Online]. *Interdisciplinary Science Reviews*, 35(1), pp.7-38. [Accessed 12th November 2021]. Available from:

<https://doi.org/10.1179/030801810X12628670445383>

Branyan, H. R. 1991. Medical Charlatanry: The Goat Gland Wizard of Milford, Kansas. [Online]. *Popular Culture*, 25(1), pp.31-37. [Accessed 10th June 2019]. Available from: https://doi.org/10.1111/j.0022-3840.1991.2501_31.x

Brennende Acker, Der (Burning Soil, The). 1922. [Film]. F. W. Murnau. dir. Germany: Goron Film

Brodnax, M. 2001. *Man a Machine: The Shift from Soul to Identity in Lang's Metropolis and Ruttmann's Berlin*. In Calhoun, K. S. ed. *Peripheral Visions: The Hidden Stages of Weimar Cinema*. Detroit: Wayne State University Press, pp.73-94.

Broken Blossoms. 1919. [Film]. D. W. Griffith. Dir. USA: D. W. Griffith Productions

Bronenosets Potemkin (Battleship Potemkin). 1925. [Film]. Sergei Eisenstein. dir. Soviet Union: Goskino.

Brownlow, K. 1968. *The Parade's Gone By*. Los Angeles: Secker & Warburg.

Brownlow, K. and Kobal, J. 1979. *Hollywood: The Pioneers*. London: Harper Collins Publishers Ltd.

Brown, S and Dissanayake, E. 2018. The Synthesis of the Arts: From Ceremonial Ritual to “Total Work of Art”. [Online]. *Frontiers in Sociology*. 3(9), pp.1-11.

[Accessed 10th November 2021]. Available from:

<https://doi.org/10.3389/fsoc.2018.00009>

Buchanan, J. 2013. “Now, where were we?” *Ideal and Actual Early Cinema Lecturing Practices in Britain, Germany and the United States*. In: Brown, J. and Davison, A. Eds. *The Sounds of the Silents in Britain*. Oxford: Oxford University Press, pp.38-54.

Büchse der Pandora, Die (Pandora Pandora’s Box). 1929. [Film]. G.W. Pabst. Dir. Germany: Nero-Film.

Bucklige und die Tänzerin, Der (Hunchback and the Dancer, The). 1920. [Film]. F. W. Murnau. dir. Germany: Helios Film

Bullock, A. 1991. *The Double Image*. In: Bradbury, M. and McFarlane, J. eds. *Modernism: A Guide to European Literature 1890-1930*. London: Penguin Books, pp.58-70.

Burch, N. 1973. *Theory of Film Practice*. Princeton: Princeton University Press

Burschenlied aus Heidelberg, Ein (Student’s Song of Heidelberg, A). 1930. [Film]. Karl Hartl. Dir. Germany: Ufa.

Butler, C. 1994. *Early Modernism: Literature, Music, and Painting in Europe, 1900-1916*. Oxford: Clarendon Press

Cabinet des Dr. Caligari, Das (Cabinet of Dr. Caligari, The). 1920. [Film]. Robert Wiene. Dir. Germany: Decla Bioscop AG.

Cabinet of Dr. Caligari, The. 2005. [Film]. David Lee Fisher. Dir. USA: Highlander Films

Cabinet of Dr. Caligari, The. 2011. [Film]. Robert Wiene. Dir. USA: November Fire Records

Calhoon, K. S. 2005. F. W. Murnau, C. D. Friedrich, and the Conceit of the Absent Spectator. [Online]. *MLN*, 120(3), pp.633-653. [Accessed 20 December 2017].

Available from: <https://www.jstor.org/stable/3840743>

Calhoon, K. S. 2021. *The Long Century's Long Shadow: Weimar Cinema and the Romantic Modern*. London: University of Toronto Press.

Cameraman, The. 1928. [Film]. Buster Keaton. Dir. USA: MGM

Cantaloupe Music NYC. 2015. *DJ Spooky: Rebirth of a Nation (promo trailer)*.

[Online]. [Accessed 19 February 2021]. Available from:

<https://www.youtube.com/watch?v=kekndjJW3O4>

Carrá, C. 1909. *Stazione a Milano (Milan Station)*. [Oil on canvas]. Stuttgart: Staatsgalerie

Carrá, C. 1913. *The Painting of Sounds, Noises and Smells*. Italy: Governing Group of the Futurist movement

Carrá, C. 1973. *The Painting of Sounds, Noises and Smells 1913*. In: Apollonio, U. ed. *Futurist Manifestos*. Boston: MFA Publications, pp.111-115

Carroll, B. 2016. *Soviet Fidelity and the Pet Shop Boys*. In: Donnelly, K.J. and Wallengren, A-K. Eds. *Today's Sounds for Yesterday's Films: Making Music for Silent Cinema*. Basingstoke: Palgrave Macmillan, pp.122-137.

Carroll, M. 2010. Hearing is Believing: ‘Inner Necessity’ and the Songs in the *Blaue Reiter* Almanac. [Online]. *Musicology Australia*. 32(1), pp.3-26. [Accessed 10th November 2021]. Available from: <https://doi.org/10.1080/08145851003793671>

Casini, S. 2017. Synesthesia, transformation and synthesis: toward a multi-sensory pedagogy of the image. [Online]. *The Senses and Society*, 12(1), pp.1-17. [Accessed 12th November 2021]. Available from: <https://doi.org/10.1080/17458927.2017.1268811>

Cézzane, P. 1861. *Les Quatre Saisons, L’automne (The Four Seasons, Autumn)*. [Oil on Canvas]. France: Petit Palais

Chandler, C. 2002. *Nobody’s Perfect: Billy Wilder*. New York: Applause Theatre & Cinema Books.

Chaplin, C. 2003. *My Autobiography*. London: Penguin Books.

Chateauvert, J. and Gaudreault, A. 2001. *The Noises of Spectators, or the Spectators as Additive to the Spectacle*. In: Abel, R. and Altman, R. eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.183-191.

Chelovek s kino-apparatom (Man with a Movie Camera). 1929. [Film]. Dziga Vertov. dir. Soviet Union: VUFKU.

Chion, M. 1999. *The Voice in Cinema*. New York: Columbia University Press.

Chion, M. 2009. *Film, A Sound Art*. New York: Columbia University Press

Christopher Frayling on Nosferatu. 2001. [BFI Blu-ray Extra]. Lynne Wake. Dir. UK: Photoplay Productions.

- Choe, S. 2014. *Afterlives: Allegories of Film and Mortality in Early Weimar Germany*. London: Bloomsbury.
- City Girl*. 1930. [Film]. F.W. Murnau. dir. USA: Fox Film Corporation.
- City Lights*. 1931. [Film]. Charles Chaplin. Dir. USA: Charles Chaplin Productions.
- Clair, R. 1972. *Cinema Yesterday and Today*. New York: Dover Publications.
- Coates, P. 1991. *The Gorgon's Gaze*. New York: Cambridge University Press.
- Collenberg-Gonzalez, C. 2019. Rape Culture and Dialectical Montage: A Radical Reframing of *Menschen am Sonntag* (1930). [Online]. *Feminist German Studies*. 35(1), pp. 85-109. [Accessed: 12th January 2020]. Available from: <https://doi.org/10.1353/fgs.2019.0004>
- Collier, J. L. 1988. *From Wagner to Murnau: The Transposition of Romanticism From Stage to Screen*. London: UMI Research Press.
- Comment ça va? (How Is It Going?)*. 1976. [Film]. Jean-Luc Godard. Dir. France: Bela Productions
- Cooke, M. 2008. *A History of Film Music*. Cambridge: Cambridge University Press
- Cooke, M. 2010. *From "Silents" to Sound*. In: Cooke, M. ed. *The Hollywood Film Music Reader*. Oxford: Oxford University Press, pp.1-4
- Cooke, P. 2007. *From Caligari to Edward Scissorhands: The Continuing Meta-Cinematic Journey of German Expressionism*. In: Cooke, P. ed. *World Cinema's 'Dialogues' with Hollywood*. London: Palgrave Macmillan, pp.17-34.

Correll, E. H. 2016. *The Nature and Value of Sound Film*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.562-563.

Cousins, M. 2004. *The Story of Film*. [No place]: BCA.

Cowan, M. 2014. *Walter Ruttmann and the Cinema of Multiplicity: Avant-Garde Film - Advertising – Modernity*. Amsterdam: Amsterdam University Press.

Crangle, R. 2001. “Next Slide Please”: *The Lantern Lecture in Britain, 1890-1910*. In: Abel, R. and Altman, R. eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.39-47.

Curwen, C. 2018. Music-colour synaesthesia: Concept, context and qualia. [Online]. *Consciousness and Cognition*, 61 [No Issue], pp. 94-106. [Accessed: 12th November 2021]. Available from: <https://eprints.whiterose.ac.uk/129726/>

Dabrowski, M. 1995. Kandinsky Compositions: The Music of Spheres. [Online]. *MoMA*. [No Volume] (19), pp.10-13. [Accessed 10th September 2021]. Available from: <https://www.jstor.org/stable/4381285>

Dahlquist, M., Galili, D., Olsson, J., Robert, V. Eds. 2018. *Corporeality in Early Cinema: Viscera, Skin, and Physical Form*. Bloomington: Indiana University Press.

Dahlquist, M., Galili, D., Olsson, J., Robert, V. 2018. *General Introduction*. In: Dahlquist, M., Galili, D., Olsson, J., Robert, V. Eds. *Corporeality in Early Cinema: Viscera, Skin, and Physical Form*. Bloomington: Indiana University Press, pp.1-10.

Damaged Lives. 1933. [Film]. Edgar G. Ulmer. Dir. USA: British Social Hygiene Society.

- Dark Mirror, The*. 1946. [Film]. Robert Siodmak. dir. USA: International Pictures
- Demarco, A. 2019. *Catching the Light*. In: *People on Sunday Blu-ray booklet*.
Bandaranayake, U. Producer. London: British Film Institute, pp.1-7.
- Detour*. 1945. [Film]. Edgar G. Ulmer. Dir. USA: Producers Releasing Corporation
- Deutsche Panzer (German Panzer)*. 1940. [Film]. Walter Ruttmann. dir. Germany:
UFA.
- Diebold, B. 2016. *A New Art: Film's Music for the Eyes*. In: Kaes, A., Baer, N. and
Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland:
University of California Press, pp.452-454
- Dixon, B. 2011. *100 Silent Films*. London: Palgrave Macmillan.
- Django Unchained*. 2012. [Film]. Quentin Tarantino. Dir. USA: The Weinstein
Company
- Döblin, A. 1929. *Berlin Alexanderplatz*. Berlin: S. Fischer Verlag
- Döblin, A. 2018. *Berlin Alexanderplatz*. [No Place]: Penguin Books
- Dobrenko, E. 2016. Prigov and the *Gesamtkunstwerk*. [Online]. *The Russian Review*.
75(2), pp.209-219. [Accessed 10th November 2021]. Available from:
<https://doi.org/10.1111/russ.12071>
- Donnelly, K. J. 2015. Music Cultizing Film: KTL and the New Silents. [Online].
New Review of Film and Television Studies,13(1), pp.31-44. [Accessed 10 June
2018]. Available from:
<https://www.tandfonline.com/doi/full/10.1080/17400309.2014.989019>

Doran, S. 2009. *Synaesthesia in Film Theory*. In: Trifonova, T. Ed. *European Film Theory*. London: Routledge, pp.240-254.

Düchting, H. 1997. *Paul Klee: Painting Music*. London: Prestel.

Dym, Jeffery A. 2003. *Benshi, Japanese Silent Film Narrators, and their Forgotten Narrative Art of Setsumei: A History of Japanese Silent Film Narration*. Lewiston: the Edwin Mellen Press.

Earl, H. 2020. Virginia Woolf 's Synesthesia. [Online]. *Twentieth-Century Literature*, 66(4), pp.463-484. [Accessed: 12th November 2021]. Available from: <https://doi.org/10.1215/0041462X-8770695>

Eisenstein, S. 1949. *Film Form*. New York: Harcourt Brace.

Eisenstein, S. 1986. *The Film Sense*. London: Faber and Faber.

Eisenstein, S, Pudovkin, V, and Aleksandrov, G. 1928. *Statement on Sound*. USSR: Zhizn' Iskusstva

Eisenstein, S, Pudovkin, V, and Aleksandrov, G. 1988. *Statement on Sound*. In: Taylor, R and Christie, I. Eds. *Film Factory: Russian and Soviet Cinema in Documents 1896-1939*. London: Routledge, pp.234-235

Eisner, L. H. 1973a. *Murnau*. London: Secker and Warburg.

Eisner, L. H. 1973b. *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt*. London: Secker and Warburg.

Eisner, L. H. 1976. *Fritz Lang*. London: Secker and Warburg.

Elsaesser, T. 2000. *Weimar Cinema and After*. London: Routledge.

Elsaesser, T. 2001. Six Degrees of Nosferatu. [Online]. *Sight and Sound*. 11(2), pp.12-15. [Accessed 12th November 2020]. Available from:

<https://www.proquest.com/magazines/six-degrees-nosferatu/docview/237102512/>

Elsaesser, T. 2017. *The Essay Film: From Film Festival Favorite to Flexible Commodity Form?* In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.240-258.

Elsaesser, T. and Hagener, M. 2015. *Film Theory: An Introduction through the Senses*. New York: Routledge.

Eyman, S. 1997. *The Speed of Sound: Hollywood and the Talkie Revolution 1926-1930*. New York: Simon and Schuster.

Eyman, S. 2013. *Sunrise in Bora Bora*. In: Wrigley, N. ed. *Tabu: A Story of the South Seas Blu-ray booklet*. [No place]: Eureka, pp.5-22.

Faust: Eine deutsche Volkssage (Faust: A German Folktale). 1926. [Film]. F. W. Murnau. dir. Germany: Ufa.

F for Fake. 1973. [Film]. Orson Welles. Dir. France: Les Films de l'astrophore

Fight Club. 1999. [Film]. David Fincher. Dir. USA: Fox 2000 Pictures.

Finanzen des Großherzogs, Die (Finances of the Grand Duke, The). 1924. [Film]. F. W. Murnau. dir. Germany: Ufa.

Fleming, E. J. 2004. *The Fixers*. London: Mcfarland & Company, Inc.

Föllmer, M. 2009. Suicide and Crisis in Weimar Berlin. [Online]. *Central European History*, 42(2), pp.195-221. [Accessed: 12th November 2021]. Available from:

<https://doi.org/10.1017/S0008938909000284>

Fox Film Corporation. c.1927. *Sunrise: A Song of Two Humans*. [Pressbook]. [No place]: Fox Film Corporation. [Accessed: 8 March 2017]. Available from: The British Film Institute.

freudlose Gasse, Die (Joyless Street, The). 1925. [Film]. G. W. Pabst. Dir. Germany: Sofar-Film

Friedrich, C. D. c.1814. *Jager in het bos (Hunter in the Forest)*. [Oil on Canvas]. [Unknown Location].

Friedrich, C. D. c.1818. *Der Wanderer über dem Nebelmeer (Wanderer above the Sea of Fog)*. [Oil on Canvas]. Germany: Hamburger Kunsthalle

Fulks, B. A. 1982. *Film Culture and Kulturfilm: Walter Ruttmann, The Avant-Garde Film, and the Kulturfilm in Weimar Germany and the Third Reich*. Ph.D. thesis, University of Wisconsin-Madison. [Accessed 24th September 2020]. Available from: The British Film Institute

Gainsborough, T. 1770. *The Blue Boy*. [Oil on Canvas]. USA: Henry E. Huntington Art Gallery

Gang in die Nacht, Der (Journey into the Night). 1921. [Film]. F. W. Murnau. dir. Germany: Goron Film

Gay, P. 1974. *Weimar Culture: The Outsider as Insider*. London: Penguin Books

Geduld, H. M. 1975. *The Birth of the Talkies*. London: Indiana University Press.

Gellen, K. 2019. *Kafka and Noise: The Discovery of Cinematic Sound in Literary Modernism*. Evanston: Northwestern University Press.

Goergen, J, 1996. *Julius Pinschewer: A Trade-mark Cinema*. In: Elsaesser, T. ed. *A Second Life: German Cinema's First Decades*. Amsterdam: Amsterdam University Press, pp.168-174

Goethe, J. W. 1808. *Faust*. Germany.

Gold Rush, The. 1925. [Film]. Charles Chaplin. Dir. USA: Charles Chaplin Productions

Golem, The. 2013. [Film]. Paul Wegener and Carl Boese. Dirs. USA: November Fire Records

Golem, wie er in die Welt kam, Der (Golem: How He Came Into the World, The). 1920. [Film]. Paul Wegener and Carl Boese. Dirs. Germany: PAGU.

Golleck, R. 1979. *Kandinsky in Munich and the Kandinsky Collection*. In: Vergo, P. ed. *Kandinsky: The Munich Years 1900-14*. Edinburgh: Edinburgh International Festival in Association with the Scottish Arts Council, pp.11-12

Great Dictator, The. 1940. [Film]. Charles Chaplin. Dir. USA: Charles Chaplin Productions.

Great Train Robbery, The. 1903. [Film]. Edwin S. Porter. Dir. USA: Edison Manufacturing Company.

Grey, T. S. 2008. *Leitmotif, Temporality, and Musical Design in the Ring*. In: Grey, T. S. ed. *The Cambridge Companion to Wagner*. Cambridge: Cambridge University Press, pp.85-114.

Grievesson, L. and Krämer, P. 2004. *Introduction*. In: Grievesson, L. and Krämer, P. eds. *The Silent Cinema Reader*. London: Routledge, pp.1-10.

- Groth, H., Murphet, J. and Hone, P. 2017. *Introduction: Sounding Modernism 1890–1950*. In: Groth, H., Murphet, J. and Hone, P. eds. *Sounding Modernism: Rhythm and Sonic Mediation in Modern Literature and Film*. Edinburgh: Edinburgh University Press, pp.1-18
- Guerin, F. 2005. *A Culture of Light: Cinema and Technology in 1920s Germany*. London: University of Minnesota Press.
- Gunning, T. 2000. *The Films of Fritz Lang: Allegories of Vision and Modernity*. London: British Film Institute.
- Hahn, D. 2015. *The Silent Sound Designer Rediscovering Cinema Through Quietness*. London: Zarathustra Books.
- Hake, S. 2001. *Provocations of the Disembodied Voice: Song and the Transition to Sound in Berger's Day and Night*. In: Calhoon, K. S. ed. *Peripheral Visions: The Hidden Stages of Weimar Cinema*. Detroit: Wayne State University Press, pp.55-72.
- Hales, B., Petrescu, M., Weinstein, V. 2016. *Introduction*. In: Hales, B., Petrescu, M., Weinstein, V. Eds. *Continuity and Crisis in German Cinema, 1928-1936*. New York: Camden House, pp. 1-27
- Hall, P. 2016. *In Search of Lost Films*. Albany: BearManor Media.
- Halliday, S. 2013. *Sonic Modernity: representing sound in literature, culture and the arts*. Edinburgh: Edinburgh University Press.
- Harding, C. and Popple, S. 1996. *In the Kingdom of Shadows: A Companion to Early Cinema*. London: Cygnus Arts.

Harman, C. 1997. *The Lost Revolution: Germany 1918 to 1923*. London: Bookmarks Publications Ltd

Hart, W. S. 2015. Living Your Character. *The Silent Film Quarterly*, 1(1), pp.5-6.

Harvey, D. 2012. *The Cameraman*. [Online]. [Accessed: 16th August 2022].

Available from: <https://silentfilm.org/the-cameraman-1/>

Helmers, M. 2018. The Transition from the Silent into the Sound Era in German Cinema: The Innovative Use of Sound in Pabst's *Westfront 1918*. [Online]. *MSMI*, 12(2), pp.121-139. [Accessed: 2nd December 2020]. Available from:

<https://doi.org/10.3828/msmi.2018.8>

Herr Tartüff (Tartuffe). 1925. [Film]. F. W. Murnau. dir. Germany: Ufa

Heut' spielt der Strauss (Strauss is Playing Today). 1928. [Film]. Conrad Wiene.

Dir. Germany: Fox Europa Film Produktion

Hielscher, E. 2019. *Berlin. Die Sinfonie der Grosstadt (a.k.a. Berlin. Die Sinfonie der Grosstadt, a.k.a. Berlin-Symphonie einer Grosstadt)*. In: Jacobs, S. Kinik, A. and Hielscher, E. Eds. *The City Symphony Phenomenon: Cinema, Art, and Urban Modernity between the Wars*. London: Routledge, pp.218-219.

High Noon. 1952. [Film]. Fred Zinnemann. Dir. USA: Stanley Kramer Productions

His New Job. 1915. [Film]. Charles Chaplin. Dir. USA: The Essanay Film Manufacturing Company.

Homme de têtes, Un (Four Troublesome Heads, The). 1898. [Film]. Georges Méliès. Dir. France: Star-Film

Hopp, G. 2003. *Billy Wilder: The Complete Films*. London: Taschen.

House by the River. 1950. [Film]. Fritz Lang. dir. USA: Fidelity Pictures Corporation.

Hughes, J. 2020. 'Time and Space in the Depiction of Workers' Leisure in *Mother Krause's Journey to Happiness, People on Sunday* and *Kuhle Wampe*'. [Online]. *Studies in European Cinema*, [No Volume] [No Issue], pp. 362-379. [Accessed: 1st November 2021]. Available from: <https://doi.org/10.1080/17411548.2020.1848098>

Hugo. 2011. [Film]. Martin Scorsese. Dir. USA: Paramount Pictures

Humphreys, R. 1999. *Futurism*. London: Tate Gallery Publishing.

Hunter, J. 2013. James Joyce, Walter Ruttmann, and City Symphonies. [Online]. *The Kenyon Review*. 35(2), pp.186-205. [Accessed 17th November 2017]. Available from: <https://www.jstor.org/stable/24242008>

Ialongo, E. 2013. Filippo Tommaso Marinetti: the Futurist as Fascist, 1929–37. [Online]. *Journal of Modern Italian Studies*, 18(4), pp.393-418. [Accessed: 13th January 2020]. Available from: <https://doi.org/10.1080/1354571X.2013.810800>

Ich küsse Ihre Hand, Madame (I Kiss Your Hand, Madame). 1929. [Film]. Robert Land. Dir. Germany: Super-Film GmbH.

Inception. 2010. [Film]. Christopher Nolan. Dir. USA: Warner Bros.

Indische Grabmal, Das (Indian Tomb, The). 1921. [Film]. Joe May. Dir. Germany: May-Film

Inglorious Basterds. 2009. [Film]. Quentin Tarantino. Dir. USA: Universal Pictures

Isenberg, N. 2014. *Edgar G. Ulmer: A Filmmaker at the Margins*. London: University of California Press.

Israel, N. 2017. Esperantic Modernism: Joyce, Universal Language, and Political Gesture. [Online]. *Modernism/modernity*, 24(1), pp.1-21. [Accessed: 12th November 2021]. Available from: <https://doi.org/10.1353/mod.2017.0000>

Jackson, K. 2013. *Nosferatu*. London: Palgrave Macmillan.

Jacobs, S., Kinik, A., Hielscher, E. 2019. *Introduction*. In: Jacobs, S., Kinik, A., Hielscher, E. Eds. *The City Symphony Phenomenon*. London: Routledge, pp. 3-44

Jannings, E. 2016. *Miming and Speaking*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.142-144.

Januskopf, Der (Head of Janus, The). 1920. [Film]. F. W. Murnau. dir. Germany: Decla-Bioscop AG.

Jazz Singer, The. 1927. [Film]. Alan Crosland. dir. USA: Warner Bros.

Jenkins, J. L. 2014. *A Symphony of Horror: The Sublime Synesthesia of Sweeney Todd*. In: McMahon, J. L. ed. *The Philosophy of Tim Burton*. Lexington: The University Press of Kentucky, pp.171-192.

Jetée, La (Pier, The). 1962. [Film]. Chris Marker. Dir. France: Argos Films.

Jung, U. and Schatzberg, W. 1999. *Beyond Caligari: The Films of Robert Wiene*. Oxford: Berghahn Books

Jünger, E. 1920. *The Storm of Steel*. Stuttgart: J. G. Cotta'sche Buchandlung Nachfolger GmbH

Jünger, E. 2004. *The Storm of Steel*. London: Penguin Books

Just, D. K. C. 2017. Was Kandinsky a Synaesthete? Examining His Writings and Other Evidence. [Online]. *Multisensory Research*. 30(3-5), pp.447-460. [Accessed 10th September 2021]. Available from: <https://doi.org/10.1163/22134808-00002547>

Kaes, A. 1990. Silent Cinema. [Online]. *Monatshefte*, 82(3), pp.246-256. [Accessed 1st July 2022]. Available from: <https://www.jstor.org/stable/30155279>

Kaes, A. 2009. *Shell Shock Cinema: Weimar Culture and the Wounds of War*. Princeton: Princeton University Press.

Kaes, A and Levin, D. J. 1987. The Debate about Cinema: Charting a Controversy (1909-1929). [Online]. *New German Critique*. [No Volume] (40), pp.7-33. [Accessed: 1st July 2022]. Available from: <https://doi.org/10.2307/488130>

Kagan, A. 1983. *Paul Klee / Art & Music*. London: Cornell University Press.

Kaganovsky, L. 2018. *The Voice of Technology: Soviet Cinema's Transition to Sound 1928-1935*. Bloomington: Indiana University Press.

Kalat, D. 2015. *Nosferatu: A Symphony of Horrors*. In: Bandaranayake, U. ed. *Nosferatu Blu-ray booklet*. London: BFI, pp.1-7.

Kandinsky, W. 1902. *Alte Stadt II (Old Town II)*. [Oil on Canvas]. France: Georges Pompidou Center.

Kandinsky, W. 1903. *Der Blaue Reiter (The Blue Rider)*. [Oil on Cardboard]. [Unknown Location]: Privately Owned.

Kandinsky, W. 1906. *Das Lied von der Wolga (Volga Song)*. [Tempera on Cardboard]. France: Georges Pompidou Center

Kandinsky, W. 1908. *Der blaue Berg (The Blue Mountain)*. [Oil on Canvas]. USA: Solomon R. Guggenheim.

Kandinsky, W. 1909a. *Der Gelbe Klang (Yellow Sound)*. [Stage Play]. Germany

Kandinsky, W. 1909b. *Landschaft mit einer Dampflokomotive (Landscape with a Steam Locomotive)*. [Oil on Canvas]. USA: Solomon R Guggenheim Museum.

Kandinsky, W. 1911a. *Cover-Design für Der Blaue Reiter Almanach (Cover Design for the Blue Rider Almanac)*. [Watercolour, Ink and Pencil on Paper]. [Unknown Location].

Kandinsky, W. 1911b. *Komposition V (Composition V)*. [Oil on Canvas]. [Unknown Location]: Privately Owned.

Kandinsky, W. 1911c. *Lyrisch (Lyrical)*. [Oil on Canvas]. Netherlands: Museum Boijmans van Beuningen

Kandinsky, W. 1912. *Improvisation 26*. [Oil on Canvas]. Germany: Lenbachhaus

Kandinsky, W. 1913. *Komposition VI (Composition VI)*. [Oil on Canvas]. Russia: Hermitage Museum.

Kandinsky, W. 1915. *St. George und der Drache (St. George and the Dragon)*. [Oil on Cardboard]. Russia: Tretyakov Gallery.

Kandinsky, W. 1918. *Amazone mit Löwen (Amazon with Lions)*. [Oil on Cardboard]. [Unknown Location].

Kandinsky, W. 1994a. *Autobiographical Note/Postscript*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.341-346.

- Kandinsky, W. 1994b. *Content and Form*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.84-90.
- Kandinsky, W. 1994c. *Franz Marc*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.793-797.
- Kandinsky, W. 1994d. *On the Question of Form*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.235-257
- Kandinsky, W. 1994e. *On the Spiritual in Art*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.114-219.
- Kandinsky, W. 1994f. *Reminiscences*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.357-382.
- Kandinsky, W. 1994g. *Whither the "New" Art?* In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.96-104.
- Kandinsky, W. and Marc, F. Eds. 1912. *Der Blaue Reiter Almanach (The Blue Rider Almanac)*. Munich: Piper
- Kandinsky, W and Marc, F. 1974. *Almanac: Der Blaue Reiter*. In: Kandinsky, W. and Marc, F. Eds. *The Blaue Reiter Almanac*. Lankheit, K. Ed. London: Thames and Hudson pp.250-251
- Kandinsky, W. and Schoenberg, A. 1984. *The Schoenberg-Kandinsky Correspondence*. In: Hahl-Koch, J. ed. *Arnold Schoenberg Wassily Kandinsky Letters, Pictures and Documents*. London: Faber and Faber, pp.19-85.

- Kay, O. L. 2010. 'Gathering in the orphans: essay films and archives in the information age'. [Online]. *Journal of Media Practice*, 11(3), pp.253–266. [Accessed: 20th June 2019]. Available from: https://doi.org/10.1386/jmpr.11.3.253_1
- Kember, J. 2013. *Professional Lecturing in Early British Film Shows*. In: Brown, J. and Davison, A. Eds. *The Sounds of the Silents in Britain*. Oxford: Oxford University Press, pp.17-37.
- Kevin Jackson on Nosferatu: Eine Symphonie Des Grauens*. 2013. [Eureka Video Blu-ray Extra]. John Robertson. dir. UK: Eureka.
- Kid, The*. 1921. [Film]. Charles Chaplin. Dir. USA: Charles Chaplin Productions
- Killen, A. 2006. *Berlin Electropolis Shock, Nerves, and German Modernity*. London: University of California Press.
- Killers, The*. 1946. [Film]. Robert Siodmak. dir. USA: Mark Hellinger Productions
- Kirchner, E. L. 1915. *Der Rote Turm in Halle (The Red Tower in Halle)*. [Oil on Canvas]. Germany: Museum Folkwang
- Kittler, F. A. 1999. *Gramophone, Film, Typewriter*. Stanford: Stanford University Press
- Klee, P. 1932. *Polyfonie (Polyphony)*. [Tempera on Linen]. Switzerland: Emanuel Hoffmann Foundation
- Klee, P. 1936. *Neue Harmonie (New Harmony)*. [Oil on Canvas]. USA: Solomon R. Guggenheim Museum.
- Knabe in Blau, Der (Boy in Blue, The)*. 1919. [Film]. F. W. Murnau. dir. Germany: Ernst Hofmann-Film.

Koepnick, L. 2009. *The Bearable Lightness of Being: People on Sunday (1930)*. In: Isenberg, N. ed. *An Essential Guide to Classic Films of the Era: Weimar Cinema*. New York: Columbia University Press, pp.237-254.

Kracauer, S. 1947. *From Caligari to Hitler: A Psychological History of the German Film*. Princeton: Princeton University Press

Kracauer, S. 2004. *From Caligari to Hitler: A Psychological History of the German Film*. Oxford: Princeton University Press.

Krauss, A. 2017. Writing of Attractions: Else Lasker- Schöler's Avant-Garde Techniques. [Online]. *MLN*, 132(3), pp.602-624. [Accessed: 12th October 2021]. Available from: <https://doi.org/10.1353/mln.2017.0047>

Kreimeier, K. 1999. *The Ufa Story*. London: University of California Press.

Kurtz, R. 1926. *Expressionismus und Film (Expressionism and Film)*. [No Place]: [No Publisher].

Kurtz, R. 2016. *Expressionism and Film*. Kiening, C. and Beil, U.J. eds. New Barnet: John Libbey Publishing Ltd.

Kuzmin, M. 1912. *Venok Vesny (The Wreath of Spring)*. Russian Empire.

Laner, B. 2012. THE VAMPIRIC FILM: INTERMEDIAL INCORPORATION IN NOSFERATU, A SYMPHONY OF HORROR (1922). [Online]. *Post Script*. 32(1), pp.28-38. [Accessed 14th January 2020]. Available from: <https://www.proquest.com/scholarly-journals/vampiric-film-intermedial-incorporation-nosferatu/docview/1430460462/>

Lang, F and Murnau, F. W. 2016. *My Ideal Screenplay*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.498-499

Lankheit, K. 1974a. *A History of the Almanac by Klaus Lankheit*. In: Kandinsky, W. and Marc, F. Eds. *The Blaue Reiter Almanac*. Lankheit, K. Ed. London: Thames and Hudson, pp.11-48.

Lankheit, K. 1974b. *Preface to the 1965 German Edition*. In: Kandinsky, W. and Marc, F. Eds. *The Blaue Reiter Almanac*. Lankheit, K. Ed. London: Thames and Hudson, pp.8-10.

L'arrivée d'un train en gare de La Ciotat (The Arrival of a Train at La Ciotat Station). 1896. [Film]. August Lumière and Louis Lumière. dirs. France: Lumière

Lenauer, J. 1998. *The Sound Film: Salvation of Cinema*. In: Donald, J., Friedberg, A., and Marcus, L. eds. *Close Up: Cinema and Modernism*. London: Cassell, pp.87-88.

Leonhard, R. 1974. *Marinetti in Berlin 1913*. In: Raabe, P. ed. *The Era of German Expressionism*. New York: The Overlook Press, pp.115-118

Leprohon, P. 1966. *The Italian Cinema*. London: Secker and Warburg.

Lester, E. 1925. *The Mud Turtle*. [Stage Play]. USA.

Lettre de Sibérie (Letter from Siberia). 1958. [Film]. Chris Marker. Dir. France: Argos Films

Letzte Mann, Der (Last Laugh, The). 1924. [Film]. F. W. Murnau. dir. Germany: Ufa.

Levin, O. 2018. The cinematic time of the city symphony films: time management, experiential duration and bodily pulsation. [Online]. *Studies in Documentary Film*, 12(3), pp.225–238. [Accessed: 27th May 2019]. Available from:

<https://doi.org/10.1080/17503280.2018.1504370>

L'homme orchestre (The One-Man Band). 1900. [Film]. Georges Méliès. Dir.

France: Star-Film

Lindsay, K. C. and Vergo, P. 1994. *Introduction*. In: Lindsay, K. C. and Vergo, P. eds. *Kandinsky Complete Writings on Art*. New York: De Capo Press, pp.11-32.

Lodder, C. 2006. *Searching for Utopia*. In: Wilk, C. Ed. *Modernism 1914-1939: Designing a New World*. London: V & A Publishing, pp.23-69.

London Symphony. 2017. [Film]. Alex Barrett. Dir. UK: Disobedient Films.

Lopate, P. 2017. *In Search of the Centaur: The Essay-Film*. In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.109-133.

Lost Weekend, The. 1945. [Film]. Billy Wilder. Dir. USA: Paramount Pictures

Lune à un metre, La (Astronomer's Dream, The). 1898. [Film]. Georges Méliès. Dir.

France: Star-Film.

M. 1931. [Film]. Fritz Lang. dir. Germany: Nero-Film AG

Macke, A. 1911. *Der Sturm (The Storm)*. [Oil on Canvas]. Germany: Saarland Museum

Macke, A. 1974. *Masks*. In: Kandinsky, W. and Marc, F. Eds. *The Blaue Reiter Almanac*. Lankheit, K. Ed. London: Thames and Hudson, pp.83-89.

- Macpherson, K. 1998. *As Is (October 1929)*. In: Donald, J., Friedberg, A., and Marcus, L. eds. *Close Up: Cinema and Modernism*. London: Cassell, pp.90-93.
- Malsky, M. 2016. *Scoring Ruttmann's Berlin: Musical Meaning in Historical and Critical Contexts*. In: Donnelly, K.J. and Wallengren, A.K. Eds. *Today's Sounds for Yesterday's Films*. New York: Palgrave Macmillan, pp.158-174.
- Man for All Seasons, A.* 1966. [Film]. Fred Zinnemann. Dir. UK: Highland Films
- Manhatta.* 1921. [Film]. Charles Sheeler and Paul Strand. Dirs. USA: [No Production Company].
- Manvell, R. and Fraenkel, H. 1971. *The German Cinema*. London: JM Dent and Sons Limited
- Marc, F. 1908. *Springender Hund Schlick (Jumping Dog Schlick)*. [Oil on Canvas]. Germany: Lembachhaus.
- Marc, F. 1909. *Wiesel Spielen (Playing Weasels)*. [Oil on Canvas]. [Unknown Location]: Privately Owned.
- Marc, F. 1911a. *Affenfries (Monkey Frieze)*. [Oil on Canvas]. Germany: Kunsthalle Hamburg.
- Marc, F. 1911b. *Blaues Pferd (Blue Horses)*. [Oil on Canvas]. USA: Walker Art Centre.
- Marc, F. 1911c. *Die Gelbe Kuh (The Yellow Cow)*. [Oil on Canvas]. USA: Solomon R. Guggenheim Museum.
- Marc, F. 1911d. *Eselfries (Donkey Frieze)*. [Oil on Canvas]. [Unknown Location]: Privately Owned.

- Marc, F. 1912a. *Der Stier (The Bull)*. [Oil on Canvas]. USA: Solomon R. Guggenheim Museum.
- Marc, F. 1912b. *Der Traum (The Dream)*. [Oil on Canvas]. Spain: Thyssen-Bornemisza Museum.
- Marc, F. 1912c. *Hunde spielen (Playing Dogs)*. [Oil on Canvas]. USA: Busch-Reisinger Museum.
- Marc, F. 1912d. *Kühe, rot, grün, gelb (Cows, Yellow-Red-Green)*. [Oil on Canvas]. Germany: Lenbachhaus.
- Marc, F. 1912e. *Rotwild II (Red Deer II)*. [Oil on Canvas]. Germany: Neue Pinakothek.
- Marc, F. 1913a. *Drei Katzen (Three Cats)*. [Oil on Canvas]. Germany: Kunstsammlung Nordrhein-Westfalen.
- Marc, F. 1913b. *Zwei blaue Pferde (Two Blue Horses)*. [Watercolour and Ink on Paper]. USA: Solomon R. Guggenheim Museum
- Marc, F. 1914. *Caliban (aus Shakespeares Der Sturm) (Caliban (from Shakespeare's The Tempest))*. [Oil on Canvas]. Switzerland: Kunstmuseum Basel.
- Marc, F. 1974. *The "Savages" of Germany*. In: Kandinsky, W. and Marc, F. Eds. *The Blaue Reiter Almanac*. Lankheit, K. Ed. London: Thames and Hudson, pp.61-64.
- Marcus, L. 2007. *The Tenth Muse: Writing about Cinema in the Modernist Period*. Oxford: Oxford University Press.

- Marcus, L. 2014. *Dreams of Modernity: Psychoanalysis, Literature, Cinema*. New York: Cambridge University Press.
- Marcus, L. 2022. *F. W. Murnau's Sunrise: Between Two Worlds*. In: Klein, S. W. and Moses, M. V. Eds. *A Modernist Cinema: Film Art from 1914-1941*. New York: Oxford University Press, pp.108- 125
- Marinetti, F.T. 1909. *Futurist Manifesto*. Italy: *Gazzetta dell'Emilia*
- Marinetti, F.T. 1973a. *Destruction of Syntax – Imagination without Strings – Words-in-Freedom 1913*. In: Apollonio, U. ed. *Futurist Manifestos*. Boston: MFA Publications, pp.95-106
- Marinetti, F.T. 1973b. *The Founding and Manifesto of Futurism 1909*. In: Apollonio, U. ed. *Futurist Manifestos*. Boston: MFA Publications, pp.19-24
- Mark of Zorro, The*. 1920. [Film]. Fred Niblo. Dir. USA: Douglas Fairbanks Pictures
- Marks, L. U. 2000. *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*. London: Duke University Press.
- Massaccesi, C. 2016. *Devil's Advocates: Nosferatu: A Symphony of Horror*. Leighton Buzzard: Auteur.
- Matisse, H. 1910. *La Danse (The Dance)*. [Oil on Canvas]. Russia: The Hermitage
- McDonald, M. 2015. Hitchcock's Blackmail and the Threat of Recorded Sound. [Online]. *Music and Moving Image*, 8(3), pp.40-51. [Accessed: 10th May 2019]. Available from: <https://www.jstor.org/stable/10.5406/musimoviimag.8.3.0040>

McFarlane, J. 1991. *Berlin and the Rise of Modernism 1886-96*. In: Bradbury, M and McFarlane, J. eds. *Modernism: A Guide to European Literature 1890-1930*. London: Penguin Books, pp.105-119

McGilligan, P. 1997. *Fritz Lang: The Nature of the Beast*. London: Faber and Faber Limited.

Melodie der Welt (Melody of the World). 1929. [Film]. Walter Ruttmann. dir. Germany: Tobis Filmkunst

Melodie des Herzens (Melody of the Heart). 1929. [Film]. Hans Schwartz. dir. Germany: Ufa.

Menschen am Sonntag (People on Sunday). 1930. [Film]. Robert Siodmak and Edgar G. Ulmer. dirs. Germany: Filmstudio Berlin.

Mépris, Le (Contempt). 1963. [Film]. Jean-Luc Godard. Dir. France: Rome Paris Films

Merton, P. 2007. *Silent Comedy*. London: Random House Books.

Messman, V. 1988. *Sound Film*. In: Taylor, R and Christie, I. Eds. *Film Factory: Russian and Soviet Cinema in Documents 1896-1939*. London: Routledge, pp.235-237.

Metropolis. 1927. [Film]. Fritz Lang. dir. Germany: Ufa

Metropolis. 1984. [Film]. Fritz Lang. dir. USA: PSO International

Metzger, R. 2017. *Berlin in the 1920s*. Koln: Taschen

- Meyer, J. 2019. Sound and Silence in Peter Jackson's *They Shall Not Grow Old*. [Online]. *Oxford University Press Journals*, 124(5), pp.1789-1792. [Accessed 14th February 2021]. Available from: <https://doi.org/10.1093/ahr/rhz1020>
- Meyrink, G. 1915. *Der Golem (The Golem)*. [No Place]: Kurt Wolff
- Milsome, C. 1979. *The Book of the Cinema*. London: Artists House.
- Modern Times*. 1936. [Film]. Charles Chaplin. Dir. USA: United Artists.
- Mollaghan, A. 2015. *The Visual Music Film*. London: Palgrave Macmillan
- Moltenbrey, K. 2007. Something Old, Something New: Remixing an old silent film: Using today's on yesteryear's sets. [Online]. *Computer Graphics World*, 30(9), pp.27-29. [Accessed: 8th January 2019]. Available from: https://doi.org/10.1386/ncin.15.1.81_1
- müde Tod: Ein deutsches in sechs Versen, Der (Weary Death: A German Folk Story in Six Verses)*. 1921. [Film]. Fritz Lang. dir. Germany: Decla Bioscop AG.
- Munch, E. 1893. *Skrik (The Scream)*. [Oil, Tempera, Pastel and Crayon on Cardboard]. Norway: Norway National Gallery.
- Munro, K. 2017. 'The essay film as address: The epistle as relational act'. [Online]. *New Cinemas*, 15(1), pp. 81–95. [Accessed: 22nd January 2018]. Available from: https://doi.org/10.1386/ncin.15.1.81_1
- Münsterberg, H. 1916. *The Photoplay: A Psychological Study*. Great Britain: Amazon.
- Münter, G. 1911. *Beim Malen (While Painting)*. [Oil on Canvas]. [Unknown Location].

Murnau, F. W. 2016. *The Ideal Picture Needs No Titles: By its very Nature the Art of the Screen should tell a Complete Story Pictorially*. In: Eureka Video. ed. *Early Murnau Blu-ray booklet*. [No place]: Eureka, pp.74-77.

Murphet, J., Groth, H., Hone, P. 2017. Eds. *Sounding Modernism: Rhythm and Sonic Mediation in Modern Literature and Film*. Edinburgh: Edinburgh University Press

Nanook of the North. 1922. [Film]. Robert J. Flaherty. Dir. USA: Pathé Exchange.

Napoléon vu par Abel Gance (Napoleon). 1927. [Film] Abel Gance. Dir. France: Films Abel Gance.

Napper, L. 2017. *Silent Cinema: Before the Pictures Got Small*. London: Wallflower.

Nasta, D. 2001. *Setting the Pace of a Heartbeat : The Use of Sound Elements in European Melodramas before 1915*. In: Abel, R and Altman, R. eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.95-109.

Nayar, S. J. 2009. Seeing voices: Oral pragmatics and the silent cinema. [Online]. *Early Popular Visual Culture*, 7(2), pp.145-165. [Accessed: 11th May 2020]. Available from: <https://doi.org/10.1080/17460650903010691>

Nibelungen, Die (Nibelungen, The). 1924. [Film]. Fritz Lang. dir. Germany: Ufa.

Nicolella, H. and Soister, J.T. 2012. *Many Selves: The Horror and Fantasy Films of Paul Wegener*. Duncan: BearManor Media.

Noack, 1929. The Process of the Tonbild-Syndikat: A General and technical Exposition of "Tobis". [Online]. *The Bioscope*. [No Volume] [No Issue], [No pagination]. [Accessed: 7 March 2017]. Available from: The British Film Institute

Nonsilent Film, The. 2017. [Film]. F. W. Murnau. dir. Brazil: Getty Images Brasil

Nosferatu. 2008. [Film]. F. W. Murnau. dir. USA: Infinity Motion Pictures

Nosferatu A Symphony of Horror. 2010. [Film]. F. W. Murnau. dir. USA: November Fire Recordings

Nosferatu, eine Symphonie des Grauens (Nosferatu: A Symphony of Horror). 1922. [Film]. Friedrich Wilhelm Murnau. dir. Germany: Prana-Film GmbH.

NUIT AMÉRICANE, LA (Day for Night). 1973. [Film]. Francois Truffaut. Dir. France: Les Films du Carrosse.

Nuit et brouillard (Night and Fog). 1956. [Film]. Alain Resnais. Dir. France: Argos Films.

Oktyabr' Desyat' dney kotorye potryasli mir (October: Ten Days that Shook the World). 1927. [Film]. Sergei Eisenstein. dir. Soviet Union: Sovkino

Opus I-IV. 1921-1925. [Films]. Walter Ruttmann. dir. Germany: Ruttmann-Film.

Oravský Hrad. 2022a. DRACULOVSKA KVAPKA KRVI Gróf Dracula ta osobne privíta v Renesančnej budove pod Oravským hradom už 23.8.2022 od 10.00 do [...].

[Instagram]. 21 July. [Accessed: 2nd August 2022]. Available from:

https://instagram.com/p/CgRf_8nKig8/

Oravský Hrad. 2022b. Už od needle to prepukne! Týden v znamení grófa Draculu sa neodmysliteľne blíži! Čo nás čaká? Detské interaktívne activity filmy [...].

[Instagram]. 17 August. [Accessed: 18th August 2022]. Available from:

<https://instagram.com/p/ChWIRzFq0nA/>

Orlacs Hände (The Hands of Orlac). 1924. [Film]. Robert Wiene. Dir. Austria: Pan Films

Overy, P. 1969. *Kandinsky The Language of the Eye*. London: Elek Books.

Pabst, G.W. 2016. *Reality of Sound Film*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.562-564.

Passion. 1982. [Film]. Jean-Luc Godard. Dir. France: Sara Films

passion de Jeanne d'Arc, La (Passion of Joan of Arc, The). 1928. [Film]. Carl Theodor Dreyer. Dir. France: Société générale des films.

Passion, En (Passion of Anna, The). 1969. [Film]. Ingmar Bergman. Dir. Sweden: Svensk Filmindustri

Patalas, E. 2002. "On the Way to Nosferatu". [Online]. *Film History*. 14(1), pp.25-31. [Accessed 17 November 2017]. Available from:

<https://www.jstor.org/stable/3815577>

Perez, G. 2013. The Deadly Space Between. In: Fulton, J. and Utterson, A. eds. *Nosferatu Blu-ray booklet*. [No place]: Eureka, pp.7-32.

Phantom. 1922. [Film]. F. W. Murnau. dir. Germany: Uco-Film GmbH

Pierce, D. 2011. *The Film Restoration*. In: Fullton, J, Utterson, A and Wrigley, N. eds. *Sunrise: A Song of Two Humans Dual-format booklet*. UK: Eureka Video, pp.6-

- Pommer, E. 2016. *The International Talking Film*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.314-316.
- Popple, S. and Kember, J. 2004. *Early Cinema: From Factory Gate to Dream Factory*. London: Wallflower.
- Pratella, F. B. 1910. *Manifesto of Futurist Musicians*. Italy.
- Pratella, F. B. 1973. *Manifesto of Futurist Musicians 1910*. In: Apollonio, U. ed. *Futurist Manifestos*. Boston: MFA Publications, pp.31-38
- Prawer. S.S. 1980. *Caligari's Children: The Film as Tale of Terror*. Oxford: Da Capo Press.
- Pudovkin, 1988. *On the Principle of Sound in Film*. In: Taylor, R and Christie, I. Eds. *Film Factory: Russian and Soviet Cinema in Documents 1896-1939*. London: Routledge, pp.264-267.
- Rabinovitz, L. 2001. "Bells and Whistles": *The Sound of Meaning in Train Travel Ride Films*. In: Abel, R and Altman, R. eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.167-182.
- Rascaroli, L. 2008. The Essay Film: Problems, Definitions, Textual Commitments. [Online]. *Framework*, 49(2), pp.24-47. [Accessed: 1st May 2018]. Available from: <https://doi.org/10.1353/frm.0.0019>
- Rascaroli, L. 2009. *The Personal Camera: Subjective Cinema and the Essay Film*. London: Wallflower

Raskolnikow (Crime and Punishment). 1923. [Film]. Robert Wiene. Dir. Germany: Leonardo-Film.

Rawson, J. 1991. *Italian Futurism*. In: Bradbury, M and McFarlane, J.eds. *Modernism: A Guide to European Literature 1890-1930*. London: Penguin Books, pp.243-258.

Raynauld, I. 2001. Dialogues in Early Silent Screenplays: What Actors Really Said. In: Abel, R and Altman, R. eds. *The Sounds of Early Cinema*. Bloomington: Indiana University Press, pp.69-78.

Re, L. 2008. Futurism, Film and the Return of the Repressed: Learning from Thais. [Online]. *MLN*, 123(1), pp.125-150. [Accessed: 12 April 2022]. Available from: <https://www.jstor.org/stable/30133957>

Read, P and Meyer, M-P. 2000. *Restoration of motion picture film*. Oxford: Butterworth Heinemann

Rebirth of a Nation. 2007. [Film]. DJ Spooky. Dir. USA: Starz

Reid, B. 2018. *Nosferatu Rises: Reincarnated in Sound*. Brenton Film [Online]. [Accessed 19 February 2021]. Available from: <https://www.brentonfilm.com/articles/nosferatu-rises-reincarnated-in-sound>

Reid, B. 2019. *Nosferatu History and Home Video Guide: Die zwölfte Stunde (1930)*. Brenton Film [Online]. [Accessed 19 February 2021]. Available from: <https://www.brentonfilm.com/articles/nosferatu-history-and-home-video-guide-die-zwofte-stunde-1930>

Rembrandt. 1632. *De Anatomische les van Dr. Nicolaes Tulp (The Anatomy Lesson of Dr. Nicolaes Tulp)*. [Oil on Canvas]. Netherlands: Mauritshuis

Rescued by Rover. 1905. [Film]. Lewis Fitzhamon and Cecil M. Hepworth. Dirs. UK: Hepworth

Richter, H. 2017. *The Film Essay: A New Type of Documentary Film*. In: Alter, N.M. and Corrigan, T. eds. *Essays on the Essay Film*. New York: Columbia University Press, pp.89-92

Rien que les heures (Nothing but Time). 1926. [Film]. Alberto Cavalcanti. Dir. France: Anon.

Rigadin, garçon de banque (Rigadin, the Bank Clerk). 1912. [Film]. Georges Monca. Dir. France: Pathé Frères.

Rimbaud, A. 1870. *Ophelia*. France: [No Publisher]

Rimbaud, A. 2001. *Ophelia*. In: Sorrell, M. ed. *Arthur Rimbaud Collected Poems*. Oxford: Oxford University Press, pp.29-31.

Roberts, I. 2004. Caligari Revisited. [Online]. *German Life and Letters*, 57(2), pp.175-187. [Accessed: 12th April 2018]. Available from: <https://doi.org/10.1111/j.0016-8777.2004.0278.x>

Roberts, I. 2008. *German Expressionist Cinema: The World of Light and Shadow*. London: Wallflower Press.

Robin Hood. 1922. [Film]. Allan Dwan. Dir. USA: Douglas Fairbanks Pictures.

Robinson, D. 1973. *World Cinema: A Short History*. London: Eyre Methuen

Robson, C. 2019. Age and Youth, Sound and Vision. [Online]. *Oxford University Press Journals*, 124(5), pp.1793-1797. [Accessed 10th February 2021]. Available from: <https://doi.org/10.1093/ahr/rhz1019>

Rowe, D. 2007. *Seeing Imperial Berlin: Lesser Ury, the Painter and Stranger*. In: Cowan, A. and Steward, J. Eds. *The City and the Senses*. Aldershot: Ashgate, pp.198-218.

Roy, E. A. 2017. Broken Records from Berlin: the place of listening in *People on Sunday* (dir. Curt and Robert Siodmak/Edgar G. Ulmer, 1929). [Online]. *Sound Studies*, 3(1), pp.33-48. [Accessed: 12th January 2018]. Available from: <https://doi.org/10.1080/20551940.2017.1358005>

Russolo, L. 1913. *The Art of Noises*. [Letter]. Italy.

Russolo, L. 1973. *The Art of Noises (extracts) 1913*. In: Apollonio, U. ed. *Futurist Manifestos*. Boston: MFA Publications, pp.74-88

Ruttman, W. 1927. How I Made my Berlin Film (1927). *Lichtbild-Bühne*. No. 241.

Ruttman, W. 2016a. *Painting with Time*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.450-452.

Ruttman, W. 2016b. *Walter Ruttmann. How I Made my Berlin Film (1927)*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.463-464.

Ruttmann, W. 2016c. *Walter Ruttmann. Principles of the Sound Film*. In: Kaes, A., Baer, N. and Cowan, M. eds. *The Promise of Cinema: German Film Theory 1907-1933*. Oakland: University of California Press, pp.555-556.

Sabaneiev, L. 1974. *Scriabin's "Prometheus"*. In: Kandinsky, W. and Marc, F. Eds. *The Blaue Reiter Almanac*. Lankheit, K. Ed. London: Thames and Hudson, pp.127-140.

Sadowski, P. 2017. *The Semiotics of Light and Shadows: Modern Visual Arts and Weimar Cinema*. London: Bloomsbury.

Sans Soleil (Sunless). 1983. [Film]. Chris Marker. Dir. France: Argos Films.

Scarecrow, The. 1920. [Film]. Edward F. Cline and Buster Keaton. Dirs. USA: Joseph M. Schenk Productions

Schanze, H. 2003. *On Murnau's Faust: A Generic Gesamtkunstwerk?* In: Scheunemann, D. ed. *Expressionist Film New Perspectives*. New York: Camden House, pp.223-235.

Scheintote Chinese, Der (Death Feigning Chinaman, The). 1928. [Film]. Lotte Reiniger. dir. Germany: ARD Degato Film.

Schloß Vogelöd (The Haunted Castle). 1921. [Film]. F. W. Murnau. dir. Germany: Uco-Film GmbH

Schobert, W. 2003. *"Painting in Time" and "Visual Music": On German Avant-Garde Films of the 1920s*. In: Scheunemann, D. ed. *Expressionist Film New Perspectives*. New York: Camden House, pp.237-250.

Schoenberg, A. 1911. *Probleme des Kunstunterrichts (Problems in Teaching Art)*.

[No Place]: [No Publisher]

Schönfeld, C. 2002. *Modern Identities in Early German Film: The Cabinet of Dr. Caligari*. In: Cresswell, T and Dixon, D. eds. *Engaging Film: Geographies of Mobility and Identity*. Oxford: Rowman & Littlefield Publishers INC, pp.174-190.

Schwartz, D. 2018. Sounding the Inaudible Rethinking the Musical Analogy in the City Symphonies of Walter Ruttmann and Dziga Vertov. [Online]. *MSMI*, 12(1), pp.1-31. [Accessed: 25th July 2019]. Available from:

<https://doi.org/10.3828/msmi.2018.1>

Scriabin, A. 1911. *Poema Ognya (Prometheus: The Poem of Fire)*. Russian Empire.

Sherlock Jr. 1924. [Film]. Buster Keaton. Dir. USA: Buster Keaton Productions.

Shklovsky, V. 1988a. *Literature and Cinema (extracts)*. In: Taylor, R and Christie, I. Eds. *The Film Factory: Russian and Soviet Cinema in Documents 1896-1939*. Routledge: London, pp.98-99.

Shklovsky, V. 1988b. *Sound as Semantic Sign*. In: Taylor, R and Christie, I. Eds. *Film Factory: Russian and Soviet Cinema in Documents 1896-1939*. London: Routledge, pp.305-307.

Silberman, M. 1995. *German Cinema: Texts in Context*. Detroit: Wayne State University Press.

Silberman, M. 2010. Soundless Speech/Wordless Writing: Language and German Silent Cinema. [Online]. *Journal of Cross Cultural Image Studies*, 1(1), pp.40-71.

[Accessed 16 September 2017]. Available from:

<http://ejournals.library.ualberta.ca/index.php/imaginations/article/view/9527/7489>

Silver, A and Ursini, J. 1997. *The Vampire Film: From Nosferatu to Interview with the Vampire*. New York: Limited Editions.

Simner, J. 2012. Defining synaesthesia. [Online]. *British Journal of Psychology*,

103(1), pp.1-15. [Accessed 12th November 2021]. Available from:

<https://doi.org/10.1348/000712610X528305>

Simolo, N. 2011. *Masters of Cinema: Billy Wilder*. Paris: Cahiers du cinema Sarl.

Singing in the Rain. 1952. [Film]. Gene Kelly and Stanley Donan. Dirs. USA: MGM.

Siska, W. 1979. Metacinema: a modern necessity. [Online]. *Literature/Film*

Quarterly. 7(4), pp.285-289. [Accessed: 17th February 2018]. Available from:

<https://www.jstor.org/stable/43796115>

Smith, J. 2016. *Bringing a Little Munich Disco to Babelsberg: Giorgio Moroder's Score for Metropolis*. In: Donnelly, K.J. and Wallengren, A-K. Eds. *Today's Sounds for Yesterday's Films: Making Music for Silent Cinema*. Basingstoke: Palgrave Macmillan, pp.107-121

Smith, R. D. 2008. "The Vanity of Earthly Things". *Style as Servant of Meaning in F.W. Murnau's Tartuffe*. In: Wrigley, N. Producer. *The Last Laugh DVD booklet*.

[No Place]: Eureka Video, pp.5-11.

Sophocles. c.441 B.C. *Antigone*. [Stage Play]. Greece.

Sophocles. c.429 B.C. *Oedipus Rex*. [Stage Play]. Greece.

Speck, O. C. 2014. *Quentin Tarantino's Django Unchained: The Continuation of Metacinema*. London: Bloomsbury.

Spies, W. 1922. *Das Karusell (The Merry-go-round)*. [Oil on Canvas]. Indonesia: Arma Museum

Spies, W. 1929. *Balinesische legende (Balinese Legend)*. [Oil on Canvas].

[Unknown Location]: Privately Owned.

Spione (Spies). 1928. [Film]. Fritz Lang. dir. Germany: Ufa.

Sprache der Schatten: Murnau: Das Meisterstück: Faust, Die (Language of the Shadows: Murnau: The Masterpiece: Faust, The). 2007. [Eureka Video Blu-ray Extra]. Luciano Berriatúa. dir. Germany: FilMOTECA.

Sprache der Schatten, Murnau, Die frühen Jahre und Nosferatu, Die (Language of the Shadows – Murnau: The Early Years and Nosferatu, The). 2007. [Eureka Video Blu-ray Extra]. Luciano Berriatúa. dir. Germany: FilMOTECA.

Stachka (Strike). 1925. [Film]. Sergei Eisenstein. dir. Soviet Union: Goskino

Stam, R. 1992. *Reflexivity in Film and Literature: From Don Quixote to Jean-Luc Godard*. New York: Columbia University Press

Stein, E. 2013. Abstract Space, Microcosmic Narrative, and the Disavowal of Modernity in *Berlin: Symphony of a Great City*. [Online]. *Journal of Film and Video*, 65(4), pp.3-16. [Accessed: 14th January 2020]. Available from: <https://doi.org/10.5406/jfilmvideo.65.4.0003>

Stein, J. M. 1960. *Richard Wagner & the Synthesis of the Arts*. Detroit: Wayne State University Press.

- Stevenson, R. L. 1886. *The Strange Case of Dr. Jekyll and Mr. Hyde*. London: Longman, Green, and Co
- Steward, J. and Cowan, A. 2007. *Introduction*. In: Cowan, A. and Steward, J. Eds. *The City and the Senses*. Aldershot: Ashgate, pp.1-22.
- Stock, F. 2012. *In Glorious Technicolor: A Century of Film and How it Has Shaped Us*. London: Pimlico.
- Stoker, B. 1897. *Dracula*. United Kingdom: Archibald Constable and Company
- St. Pierre, P. M. 2016. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles, and the Men Who Shot Them*. Madison: Fairleigh Dickinson University Press
- Sudermann, H. 1917. *Litauische Geschichten (The Excursion to Tilsit)*. [No Place]: J. G. Cotta.
- Sunrise: A Song of Two Humans*. 1927. [Film]. F. W. Murnau. dir. USA: Fox.
- Sunset Boulevard*. 1950. [Film]. Billy Wilder. Dir. USA: Paramount.
- Szaloky, M. 2002. Sounding Images in Silent Film: Visual Acoustics in Murnau's "Sunrise". [Online]. *Cinema Journal*, 41(2), pp.109-131. [Accessed 1 October 2017]. Available from: <https://doi.org/10.1353/cj.2002.0005>
- Tabu: A Story of the South Seas*. 1931. [Film]. F.W. Murnau. dir. USA: Murnau-Flaherty Productions.
- Tagebuch einer Verlorenen (Diary of a Lost Girl)*. 1929. [Film]. G. W. Pabst. Dir. Germany: Pabst-Film.

Taylor, J. 2009. "Speaking Shadows": A History of the Voice in the Transition from Silent to Sound Film in the United States. [Online]. *Journal of Linguistic Anthropology*, 19(1), pp.1-20. [Accessed: 12th January 2021]. Available from:

<https://www.jstor.org/stable/43104205>

<https://www.jstor.org/stable/43104205>

Telotte, J.P. 2001. The Sounds of Blackmail: Hitchcock and Sound Aesthetic.

[Online]. *Journal of Popular Film & Television*, 28(4), pp.184-191. [Accessed 17th

June 2018]. Available from:

<https://www.tandfonline.com/doi/abs/10.1080/01956050109602840>

That Fatal Sneeze. 1907. [Film]. Lewis Fitzhamon. Dir. UK: Hepworth

They Shall Not Grow Old. 2018. [Film]. Peter Jackson. Dir. UK: House Productions.

Tony Rayns on Faust. 2006. [Eureka Video Blu-ray Extra]. Nick Wrigley. Dir. UK:

Masters of Cinema.

Tramp, The. 1915. [Film]. Charles Chaplin. Dir. USA: The Essanay Film

Manufacturing Company.

Trezise, S. 2019. *Historical Introduction*. In: Barton, R., Trezise, S. Eds. *Music and*

Sound in Silent Film: From the Nickelodeon to The Artist. London: Routledge, pp.1-

22.

Triumph des Willens (Triumph of the Will). 1935. [Film]. Leni Riefenstahl. dir.

Germany: Leni-Riefenstahl-Produktion.

Uecker, M. 2012. *Construction of Normality in Menschen Am Sonntag*. In: Hung, J,

Weiss-Sussex, G and Wilkes, G. Eds. *Beyond Glitter and Doom. The Contingency of*

the Weimar Republic. Munich: IUDICIUM Verlag, pp.162-175

Unrau, R. 1996. Eine Symphonie des Grauens or The Terror of Music: Murnau's Nosferatu. [Online]. *Literature Film Quarterly*. 24(3), pp.234-239. [Accessed 15 October 2017]. Available from: <https://www.jstor.org/stable/43796727>

Usai, P. C. 2019. *Silent Cinema: A Guide to Study, Research and Curatorship*. London: Bloomsbury Publishing

Vacche, A. D. 1996. *Cinema and Painting: How Art is Used in Film*. Austin: University of Texas Press.

van Campen, C. 2013. *Synesthesia in the Visual Arts*. In: Simmer, J. and Hubbard, E. Eds. *Oxford Handbook of Synesthesia*. Oxford: Oxford University Press, pp.631-646

Van Gogh, V. 1889a. *De Sterrennacht (The Starry Night)*. [Oil on Canvas]. USA: Museum of Modern Art.

Van Gogh, V. 1889b. *Korenveld met cipres (Wheat Field with Cypresses)*. [Oil on Canvas]. USA: Museum of Modern Art.

Vengeance du gâte-sauce, La (Cook's Revenge, The). 1900. [Film]. Georges Méliès. Dir. France: Star-Film.

Vergo, P. 1977. *The Blue Rider*. Oxford: Phaidon Press.

Vergo, P. 2003. Kandinsky and Music. [Online]. *Experiment*. 9(1), pp.49-56. [Accessed 10th September 2021]. Available from: <https://doi.org/10.1163/2211730X03X00047>

Vertov, D. 1984. *The Same Thing from Different Angles*. In: Michelson, A. ed. *Kino-Eye: The Writings of Dziga Vertov*. London: University of California Press Ltd, pp.57-58.

Von Caligari zu Hitler: Das deutsche Kino im Zeitalter der Massen (From Caligari to Hitler: German Cinema in the Age of the Masses). 2014. [Film]. Rüdiger Suchsland. Dir. Germany: LOOKSfilm.

von Dassanowsky, R. Ed. 2012. *Quentin Tarantino's Inglourious Basterds: A Manipulation of Metacinema*. London: Continuum.

Von morgens bis mitternachts (From Morn to Midnight). 1920. [Film]. Karl Heinz Martin. Dir. Germany: Ilag-Film.

Voyage dans la lune, Le (Trip to the Moon, A). 1902. [Film]. Georges Méliès. Dir. France: Star-Film

Wachsfigurenkabinett, Das (Waxworks). 1924. [Film]. Paul Leni. Dir. Germany: Neptune-Film A.G.

Wagner, R. 1849a. *Das Kunstwerk der Zukunft (The Artwork of the Future)*. Leipzig: [No Publisher]

Wagner, R. 1849b. *Die Kunst und die Revolution (Art and Revolution)*. [No Place]: [No Publisher]

Wagner, R. 1850. *Lohengrin*. [Opera]. Germany.

Wagner, R. 1869-1878. *Der Ring des Nibelungen (The Ring of the Nibelung)*. [Opera]. Germany.

Wahl, C. 2010. *Babel's Business – On Ufa's Multiple Language Film Versions, 1929-1932*. In: Rogowski, C. ed. *The Many Faces of Weimar Cinema: Rediscovering Germany's Filmic Legacy*. New York: Camden House, pp.235-248.

Walker, A. 1978. *The Shattered Silents: How the talkies came to stay*. London: Elm Tree Books.

Ward, J. 2013. Synesthesia. [Online]. *The Annual Review of Psychology*, 64(1), pp.49-75. [Accessed 25th November 2021]. Available from:
<https://www.annualreviews.org/doi/10.1146/annurev-psych-113011-143840>

Webern, A. 1908-1909. *Ihr tratet zu dem herde (You Joined the Herd)*. [Song]. Austria

Weekend am Wannsee (Weekend at the Wannsee). 2000. [Film]. Gerald Koll. Dir. Germany: Arte France.

Westerdale, J. 2010. *The Musical Promise of Abstract Film*. In: Rogowski, C. ed. *The Many Faces of Weimar Cinema: Rediscovering Germany's Filmic Legacy*. New York: Camden House, pp.153-166

Whissel, K. 2008. *Picturing American Modernity: Traffic, technology, and the Silent Cinema*. Durham: Duke University Press.

Wild Orchids. 1929. [Film]. Sidney Franklin. Dir. USA: Metro-Goldwyn-Mayer.

Willett, J. 1996. *Art and Politics in the Weimar Period: The New Sobriety*. New York: De Capo.

Williams, A. 1992. *Historical and Theoretical Issues in the Coming of Recorded Sound to the Cinema*. In: Altman, R. ed. *Sound Theory/Sound Practice*. London: Routledge, pp.126-137.

Woman of Affairs, A. 1928. [Film]. Clarence Brown. Dir. USA: Metro-Goldwyn-Mayer.

- Wood, S. 2019. *People on Sunday*. In: *People on Sunday Blu-ray booklet*.
- Bandaranayake, U. Producer. London: British Film Institute, pp.8-13.
- Woolf, V. 1925. *Mrs Dalloway*. United Kingdom: Hogarth Press
- Woolf, V. 1927. *To the Lighthouse*. United Kingdom: Hogarth Press
- Woolf, V. 2012. *Complete Works of Virginia Woolf*. [No Place]: Delphi Classics
- Wunder, Das (Wonder, The)*. 1922. [Film]. Walter Ruttmann. dir. Germany: Werbefilm GmbH Julius Pinschewer.
- Yumibe, J. 2009. 'Harmonious sensations of sound by means of colors': vernacular colour abstractions in silent cinema [Online]. *Film History*, 21(2), pp.164-176. [Accessed: 1st September 2021]. Available from: <https://www.jstor.org/stable/40406021>
- Zemlya (Earth)*. 1930. [Film]. Alexander Dovzhenko. Dir. Soviet Union: Kyivska Kinofabryka
- Zinnemann, F. 1992. *Fred Zinnemann: An Autobiography*. London: Bloomsbury.
- Zweite, A. 1992. *Free the Line for the Inner Sound*. In: Barnett, V. E. and Zweite, A. eds. *Kandinsky Watercolors and Drawings*. Munich: Prestel, pp.9-32.
- Zwölfte Stunde: Eine Nacht des Grauens, Die (Twelfth Hour: A Night of Horror, The)*. 1930. [Film]. Waldemar Roger. Dir. Germany: [No Production Company]