EVERYONE'S A *FILMEMACHER*: WEIMAR CINEMATOGRAPHIC INNOVATION AND THE ENABLING CONDITIONS WHICH ALLOWED FOR THEM TO OCCUR

by

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In this thesis, I explore the creative innovation that made German Weimar cinema world famous. During the years of the Weimar Republic (1919-1933) the German film industry flourished into one of the strongest and most successful in the world, and the canon of research into Weimar cinema has primarily centered on the dominant filmic themes, movements, and directors from this time, which has resulted in a disproportionate neglect of cinematography studies and how the work of cinematographers within the Weimar industry were important. This study aims to add to the small but growing number of works that investigate beyond filmic movements and directors, and get at the the industry conditions, cinematography, and cinematographers – such as the works of scholars Thomas Elsaesser, Paul Matthew St. Pierre, Frances Guerin, and Katharina Loew. This study focuses on two cinematographers and two cinematographic techniques of lasting importance in filmmaking: lighting and camera movement. By analyzing the German techniques of lighting and camera movement, pioneered by German cinematographers, a collaborative culture engrained into the industry emerges. The German film industry supported cinematographers and made space for each member of the filmmaking ensemble to advance the artistic, and economic, value of their films. This thesis argues that the work of cinematographers Fritz Arno Wagner – his use of light as action and creating a tactile atmospheric quality– and Karl Freund – his developments unchaining the

camera from its stationary tripod and dynamizing the viewer experience – was possible due to this culture of collaboration. These cinematographic techniques capture the larger reality of Weimar filmmaking practices and offer a valuable contrast to the dominant Hollywood practices of visual standardization, hierarchical labor roles, and unobtrusive cinematography. Interrogating the differences between Germany and Hollywood during the silent era demonstrates the greater importance of German cinematic legacy in Hollywood. Weimar cinematographers influenced dominant cinematography practices in postwar Hollywood, which continue today.

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The real author of the film is the camera.

– Karl Freund, *Moving Pictures: A Century of European Cinema*

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Chapter 1: Introduction – The Weimar Era, Cinematography and Collaborative Authorship

Weimar and Cinematography

The Weimar era of Germany, the period from 1919 to 1933, when the country was run by its first democratic government was a time of both strife and abundance. Germany was reeling from defeat in WWI and struggling to define their new society amid social reorganizations, political reshufflings, and economic collapse, yet the cinematic arts found footing, and launched into a fervent period of success. In fact, the period from 1920 to about 1932 is often considered the 'golden age' of German cinema, where the topmost German filmmakers were on the forefront of cinematic innovation, had a global reputation for successful films, and pushed into cinematic areas previously unexplored. Thus, Weimar cinema is a widely researched epoch of cinema history, yet – as is the case far too often in Cinema Studies research – the role, responsibility, and significance of cinematography and cinematographers is understudied. Cinematography is the backbone of film; it is broadly defined as "the art and technology of motion-picture photography".[1] It is important to note this definition, where neither solely technical nor solely artistic elements encompass cinematography, rather it's the combination of the two. Without cinematography, movies as we know them would simply not exist. Yet, the contributions of cinematographers are widely underrepresented in both academic research and general understanding of filmmaking. The Weimar years coincide with critical years in silent-film history, and overall, the practices, advancements, and innovations made during this time are the foundation of what cinema would become. In other words, many tenets of modern-day movie

[1] Britannica, Editors of the Encyclopedia. "cinematography". *Encyclopedia Britannica*, December 19, 2022.

making have their roots in the silent period, and this investigation will examine some of the contributions made towards developing cinematography pioneered in Weimar Germany.

To introduce you to my research question, theoretical approach, and purpose of my thesis, I will preface my discussion of Weimar cinematographic innovation in the following sections. I will outline the previous scholarship in this field and describe how my research slots into the knowledge gap that still exists. I will define the scope of my research and the methods used to conduct it, discuss the important notion of collaborative authorship in film, and finally overview the content of this thesis.

Existing Scholarship

The realm of Weimar Cinema scholarship was built by two important German scholars, Siegfried Kracauer, and his book, *From Caligari to Hitler: A Psychological Study of the German Film* (1947), and Lotte H. Eisner and her book *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt* (1952). These works provided much of the foundational understandings of Weimar filmmaking; thus, they are important cornerstones of the Cinema Studies field and remain important in this study. For instance, Kracauer brings up the question as to why the camera "first reached complete mobility" in Germany.[2] Moreover, within her discussions of Weimar films, Eisner defines important cinematographic concepts, such as chiaroscuro lighting, and includes testimony from members of the filmmaking ensemble outside of just directors. However, there are also certain limitations in Kracauer's and Eisner's work. For instance, German film scholar Thomas Elsaesser has endeavored to amend some of these limitations in his book, *Weimar Cinema and After: Germany's Historical Imaginary* (2000),

[2] Kracauer, Siegfried. *From Caligari to Hitler: A Psychological History of the German Film*. Princeton University Press, 2019 Princeton Classics edition, original, 1947, 4.

where he critiques the way Kracauer and Eisner too often assigned signs of the coming second world war in their film analysis, or in other words they fall victim to a "historical imaginary" within the product of Weimar arts.[3] Elsaesser states that he wants to "give back" a more comprehensive analysis to these films and acknowledge the way that Kracauer and Eisner's "interpretations make such a perfect fit that the films appear as the books' illustrative evidence, retrospectively becoming the effects of a narrative of which, they started out being the cause."[4] Elsaesser's work represents the important trajectory of Weimar film scholarship, and his work more often recognized the impact of cinematographers. For instance, he notes that many German cinematographers who came to Hollywood, "in some ways [had] more lasting and more profound [influence] than that of the directors or the films."[5] He importantly opens the conversation to the role, and influence of cinematographers; as well as sets more appropriate stylistic and collaborative definitions than Kracauer or Eisner.

In the wake of Elsaesser's work, there have been important works with more specificity towards cinematography. Namely, Paul Matthew St. Pierre's book *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles, and the Men Who Shot Them* (2016), in which he deliberately fills the gaping hole in recognizing Weimar cinematographers, and he poses the model of studying director-cinematographer relationships and their importance in production across any national industry or time period. St. Pierre offers an important difference in vocabulary to introduce his findings: "[w]hereas in silent-film production in most countries the terms filmmaker and director were synonymous, in German silent film the plural term *filmemacherin* [or *filmemacher*] connoted primarily both directors and cinematographers, along

[3] Elsaesser, Thomas. *Weimar Cinema and After: Germany's Historical Imaginary*. London: Routledge, 2000, 4.
[4] Elsaesser, *Weimar Cinema and After*, 4.
[5] Elsaesser, 369.

with the rest of the filmmaking crew."[6] Further, St. Pierre argues the paramount nature of German collaboration, noting that one of the most important legacies of Weimar filmmaking was the "executional practice of coauthorship and coproduction."[7] My work is centered along the same themes of cinematography and collaboration, and continues the work of exploring the interconnectedness and influence of these factors in advancing the art of cinema.

Other important scholars such as Frances Guerin (*Culture of Light: Cinema and Technology in 1920s Germany*, 2005) and Katharina Loew (*Special Effects and German Silent Film: Techno Romantic Cinema*, 2021) have investigated the technical elements of cinematography within Weimar contexts, opening the opportunity for technological studies of early cinema and how Germany's industry approached technological challenges with artistic solutions. These studies into technology counter the larger scope of Cinema Studies works that often focuses on the transition from silent film to synchronized sound film projection. The years of the Weimar Republic overlap with this important shift in the trajectory of cinema, which took place from 1927 to the early 1930s. This shift is a widely researched area, and the extent of sound technology scholarship[8] dwarfs the amount of scholarship explicitly analyzing visual technological advancements. The acknowledgement of visual technology, pertaining to cinematography, must be given greater attention in Cinema Studies research.

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[6] St. Pierre, Paul Matthew. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles and the Men Who Shot Them*. Farleigh Dickinson University Press, 2016, 6. Italics in original.

[7] St. Pierre, *Cinematography in the Weimar Republic*, 6.

[8] *The Talkies: American Cinema's Transition to Sound, 1926-1931* by Scott Crafton (1999), *The Coming of Sound: A History* by Douglas Gomery (2005), *Introduction to the Photoplay: 1929, a Contemporary Account of the Transition to Sound in Film* edited by John C. Tibbetts (1977), and "'Speaking Shadows': A History of the Voice in the Transition from Silent to Sound Film in the United States" by Jessica Taylor (2009). Some examples of the plethora of scholarship relating to the transition to sound.

My study aims to add to the works of Elsaesser, St. Pierre, Guerin, and Loew, and further establish their interrelation in discussing cinematographic innovations of Weimar cinematographers, and how the industry parameters created conditions that suited this work.

Knowledge Gap

As alluded to, the field of Cinema Studies suffers from a tendency to underplay or ignore the role of cinematographers and others in the filmmaking ensemble in favor of attributing the authorship and significance of a film only or mostly to its director.[9] This is in part due to the prevalence of something film scholar C. Paul Sellors calls, "entrenched auteurism", or the persistence of an auteurism-lens by which even well informed scholars take the "easier" route and ascribe film analysis and authorship to a film's director, rather than navigate the more complicated web of collaborative authorship and co-creation of the content, effects, and technical advancements seen on screen.[10] This comes from *auteur theory*, which arose in France in the 1940s, and then the term was coined by American film critic Andrew Sarris in 1962.[11] The theory posits that when a director of a film possesses a certain abounding visual and thematic style, and that their contribution to a film is so important, that the designation of the film's authorship belongs solely to that director.[12] This so-called theory was popularized "through a network of film journals, newspapers, and magazines… [resulting in] the marginalization of the collaborative ethos that is at the center of film and multimedia production."[13] The idea that auteur theory is critically flawed is by no means new, in fact Sellors writes that "authorship in

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[9] Beach, Christopher John. *Hidden History of Film Style: Cinematographers, Directors and the Collaborative Process*. University of California Press, 2015, 4.
[10] Beach, *Hidden History of Film Style*, 13.
[11] Sarris, Andrew. "Notes on the Auteur Theory in 1962." *Film Culture* 27, no. 1-18 (1963).
[12] Auguiste, Reece. "Visible Things Unseen: Co-creation and Its Philosophical Turn." *Afterimage: The Journal of Media Arts and Cultural Criticism* 47, no. 11 (2020): 36.
[13] Auguiste, "Visible Things Unseen," 37.

film studies is simply a problem that will not go away."[14] I believe that both film scholars and the wider public should begin to change their conceptions of film production, and the roles of the people involved, as it is the collaborative work between all those who work behind the camera, including cinematographers, who produce "a film's 'look'".[15] Hence, this investigation aims to contribute to that discussion with an examination of cinematographic techniques and the greater role of cinematographers within the specific industry of Weimar.

Importantly, many investigations into Weimar film, when touching on cinematographic elements such as lighting, too often attribute the credit and the authorship of these techniques to the directors, neglecting to fully recognize the creative collaborations between directors and cinematographers, as well as other members of the production ensemble. Thus, auteurism bias extends beyond directorial authorship of a film's story, but even includes authorship over cinematographic elements. For instance, Eisner commonly uses phrases that assign authorship of lighting or camera to directors, such as "[Fritz] Lang's masterly chiaroscuro," or "[F.W.] Murnau's camera."[16] This kind of phrasing is all too commonplace in film analysis scholarship, regardless of specific topic or nation of interest. Thus, more studies and works depreciating the emphasis on auteurism are extremely important, directing my focus to the creative collaborations within the milieu of silent era film production.

Like the propensity for auteurism bias which afflicts the entire field of Cinema Studies, too often scholarship pertaining to Weimar filmmaking is accompanied by the term *German Expressionism*. The legacy of Weimar filmmaking is widely known in Cinema Studies and film

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[14] Sellors, Christopher Paul. "Collective Authorship in Film." *The Journal of Aesthetics and Art Criticism* 65, no. 3 (2007), 264.

[15] Beach, *Hidden History of Film Style*, 16.

[16] Eisner, Lotte H. *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt*. University of California Press, 1968, original 1955, 158 & 213.

criticism lexicon as German Expressionist cinema, stemming primarily from the acclaimed film *Das Cabinet des Dr. Caligari* (1920), or in English, *The Cabinet of Dr. Caligari*. This film is Expressionist, and it is known for its dark, shadowy visual style, twisting and askew lines in the mise-en-scène[17], a rejection of realism, unusual angles, and dramatic lighting tools – such as painting streaks of light directly onto the sets. Thus, any subsequent German film during this era which utilized visuals, storylines, or techniques resembling any of these traits or effects, often collects the label of German Expressionist cinema. The wide-reaching and long-lasting prominence of scholarship claiming German silent era film to be Expressionist is one of the great misattributed tenets of this period in film history.[18] Expressionism is considered an avant-garde artistic movement and style focused on subjective perspectives, distortion of reality, and hyper-expressive performances. While a number of famous Weimar films employ subjectivity, departures from verisimilitude, and stylized acting, it is not enough to ascribe the label to the body of Weimar cinema. My study thus joins the increasing number of works that reject the notion that the canon of Weimar cinema is one of Expressionism, and rather recognizes the fact that the closely knit industry milieu contributed to overlap of styles and themes onscreen, but not a single movement or defining style.[19] This distinction will be especially important in my discussion of lighting.

However, that is not to say the label of Expressionism is not without its benefits. Indeed, Expressionism remains stylistically influential in the scope of German Weimar filmmaking.

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[17] Mise-en-scène is everything that appears before the camera, i.e. sets, props, costumes, actors, and lighting.

[18] Elsaesser, Thomas. *Weimar Cinema and After: Germany's Historical Imaginary*. London: Routledge, 2000, 3.

[19] Elsaesser, Thomas. *Weimar Cinema and After: Germany's Historical Imaginary*. London: Routledge, 2000; Loew, Katharina. *Special Effects and German Silent Film: Techno-Romantic Cinema*. Amsterdam University Press, 2021; Isenberg, Noah William, ed. *Weimar Cinema: An Essential Guide to Classic Films of the Era*. Columbia University Press, 2009. Some examples of scholarship that argues against a German Expressionism label.

Some films take from the very same influences which shaped *Caligari*. Further, Expressionistic art is present in the advertising of Weimar films, such as a poster for *Der letzte Mann* which emulates the woodcut paintings by famous Expressionist painters such as Erich Heckel. Thus, the term German Expressionism to describe films is not in whole worth rejecting, rather the propensity of the label to refer to the entire canon of 1920s German films is. In this way, Expressionism should be assessed per film, to highlight the important instances of its influence and avoid being used as catch-all term.

These two concepts, auteur theory and German Expressionism, represent limitations of existing Cinema Studies scholarship that overlap to form a knowledge gap in the field regarding film production in Weimar Germany, where the realm of cinematography and collaborative authorship are interwoven. There is no one style of German silent film, but a style of production which invited innovation. This thesis aims to fill the knowledge gap and examine practices of Weimar cinematography, achieved through collaboration, and intended to advance the narrative and artistic potential of film.

Thesis Aims

Purpose

The purpose of this thesis is to investigate the environment of Weimar cinema which produced influential cinematographic innovation that had a widespread and long-lasting influence across multiple film industries and nationalities. Specifically under investigation is lighting and camera movement techniques. The Weimar years are undeniably a period of rich, imaginative, and artistic history, yet they were also infamously unstable and volatile socially, economically, and politically. To gain a deeper understanding of the significance of the

conditions of the Weimar film industry which produced innovative cinematographic uses, it will be critical to take Hollywood as a point of comparison. This point of comparison is relevant because Hollywood is often historicized to be a rigid film industry with a strict production regime that arguably inhibited experimentation in areas like cinematography.[20] On the surface, the structure of Hollywood and Weimar film industries were not very different, in fact Hollywood was the global standard with which to learn from and emulate, even in Germany.[21] However, this thesis will probe the specific conditions of the German film industry that allowed for cinematographers, such as Fritz Arno Wagner and Karl Freund, to push the boundaries of cinema technology and devise new ways of capturing narrative images. Wagner's use of light as action via chiaroscuro lighting and the creation of *Stimmung*, or atmosphere, advanced visual and emotional lighting practices. In addition, Freund's radical unchaining of the camera from its stationary tripod provided new avenues for filmic expression and narrative artistry. This thesis will further explore these claims and extrapolate how the conditions of the Weimar industry contributed to their development.

Extracting the production practices of the Weimar film industry that enabled cinematographic innovation is important because these advancements, specifically those in lighting and camerawork, were globally influential, and their effects are still seen on the big screen today. For instance, famous films such as *Blade Runner* (1982) and its sequel *Blade Runner 2049* (2017) showcase similar chiaroscuro lighting techniques to German silent era cinema, adapted for their science-fiction atmospheres. Furthermore, camera movement is used in abundance in most films, with experimentations in persistent unchained camera movement seen,

[20] Bordwell, David, Janet Staiger, and Kristin Thompson. *The Classical Hollywood Cinema: Film Style & Mode of Production to 1960*. Columbia University Press, 1985, 81.
[21] Saunders, Thomas J. *Hollywood in Berlin: American Cinema and Weimar Germany*. Univ of California Press, 1994, 1.

for example, in *1917* (2019), where the cinematography was constructed to imitate two single moving takes throughout the entire film. Cinematography is a fundamentally vital element of cinema, and both lighting and camera movement are ever present pillars of filmmaking.

Methodology

To answer the complicated and multifaceted question of what enabling conditions in silent era German film production created cinematographic innovations, I have multiple research strategies. First, my study uses a case study methodology to highlight two cinematographers, Wagner and Freund; and two innovative techniques, lighting and camera mobility. By focusing on these individuals, the chosen cinematographic techniques can be investigated within the filmography of each cinematographer, specifically two selected films per cinematographer. Studying the work of individual cinematographers, and their collaborative relationships, is an effective way to examine the greater scope of Weimar production practices. To demonstrate a range of the cinematic areas under the responsibility of the cinematographer I have chosen to highlight lighting and camera movement. These technical areas far from represent everything a cinematographer is responsible for in filmmaking but are two of the most important in both the silent era of film production and today. Some cinematographic techniques of the silent era are no longer relevant to today's filmmaking, such as the use of vignetting masks and tinting, due to the advancement of technology. However, lighting and camera movement are as important today as they have ever been. Additionally, lighting effects and camera movement are cinematographic devices that are not simply technical but have weight and influence over the story itself. Through the investigation of Wagner and his contributions to lighting and Freund and his contributions to camera movement, the working conditions of the industry that supported them can be examined.

The cinematographic techniques of focus for this study must be observed. Thus, the focal points of analysis and centering elements of the project are the four selected Weimar films: *Schatten* (1923), *Nosferatu* (1922), *Der letzte Mann* (1924), and *Variété* (1925). Unlike many film analysis collections, the films I selected for analysis are not based categorically by directors, themes, or actors, but naturally were chosen by their cinematographer, and display of specific cinematographic techniques. Through close analysis of the films' exhibition of these techniques, I can observe and study Weimar cinematographic and technical innovations.

In addition to the films, I will use secondary archival sources that provide evidence of film reception, collaborative spaces, and cinematographic techniques. This can be gleaned from articles, reviews, interviews, and advertisements in film magazines and trade journals from this time period. Looking through these first and secondhand accounts of the cinematographic developments and their resulting public reactions provides valuable information in this study. These glimpses into sources contemporaneous with the films are crucial to understanding them within their context, and to observe how cinematography was viewed in discussion at the time. Furthermore, materials from Germany and Hollywood can be compared. For instance, articles from German journals such as the *Der Kinematograph* counter articles from Hollywood journals such as *American Cinematographer*. I will further use information from scholarly literature regarding Weimar cinema and Hollywood cinema to supplement my arguments.

To restate my research methodology, the films will be the central texts, but as one zooms out from these cinema products, the film industry standards, creative partnerships and collaborations, cultural conditions, historical implications, and technological elements will be unearthed and identified through the combined use of secondary sources from the Weimar era,

and a range of literary scholarship. Additional information comes from visual scholarship, such as documentaries and video essays done by film scholars.

My investigation into Weimar cinematography grounds itself first and foremost with an examination of cinema authorship, and the tendency for scholars and the public alike to attribute authorship of a film to its director, rather than fully recognize the collaborative nature of the medium. I will thus build off my previous introduction of auteurism bias and provide a foundational review regarding film authorship in the next section. It will be an important stepping off point into the heart of this thesis' discussion regarding cinematography and cinematographic techniques within the larger filmmaking industry.

Film Authorship and Collaboration

Cinematography scholar Christopher Beach articulates that "if the field of film studies is to move beyond the de facto auteurist bias that has dominated it for the past half century, film scholars will need to adopt a model in which the intersecting career paths of producers, directors, writers, cinematographers, editors, and art directors yield new insights into the filmmaking process" and thus, abandon the "easier" strategy of looking only at a film's director in analysis.[22] There are in fact greater problematic notions of auteur criticism and scholarship, as scholars Bordwell, Staiger and Thompson describe, "[a]uteur criticism has relied completely upon thematic interpretation, consistently minimizing film form and technique."[23] Naturally, that is especially important to note within this investigation, which focuses on techniques of cinematography. Sellors confirms that the "authorship of a film needs not identify only one

[22] Beach, Christopher John. *Hidden History of Film Style: Cinematographers, Directors and the Collaborative Process*. University of California Press, 2015, 16.
[23] Bordwell, Staiger, and Thompson. *Classical Hollywood Cinema,* 80.

individual... authoring can be a collective action."[24] This brings us to the idea of collective authorship. Beach theorizes a form of collective authorship, by focusing on director-cinematographer relationships to expand the discussion of cinematic aesthetics, developments, and scholarship. The director-cinematographer relationship is an important model, but it is not the only definition of a collectively authored filmic piece. Because film is "a social practice" as well as an artistic mode, it involves more than just an individual author or author-pair.[25] The idea of intent matters when assigning authorship, but collective intentions achieved through the actions of individuals, is still intent. This idea will be important to the collective industry thinking under Weimar's most powerful studio, UFA. Furthermore, Sellors posits that the director is often still the major source of significant authorship on a film, but that does not discount or diminish the crucial components of authorship that were achieved collectively.[26] Because cinema is an undeniably collaborative medium, there are always "varying degrees of joint-authorship in the finished work", and accepting this requires abandoning the auteurist bias in favor of a collective mindset.[27] Yet, as outlined, this attitude is not commonly taken, thus it must be reiterated, that "no one person involved in the production of a film can claim a privileged status as its author," meaning the propensity for directors to be given authorship should be interrogated and phased out.[28] Essentially, auteur theory is a "hegemonic" concept that has proven nearly impossible to hinder, as its lasting "cannibalizing effects" are visible everywhere.[29] This study aims to break into the hegemonic structure and find alternative footing.

[24] Sellors, "Collective Authorship in Film," 268.
[25] Sellors, 269.
[26] Sellors, 270-271.
[27] Sellors, 271.
[28] Beach, *Hidden History of Film Style,* 14.
[29] Auguiste, "Visible Things Unseen," 37.

Collaboration is key in the creation of a film, and the process of collaborating among the ensemble of individuals who work together to make films has clear results, but not always clear substance, to the outside eye. Importantly, working on a film requires "skilled collaboration that enables technical expertise and artistic talent to be fully realized."[30] In Weimar Germany, "creative partnerships" were vital to production success. For instance, because of the "shared agency" in the relationships between directors and cinematographers, "the essence of collaboration is not just quantitative, based on the principle that two people working together may be more productive than the same two people working individually at the same tasks, but also qualitative, about the common standard by which two artists can be assessed, their agencies together."[31] Collaboration makes a shared vision of the final product possible, and to suggest anything else is both irresponsible to the field and blatantly ignores reality. Collaboration integrates all previously mentioned themes for this thesis, as Weimar Germany's instability and uncertainty prompted decisive collaborative environments where "German filmmakers dealt with this uncertainty by closing the ranks of their ensemble art and forging creative partnerships."[32] Films are not possible without the creative work of collaborative teams, because it is from these teams that the "look" and the "definition of style" for every individual film is unified.[33] Essentially, the milieu of Germany's filmmakers was based fundamentally in a culture of collaboration and yielded important circumstances in the creation of cinematographic innovation as a result.

[30] Hodge, "Film Collaboration," 20-21
[31] St. Pierre, *Cinematography in the Weimar Republic,* 10.
[32] St. Pierre, 11.
[33] Elsaesser, *Weimar Cinema and After,* 38.

Thesis Overview

To lay out the structure of the remainder of this thesis, I will lead the reader from my historical background, to my case studies, to a comparison of Weimar and Hollywood industries, and finally to the legacies of Weimar cinematography. In the next chapter, I will describe the historical and cinematic background of the Weimar era and provide foundational context for understanding the individuals, the industry, and the resulting cinematographic innovations. I will then examine the role of cinematographers in Weimar filmmaking in chapters three and four, through analysis of cinematographic techniques. First, I will investigate Fritz Arno Wagner and lighting in chapter three. Next, I will discuss Karl Freund and camera movement in chapter four. In each of these chapters, I highlight two selected films that demonstrate these techniques. I will then, in chapter five, investigate the enabling conditions of the Weimar industry which allowed for these techniques to develop specifically in Weimar, and why Hollywood was different. Finally, I will address the legacies of Weimar cinematography, and the limitations of this study in chapter six.

Chapter 2: The Silent Era – Historical and Cinematic Background

This chapter invites the reader farther into my topic and addresses the important background knowledge needed to understand how Weimar cinematography ties into the greater history of both cinema and Germany. Given the historical significance of the Weimar period, understanding silent era cinema history in relation to Weimar Germany is extremely relevant. I will outline the historical background of early cinema, the Weimar period and lay the foundations of understanding the Weimar film industry.

Early Cinema

The first experiments of the moving image in the 1890s were purely technical, an expansion of still photography into moving photography. It wasn't until the turn of the century that the first boom of the cinema occurred, and these scientific and engineering experiments became a world of attractions and novelty. In its first decade of existence, the cinema commonly took form in something coined the *cinema of attractions*, a term from film scholar Tom Gunning, who noted that this form of entertainment was not about acting or narrative, rather about "the display of the new technology's capabilities."[1] The cinema of attractions was the display of images for the sake of pure novel enjoyment, putting "the cinema itself on display, including the devices of cinematography, offering special effects, electric lighting, and the spectacle of movement as attractions."[2] That means that this first era of cinematic exhibition was centered on cinematography itself, the ability of the camera, its operator, and what the technology could capture. This is important when considering the shift in the early 1910s towards a storytelling

[1] Keating, Patrick, ed. *Cinematography*. Rutgers University Press, 2014, 12.
[2] Keating, *Cinematography*, 7.

and narratively structured style of filmmaking, which would prevail and set in motion the cinema as we know it today.

The cinema as a form of both capturing moving images and displaying them for the masses began at the end of the nineteenth century in part due to the second industrial revolution and occurred in tandem with the large expansion of urbanization across the Western world.[3] Thus, the world of moving images provided new comforts to these new larger urban masses, as well as "community, moral guidance and education as well as entertainment, all at a moderate cost."[4] But the quick transition to cinematic popularity was not met with the same rise in terms of the medium's status as art. In fact, there was much backlash and an outcry of concern from certain areas of the upper-class (often intellectuals, connoisseurs of high-art, and community leaders) regarding what the cinema was doing to social and aesthetic attitudes. In the earliest years, "cinema was perceived as a threat to the health, tastes, and morals of mass audiences as well as a danger to established cultural institutions like the theatre.[5] Additionally, as the urban world expanded and amassed technological and industrial advancements, the nature of cinema as a technological invention encroaching on the artistic realm was further debated, thus explaining why it took especially long for cinema to become accepted as art.[6]

However, as is the case in most cinema history, the disparity between conversations among critics did not align with the populace masses that flocked to the cinema due to its cheap prices and imaginative novelty. Between the period of the cinema's introduction to its rise as an established mass entertainment medium, thriving industry and new art form in the 1920s, these

[3] Saunders, Thomas J. *Hollywood in Berlin: American Cinema and Weimar Germany.* Univ of California Press, 1994, 2.
[4] Saunders, *Hollywood in Berlin*, 2.
[5] Loew, Katharina. *Special Effects and German Silent Film: Techno-Romantic Cinema*. Amsterdam University Press, 2021, 33.
[6] Loew, *Special Effects*, 33.

discussions of social worth, artistic value, and economic opportunity took place around the world. But all the while, the industry grew, and more and more people flocked to theaters. For instance, in Germany, there were approximately 1,000 theaters in 1910, approximately 1,500 in 1912, approximately 2,500 in 1915 and by 1919 there were 2,836 motion picture theaters.[7] Moreover, theater capacity grew as well, so that in 1919 an average of five times as many patrons could be seated in every theater than in 1910.[8] This rapid growth amid uncertain intellectual conversations speaks to the dedication of those intimately involved in the production of cinema, who saw its potential and worked to establish the medium as an art form, not just a technological marvel.

Weimar Germany

The term Weimar Germany is representative of the period of the Weimar Republic, named after the town of Weimar, where the first democratic republic in Germany's history was signed into existence. But the conditions for a fledgling German democracy were wrought in the devastation of total war and sparks of revolution. World War I was a critical catalyst in the path to democracy in Germany. When the end of the war was nearing, the first signs of coming change rang out, as the enlisted soldiers and the masses of everyday people caught onto the lies of the elite authorities in power, namely the "archauthoritarian" Generals Paul von Hindenburg and Erich Ludendorff, and the Kaiser himself.[9] The revolution which led to democracy, in other words the Revolution of 1918-19, was the series of events calling for an immediate end to the war, the removal of the Kaiser and the institution of a republic. The revolution began with the mutiny of enlisted sailors in Kiel, and spread across Germany, culminating in strikes, marches in

[7] Saunders, *Hollywood in Berlin*, 20.
[8] Saunders, 21.
[9] Weitz, Eric D. *Weimar Germany: Promise and Tragedy*. Princeton University Press, 2007, 17.

the streets and protest.[10] Then on the 9th of November, 1918 "with tens of thousands gathering in key public squares in Berlin and many more still marching in the city, Prince Max [von Baden], desperately hoping to maintain order in Germany, handed over the Reich chancellorship to Friedrich Ebert, the head of the SPD [social democrats]" and then from the balcony of the Reichstag building another SPD leader, Philipp Schiedemann proclaimed a German republic.[11] This declaration of democracy would prove immensely important, and while there were important social and political achievements of the era, including freedom of speech, freedom of religion, the right to vote for women, a reasonable work week, social welfare insurance guarantees, there is of course also the infamous instability, uncertainty and violent clashes that more poignantly ushered in the rise of National Socialism and Hitler.[12]

This drastic revolution brought about by mass movements in the streets and in the workplace sparked ensuing protests in almost every industry, and "dramatically broadened the sense of new possibilities and the openness to new forms of culture." [13] It is worth noting that the Weimar era is marked by a unique tension between progress and imagination, and the simultaneous violence, disparity, and hardship, and of course the ever-looming rise of the Nazis. Yet, no "historical event is predetermined", and this study, as well as any other historical look at the Weimar period must remember that.[14] By mid-1919 there was a democratically elected government and a new sense of creative and social freedom, but there were also months of chaos in the streets, some areas were still using food rations from the war, and the recently signed Treaty of Versailles struck deep in the chords of the German hope for the future; overall, the tone

[10] Weitz, *Weimar Germany*, 17-18.
[11] Weitz, 19.
[12] Weitz, 2 & 19.
[13] Weitz, 24.
[14] Weitz, 6

was worrisome. Surprisingly, much of the immediate postwar economic readjustment period went smoothly, the primary reason being inflationary tactics. But as the Weimar Republic era is most defined, there was no consensus about how to return the economy to its devices, and soon the inflation was completely out of control.[15] Intertwined with inflation was reparations, and their results were disastrous, as a rise of poverty, social uncertainty, protests, and unrest followed until the ultimate collapse of the German mark. In October 1922, one dollar was equal to 3,180 marks, and by November 1923, one dollar was equal to "4.2 *trillion* marks."[16] German society was reeling, and it was not until the Dawes Plan in 1924 and the period of stabilization took hold that the so-called 'golden age' of Weimar commenced, in the mid-1920s.[17] Moreover, this period of growth and prosperity came crashing down in the winter of 1929 and 1930 when the Wall Street crisis reached Germany, and it "quickly became a multifaceted political conflict as well as an existential crisis of the Weimar system." [18] These conditions must be noted as the realities of the Weimar era, and that despite these catastrophes of "civil war, hyperinflation, stabilization, depression and political paralysis" the Weimar Republic "fostered the celebration of modernity" and witnessed advances in many forms of art, social reform, gender equality, and the "cultural imaginary." [19] Ultimately, this instability and uncertainty is also relevant as a setting and backdrop conducive for creative collaboration. Across the arts, people "founded collectives, organized councils, and issued manifestos proclaiming the overthrow of everything that was old and stultified."[20] In essence, the revolutionary and politically volatile realities of Weimar created an environment, especially in the capital Berlin, that was suited for ambitious artistic progress.

[15] Weitz, 131-32.
[16] Weitz, 134-35. Italics in original.
[17] Weitz, 143 & 146.
[18] Weitz, 161.
[19] Weitz, Eric D. "Weimar Germany and its Histories." *Central European History* 43, no. 4 (2010): 581-582.
[20] Weitz, *Weimar Germany*, 23.

The Industry Foundations

The conditions and practices of the Weimar film industry and the Hollywood film industry are central to this investigation. Regarding the film industry in Weimar Germany, it cannot be separated from the social, economic, and political setting of the period, which was so inherently unstable.[21] These outside factors, laid out in the previous section, were constant realities that shaped Weimar films and how they were made. However, according to St. Pierre, the "process of constructing films in Germany at this time was radically different from in other major filmmaking nation such as France, Russia, England, and America, all of which were relatively stable politically after World War One."[22] This was due to the "production hierarchy in most filmmaking, [yet] in formative German silent film... this hierarchy was less rank, or class driven, because collaborative partnerships took precedence over authorship."[23] The Hollywood hierarchical model with directors at the apex, was in part due to the propensity of patterns that resemble auteurist thinking. Hollywood was greatly influenced by the growing authority of directors, who began to assert their command over production which had been previously dominated by camera operators – when the industry was still a cinema of attractions rather than based in narrative filmmaking – so when the transition to longer narrative films was becoming standard, directors (and producers) stepped in and triggered the hierarchy of the industry.[24] Although, it is a multi-faceted transition, that involves other factors as well, such as the eventual rise of the studio system and the power from studio heads. St. Pierre has posited that in Germany,

[21] St. Pierre, Paul Matthew. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles and the Men Who Shot Them.* Farleigh Dickinson University Press, 2016, 10.
[22] St. Pierre, *Cinematography in the Weimar Republic*, 10.
[23] St. Pierre, 2.
[24] Beach, Christopher John. *Hidden History of Film Style: Cinematographers, Directors and the Collaborative Process.* University of California Press, 2015, 22.

there was a greater understanding of the collective nature of filmmaking.[25] In other words, German filmmakers and the German industry possessed "a collective discipline which accounts for the unity of narrative as well as for the perfect integration of lights, settings, and actors," and these "unique values... exerted world-wide influence."[26] There's no question that Hollywood was the bigger, more powerful entity during the 1920s and beyond, but Weimar cinema was innovative and powerful in its own right.[27] What will be important for this study is that German filmmakers existed in this industry that was aware of the Hollywood dominance but were equally as determined to advance their own national cinema with high quality films achieved through industry-wide collaboration.

In the next chapter I will introduce the cinematographic element of lighting. I will outline the concept of *light as action*, and the role of cinematographer Fritz Arno Wagner in contributing to the uniquely German style of lighting and atmosphere onscreen. Wagner's role as an adaptive collaborator further demonstrates the precedent of German cinematographers within the tight-knit milieu of Weimar filmmaking that has left its marks on film history.

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[25] St. Pierre, *Cinematography in the Weimar Republic*, 14.
[26] Kracauer, Siegfried. *From Caligari to Hitler: A Psychological History of the German Film.* Princeton University Press, 2019 Princeton Classics edition, original, 1947, 3-4.
[27] Elsaesser, Thomas. *Weimar Cinema and After: Germany's Historical Imaginary*. London: Routledge, 2000, 7.

Chapter 3: *Light as Action* – Fritz Arno Wagner and the Art of Lighting

As the film industry took shape in Germany, one cinematic device that was of keen interest to cinematographers, directors, writers, set designers, critics and audiences alike was the use of lighting. Although Weimar filmmakers were not the first to explore the lighting techniques that would come to define their national cinema, they made them their own. I argue that the use of chiaroscuro lighting and a visual mastery of light and shadow rendered by German cinematographer Fritz Arno Wagner demonstrates how *light as action* and the creation of *Stimmung* represent the innovative approach to lighting that took hold across the industry during the early Weimar years. Wagner is a renowned cinematographer, with important collaborations with many of Germany's top tier directors. He is known for his use of light to deepen narrative, thematic, tonal, and atmospheric quality, which makes him a valuable case study. His work on *Schatten* (1923) directed by Arthur Robinson and *Nosferatu* (1922) directed by F.W. Murnau serves as key evidence from the early Weimar period, in which these important lighting techniques were developed. Looking specifically at Wagner and a sample of his works for analysis displays the techniques clearly structured within the functions they offer to each film, and they represent the important greater Weimar lighting trends: chiaroscuro lighting and light as action.

Lighting is an inherent piece of cinema and is the art and responsibility of cinematographers. Cinematography has in fact been called "painting with light," and this notion was first taking shape during the 1920s.[1] In Weimar Germany, the importance of lighting was understood and remained an explicit focus in filmmaking. Light is even built into the language

[1] Alton, John, John Bailey, and Todd McCarthy. *Painting with Light*. Berkeley: University of California Press, 2013.

and foundation of the cinema. For example, the German word for photograph at this time was *Lichtbild*, literally meaning 'light image.' An article in *Der Kinematograph* from 1922 titled, "*Das Licht als Tat!*" (The Light as Action), describes how light in the cinema is used so powerfully. Correspondent Willy Schlüter writes, "but it is in the cinema that light performs its finest, most elastic, most true-to-life action."[2] This notion of *light as action* speaks to the attitudes of German cinematographers and other filmmakers in their intentional integration of technical cinematographic elements, in this case lighting, into the fabric of the stories on screen. At a time when electric light was a sign of ever progressing modernity, cinematic lighting was recognized as culturally significant, a powerful storytelling tool, and technologically expressive. Overall, Germany's explorations of light in film have remained a trademark of the Weimar era, especially used in horror, fantasy and melodrama. Lotte Eisner cites the idea of "*lichtspiele*" (light-play or light-games) as an encompassing trait of the Weimar film industry, where films were playing with light in storytelling.[3] Lighting techniques are thus an incredibly important innovative element of the work of German cinematographers.

In the next section I will discuss German chiaroscuro lighting as a key feature of Weimar cinematography. Then I will then zoom in on Fritz Arno Wagner as an exemplar of a Weimar cinematographer who innovated the chiaroscuro lighting technique in this period. After that, I will analyze *Schatten* as a relevant case for foregrounding Wagner's innovative approach to lighting. I will then discuss *Nosferatu* which further establishes Wagner's use of light in advancing narrative and visual storytelling. To conclude, I demonstrate how the use of light as

[2] Schlüter, Willy. "Das Licht Als Tat!" *Der Kinematograph* 806, no. 7 (August 6, 1922): 58–59. In original German: "*Am feinsten, elastischen, lebenstreusten aber vollbringt das Licht im Kino ein unerschöpfliches Tatbewegen"*

[3] Eisner, Lotte H. *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt.* University of California Press, 1969, original, 1955, 186.

action in the chiaroscuro style exemplifies a uniquely German film style which would go on to influence national cinemas across the world.

German Chiaroscuro Lighting

As discussed in the introduction chapter, this thesis rejects the blanket term of German Expressionism and takes instead an approach that acknowledges the nuances of Weimar filmmaking beyond Expressionist ideas. As German film scholar Thomas Elsaesser points out, Weimar films can be described as innovative, modernist, and avant-garde, but should not be identified so strongly with Expressionism.[4] Moreover, he argues that "no single stylistic label could hope to cover the many innovative ideas about film décor, the distinctive mise-en-scène of light and shadow, or the technical advances in cinematography usually attributed to Weimar filmmakers."[5] Hence, the notion that stylistic similarities, rather than complete congruity, arose at this time is a more accurate and plausible argument. Elsaesser notes that if there is to be a label of "stylistic unity" during the 1920s in Germany, it is owed "mainly to the stable personnel in key positions, notably the writers, cameramen, (male) actors, art directors and set designers."[6]

One important contributing factor as to why so many German films were labeled Expressionistic is the stark effects of chiaroscuro lighting. Chiaroscuro lighting – which originates from other media such as paintings and stage lighting – is high-contrast, low-key lighting that creates impressive contrast between the foreground, usually occupied by objects or characters, and a dark, shadowy background. The word chiaroscuro comes from Italian, combining *chiaro* meaning 'clear, bight' and *scuro* meaning 'dark, obscure.'[7] In German, the

[4] Elsaesser, *Weimar Cinema and After*, 3.
[5] Elsaesser, 3.
[6] Elsaesser, 234.
[7] "Chiaroscuro." *Oxford English Dictionary*. Accessed February 10, 2024.

term for chiaroscuro is *helldunkel*, and matches the Italian linguistic pattern where *hell* means 'light, bright, clear' and *dunkel* means 'dark, obscure.'[8] Many German cinematographers of this time utilized *helldunkel* lighting, but this cinematic technique was not created by the Germans. As with most technological areas, the United States led in terms of implementing new technological devices and tools. Such is the case for the use of electric light in cinema. It wasn't until after WWI that German studios finally brought in electric lights, whereas in America, the shift had already occurred several years prior.[9] So, while Germany was years behind in introducing electric lights, and many techniques of their use (such as high-contrast lighting) had been explored already by the U.S. and other nations, it did not stop a resolve among filmmakers to experiment, innovate, and search for more possibilities within the context of their own national cinema. Film scholar Frances Guerin comments on the fact that the innovation of German cinematographers and other filmmakers was less focused on "the development of the technological apparatuses themselves… [rather] more consistent were the particularly innovative uses to which the available technology, such as that needed for lighting, was put." [10] As a result, Weimar cinema is known for its lighting effects, particularly the dramatic use of chiaroscuro lighting throughout the 1920s.

One functional effect of this high-contrast, low-key lighting is the creation of *Stimmung*, which translates as 'mood' or 'atmosphere.' Many Weimar films are said to display this somewhat elusive effect of Stimmung, where on screen objects, people and scenes are imbued with a deep sense of soul – of atmosphere. While it certainly does not extend to every Weimar film, Stimmung remains an important quality of light and mise-en-scène. Eisner links Stimmung

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[8] "Helldunkel." *Duden*. Accessed February 6, 2024.
[9] Guerin, Frances Jane. *In a Culture of Light: Cinema and Technology in 1920s Germany*. New York University, 2000, 10.
[10] Guerin, *Culture of Light*, 10.

directly with "the use of light," describing that it "is most often diffused by a 'veiled' melancholy landscape, or by an interior in which the etiolated glow of a hanging lamp, an oil lamp, a chandelier, or even a sunbeam shining through a window, creates penumbra."[11] Elsaesser elaborates, claiming that the style of lighting developed by German cinematographers "lends the image the ability to attract the spectator's desire for touch, a desire frustrated not only in the literal sense, but also metaphorically," where this lighting creates an "essence."[12] Stimmung is thus inherently linked to the chiaroscuro style of lighting, and in turn the creation of Stimmung is also the mark of the unique uses of chiaroscuro lighting advanced by German cinematographers. One cinematographer renowned for his masterful lighting imbued with Stimmung on many films is Fritz Arno Wagner.

Fritz Arno Wagner

Wagner started his career as a newsreel cameraman, then as a stills photographer for the film industry, then a second cameraman, and finally worked his way to the primary camera and cinematographer.[13] During the Weimar years, he made over forty films, and became one of the highest acclaimed German cinematographers, especially remembered for his skill and creativity in lighting. He also formed strong working relationships with several of Germany's famous directors, including Fritz Lang, F.W. Murnau, G.W. Pabst, and Arthur Robinson.[14] Wagner was a secure member of the "stable personnel" working during the 1920s, and his contributions are many.[15] One of his important credits, with impressive and innovative lighting on display is the 1923 film, *Schatten*, directed by American-born but German-raised Arthur Robinson.

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[11] Eisner, *The Haunted Screen*, 199-200.
[12] Elsaesser, *Weimar Cinema and After*, 251.
[13] St. Pierre, Paul Matthew. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles and the Men Who Shot Them*. Farleigh Dickinson University Press, 2016, 104.
[14] St. Pierre, *Cinematography in the Weimar Republic,* 103.
[15] Elsaesser, *Weimar Cinema and After*, 234.

Schatten: Eine nächtliche Halluzination (1923)

Schatten: Eine nächtliche Halluzination, literally translated as *Shadows: A Nocturnal Hallucination,* though known as *Warning Shadows* in English, is one of the few silent era films that is entirely void of intertitles. In other words, there were no title cards with narrative or dialogue text throughout the film. This was a deliberate choice by the collaborative production team – mainly Robinson, Wagner, and the writer/set designer Albin Grau – as they wanted to create a film whose story spoke entirely for itself, the visuals would be all that was needed. Robinson, Wagner, and Grau represent the core creative team responsible for this film. Their idea for a film without intertitles came from the concept of *Kammerspielfilme*, or 'chamber play films,' an approach to filmmaking adapted from Max Reinhardt's *Kammerspiel* theater productions, that focus on character psychology, sparse set design and an emphasis on visuals.[16] Thus, *Kammerspiel* films are characterized by confined interiors, significant but simple settings, and a lack of intertitles.[17] Wagner himself called intertitles, "boring subtitles which interrupt, if they do not wholly destroy, the pictorial continuity" and stated that *Schatten* was made to "avoid this dilemma."[18] The story is an allegorical exploration of a wealthy man (played by Fritz Kortner), his wife (played by Ruth Weyher), and their five guests for the night: three travelling men, one youth (played by Gustav von Wangenheim) and one entertainer off the street who tricks his way into the house (played by Alexander Granach). The story is a period piece, meant to take place in the early 1800s. Central to the plot is the jealousy of the wealthy man and his perceptions that the travelers and the young man are going to seduce and steal his wife. The entertainer enters the fray as both catalyst and mystical string puller; he puts on a shadow play

16 Eisner, *The Haunted Screen*, 177.
17 St. Pierre, *Cinematography in the Weimar Republic,* 113.
18 Fritz Arno Wagner, "I Believe in the Sound Film," trans. A. L. H. Moore and S. P. Larcombe, Film Art 8.111 (1936), 11.

which he soon magically morphs into a hallucinatory shadow realm, essentially following a 'what-if' storyline with the characters. In this alternate realm, the host, with his heated jealousy, forces the other men to murder his wife, and they then force him out of a window, and he falls to his death. Always at the center of each piece of the plot are the relationships between the characters, their shadows, and the illusions produced by shadow. This storyline, in addition to the production itself, rely on cinematography and the creation of shadow through deliberate use of light and camera craft. This lighting creates a sense of foreboding, distortion and haunting that dominate the narrative.

The opening credits invite the audience into the world of shadow-play, as each character is introduced in turn as both a real person and shadow silhouette, cut together with special effects. The call of characters is directed by the wiping actions of a pair of giant shadow hands, which wipe away one character and usher on the next (Figure 1). This sequence demonstrates the use of "trick photography" or what would today be referred to as special effects.[19]

[19] Loew, Katharina. *Special Effects and German Silent Film: Techno-Romantic Cinema.* Amsterdam University Press, 2021, 24.

Figure 1: *Schatten* Opening Credits

The shadow of the man, and the swiping motion of the directing hands, which with information from later in the film, can be inferred to be those of the entertainer who puts on the shadow play.

The use of special effects was common practice in German films during this time, they were one of the "uniquely cinematic devices" suited for experimentation and innovation to push the progression of the form and culture forward.[20] In this sequence, the effects are realized by using both trick photography (and editing) as well as practically achieved lighting techniques. This effect is the first Wagner utilizes to draw the spectators into a story defined and told through light and shadow.

With the heart of the plot being the rising jealousy of the husband, and specifically his perception of events involving his wife and the youth, this allows for the use of shadows to dictate the feelings of the characters, and the audience. The use of shadows links the story with his mood and the sense of foreboding and warning as the stakes rise – in fact, Eisner notes the use of shadows in many Weimar films is linked to these effects, giving audience members a sense of impending threat.[21] The first scene in the film where shadows present an unreliable

[20] Loew, *Special Effects*, 25.
[21] Eisner, *The Haunted Screen*, 133.

reflection of reality takes place even before the entertainer/shadow-artist enters the house – which adds to the complexity of the narrative and overall uncertainty growing within the audience. The man appears to see his wife being fondled by the three traveling men through a curtain, which is backlit so that their shadows shine through (Figure 2). The audience is aware that the men are not touching the woman, but rather making gestures in her vicinity.

Figure 2: Duped by the Shadows

The first instance of shadows that distort reality for the man. Here the audience is aware of the trick, but the main characters are not. This incident sends the man into his state of jealousy and anger that will propel the plot of *Schatten*.

The interplay between light and darkness is also explored. For instance, when the group of characters sit down for dinner, the light dramatically shifts from a high-key brightness to a low-key single source lighting – appearing as if the candelabra on the table is the only source of light. This shift makes the audience aware of the long shadows now cast along the far wall, and the ominous nature of this meal. Later in the film when the characters are magically sent into the alternate realm, the man descends into a fit of insanity and anger, Wagner uses chiaroscuro lighting to stress the character's state of mind. For instance, after the man's wife is killed (in the shadow realm), he goes through stages of anger and confusion. Wagner captures his face in a medium shot, where the left side of his face is thrown into darkness and the right is lit from below with an ominous glow (Figure 3).

Figure 3: Turmoil and Confusion

The conveyance of the man's confusion and anger are aided using contrasting lighting across his face.

In contrast to the darkness around the man, his wife is nearly always well-lit and in fact shrouded in light. For example, with the use of a mirror shot – which has a long history, significance, and status as an object of experimentation in Weimar filmmaking – the woman appears glowing at the end of a dark hallway, she is a beacon for the youth to reach. In this way the woman, and her beauty, are associated with the glow of light, whereas her husband is cloaked in ominous contrast and an overwhelming darkness. This contrast between light and dark associated with women and men, good and evil are not unique to this film nor Weimar cinema. Yet, the narrative built around shadows makes *Schatten* – as the core collaborative group of artists: Robinson, Wagner and Grau, intended – visually and narratively individual. Where exposition may have been conveyed with the use of intertitles, lighting and shadows explicitly informs audiences of the important emotional beats and characterizations.

Wagner frequently uses wider shot types, such as long shots, which display more of the interiors and the entirety of characters despite movement within the frame. This use of long shots means that the lighting of physical spaces is often on a large scale – the atmosphere of a room is determined by the way the lighting interacts with the entire space. The illumination of these areas has similar value in imbuing the visuals with narratively important information, as well as an

impression of Stimmung that confirms thematic tones. The sense of foreboding and rising tension associated with the man's character is present even in the spaces he occupies. For instance, when he enters his library holding a candle, the room's verticality and ominous nature is emphasized through the moving candlelight and his large looming shadow (Figure 4).

Figure 4: Candle-lit Stimmung

Since Wagner uses a long shot to capture the space and the movement of the man, the interacting candlelight and shadow conveys a mood of anxiety and lurking danger that matches the plot and tone of the character.

This Stimmung is perhaps less defined than in other films, but without the use of lighting to add layers to the long shot interiors, each space would lack a feeling of shading and depth. At the time of the film's release, German critics primarily recognized the lack of intertitles and the impressive lighting effects, praising both as innovative and successful. From an article citing various press reviews of the film in *Der Kinematograph*, one critic for the *Berliner Lokal-Anzieger* writes that the film has "wonderful lighting effects, excellently photographed by Fritz Arno Wagner, [that] force you into the creepy atmosphere from which the fantastic material must be recreated."[22] Another critic from the magazine *Lichtbildbühne* notes that "the type of lighting

[22] "Was Die Presse Über Den Film Schatten Sagt:" *Der Kinematograph*, 870 (October 1923): 12–13. In original German: "Wundervolle Lichteffekte, von Fritzarno Wagner ausgezeichnet photografiert, zwingen in die gruselige Stimmung, aus der heraus der phantastische Stoff nachempfunden werden muss."

is always fantastic; sometimes spooky and sometimes of ingratiating warmth, enchanting people and things… the unforgettable overall impression of this groundbreaking work of art, a new German film style."[23] These reviews highlight the lighting and its pivotal role in the fantastical nature of the narrative and creation of an appropriate atmosphere.

Figure 5: *Schatten* Promotional Image

An advertisement for *Schatten*, presented in *Der Kinematograph* from July 1923, page 34. "Ein Film Ohne Titel" refers to the lack of intertitles, and the drawing itself points to the shadowy narrative.

At the end of the narrative, when the youth, the traveling men and the entertainer have left, the woman and her husband – who has a newfound appreciation for her – are alone in the dark dining room. A servant opens the curtains, letting the shining light of daylight enter the space (Figure 6). This rush of "sober natural lighting" signals both the extinguishment of the night's darkness, as well as the "metamorphosis" of the characters away from the shadow realm

[23] "Was Die Presse Über Den Film Schatten Sagt," 12-13. In original German: "Die Art der Beleuchtung immer phantastisch; gespenstisch bald und bald von einschmeichelnder Wärme, Menschen und Dinge verzuaubernd… den unvergesslichen Gesammteindruck dieses bahnbrechen den Kunstwerkes, eines neuen deutschen Filmstils."

and into "the light of reason."[24] This moment is further significant due to the final break from chiaroscuro lighting which Wagner has used to dominate the visual palette, to the final scene where natural, high-key lighting washes over the audience with the same sobering effect as it has on the characters. Overall, *Schatten's* narrative is strengthened, and ultimately dependent, on Wagner's low-key lighting and the resulting ominous Stimmung. Without the conscious effort between Wagner, Robinson and Grau to construct a visually powerful film without intertitles, Wagner's use of lighting would not have had the same impressive effects, and the new German film style proposed by the *Lichtbildbühne* critic – a German style of cinematic lighting focused on *helldunkel* and Stimmung – may not have come to prominence at such an early time in the 1920s.

Figure 6: Daylight Floods In

The shadowy nightmare is finally over, with the arrival of daylight shining in. The lighting shifts from low-key to high-key, covering the entire space.

Nosferatu: Eine Symphonie des Grauens (1922)

A year before *Schatten* was released, Wagner was working as the cinematographer on an incredibly important film: *Nosferatu: Eine Symphonie des Grauens*, or *Nosferatu: A Symphony*

[24] Kracauer, Siegfried. *From Caligari to Hitler: A Psychological History of the German Film*. Princeton University Press, 2019 Princeton Classics edition, original, 1947, 114.

of Horror, directed by F.W. Murnau. Unlike *Schatten*, which is a relatively understudied and overlooked Weimar film, *Nosferatu* is one of the most famous and remembered films from the canon of silent era German filmmaking. In fact, the film's legacy as a foundational horror movie led to a 1979 German remake, directed by Werner Herzog (cinematography by Jörg Schmidt-Reitwein) and an anticipated 2024 Hollywood remake directed by Robert Eggers (cinematography by Jarin Blaschke). The merits of *Nosferatu* have also generated a significant amount of scholarship relating to its importance and success. What is most often discussed however, is the way in which the film launched F.W. Murnau's career and launched the horror genre to new creative planes.[25] Cinematographically, the film is most often praised for the use of on-location shooting[26], novel camera angles and onscreen movement to communicate fear[27], different cranking speeds[28], and shadow to convey horror.[29] So, while the lighting is recognized in relation to the creation of shadow, it is rarely the considered focus over other cinematographic elements such as camera angles and cranking speeds. *Nosferatu* is, unfortunately, a film that is commonly crowned as a prime sample of German Expressionism. And while it is fair to assess the film as congruent with dark thematic content, visual darkness, stark angles, and emotional turmoil – those traits should not define the film completely or assign it to the term of Expressionism. Instead, looking at the film's innovative cinematography, I will assess Wagner's use of light to transmit story information and suggested horror – the tantalizing effects that

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[25] Eisner, *The Haunted Screen*, 98-104.

[26] St. Pierre, *Cinematography in the Weimar Republic,* 107.

[27] Eisner, *The Haunted Screen*, 104; St. Pierre, *Cinematography in the Weimar Republic,* 110.

[28] Salt, Barry. *Film Style and Technology: History and Analysis*. Starword, 1992, 204. Some consider the difference in cranking speeds to be an unintentional effect since Fritz Arno Wagner and Günter Krampf (uncredited) shot different portions of the film.

[29] St. Pierre, *Cinematography in the Weimar Republic,* 111; Eisner, *The Haunted Screen*, 113.

display the suggestion, impression, and implication of violence, danger, and fear – rather than wholly attribute aesthetics up to Expressionism.

Nosferatu is an unofficial adaptation of Bram Stoker's *Dracula* (1897), transplanting the concept to a German setting, with German characters and meant for German audiences. The film is set in Wisborg (a fictionalization of the German city Wismar) in 1839 and follows Hutter (played by Gustav von Wangenheim – the same actor who played the youth in *Schatten*), an estate agent assistant who is sent to Transylvania to visit an ominous Count Orlok (also the vampire Nosferatu, played by Max Schreck) who is looking to buy a house in Wisborg. Hutter journeys to Orlok's isolated castle. His visit grows stranger and stranger as he is plagued by visions of Orlok overtaking him and being engulfed in his shadow. Frightened, Hutter finally investigates, and discovers Orlok asleep, apparently dead, in a coffin during the day. Hutter no longer thinks what he's experiencing have been visions, but reality. He sees Orlok leave with many coffins filled with dirt – Orlok himself inside one of these coffins – and Hutter knows he must escape and return to his wife Ellen. Orlok, more accurately, Nosferatu, with his many dirt-filled coffins is loaded onto a ship bound for Wisborg. What follows is intercutting between the journey of the ship, Ellen's distress at Hutter's absence, Hutter waking up in a hospital, and the rise of Black Plague in the wake of Nosferatu's death ship. What is thought to be Plague is naturally associated and connected with Nosferatu, and his travels towards Wisborg. Hutter returns to Wisborg, just as Nosferatu's ship arrives, and Nosferatu sneaks off to the empty house across from Hutter's, which Hutter sold to him. As the Plague overwhelms the city, Hutter tries to keep Ellen safe. Ellen has visions of Nosferatu, and he seeks her out, leading to his downfall – as the innocent maiden who sacrifices her blood brings about the fall of the vampire – he is exposed to the sunlight of breaking dawn and poofs away just as he is sucking the life from

Ellen. But Ellen survives, the Plague vanishes, the estate agent Knock (played by Alexander Granach – the entertainer from *Schatten*) – who had been put under a spell of devotion to Nosferatu is freed – and Hutter embraces Ellen. As the intertitles tell the audience, the "triumphant rays of the living sun" have warded off the dangerous creature.[30]

The film's set design and costumes were completed by Albin Grau, who worked intimately on *Schatten*, exemplifying the tight-knit sphere of professionals at this time. Additional personnel overlap includes actors Alexander Granach and Gustav von Wangenheim, and producer Enrico Dieckmann. More importantly, the film exemplifies an overlap of Wagner's lighting techniques with *Schatten*, though of course *Nosferatu*'s effects were filmed first. While chiaroscuro lighting is still used in *Nosferatu*, the frequency and jarring effects are less pronounced than in *Schatten*. Rather, Wagner uses lighting more sparingly, in part due to the presence of intertitles. For example, the use of explicit writing in intertitles serves as exposition and foreshadowing, as with Knock's titled dialogue to Hutter: "Off with you! Have a good trip, my young friend… to the land of *phantom.*"[31] Another important example is the intertitles from the novel Hutter is reading about vampires, which warn readers: "Beware that his *shadow* does not *engulf* you like a daemonic nightmare."[32] Yet, the uses of light as action, contrasted frames, and stark shadowed silhouettes display the strength of Wagner's range with lighting and his ability to transmit story information through lighting, even with the presence of expository intertitles.

At the beginning of the film, the interiors and exteriors are shot with high-key lighting, matching the happy and carefree initial tone; Hutter and Ellen are in love, and all is well. As the

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[30] *Nosferatu: Eine Symphonie des Grauen*s. Germany: Prana Film, 1922. Intertitle in English.
[31] *Nosferatu*. Germany: Prana Film, 1922. Intertitle in English; emphasis added.
[32] *Nosferatu*. Germany: Prana Film, 1922. Intertitle in English; emphasis added.

narrative progresses, the tension grows, and fear begins to rise. Due to the use of location-shooting in *Nosferatu*, a novel idea at the time, Wagner's use of natural lighting aids the creation of contrast. For instance, the introduction to Orlok at his castle shows his approach, in a long shot, under natural lighting that is framed by an archway in the foreground that is dark and shadowy (Figure 7). Wagner weaves the use of shot type with natural lighting, and the framing of a dark structure in the foreground to contrast the natural light. This effect is essentially a chiaroscuro symmetry with the use of space, setting, and natural light.

Figure 7: Natural Light and Foreground Shadow

Wagner demonstrates the use of framing spaces and characters with the available natural light to emphasize scale, contrast, and gloom.

The use of combining cinematographic techniques to highlight light is another strength of Wagner's. He repeats the technique of using archways and other structures in the foreground, always in shadow, to contrast a natural lit background throughout the film. The effect is aided by movement within the frame, where a stationary camera captures the movement of the characters between lit and unlit spaces to represent the shifting dynamics and narrative subtext. For example, Hutter must leave the shadow beneath the archway to approach Orlok: he enters the natural light – which is tinted blue to signify darkness of night – and then must again leave for

the wider and greater darkness beyond to follow Orlok into the depths of the castle. The use of light may be static and from a natural source, but Wagner's artistry and understanding of craft allows him to manipulate light for the benefit of action and plot development. Moreover, since this film uses so much on-location shooting, the difference between night and day is delineated using tinting: blue for night, and yellow for day. Tinting was very commonly used at this time, and especially to denote night and day, interiors and exteriors, and other stark and obvious differences. However, Wagner makes use of natural light in different ways depending on whether it is night or day in the story. This technique of contrast can be seen later in the film when Nosferatu's death ship nears Wisborg. In a classic instance of extreme low camera angles portraying Nosferatu, to highlight his grotesque and ominous features, Wagner uses high-angle natural lighting across Nosferatu's face but contrasts the light of the sky above with the darkness of the foreground structure (a square shape of the hold of the ship) which frames the vampire.

The most important tone in the film is a tone of fear, horror, and death. In fact, these qualities of the film were what critics praised most: "The film is like a nightmare for the senses and envelops the viewer in its fantasy… underscore[ing] the horror of the action with atmospheric images."[33] These are emotional goals of the visual images, and the ways Wagner uses light to achieve this horror and atmosphere is key. During one of the most explicitly frightening scenes in the film, Nosferatu approaches Hutter in his castle guest room, entering the room menacingly, seeming as though he's going to attack. While Hutter cowers in fear on the bed, the lanky frame of Nosferatu stands in the doorway, backlit to illuminate his shape, he glows bright (Figure 8). This backlighting serves both to cast a long, dangerous shadow onto

[33] Brauner, Ludwig. "Berliner Filmneuheiten. Uraufführungen." *Der Kinematograph*, 785 (March 5, 1922), 46. In original German: "Der Film legt sich wie ein Alp auf die Sinne und spinnt den Zuschauer in seine Phantastik in… der das Grauen des Geschehens durch Stimmungsvolle [Bilder]."

Hutter, but also aids in the creation of an impressive Stimmung of horror. The castle is a place of danger and ghostly shadows, and the lighting now confirms this. One correspondent, in an article promoting the film for regional premieres after its Berlin release, called the film an "outpouring of inner impression," and where the viewer is "suggestively captured" by the acting and Wagner's photography that "emphasizes the macabre tone of the film."[34]

Figure 8: Stimmung of Horror

The nightmarish figure of Nosferatu approaches Hutter in his room, the glow behind him, and the framing of his imminent proximity create a Stimmung of fear and horror. The monster gleans and approaches slowly.

As Hutter shuts his eyes in terror, the clawed shadow silhouette of Nosferatu creeps up his body and engulfs him, as was forewarned in intertitles previously in the film (Figure 9). The power of the silhouette in evoking dread and terror displays the suggestive power of Wagner's lighting. Hutter is in no danger, objectively, from a shadow, but the cinematography communicates to audiences the sinister nature of the shadow, and danger therein. This scene is then intercut with Ellen's distress at envisioning Hutter in trouble, and the shadow which has

[34] "Bezirks-Uraufführungen Im Reich." *Der Kinematograph*, 7, 806 (August 6, 1922): 123–26. In original German: "…einen Ausfluß innerlicher Beeindruckung… suggestiv erfaßten… unterstriecht den macabren Gesamtton des Werkes."

risen over him retracts and Nosferatu leaves, we can infer that Nosferatu now wants to go after Ellen. This inciting incident is marked by the lighting and shadow work of Wagner.

Figure 9: Engulfed by Shadow

The monstrous silhouette of Nosferatu shows the power of lighting in creating suggestive horror.

So, while Wagner's use of chiaroscuro is less pronounced, the Stimmung of macabre horror is intact. The technique of light as action can be as simple as drawing deliberate attention to light and darkness. For instance, as the Plague terrorizes the town, a man lights an oil streetlamp, illuminating the nearly completely dark street with the glow of a flickering lamp (Figure 10).

Figure 10: Lighting of Fear

The man lighting the oil lamp removes the darkness, but shadows lurk all around him, and the feeling of fear, and atmosphere of danger is deepened.

This is yet another clear example of Stimmung created through an action-based light source and provides additional story information. In this case, showing the audience that it is now night, and signaling by way of the language of lighting that more sinister things are about to happen. This supposition is confirmed by the next intertitle, which reads: "Fear lurked in every corner of the town. Who was still healthy? Who was sick?"[35] The more overt use of Nosferatu's silhouette returns in the most famous shot of the film, where Nosferatu's shadow glides up the stairs to Ellen's room: the framing is perfect to show his ominous silhouette and the bars of the stairway railing thrown in relief on the wall (Figure 11).

[35] *Nosferatu: Eine Symphonie des Grauens.* Germany: Prana Film, 1922. Intertitle in English.

Figure 11: Nosferatu's Shadow

As the visuals and intertitles have alluded to, the shadow of the vampire is just as dangerous as the being himself, if not the core of his danger. This twists the narrative with the use of light and shadow, so that they are utterly reliant on each other.

The climax of the film then follows, as the suggestive horror returns when his silhouette sweeps over Ellen, his claw-like hand rises across her body, and closes around her heart. Ellen reacts in this instant, as she would were there a physical hand clutching inside her chest, showing further the shadow is not just a phantom, or suggested horror, but the true danger itself. In what is likely a precursory influential ending to *Schatten*, *Nosferatu's* final scene displays the arrival of day and daylight, repelling the darkness, danger, and dread. Sunlight shines over the building out the window, and comes to rest on Nosferatu, killing him. Using trick photography, he fades away (Figure 12). Again, light is the savior, and Wagner's lighting conveys this climactic ending clearly and with impressive innovation of moving light, backlighting, and double exposure special effects.

Figure 12: Death by Sunlight

The horror is over, Nosferatu's deathly reign comes to an end by the hands of the rising sun. The use of lighting on the buildings in the background, and the light shining through the window onto Nosferatu are both important action-based lighting techniques.

Overall, Wagner's use of lighting demonstrates an example of the early development of chiaroscuro lighting within a narrative defined by darkness, of both theme and visual style, the strength of contrasting light and shadow for the advancement of characterization, and the power of suggestive horror by use of silhouettes and light as action. *Nosferatu* is a foundational Weimar film, for advancing the careers of Murnau and Wagner, elevating Wagner's status as a cinematographer strong in craft and artistry, and in demonstrating signs of Wagner's mastery of light and shadow, which he goes on to dominate throughout the Weimar period.

In the next chapter I will shift from lighting to camera movement, and the new possibilities which arose from the experimentations and innovations in mobile camera work. The freedom of the unchained camera allowed for new viewing experiences, including the functions of camera movement provided by the work of cinematographer Karl Freund. I will examine Freund's efforts to experiment with unchained movement and create stronger narrative effects, through orienting viewers, deepening expressivity, creating narrative rhythm, and exploring

embodiment of the camera. Freund's role in freeing the camera from its stationary prison makes his work critical and impressive in the entire picture of Weimar cinema.

Chapter 4: *Die Entfesselte Kamera* – Karl Freund and Camera Movement

In addition to the importance of innovative lighting, one of the most influential cinematographic techniques to come out of the Weimar era is the moving camera. From the outset of cinema history, the camera was the central piece. Literally, the technology of the camera is what catapulted the medium of film into being, and thus the progression of the camera's form, functions and capabilities are pivotal in cinematography. I argue that freeing the camera from the confines of the stationary tripod created a new, dynamic, and immersive viewing experience – one that provided the audience with multiple perspectives, transported the audience into the world of the story, and imbued the narrative with more expressive qualities. These effects can be seen in two key Weimar films shot by cinematographer Karl Freund, *Der letzte Mann* (1924) directed by F.W. Murnau, and *Variété* (1925) directed by E.A. Dupont. Freund's work in pioneering drastic, extensive, and innovative camera mobility in *Der letzte Mann* has cemented his name in the world of Cinema Studies, where he is known for 'unchaining' the stationary camera and ushering in the full potential of a moving camera.[1] Though there are also many scholarly works that discuss the unchained camera, they commonly fail to adequately recognize the role of Freund, or any cinematographer, and the extent of advancing cinematographic procedure and practice.[2] Freund's work hence demands analysis, and proper recognition for the importance of cinematography, and the role of cinematographers, in advancing film's possibilities. Moreover, like lighting, camera movement is a steadfast principle of filmmaking to this day, making the origins in the 1920s relevant and foundational to the

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1 St. Pierre, Paul Matthew. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles and the Men Who Shot Them*. Farleigh Dickinson University Press, 2016.; Elsaesser, Thomas. *Weimar Cinema and After: Germany's Historical Imaginary.* London: Routledge, 2000.

2 Eisner, Lotte H. *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt*. University of California Press, 1969, original, 1955.; Müller, Sabine. "Embodied Cognition and Camera Mobility in FW Murnau's The Last Laugh and Fritz Lang's M." *Paragraph 37*, no. 1 (2014): 32-46.

ongoing cinematographic innovation. Freund's contributions to camera movement, in particular some of the first explorations of how it can provide new experiences, perspectives, and functions for storytelling and audiences, establish important pieces of the culture of Weimar cinematographic innovation overall. The selected films, *Der letzte Mann* and *Variété*, not only display the unchained camera in varying degrees and with different effects, but also represent two films of varying lasting success. *Der letzte Mann* is one of Weimar's longest lasting works and widely known for the unchained camera. It is taught in Cinema Studies textbooks and appreciated by cinephiles with a love of early film history.[3] On the other hand, *Variété* is a much less well-known and discussed film, making an impact primarily only at the time in domestic arenas. Despite this, it adds to the discussion of camera movement innovation during the height of Weimar cinema.

However, unlike lighting, camera movement is not something that was inherent to cinema production in the early 1920s. As film history unfolded, cameras were stationary for many years, locked in place on tripods and the action appearing on screen was the only possible movement. This means that the explorations into camera movement were not adapted from necessity, as the German style of lighting was, but rather represent an area of purely innovative experimentation. The act of operating the camera falls under the task of cinematographers, and when these operators, more accurately described as artists, began to use mobility, a new realm of cinematography was born. As the language of lighting was integrated into the cinematic culture, the language describing the camera's first radical departure from static shooting is important to

[3] Thompson, Kristin, and David J Bordwell. *Film History: An Introduction.* 5th ed. New York, NY: McGraw-Hill Higher Education, 2022.; Hayward, Susan. *Cinema Studies: The Key Concepts*. Sixth edition. London: Routledge, Taylor & Francis Group, 2023.; Sharman, Russell Leigh. *Moving Pictures: An Introduction to Cinema.* Place of publication not identified: University of Arkansas, 2020. These are some examples of textbooks which perpetuate the idea of German Expressionism in film.

analyze. Camera movement in Weimar Germany was first hailed as *die entfesselte Kamera*, or *the unchained camera*. Alternative translations make it the *unleashed* camera or the *unfettered* camera. Regardless of how it's translated, the notion of freedom is implied, freeing the camera from a limited, static existence. With the freedom to move, came a freedom to experiment and explore new ways of presenting narrative information, setting information, and character psychology. The fact that the camera was first radically released from its static position in Germany speaks to the innovative nature of the German cinematographer, and the industry that supported drastic artistic experiments.

In the following section I will outline the mobile camera, its early uses in silent era cinema, and the important functions of camera movement in narrative cinema. I will then introduce Freund and his foundational role in unchaining the camera from its tripod. Next, I will analyze two of Freund's films: *Der letzte Mann* and *Variété*, which exemplify the innovative possibilities of the mobile camera in Weimar cinema, and how a moving camera imbues the narrative with orientation, expressive, and pacing information. The mobile camera provided an entirely new experience for audiences and filmmakers alike in the mid-1920s, and Freund's work during that time laid the foundations for the mobile camera as we know it today, which is present in everything from Hollywood blockbusters to indie art house films to amateur filmmaker YouTube videos.

The Mobile Camera

One of the tenets of the craft of cinematography is "the orchestration of camera movement" within a film.[4] The equipment of the camera itself restricted much movement or flexibility in the early years. For instance, one commonplace camera between 1914 and 1919, the

[4] Keating, Patrick, ed. *Cinematography.* Rutgers University Press, 2014, 1.

Bell and Howell studio camera was approximately 15 inches tall, 15 inches long, and 7 inches wide, and weighed around 27 pounds.[5] However, when Freund shot *Der letzte Mann*, his Stachow camera was more compact and weighed about 17 pounds (eight kilograms), and allowed for versatile possibilities.[6] Before *Der letzte Mann*, incremental movements began to appear, such as the use of small pans and tilts, upon an unmoving tripod. These first experiments occurred in small doses in the late 1910s, and early 1920s. For instance, "daring examples" of early camera mobility can be found in the 1919 and 1920 films *Die Spinnen*, or *The Spiders*, which was released in two parts and also shot by Freund.[7] These earlier uses consisted of tilts and pans, used as "transitional devices" when cutting between continuous action.[8] Such experiments as these were not uncommon at this time and across many industries, but they made up only a small footprint within films and were not recognized yet as steps toward a complete sense of mobility. It would take more drastic movement to catch the attention of critics, audiences, and global filmmakers. The transition to a mobile camera changed the scope of possibilities in filmmaking, providing new avenues of storytelling that are still on display today.

Camera movement serves several functions in narrative filmmaking. Jakob Isak Nielsen theorizes five key functions of camera movement: orientation, inflection, pacing, reflexive, and abstract.[9] In this thesis, I will use Nielsen's theorized functions. The orientation function serves to spatially orient the viewers and attune their attention to the depth of space, direct their gaze to pertinent story information, and define the scope of the action.[10] The inflection function

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5 Salt, Barry. *Film Style and Technology: History and Analysis*. Starword, 199, 151.

6 *Making "The Last Laugh" (Dir: F. W. Murnau, DoP: Karl Freund, ASC) - w/ English Subtitles*. YouTube. Cinematographers on Cinematography, 2021, 00:17:06 – 00:17:18.

7 St. Pierre, *Cinematography in the Weimar Republic*, 55.

8 St. Pierre, 54.

9 Nielsen, Jakob Isak. "Five Functions of Camera Movement in Narrative Cinema." *Transnational Cinematography Studies*, Lanham, MD: Lexington Books (2017), 26.

10 Nielsen, "Five Functions of Camera Movement," 28.

"magnifies a physical or emotional outburst."[11] The pacing function "determine[s] the pace at which visual information transpires."[12] The reflexive function calls attention to the "artifice of camera movement," and asks viewers to engage differently with the developing plot.[13] Finally, the abstract function "suggest[s] abstract ideas and concepts," separate from subjective experiences.[14] Nielsen's functions are based on camera movement in much more modern filmmaking, but it does not diminish their relevance in applying them to Weimar films, where movement of the camera engaged with these same effects. The most relevant functions to this study are the orientation, inflection, and pacing functions, which appear in *Der letzte Mann* and *Variété.* These functions, in addition to experiential effects specific to each film determine the scope of new possibilities in range, due to Freund's camera movement innovations.

Karl Freund

"In the beginning was Karl Freund" opened an article in *UFA Magazin* in 1927 referring to Freund's status as the catalyst and primary contributor in freeing the camera from its stationary existence, in *Der letzte Mann.*[15] Karl Freund is one of the most celebrated Weimar cinematographers with many influential and important films. His career includes collaborations and innovations that solidify his name on the list of elite German filmmakers of the Weimar period, and beyond, as he went on to be a successful cinematographer in Hollywood after fleeing Germany. Freund was born in Bohemia, Austria-Hungary then moved to Berlin as a child. He was inducted into the film industry at age sixteen, and from there rose through the ranks quickly.

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11 Nielsen, 37.
12 Nielsen, 34-35.
13 Nielsen, 40.
14 Nielsen, 46.
15 "Die Entfesselte Kamera." *UFA Magazin*, no. 13 (March 25-31, 1927): 216-218. In original German: "Am Anfang war Karl Freund."

From apprentice projectionist to assistant camera operator, to newsreel camera operator, to film laboratory designer, and finally full-fledged cinematographer.[16] Interestingly, he was always experimenting with the capabilities of the camera, even building his own cameras, and attempting early sound-on-film experiments.[17] Freund's role as an innovator is especially evident in his role in pioneering the *entfesselte Kamera* in 1924 on *Der letzte Mann*. He also worked closely with many of the German directing giants including F.W. Murnau and Fritz Lang; and less well known but additionally important directors, such as Paul Wegener, E.A. Dupont, and Walter Ruttmann.

Der letzte Mann (1924)

Der letzte Mann represents one of the masterclass examples of Weimar cinema, helmed by a hard-hitting group of the era's most accomplished names: director F.W. Murnau, writer Carl Mayer, producer Erich Pommer, set designers Robert Herlth and Walter Röhrig, and of course cinematographer Karl Freund. Their work on this film has been called "the most famous collaborative effort" between them.[18] The film – English title, *The Last Laugh* – tells the story of an aging hotel porter (played by Emil Jannings) at a fictional Berlin hotel, The Atlantic. His occupation, and importantly, his military style uniform is a source of personal pride and social status in his working-class neighborhood. When the porter is unexpectedly demoted to washroom attendant, he reels into a state of dishevelment and disbelief, and so begins a desperate attempt to hide his demotion from his family and neighborhood. The film follows his personal despair until in a surprise epilogue ending, he is given the fortune of a wealthy man who dies in

16 St. Pierre, *Cinematography in the Weimar Republic*, 52.
17 St. Pierre, 53.
18 Isenberg, Noah William, ed. *Weimar Cinema: An Essential Guide to Classic Films of the Era*. Columbia University Press, 2009, 115.

the washroom. Apart from this unlikely epilogue, the film is one of personal downfall; a tragic comedy of disgrace through the porter's social and emotional backslide. The porter's uniform as a symbol of his identity is a uniquely German sentiment, making the true tragedy of the story only accessible to domestic audiences, where "uniform is King… [and] a non-German mind will have difficulty in comprehending all its tragic implications."[19] Thus, the film presents domestically focused thematic content, lacking global appeal, but whose cinematography caught the attention of international markets and creatives. Reportedly, Hollywood filmmakers asked UFA, the German studio responsible for *Der letzte Mann*, what camera had been used to shoot the film, and that no comparable camera or technique existed in the United States.[20] Like *Schatten*, *Der letzte Mann* is void of intertitles, maximizing the opportunity for visual storytelling. Though, in this film, it is camera movement which stands out as the innovative solution for replacing textual exposition and deepening the narrative potential.

The film's opening immediately sets the expectation that the camera will not be stationary, as the first scene opens with a mobile camera: which descends into the crowded hotel lobby from an elevator, then after a jump cut, the camera resumes a "roving movement" through the crowd to the revolving door at the front of the hotel, where the porter becomes the camera's focus (Figure 13 and 14).[21]

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[19] Eisner, *The Haunted Screen*, 207.

[20] Roberts, Ian. "Friedrich Wilhelm Murnau, Transatlantic Thresholds and Transcendental Homelessness." *Studies in European Cinema* 4, no. 3 (November 2007), 230-231.

[21] Kracauer, Siegfried. *From Caligari to Hitler: A Psychological History of the German Film*. Princeton University Press, 2019 Princeton Classics edition, original, 1947, 105. Clips of the camera movement in Figures 13 and 14 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

Figure 13: *Der letzte Mann* Opening Elevator Movement

This series of frame grabs captures the first shot of the film, and the elevator descending into the action. The camera mounted in the elevator descends into the hustle and bustle of the lobby with unprecedented view and kinetics.

Figure 14: Roving Through the Lobby

The editing has jumped the camera from the elevator to the spot of the first frame grab, deeper into the lobby, and it then fluidly travels towards the revolving door. This is truly the first instance of the completely unchained camera, which moves through space like a person and explores new visions for film audiences.

Within the first twenty seconds of the film, from the black screen post opening credits, Freund's unchained camera has introduced a new and revolutionary experience for viewers. These movements of the camera activate Nielsen's *orientation* function, spatially orienting the viewers to the setting and introducing the protagonist.[22] Through its mobility, the viewer is "guided by the camera" as the setting is presented for the first time.[23] More than just a visual and kinetic orientation to the story's time, characters, and place, camera movement embodies the experience

[22] Nielsen, "Five Functions of Camera Movement," 28.
[23] Kracauer, *From Caligari to Hitler*, 105.

of how the viewer cognitively responds to entering the narrative.[24] The extended motion of the camera makes this film the first of its kind to draw audiences into the narrative so powerfully, and "let them participate in the protagonist's misfortune."[25] In other words, the movement of the camera, in addition to orienting viewers to temporal, spatial, and personal dynamics, provides a perspective for viewers to embody – to mentally enter the illusion of cinematic continuity and perception via movement. This was intentional, an effort "to break through the boundaries that film had previously imposed on the viewer's gaze."[26] For instance, the camera that roves through the crowd in the lobby, or later that follows the porter through the revolving doors, as he lays eyes on his replacement at the front of the hotel transport the viewer into the action, and thus cause a potential cognitive connection to the motion of a human occupying the space and *eyes*, so to speak, of the camera; part of the "principle of supporting the eye."[27] Moreover, similar to Wagner's use of lighting in *Schatten* to convey exposition, Freund's use of camera movement conveys critical story information that replaces the need for intertitles to display dialogue and character's thoughts.[28] For example, when the porter is handed his letter of demotion, the camera dramatically moves in to close the distance to the porter; signifying the letter's narrative significance, before its content is revealed (Figure 15).[29] This movement brings the audience into his state of mind, and "animate[s] the filmic space," even using special effects to travel through glass and settle in a medium close-up on the porter.[30]

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[24] Müller, "Embodied Cognition," 32-46.
[25] Müller, 33.
[26] "Die Entfesselte Kamera," 216. In original German: "…durch die befreite Kamera auch die Grenzen, die der Film bisher dem Blick des Zuschauers setzte."
[27] "Die Entfesselte Kamera," 216. In original German: "…das Prinzip, das Auge zu unterstützen…"
[28] Müller, "Embodied Cognition," 33.
[29] A clip of the camera movement from Figure 15 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing
[30] Isenberg, *Weimar Cinema*, 122.

Figure 15: The Letter

The porter opens his letter outlining his demotion, but this information is unknown to the audience at the time. The camera closes in on the porter using a dramatic push-in, which occurs via a single camera motion, including a fluid motion 'through' the glass, the significance of the letter becomes apparent. The sudden push-in reveals its narrative significance, orienting the viewer to this information.

Additionally, frequent uses of tracking shots – in other words moving shots that track the movement of a character or object through onscreen space – consistently orient the audience to the setting and relevant story details. The attachment of the moving camera to the protagonist furthers these effects; while the camera "tirelessly details the doorman's mortifications," the audience is immersed in the woes and actions of the protagonist with previously impossible depth.[31] These movements, which function to immerse and educate the viewers demonstrate Freund's understanding of motion for drawing spectators in. He further demonstrates how movement adds expressive qualities to the narrative with more effects and innovations.

After the porter has lost his job, and thus his uniform and pride, he gets drunk at his niece's wedding, to wash away his despair. This camera movement alerts viewers to the porter's deepening state of drunkenness, with a series of spinning, shaky movements from the perspective of the porter. First, Freund shows the porter acting drunk without any camera movement, but as his state of intoxication sends him into an unstable seat, the camera locks onto the porter and begins to spin so that both the porter and the camera spin back and forth around the room (Figure

[31] Eisner, *The Haunted Screen*, 212.

16).[32] Then Freund utilizes a point of view (POV) shot to switch the perspective from an outside view at the porter to his own view of the spinning, shaky room – this camera is completely unchained, a handheld (or equivalent) shot with a blur effect in accompaniment, to depict the character's drunken state. This unchained camera aids Jannings' performance to explore and display "the protagonist's state of mind."[33] Also, this exemplifies how the camera is both embodied, with POV shots, and disembodied, such as the opening elevator movement, which display the range of subjectivity and psychology the camera can express.[34]

Figure 16: Spinning Drunkenness

These frame grabs show the moving shot of the porter spinning side to side in his state of intoxication. The proximity of the camera to the porter, and the locked off nature of the lens on his face suggest a personal perspective of his experience, the spinning is inside his head, but the audience are shown it through camera movement.

Moreover, the camera invades proximity to the porter and provides emotional glimpses with dramatic push-in or pull-back camera movements, which achieves the *inflection* effect of intensifying the emotional magnitude of the moment. The unchained camera "overcomes the limitations of space," here and frequently in the film.[35]

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[32] A clip of the camera movement from Figure 16 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

[33] Schindler, Stephan. "What Makes a Man a Man: The Construction of Masculinity in FW Murnau's The Last Laugh." *Screen 37*, no. 1 (1996), 32.

[34] Isenberg, *Weimar Cinema*, 122.

[35] "Die Entfessetle Kamera," 217. In original German: "Die entfesselte Kamera ueberwindet die Beschraenkung des Raumes."

The drunkenness shots dovetail with the following scene, which displays the porter's drunken vision, or dream state, which explores a fantasy of his super strength, triumph, and higher status as the uniformed hotel porter. It is important to note, the change of this dream state is signaled by use of a double exposure special effect, which overlays the porter's face as he drifts into sleep with a blurred trumpet, and then the revolving doors of the hotel façade. The dream sequence begins with a stationary shot that becomes mobile. The revolving door – distorted to be extended vertically – comes out of overlay over the porter's face and into focus, when the camera pushes in, bringing the audience into the vision (Figure 17).[36] This provides essentially an intensified orientation, by directing attention to the porter – in his uniform and in front of the revolving door again – and signaling the psychological state he is in.[37]

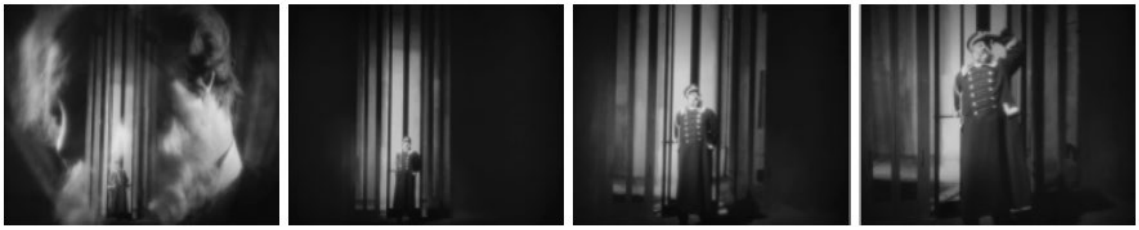

Figure 17: Entering the Dream Sequence

First dissolving from an image of the porter's sleeping face, an extended push-in closes towards the porter in his dream, introducing the audience to the subjective world of this vision, and imbuing a psychological quality to his state of mind. These frame grabs display the scale of the unchained movement.

The dream sequence continues to utilize unfettered camera movement, focused on distorting the porter's surroundings, emphasizing his fictional heroic feats – such as lifting a trunk over his head with just one hand – and finally signaling the return to the real world, and the sleeping porter.

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[36] A clip of the camera movement from Figure 17 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

[37] Nielsen, "Five Functions of Camera Movement," 37.

These expressive camera movements fluctuate between the point of view of the porter and a fragmented, disembodied, observational companion to the narrative. For instance, Freund employs dramatic movements that glide through space as an expression of traveling sound: in one case the outburst of a trumpet, and the other the sound of gossip spreading between balconies. The shot of the trumpet takes place before the porter's drunken vision, as a man (also drunk from the wedding party) blasts into the instrument. Starting with a close-up shot on the trumpeter, the trumpet's bell fills the frame for a moment, until the camera suddenly rises back and away from the trumpet, towards the window above, where the drunk porter hears the music (Figure 18).[38] The trigger of the (unheard) sound starts the porter to sway and ultimately is what sends him into his chair, and into the dream.

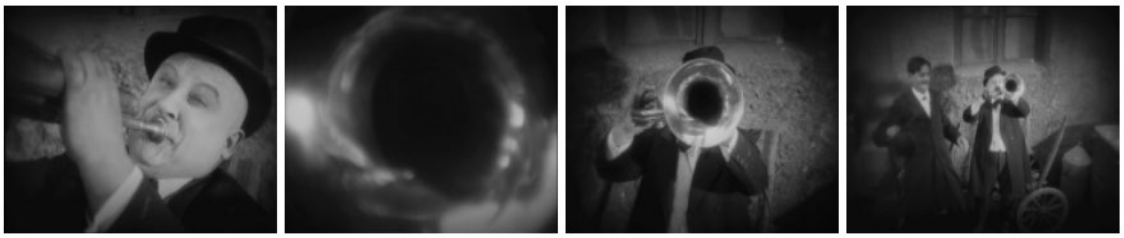

Figure 18: *Fliegende Ton*, Trumpet

Starting with the trumpeter in frame, then the trumpet itself in an extreme close-up, then as the camera dramatically pulls back, the movement emulates sound traveling upwards towards the open window. This shot used a specially made iron crane and pulley system to capture the movement of sound.

This effect of kinetic sound via camera movement was dubbed, "*fliegende Ton*" or *flying sound.*[39] This flying sound effect is repeated later in the film when the porter's demotion has become public knowledge, and the neighborhood women gossip about his fate across upper

[38] A clip of the camera movement from Figure 18 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing
[39] "Die Entfesselte Kamera," 216.

balconies. First utilizing a quick pan to introduce the cross-balcony discussion, Freund's camera displays a woman yelling, then descends towards another woman's presented ear, as though it were the first woman's voice reaching the open window above (Figure 19).[40] This instance reverses the motion from the trumpet, so that the camera pushes in towards a listening subject, rather than pulling out from a source of sound. Both cases, however, demonstrate the expressive power of the unchained camera. Each instance inflects the moment with magnified feelings and dramatic intensity. This was the intention of Freund and Murnau, who both understood the power a moving camera could provide to the narrative. Eisner notes that the Freund's unchained camera always "has a precise, clearly-defined aim."[41] Freund's use of camera movement is in fact "always in the service of the narrative," and a product of creative collaboration between the creative leads on every project.[42] Without the mobile camera, specifically the orienting, expressive and dramatic movements, the narrative would be devoid of critical emotional and subtextual information.

[40] A clip of the camera movement from Figure 19 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

[41] Eisner, *The Haunted Screen*, 213.

[42] Tieber, Claus. "Karl Freund. Der letzte Mann." *Metro Kino 27* (2019), 2. In original German: "…stets im Dienste der Narration."

Figure 19: *Fliegende Ton*, Gossip

Through a rapid fluid movement, also achieved using the iron crane and pulley system, the flight of the neighborhood gossip travels to this woman's outstretched ear.

This film demonstrates the impressive technical constructions and craft needed to free the camera from its stationary prison. Freund, and his team, invented many techniques and apparatuses to achieve these unchained movements. For example, snaking through the crowd in the opening scene, and others throughout the film, required Freund to strap the camera to his chest with a custom-built harness.[43] Moreover, the *fliegende Ton* shots required the production team to attach the camera to "a huge iron frame [that] was built to visually express the flight of a sound," and as the trumpeter blows or the woman's voice travels, the "apparatus moves along the frame with a backward movement" (Figure 20).[44] Freund's assistant, Robert Baberske, operated the camera within the bridge-like flying sound system, lying upon a hanging support and working the camera.[45] For the drunken spinning of the porter, the team built a mobile platform, in the vein of a seesaw, where Jannings sat on a crate attached to the platform and the camera moved with the motion of the platform.[46] To achieve many of the tracking shots, Freund used an

[43] Roberts, Ian. "Friedrich Wilhelm Murnau," 230.

[44] "Die Entfesselte Kamera," 216. In original German: "Um Flug eines Tones optisch auszudrücken, wurde ein rieseges Eisengerüst gebaut… A's [*sic*] der Tropmeter in sein Instrument blies, schnellet der Apparat mit einem Rücklauf dem Gerüst entlang."

[45] *Making "The Last Laugh,"* (Dir: F. W. Murnau, DoP: Karl Freund, ASC) - w/ English Subtitles. YouTube. Cinematographers on Cinematography, 2021.

[46] *Making "The Last Laugh,"* Cinematographers on Cinematography.

early version of a dolly, in this case a platform with rubber wheels to track the movement of the porter through the street – tire tracks can even be seen in the final shot.[47] There are also conflicting reports that the camera was mounted on a bicycle at certain points in the film to travel through masses of people.[48] These constructions were naturally not the sole creation of Freund, but required extensive collaboration and teamwork among the director, set designers, production team, Freund, and his assistants.

Figure 20: Apparatuses of the *Fliegende Ton*

These set photographs display the iron cage and pulley system built specially to capture the flying sound effects of the trumpet and the gossip. Assistant cameraman Robert Baberske hangs with the camera – he was chosen to shoot this sequence because of his size, much smaller and thinner than Freund. These images appeared in the "Die entfesselte Kamera" article in UFA Magazin, 1927.

There are conflicting reports on whose idea each effect was, likely attributable to the press and attention the unchained camera garnered, but it merely speaks more strongly to Freund's own argument that the "real author of the film is the camera."[49] *Der letzte Mann* was the important jumping off point for the *entfesselte Kamera* which Freund continued to expand and adapt in his next film, *Variété*.

[47] *Making "The Last Laugh."*
[48] *Making "The Last Laugh."*
[49] IMAGO. *Moving Pictures: A Century of European Cinematography*. New York: Abrams, 2003, 35.

Variété (1925)

Following the success of *Der letzte Mann*, Freund continued his exploration of camera movement in *Variété* – or *Variety* as it's known in English – directed by E.A. Dupont, which follows the story of a former trapeze performer, Boss Huller, who runs a carnival sideshow with his wife. But when a young foreign dancer arrives, Huller falls in love. He takes her in, and Huller returns to the life of trapeze by the lure of the beautiful young dancer. He leaves his family, and the carnival man starts a new act with the young woman. However, a new third trapeze partner, Artinelli, soon wins the young woman over, and they begin a kindling relationship. Huller is thrown into a jealous rage, which pits the two men against each other, and eventually Huller murders Artinelli. Boss Huller is played by Emil Jannings, the same actor who played the porter in *Der letzte Mann*, though in this case he plays someone of his actual age, rather than an old man. This film returns to the use of intertitles, the opening of which introduces for audiences that the film is a "tragedy of an artist," setting the tone for tragic themes.[50]

The film opens with a scene in prison, where Prisoner Twenty-eight, soon to be revealed as Boss Huller, is called into the warden's office. The warden informs him that his wife has filed a mercy plea with the justice minister, and then he asks why Huller has never said word of what happened that landed him in prison these last ten years. This prompts a flashback, where the narrative ensues. The opening shot of the flashback narrative, like *Der letzte Mann*, ushers the audience into the world with the camera in motion via a mechanical contraption, in this case a Ferris wheel rather than an elevator (Figure 21).[51] This mobile device, with stationary shots in accompaniment, introduces the viewer into the fast, frenetic, and magical craze of the carnival

[50] Variété. Germany: UFA, 1925. In original German: "Die Tragödie eines Artisten"
[51] A clip of the camera movement from Figure 21 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

setting, queuing Nielsen's *orientation* function. The "incessant camera movements" only continue, as Freund repeatedly places the camera into moving apparatuses, namely the trapeze, breaking "into the magic circle of the action."[52]

Figure 21: The Ferris Wheel

These frame grabs capture when the carnival is first put on display from the perspective of a Ferris wheel cart; again, showing Freund's experimentation with putting the camera in mobile contraptions.

Again, Freund allows mobility to begin the narrative, and while there is much less use of the unchained camera in *Variété* than in *Der letzte Mann*, its moments are strategically important to the narrative.

The use of mobile POV and tracking shots enforce key details of characterization and plot. After the new dancer has arrived, Huller begins to compare his wife to the new dancer, because he longs to return to aerial performance, but his wife refuses due to his history of injury. When the young woman dances in front of a sleezy crowd, Huller looks from the dancer to his wife; he then scans his wife's body – shown via a moving POV shot down her body. This POV shot, albeit brief, provides key subtextual information for the progression of the narrative: the arrival of the new, young dancer makes Huller question his wife, and he begins to form thoughts of leaving her for a return to his old trapeze lifestyle (and the dancer). Moreover, in a subsequent part of this dance scene, one of the sleezy men in the audience wanders on stage, drawn by the

[52] Kracauer, *From Caligari to Hitler,* 127.

allure of the woman, and this action enrages Huller. He sees the man approaching, and through use of another moving POV shot – this one moving forward rather than panning down – shows Huller's POV as he rushes the man (Figure 22).[53] The sudden drive of the camera at the man shows even more strongly the newfound attachment Huller has for the dancer and sets up his quickness to rage. These instances demonstrate information that intertitles do not provide, so while much of expository information comes from intertitles in this film, the additional camera movements remain narratively significant.

Figure 22: Huller's POV Charging the Man on Stage

In this case, the camera quickly pushes in, imbuing the POV shot with anger and irrational thinking, in contrast to the observational pan of the previous POV shot.

Additionally, this sparse but informative camera movement in the early stages of the film establishes the pacing style that Freund uses throughout – activating Nielsen's *pacing* function of camera movement, adding a spatial and temporal rhythm to the narrative. The uses of unchained tracking shots, such as a moving tracking shot to keep the trapeze rival, Artinelli, in frame as he walks down the street. The tracking shot through the busy street is repeated less than thirty seconds later, both shots are brief, but in conjunction with shots where the camera is mounted to moving cars, the street comes alive with movement, and the character's position within the chaos is understood (Figure 23).[54] Essentially, the deliberate use of moving POV and tracking shots

[53] A clip of the camera movement from Figure 22 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing
[54] A clip of the camera movement from Figure 23 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

allows camera movement to permeate the narrative structure, providing narrative subtext and introducing the pacing structure in which character details, and story rhythm are revealed through camera movement.

Figure 23: Tracking Artinelli

These frame grabs display the quick tracking shots that keep Artinelli in frame as he is ushered down the busy nighttime street. The hustle and bustle of the location is achieved as well as the greater contribution to the fast-paced rhythm of the film.

The most innovative mobile camera strategy employed in the film does not occur until about halfway through, when the camera is finally mounted onto the trapeze apparatus – soaring and swinging with the actors at daring heights (Figure 24).[55] This is the unchained camera of *Variété*, providing access to entirely new and visually unique perspective and motion on screen for viewers. This was felt by audiences and critics at the time, and the immediate success of the film came from enamored domestic audiences. For instance, the film was advertised as "the biggest German film" in November 1925, when the film was released.[56] The same article goes on to report, that the film is one "that German film industry can be proud of." [57] This pride came not just from strong performances, but explicitly from the "excellent material… created with a rare power and excellent expressiveness," and "photographically and technically exquisite

[55] A clip of the camera movement from Figure 24 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

[56] "'Variete' Der Grosse Deutsche Film." *Der Kinematograph* 19, no. 979 (November 1, 1925): 21.

[57] "'Variete' Der Grosse Deutsche Film," 21. In original German: "Wirklich ein Film,auf den die deutschen Industrie stolz sein kann…"

scenes."[58] Importantly, the essence of collaboration is emphasized in this article, where the question of credit in the film's success is not settled on one party, but attributed collectively to the director Dupont, the strong acting performances of Emil Jannings and Lya de Putti (the young dancer), and to Freund, "who brought out the best that could be brought out of the individual scenes."[59] The expressivity and effort of Freund's camerawork is not only acknowledged, but celebrated in equal terms to the direction and acting, which speaks to the entire industry and social conditions in which Freund, and other cinematographers were able to creatively innovate in.

Figure 24: Swinging on the Trapeze

These frame grabs display the first instance in which Freund's camera is mounted onto the moving trapeze swings. These shots are also intertwined with moving camera shots which establish their location and the aerial space. These images offered audiences brand new visual spaces to experience.

The aerial camera continues the formerly established high-paced movement interspersed throughout the narrative. Through the lens of Nielsen's theory, this strengthens the pacing function, and the "cinematic rhythm of the film."[60] By inserting the camera into this exclusive space frequently as the rest of the narrative unfolds, the audience is given greater access to the

58 "'Variete' Der Grosse Deutsche Film," 21. In original German: "Einausgezeichneter Stoff… gestaltet mit einer seltenen Kraft, mit einer ausgezeichneten Ausdrucksfähigkeit… Photographisch und technisch ausgezeichnetene Szenen…"

59 "'Variete' Der Grosse Deutsche Film," 21. In original German: "…der das Letzte bildlich aus den einzelnen Szenen herausholte, was herauszuholen war…"

60 Nielsen, "Five Functions of Camera Movement," 34.

protagonists, and the structure of the story is firmly established. The sustained pacing, an "ebb and flow of movement," is especially prevalent in the faux climax of the film when it's unclear whether Huller will be able to continue with the performance or sabotage Artinelli's stunts.[61] Freund employs "[an] inquisitive camera" that "helps transport the spectator to the heart of the events".[62] Huller's dilemma of jealousy is made alive and proximal through the engagement with movement. This camera that identifies with and spies on characters returns to the embodied cognition principle, that the spectator's experience is reflected by the behavior of the camera.[63] The audience feels what Huller is feeling, in addition to glimpsing what he sees.

Again, the *inflection* function saturates scenes with expressive and symbolic meaning: the same dramatic push-in onto a character's ear is even utilized, and the emotion imbued in one of tension, as Artinelli listens for the young dancer to pass in front of his doorway (Figure 25).[64] Though unlike in *Der letzte Mann*, where the camera movement acts as flying sound, in this case, the movement is disconnected from what he's listening for, and rather imbues his action of listening with greater significance – a greater sense of foreboding and suspicion against why he's listening for her to cross his doorway.

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[61] Barlow, John D. *German Expressionist Film*. Boston: Twayne Publ., 1982, 284.
[62] Kracauer, *From Caligari to Hitler,* 127.
[63] Müller, "Embodied Cognition," 34.
[64] A clip of the camera movement from Figure 25 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

Figure 25: Intense Listening

Through the same dramatic push in, though this time using a dolly shot rather than the cage and pulley system, Freund's camera fluidly displays an outstretched ear. This movement inflects the scene with more dramatic suspense, as Artinelli waits and listens for the dancer to walk by his door.

Finally, prior to the true climax of the film, multiple camera movements work together to build up to and execute the intense tragic ending. Freund reuses another technique from *Der letzte Mann* with a drunken POV shot that moves shakily and unpredictably, this time from Artinelli's perspective as Huller stares him down in anger. Freund then adjusts the rhythm of the pacing by utilizing repeated slow pans around Huller and Martinelli, that anticipates the confrontation and makes clear that Martinelli is trapped. As the setting of frame story returns, with a match cut from Huller leaving the hotel after he has killed Martinelli with him in prison, a final use of camera movement closes the narrative. A brief retreating shot that rises looking down at Boss in prison, and he looks up (Figure 26).[65]

[65] A clip of the camera movement from Figure 26 accessible here: https://drive.google.com/drive/folders/1yWxmY1ey1S6fY_6Z4iUqxfTZosTKsDsA?usp=sharing

Figure 26: A Final Rising Camera

The final camera movement of the film is a subtle, yet conclusive upward motion that closes out the telling of Boss Huller's tragic rise and fall.

Freund's use of the mobile camera in *Variété* demonstrates the growing, multifaceted use of the mobile camera to imbue specific effects that advance the narrative and expand the possibilities for both filmmaker and viewer. Without the mobile camera, not only would the viewer lack proximity and privilege into the new and exciting visuals of trapeze aerials, but many of the emotional moments would be weaker. So, while the mobile camera may be less explicit than in *Der letzte Mann*, it is used in critical moments which notably add orientation, expression, and pacing to the narrative. Freund's impressive innovation takes further steps towards modern mobility and demonstrates the strength of Weimar cinematographers in advancing the cinematographic possibilities of film.

In the next chapter I will shift from camera movement to the enabling conditions of the Weimar industry in which allowed for these innovations, in both camera movement and lighting, to occur. I will outline the broader structure of the Weimar film industry, and how the role of the cinematographer developed within this system. In comparison, I will examine the Hollywood cinematographer, and the differences from the German cinematographer. Starting with the legacy of one of Germany's first innovative cinematographers, Guido Seeber, I trace the trajectory of collaboration within the established systems that resulted in a culture of collaboration unique to this time and place.

Chapter 5: The Enabling Conditions for Cinematographic Creativity

The previous two chapters outlined the two cinematographic techniques of special interest to this study and the cinematographers who pioneered them, which display the existence of experimentation and innovation in the Weimar era. In other words, Wagner's lighting techniques and Freund's use of camera movement represent cinematographic results, part of a larger context. This chapter will outline this greater context: the conditions in which these specific innovations were able to take place. It is important to recognize these innovations within the larger structure of the industry which produced them. The Weimar silent era industry developed a unique attitude of close collaboration, a desire to advance the artistic quality of the cinema, and a unification of efforts under the leadership of producer Erich Pommer, which ultimately positioned cinematographers as creative artists as opposed to technicians, enabling them to innovate and experiment with lighting and camera movement. I will illustrate the features of the German cinematographer, in other words, the formation of a cinematographer role unique to Weimar Germany. In addition, I will compare this to the Hollywood cinematographer; highlighting the differences in industry standards, beliefs, and culture which resulted in a lesser extent of cinematographic creativity in Hollywood during the 1920s. Then, I will expand the discussion of the Weimar film industry by presenting how a culture of collaboration was cultivated. Finally, I will pose the question as to why the creative collaboration in Germany was not enough to stop the stream of top filmmakers who emigrated to the United States to work in Hollywood during the latter stages of the Weimar era. I will provide a big-picture explanation for this phenomenon and place the global power of Hollywood within the discussion of Weimar cinematographic excellence.

The German Cinematographer

As previously outlined in chapter two, the early years of cinema history overlap with crucial global and national events, namely: industrialization and urbanization, WWI, and the social, economic and political turmoil (and reform) in postwar Germany. These factors remain important in shaping the German cinematographer, within the structure of Weimar cinema. Moreover, it is important to acknowledge the role of individuals who seized their chance amid these larger societal shifts to influence the trajectory of the film industry, and of cinematography. Essentially, the most important features that define the German cinematographer from the Weimar silent era are an attitude of close collaboration and association, and a desire to advance the artistic quality of the cinema. These features, held by the topmost German cinematographers like Wagner, Freund, and others, help to explain the impressive cinematographic quality of Weimar films, and specifically the cinematographic innovations I've already described.

The foundations of the German cinematographer were laid by one of the nation's most celebrated cinematographers, Guido Seeber. Seeber was devoted to the development of cinematography, a true experimenting pioneer in German filmmaking, first gaining a reputation for innovation in 1913 with the double exposure Doppelgänger shots in *Der Student von Prag* (in English: *The Student of Prague*). Additionally, Seeber's body of work includes precursors to both Wagner's light as action through chiaroscuro and Freund's mobile camera techniques.[1] Around this time, the conversations that first began to propel cinema as an art form were taking hold, and Seeber felt that there should be access to technological and cinematographic techniques for amateur and professional cinematographers alike. Thus, as Weimar special effects scholar Katharina Loew notes, he published his knowledge and collected techniques "in countless

[1] Loew, Katharina. *Special Effects and German Silent Film: Techno-Romantic Cinema*. Amsterdam University Press, 2021, 74.

publications," ranging from technical journals which he co-founded (*Kinotechnik*, 1919-1943 and *Die Filmtechnik*, 1925-1943) to two "book-length studies that introduced aspiring cinematographers to the basics of the trade."[2] Loew cites that his work was integral in initiating "a national conversation that helped shift attitudes about film technicians and film technology and fostered a consensus about technology as cinema's principal creative tool."[3] Seeber's decision to collect and disseminate his cinematographic tools, techniques, and tricks to the German industry and the public at large was critical in laying the foundation for German cinematographers to share information, to learn from each other, and for the industry to welcome the assertion that cinematographic technology was the "cinema's key artistic device."[4] As Loew argues, the openness and access to these tools of the creative trade at such an early stage of the industry's formation – especially given the late start in which Germany had to developing a national-scale film industry – "elevated levels of competence among cinematographers and encouraged young talent, which was instrumental in establishing the world fame of German cinematography."[5] With this notion of the quintessential German cinematographer in mind, who shares knowledge and creates collectively, their place in the larger Weimar context is more clear.

The German cinematographer was a part of the German national efforts to advance the artistic qualities and economically lucrative potential of the cinema; already a more inclusive position than cinematographers experienced in the Hollywood structure. As the strength of the German film industry began to form, after WWI, there was an industry-wide consensus that

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[2] Loew, *Special Effects*, 75.; *Der praktische Kameramann* (*The Practical Cameraman*); *Der Trickfilm in seinen grundsätzlichen Möglichkeiten* (*The Trick Film in its Basic Possibilities*). The titles of Seeber's book-length studies.
[3] Loew, *Special Effects*, 70.
[4] Loew, 73.
[5] Loew, 70.

artistic films would bring in money in the long term.[6] In other words, the rise of artistically conscious filmmaking was connected to the social and economic factors unique to the Weimar period and had influence over the development of the industry. These outside factors pushed filmmakers to realize that the vision of the film – especially if it was a film of a higher artistic pedigree – is conceptualized by the director, but it is "the cinematographer who has the means of attaining it."[7] This means that at the inception Germany's silent era fame cinematographers were already intimately involved in the creative process. Furthermore, the pressure to make artistic films was an incentive for cinematographic innovation and creative experiments that would convey ideas and emotions in clear and unconventional ways.[8] Unlike the United States, where economic value was of utmost importance, the artistic value took precedent in determining a film's esteem in Weimar Germany.[9] German filmmakers thread the needle between meeting international expectations, while "emphasizing national characteristics in the approach to artistic quality."[10] This helps further explain innovations such as chiaroscuro lighting, while the technique may have been initially invented in Hollywood, it was German cinematographers who recognized the power it had to imbue atmosphere and emotion, tailoring the cinematography to the pursuit of artistic images. As I've outlined in chapters three and four, the innovations that Wagner and Freund developed were not solely technological – they weren't inventing new lights and cameras – but expanding the use of existing technology, with a desire to advance the artistic and emotional quality of the films. This helped advance the industry to a place where they were

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6 Eisner, Lotte H. *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt.* University of California Press, 1969, original, 1955, 19.

7 St. Pierre, Paul Matthew. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles and the Men Who Shot Them.* Farleigh Dickinson University Press, 2016, 14.

8 Loew, *Special Effects*, 9.

9 Loew, 17.

10 Isenberg, Noah William, ed. *Weimar Cinema: An Essential Guide to Classic Films of the Era*. Columbia University Press, 2009, 122.

influential abroad.[11] The German cinematographer was well versed in the artistic needs of the film and pushed the boundaries on how to elevate technology to achieve this.

The German cinematographer, both conceptually and in reality – with those such as Wagner, Freund, Carl Hoffmann, Guido Seeber, Eugen Schüfttan, Theodor Sparkuhl, and others – were integrated into the fabric of the topmost filmmaking elite in Germany, responsible for the bulk of Weimar's notable films and innovations. These cinematographers were collaboratively inclined, artistically attuned, and united by the realities of their specific societal parameters to innovate the medium for the advancement of cinematographic possibilities. These foci were not shared in Hollywood, and it is important to compare the characteristics of the German cinematographer to the Hollywood cinematographer, which I undertake in the next subsection.

The Hollywood Cinematographer

Since the earliest instances of narrative filmmaking replacing the cinema of attractions, the American formation of a film style of realism and authenticity began. The role of capturing this realistic image fell to Hollywood cinematographers. Despite the existence of many similarities between the Hollywood and Weimar industries, such as the hierarchical dominance of the director, there are important distinctions that limited the opportunity for cinematographic innovation and acceptance in Hollywood. These include the film style of pictorial realism, the dominance of technological thinking, and the status of the cinematographer as first and foremost a laborer and technician rather than a creative producer.

The notion of filmic realism, in other words the desire for narrative films that represented "authenticity" and "believability," formed simultaneously with the ascent of directors to the

[11] Saunders, Thomas J. *Hollywood in Berlin: American Cinema and Weimar Germany*. Univ of California Press, 1994, 6.

dominant production authority.[12] The strength of this attitude should not be overlooked, as the efforts to make cinematographic techniques "as unobtrusive as possible… remained a guiding principle from the early years of the feature film to the end of the studio system and beyond."[13] This meant that American cinematographers, were encouraged to make their work as unnoticeable as possible, "without distracting the audience with the quality of their lighting or camera work."[14] It should be noted that this style creates an alternate form of artistic value, one of hidden spectacle and seamless integration of technology with realistic perception, but such style also limits explicitly artistic explorations. In fact, it was commonly cited, by studios, directors, and cinematographers themselves, that "artistry would need to be sacrificed to better serve the needs of the story," and that "beauty arrests the attention, and is therefore an obvious threat to unobtrusive storytelling."[15] Essentially, beauty was seen as distracting, and commonly avoided in image-making. Thus, during the silent era, the Hollywood cinematographer remained subordinate to this hegemonic style, and primarily withheld their frustrations until the 1940s.[16]

This desire for realism in part explains why the majority of Hollywood cinematographic innovation revolved around technology itself, which reinforced the understanding that cinematographers were technicians first and foremost, not creatives. As prominent Hollywood cinematography scholar Patrick Keating urges, it is important not to rely on the existence of advancing technology when attributing cinematographic innovation, citing the important notion that while "many stylistic can be explained most efficiently by pointing to proximate changes in

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12 Beach, Christopher John. *Hidden History of Film Style: Cinematographers, Directors and the Collaborative Process.* University of California Press, 2015, 19.

13 Keating, Patrick, ed. *Cinematography*. Rutgers University Press, 2014, 6.

14 Beach, *Hidden History of Film Style*, 23.

15 Keating, Patrick. *Hollywood Lighting from the Silent Era to Film Noir.* New York: Columbia University Press, 2010, 26.

16 Beach, *Hidden History of Film Style*, 24.

technology."[17] However, "it should be clear that the causal relationship between technology and style can go both ways."[18] The way that new technology like the arc light may trigger the use of starker shadows, the "stylistic preoccupations of cinematographers might push the industry to invest in certain technological research likely to have market potential."[19] This suggests that while the advancement of technology influenced Hollywood cinematographers, there is opportunity that the cinematographers influenced the production of technology. In fact, in 1917 the Hollywood norm positioned cinematography as "a mechanical problem, requiring mechanical… solution[s]."[20] These key details of the way that technology, efficiency, and mechanical perceptions shaped the understanding of what the Hollywood cinematographer was, tie into their further perceived role as technical laborers.

The dominant Hollywood structures – studios, producers, and even the public – viewed cinematographers as laborers, as crank turners. They were the ones who physically turned the camera crank to record the images, the work of a critical cog in the machine of movie making, but ultimately a labor position of specific technical capabilities. This does not mean the Hollywood cinematographer blindly accepted this role. In fact, the American Society of Cinematographers, which formed in 1919 as multiple organizations (based in New York and Los Angeles) but consolidated in the early 1920s, with the express goal to "promote the interests of cameramen."[21] The ASC published their efforts to flip the narrative on the artistic value cinematographers provided in their journal *American Cinematographer*. The argument that the cinematographer was "not just a laborer [but] a professional with a special gift for efficiency,"

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[17] Keating, *Cinematography*, 3.
[18] Keating, 3.
[19] Keating, 3.
[20] Keating, *Hollywood Lighting*, 15.
[21] Keating, 16.

was pushed by the journal.[22] Keating describes this efficiency as, "though not un-artistic, does point to a more mechanical attitude of working on set and finding the image."[23] The notion of American efficiency became a source of pride among Hollywood cinematographers. For instance, *American Cinematography* ran articles that satirized foreign cinematographers for being slow and possessing "lofty artistry."[24] One common way this satire was expressed was through the recurring "Jimmy the Assistant" articles, which aimed to flatter and elevate American cinematographers through the comical nature of this fictional character, a working-class assistant, and his candid opinions on a number of relevant topics.[25] One such topic being foreign cinematographers entering the Hollywood fray. In one 1928 article, Jimmy criticizes foreign cinematographers (using racist remarks); he writes, "[t]here was a first cameraman come to the lot, a forrener [*sic*] from Checkovia or somewhere, and he talked English like a [*sic*] excited Chinaman trying to recite a Bjornsjern-Bjornsjern poem backwards with the original language. He didn't make sense… He was slower than the next raise."[26] Interestingly, the unifying feature of "Jimmy the Assistant" articles is his praise of the efficiency of American cinematographers, and insisting on the need for art to be a good cinematographer in Hollywood. This speaks to the desire of the ASC to elevate the Hollywood cinematographer. Overall, with the dominant style of unobtrusive cinematography in conjunction with a technologically serving cinematographer who valued efficiency over artistry, the opportunity for creative and artistic experimentation was much more limited for the Hollywood cinematographer. The Hollywood definition of artistic cinema was one of subtlety, whereas in Germany the artistic cinema was

[22] Keating, 19.
[23] Keating, 19.
[24] Keating, 19.
[25] Keating, 18-20.
[26] "Jimmy the Assistant: The Gift of Gab." *American Cinematographer* 8, no. 10 (January 1920): 28–29.

connected to larger conversations about art and modernity, and pushing the boundaries of what the medium could express. In other words, the art of cinematography was defined by an ability to blend-in in America, and an ability to stand out in Germany.

In addition to these pieces of the puzzle, it is important to outline the larger structure of Hollywood filmmaking. Hollywood and Weimar industries, while constructed in similar ways – as Weimar was inexplicably influenced and linked to Hollywood dominance like every other national cinema around the world – are also extremely different in terms of scale. Hollywood during the silent era produced thousands and thousands of films, and Germany's output was a mere fraction in comparison.[27] Hollywood's industrial structure was operating on a much larger scale and with conditional parameters that pumped out films, leading to some assertions in film scholarship that Hollywood operated like an assembly-line.[28] Notable film scholars David Bordwell, Janet Staiger, and Kristin Thompson have argued that the mode of production of Hollywood film may resemble mass manufacture, but to assume reality was as such ignores the nature of art production as collective labor.[29] The division of labor in Hollywood was "organized by work functions, not the identity of individuals," thus the structure favored "control over subordinate and separate work functions, and hence input into the product… [was done via] a system of management controls the execution of the work."[30] In most respects, this structure was incredibly successful; it encouraged vertical integration, demanded high degree of control, and played an important part in establishing the growing Classical Style of Hollywood films. The Weimar filmmaking industry emulated Hollywood in many ways, but a central difference is the

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[27] Saunders, *Hollywood in Berlin*, 10.

[28] Bordwell, David, Janet Staiger, and Kristin Thompson. *The Classical Hollywood Cinema: Film Style & Mode of Production to 1960.* Columbia University Press, 1985, 83.

[29] Bordwell, Staiger, and Thompson, *Classical Hollywood Cinema*, 83.

[30] Bordwell, Staiger, and Thompson, *Classical Hollywood Cinema*, 89-90.

role of cinematographers within the labor structure. The Weimar system of collaborative production, which I will outline in the next section, subverted the Hollywood norm of strict technical and hierarchical roles and rather broadened opportunities for creative collaboration.

Weimar Collaboration

In both Hollywood and Weimar Germany, the core collection of individuals who work together to create a film include the screenwriter(s), director, cinematographer, set designer(s), producer, and actors. It is incredibly important to highlight the entire creative ensemble, as it is only amid this milieu of people and roles that Weimar's most important films and filmic innovations were possible. As made clear, in Hollywood these roles remained especially separate, but in the Weimar context, this group was connected by the established structure of the industry, with creative directives and output goals that aligned with individual goals for advancement. I have previously established the fact that the small tight-knit group of creative leads in German filmmaking have left the biggest mark on Weimar's filmic legacy. This tight-knit group was also the bedrock of creative collaboration in Germany. According to Weimar film scholar Thomas Elsaesser, this group was "no more than two dozen names – operating as teams and skills networks" throughout the 1920s.[31] The same reasons which explain the German cinematographer to be someone advancing the art of cinema, also explain their propensity for working in collaborative partnerships. The fact that the entirety of the Weimar film industry needed to work together in the uncertainty of the early postwar years created a culture of collaboration that propelled the industry to international recognition by the middle of the 1920s. The core of the Weimar industry represents a culture of collaboration: where studio leadership

[31] Elsaesser, Thomas. *Weimar Cinema and After: Germany's Historical Imaginary*. London: Routledge, 2000, 234.

disseminated and supported the elite group of filmmakers with designed strategies of coproduction, cooperation, and creative experimentation.

In the early 1920s, the powerhouse corporate structure of German filmmaking was firmly established in the studio UFA (*Universum-Film Aktiengesellschaft*). UFA was Germany's only studio ever comparable to Hollywood, and even then it was by no means a true opponent, more or less a David that thought it "could compete" against the Goliath of Hollywood hegemony.[32] In 1923, producer Erich Pommer became the head of production operations, and his especially collaborative approach, which he honed at his previous studio Decla-Bioskop, became standard UFA practice.[33] Pommer's production policy was based in a director-unit system, where creative teams were built around directors, and the screenwriters, cinematographers, and set designers/architects with whom they collaborated with.[34] Under Pommer's leadership, the most powerful production house in Germany was united by creative collaboration and an artistic freedom to experiment. Pommer's, and thus UFA's, goals were always explicit: to make the highest quality German art films for export, challenge the international markets, and establish German excellence with films that were aesthetically and technically masterful, while also maintaining strong domestic production to provide the "economic bedrock."[35] He understood in order to achieve these goals, collaboration between every member of the film's production was required.[36] This understanding was shared among Germany's top filmmakers, for example, in a 1926 *Der Kinematograph* article, famous director Fritz Lang writes about the working community and teamwork in film, describing that way filmmakers work together to solve

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[32] Elsaesser, *Weimar Cinema and After*, 3.
[33] Elsaesser, 117.
[34] Elsaesser, 118.
[35] Elsaesser, 6 & 118.
[36] Elsaesser, 118.

problems creates "the most beautiful thing that exists among people: working community. Nowhere else as in film do all the creative factors have to concentrate so much on the few seconds in which a fraction of the work is created."[37] Lang goes on to praise the work of some of his recent collaborators, including cinematographers Carl Hoffman and Günther Rittau. His final remarks highlight the importance of *Arbeitsgemeinschaft* (working community) in film production: "when no one slackens off in their successful achievement and those who, for whatever reason, have not yet succeeded completely, spur on their strength and are inspired by the energies of their fellow creators. This is the only way to create the kind of unity that, while respecting personal characteristics, resolves any conflict for the sake of the common goal."[38] This attitude was a far cry from the "preoccupation with storytelling, box office success, and the individual job performance that dominated the discourse in Hollywood."[39] Loew even argues that the influence Pommer inspired over German production was so robust that it "permeated the German film industry, [existing] even in films produced without [his] involvement."[40] Thus, while the dominant studio structure in Hollywood focused on advancing the careers of directors and maintaining an invisible photographic style, Weimar's dominant studio focused on creating a collaborative structure to grow artistic and economic value.

The spirit of Pommer's style of collaboration at UFA can be seen concretely through examination of vocabulary. There are important German words – in addition to Lang's use of

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[37] Lang, Fritz. "Arbeitsgemeinschaft Im Film." *Der Kinematograph*, no. 857 (February 1924), 7. In original German: "des Schönsten, das es unter Menschen gibt: Arbeitsgemeinschaft. Niergends wie beim Film müssen sich alle schaffenden Faktoren so auf die wenigen Sekunden konzentieren, in denen ein Bruchteil des Werkes entseht…"

[38] Lang, "Arbeitsgemeinschaft Im Film." In original German: "wenn niemand in seiner geglückten Leistung nachläßt unc der, dem sie jus irgendeinem Grunde noch nicht vollkommen gelang, seine Kräfte anspornt und von den Energien seiner Mitschaffenden beflügelt wird. So erst entsteht jene Einigkeit, die bei aller Wahrung persönlicher Besonderheiten jeden Zwiespalt auflöst um des gemeinsamen Zieles willen."

[39] Loew, *Special Effects,* 17.

[40] Loew, 18.

Arbeitsgemeinschaft mentioned above – that describe and demonstrate the extent of creative collaboration during the Weimar years, and beyond. First, is the concept of *Bauhütte*, which literally means 'shelter' or 'hut,' but principally represents the collective spirit of collaboration, adapted from a medieval cathedral construction context.[41] Disseminated through UFA productions, *Bauhütte* was the broadest conception of an "artisanal mode of production," which consistently "required the innovative work of scenarists [another term for screenwriters], cameramen, and set designers, as well as directors." [42] The next term of significant importance is *Regiesitzungen*, which means 'director's meetings' or 'direction meetings.' This refers to crew-wide discussions held during a film's pre-production to plan the filming as well as generate and share ideas between crew and departments.[43] These meetings were also a part of Pommer's leadership style at UFA and involved the entire production staff.[44] Lotte Eisner notes how at these meetings, "everyone was heard; like everybody else, the cameraman could ask for changes in the sets if he thought he saw a better way of achieving results."[45] This type of open discussion forum between departments and individuals was something other national cinemas, including Hollywood, lacked. These meetings cultivated a shared understanding of artistic quality and creative collaboration, where everyone was given space to voice their creative ideas within the structure of technical know-how. This discussion of vocabulary circles back to St. Pierre's notion of *filmemacher*, as a term that connotated the cinematographer and director, as well as the entire filmmaking ensemble within the Weimar industry, where the English equivalent, *filmmaker*,

41 Loew, 19.
42 Isenberg, *Weimar Cinema*, 2009, 117.
43 Eisner, *The Haunted Screen,* 37.
44 Loew, *Special Effects,* 18-19.
45 Eisner, *The Haunted Screen,* 37.

connoted (and still connotes) the director.[46] According to St. Pierre, this term is the embodiment of coproduction, co-authorship, and collaboration between the directors and cinematographers during the Weimar years, where in addition to the production ensemble, these key roles were defined by their work together.[47] Although I am cautious about the representativeness of this word as common parlance among Weimar filmmakers at this time, the concept of *filmemacher*, and the signified difference between how Hollywood defines a filmmaker versus Weimar remains important to this investigation of Weimar collaboration. Overall, these terms and practices demonstrate how Weimar productions were teeming with collaboration, and further support the existence of a culture of collaboration within Weimar industry structures.

Clearly, German cinematographers experienced opportunities unseen in places like Hollywood. Their role in shaping the look and texture of a film was not only appreciated technically, but creatively as well. However, this then poses the question as to why so many German filmmakers, most often members of the filmmaking elite, left Germany to work in Hollywood – either temporarily or permanently during the latter years of the silent era. I will examine this phenomenon in the following subsection.

Yet Why Hollywood?

After WWI, the societal pressures that existed in Weimar were utterly absent from the United States. The country was victorious, and regarding Hollywood's global power, they emerged from the war unrivaled, "dwarfing all other nations in every department from the size and number of theaters to production figures and the salaries paid to its screen stars."[48] This kind of dominance was not unexpected, given the war in Europe and the toll it had on European

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[46] St. Pierre, *Cinematography in the Weimar Republic*, 2.
[47] St. Pierre, 234.
[48] Saunders, *Hollywood in Berlin*, 10.

industries. Importantly, the slowly growing flow of emigration began years before the Nazis consolidated their power (1933), when many more would join those who had already left to avoid persecution. Despite the rank of the German industry, at any stage of the 1920s, it would be nearly impossible to miss the influences and inroads of American economics, and culture in the Weimar filmmaking industry.[49] Hollywood's dominance was disseminated across the world through the spread of capitalism: American film businesses in foreign countries helping or competing with domestic production. However, Germany was again slightly insulated from these inroads due to the postwar societal conditions. Scholar Thomas Saunders explains that "American companies dumped large quantities of movies in Germany, established their own distribution companies and gained influence in German production… [but] Hollywood never won the control in Germany which it wielded almost everywhere else. At no time did American feature film imports constitute a clear majority of German market offerings."[50] This distance is in part why Pommer and UFA were able to strike up the challenge of "present[ing] a European answer to Hollywood," yet it was not enough distance to keep the talent of the Weimar industry away from the Hollywood.

The simplest explanation for why German film professionals flocked to Hollywood is because Hollywood lured them there after their own successes in their national markets. That oversimplifies the matter, but accurately introduces the nature of the Hollywood hegemonic conglomerate. They wanted the best no matter where they came from, and they had the means to entice these prospects with the draw of their scale: "Hollywood made films with higher budgets in better-equipped studios, for larger audiences."[51] In other words, no matter the comparison of

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[49] Saunders, 3.
[50] Saunders, 5.
[51] Elsaesser, *Weimar Cinema and After*, 365.

societal conditions, Hollywood attracted filmmakers "because of the technology, resources, and rewards that [they] could offer."[52] This transfer of talent included directors, stars, cinematographers, screenwriters and set designers across the European market.[53] Elsaesser notes how the majority of scholarship focuses on the directors and stars who were drawn to Hollywood, often citing F.W. Murnau or Marlene Dietrich, but he says that the influence of the more technical industry personnel (i.e., cinematographers and set designers) "was in some ways more lasting and more profound than that of the directors or the films."[54] He then goes on to cite important cinematographers who left for Hollywood, including Karl Freund (emigrated in 1929), Theodor Sparkuhl (left Germany in 1928, emigrated to Hollywood in 1931), and Eugen Schüfftan (emigrated in 1933) – all of whom left flourishing careers in Germany.[55] The presence of Hollywood interests in Germany, as Saunders describes, explains how Germany fit into the "network of international cinema culture of which Hollywood was capital."[56] This meant that Hollywood was top of the food chain, and as I've outlined, German filmmakers struggled to both advance the social standing of the cinema domestically to compete with these Hollywood interests.[57] Thus, Weimar filmmakers were striving for survival. While on the one hand this supports the collaborative efforts to make the highest quality films, it also opens the door for possibilities that individuals would be enticed by the relative differences Hollywood could

52 Elsaesser, 365.
53 Elsaesser, 364.
54 Elsaesser, 369.
55 Elsaesser, 369.
56 Saunders, *Hollywood in Berlin*, 11.
57 Elsaesser, *Weimar Cinema and After*, 5.

provide: higher wages[58], a more secure sociopolitical reality, the opportunity to work on more films, and the chance to work at the top of the food chain.

Furthermore, while Hollywood cinematographers were struggling for any public recognition and elevation towards the role of artist, American film critics began to give the praise they craved to German cinematographers.[59] For example, Keating outlines how the editor of *American Cinematographer* was outraged by domestic critics praising the artful camerawork in *Der letzte Mann* and *Variété,* when the same critics paid no attention to the "unobtrusive virtues" of Hollywood cinematography.[60] While this may have angered Hollywood cinematographers and spurred deeper conversations about how to expand the artistic style of Hollywood, it conversely demonstrates the international praise German cinematographers garnered. Moreover, Elsaesser notes the existence of Hollywood "talent-raiding campaigns masterminded and conducted by US studio executives coming to Europe" in the 1920s.[61] The objective was simple: to poach from the best of Europe's film teams to exploit their economic value in international markets. The massive studio system of Hollywood possessed financial benefits Weimar could only dream of, which meant that "American moguls could pay more attractive salaries and finance more adventuresome projects." [62] Thus, in combination with the growing contemporary idea among some German critics of advancing German cinema through work in Hollywood, the topmost German talent was drawn to the Hollywood markets.[63] So, while the exact reasoning for every individual who came to Hollywood remains unique and specified (and precisely unattainable),

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[58] While I was unable to acquire exact salary comparisons, multiple sources reported the existence of higher wages in Hollywood than Weimar which enticed international filmmakers to leave their national markets. For instance, Elsaesser and Saunders.

[59] Keating, *Hollywood Lighting*, 27.

[60] Keating, 27.

[61] Elsaesser, *Weimar Cinema and After*, 363.

[62] Saunders, *Hollywood in Berlin*, 198.

[63] Saunders, 199.

these aspects which commonly attracted filmmakers and stars explain the propensity for Hollywood to leach from successful industries like Weimar. Additionally, this highlights the dwindling nature of Weimar, as both a golden age of filmmaking, as well as a democratic society. At the end of the 1920s and early 1930s UFA lost nearly all their talent, from every department of production.[64] Further, the rise of the Nazis was underway, and the German film industry would be stripped of its identity and remade to match the regime. The Weimar years are naturally shrouded in this dark future, but it remains important to remember the legacies of Weimar Germany.

I will outline the cinematographic legacies of Weimar filmmaking in the following conclusion chapter, as well as explore the limitations of this study and the areas where it can be improved and expanded with further research.

64 Elsaesser, *Weimar Cinema and After*, 367.

Chapter 6: Conclusions

Weimar film practices demonstrate a valuable lesson in how the role of cinematographers is in part shaped by the greater industry conditions and working environment. Throughout film history, since the transition from the cinema of attractions to narrative filmmaking, when the cinematographer was usurped by the rising role of the director, their value has been frequently misunderstood. As time has gone on, the propensity of directorial authorship pushed cinematographers farther out of the picture, and left their contributions underappreciated. It is thus important to call out the co-authorship model of Weimar cinema, and the collaborative partnerships between directors, cinematographers, and every member of the cinematic ensemble under Pommer and UFA, and how this attitude of collaboration permeated the culture of filmmaking, reception, and cinematography. The contrasting Hollywood model of directorial hegemony and subdued cinematographic conventions, while ultimately proved highly successful, is not the only model. My research joins in the movement to describe co-authorship and collaborative authorship involving cinematographers, such the work of scholars Christopher Beach and Paul Matthew St. Pierre. Further, this appreciation of collaboration extends to other 'below the line' creatives, such as production design, editing, special effects, visual effects, and more. The most important implications of Weimar cinematographic innovation surrounding lighting and camera movement are the lasting effects they continue to have in modern filmmaking. This chapter will examine the legacies of Weimar cinematography, touching specifically on the legacies of Wagner's lighting, and Freund's camera movement. I will then outline the limitations of this study and finally describe possible future expansions of this research.

Legacies of Weimar Cinematography

In whole, the legacy of silent era cinema is the foundation upon which the monument of cinema history has been built from. Modern day movie making is an enterprise that reflects modern day living and technology, but there are important elements which can be traced directly to the 1920s. These include the techniques which I have outlined through my case studies of Fritz Arno Wagner and Karl Freund. Lighting and camera movement are vitally important cinematographic elements which are integral to any filmmaking endeavor. The progression of these techniques is thus a legacy itself.

Weimar cinematography, namely the chiaroscuro lighting effects and creation of *Stimmung*, is known for influencing post-WWII Hollywood style, with the atmosphere and tone of Noir Films. This directly connects Wagner's Weimar achievements to an ongoing filmic legacy far beyond Weimar films. The 1940s to the early 1950s saw an increase of Hollywood films with dark, shadowy cinematography that meddled with shadows and psychological conflicts, and while there are a number of influences for this tendency – such as the influence of pulp fiction crime stories which became adaptations and the post-WWII attitude of returning soldiers – the lighting style which suited these factors was taken in part from Weimar silent films. This connection is preserved in cinema history and commonly discussed in relation to post-WWII American cinema.[1] Thus the German lighting style morphed into Hollywood Noir lighting style, highlighting the dark alleyways and shadowy underworlds of Noir narratives. Film Noir lighting has continued to expand and grow as the decades of cinema production have evolved. In today's biggest blockbusters, the *light as action* approach perseveres. For instance,

[1] Durgnat, Raymond. "Paint It Black: The Family Tree of the Film Noir." *Film Noir Reader*, Mar. 1997, pp. 37–51.; Porfirio, Robert G. "No Way Out: Existential Motifs in Film Noir." *Film Noir Reader*, Mar. 1997, pp. 77-93.; Schrader, Paul. "Notes on Film Noir." *Film Comment*, vol. 8, no. 1, 1972, pp. 8–13. These sources speak to the discussions of how Weimar influenced Hollywood Noir.

the 2024 science-fiction epic, *Dune: Part Two* uses extreme chiaroscuro contrasts between light and dark – achieved in camera with infrared light – to construct a rigidly stark alien world void of color but teeming with depth and shadow.[2] With this kind of continuation in exploring the possibilities of chiaroscuro and atmospheric lighting effects, cinematographers like Greig Fraser (*Dune, Dune: Part Two, The Batman, Rogue One*) demonstrate the importance of modern cinematographic innovation building upon the years of progress before it. Moreover, this preservation contributes to the growing field and discussions of transnational cinematography, which interrogates the "substantial communication between critical studies of cinema and film production practices," as well as "expands the scope of film and media studies into the arena of transnationalism."[3] This topic ties in nicely with my study and addresses the important discussion of cinematography in current Cinema Studies discourses. The cinematographic techniques of Weimar cinema did not die with the rise of the Nazis, and that is due to the transnational nature of cinematography and the entire scope of filmmaking.

As I've outlined, many German filmmakers emigrated to the United States, and thus were able to continue to advance their respective fields, by adapting to the Hollywood structure. For instance, Karl Freund's largest cinematographic legacy is the unchained camera, but he continued to innovate and produce high quality films (and television) in Hollywood. Some of his most well remembered Hollywood productions include *Dracula* (1931), *Key Largo* (1948) and *The Good Earth* (1937), for which he won the Oscar for Best Cinematography.[4] In fact, after his Oscar win *American Cinematographer* described Freund as "'a veteran of camera, a pioneer of

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[2] Tangcay, Jazz. "'Dune 2': How Artisans Pulled off Shooting the Arena Fight Scene with Infrared Technology." *Variety*, March 3, 2024.

[3] Coleman, Lindsay, Daisuke Miyao, and Roberto Schaefer, eds. *Transnational Cinematography Studies*. Lanham, Mayland: Lexington Books, 2016, 2-3.

[4] Schmitt, Gavin. *Karl Freund: The Life and Films*. Jefferson, NC: McFarland & Company, Inc., Publishers, 2022, 2.

the lens in the truest sense, one who has dared to do things that were not in the book.'"[5] Additionally, Freund was a critical force in advancing the practices of shooting multi-camera television for the show *I Love Lucy*, which he worked as principal cinematographer on throughout its run in the 1950s. He designed solutions to the issue of lighting strategies to accommodate for three simultaneous shooting cameras at different angles and positions, which revolutionized the production of sitcom television.[6] His continued contribution to cinematographic advancement speaks to the legacy of Weimar cinematography, through one of its most skillful cinematographers.

Additionally, the explicit use of unchained camera movement should be appreciated as its own legacy of Weimar filmmaking. The unchained camera can be observed in every Hollywood blockbuster, and more than that, in a plethora of indie filmmaking as well as amateur filmmaking. The unchained camera has permeated into the visual culture of cinematography and has influenced how audiences perceive cinematographic quality. This speaks to the power of camera movement, which Freund and his compatriots set in motion. To radically define a film by roving, traversing movements in *Der Letzte Mann* – as Freund achieved – sparked a cascade of experiments and avenues for camera movement to develop within filmmaking. Like lighting, the technique is quintessentially transnational, as movies from all over the world possess the unchained camera. In fact, the scale of the unchained camera has only expanded with the continued advancement of technology. Physical devices such as techno-cranes, Steadicams, dollies, gimbals, and drones are extremely commonplace cinematographic tools for achieving camera motion in today's filmmaking; as well as digital tools such as virtual camera movements

[5] Schmitt, *Karl Freund*, 2022, 1. Quoting an *American Cinematographer* article from 1938.
[6] Schmitt, 2-3.

achieved through visual effects. However, early imaginations of these devices are evident in Freund's work: the flying sound shots, with a crane-like structure that resembles today's techno-cranes; mounting the camera on his chest conceptualizes an early form of Steadicam; and putting the camera on wheeled devices foreshadows the dolly. These devices are not solely the product of German cinema by any means, but Freund and his team were among the first to see the potential of the moving camera and propelled its development for years to come given the wide reach of Weimar films. The extent to which an unchained mobile camera is used today only adds to the legacy, and the current cultural ideas that distinguish elaborate camera movement as signs of high-quality production.

This study has demonstrated that cinematographers are paramount to the endeavor of filmmaking and elevate a technical medium into art of the highest form. While in the 21st century there may not be such common discourses questioning the art of film, it remains important to acknowledge and appreciate the work of the filmmaking ensemble and specific individuals other than directors in the analysis of film and its production. As Bordwell, Staiger, and Thompson articulate, "production practices [allow] films to look and sound the way they [do]," and we need to understand "how and why" these practices are what they are, and were what they were.[7] Weimar Germany was an unstable period of chaos, but through the turmoil, cinema flourished, and this flourishing should be recognized and appreciated – and not just for the famous directors and not under a misleading catch-all term of German Expressionism, but with the study of its production practices. The discussion of cinematography from 1920s Weimar contexts helps to build on the ongoing conversations about cinematography in Cinema Studies, the importance of the transnational arena, and further speaks to techniques of filmmaking still used today.

[7] Bordwell, David, Janet Staiger, and Kristin Thompson. *The Classical Hollywood Cinema: Film Style & Mode of Production to 1960*. Columbia University Press, 1985, 87.

Furthermore, as the film industry faces the rise of AI technology, it is all the more important to recognize cinematography, among other elements of the creative ensemble, in both film history and today's productions, to preserve the artistry of film and the individuals who create it.

Limitations of this Study

As important as it is to recognize the value of this study, it is equally important to recognize its shortcomings. Key limitations must be highlighted, which in part speak to the complexity of cinematography studies, and the difficult nature of attributing innovative techniques to individuals. First, the exact production conditions through which the case study films were made are impossible to ascertain with complete confidence. In other words, the decisions made on set in the 1920s, even when reported in secondary sources, are impossible to know completely. For instance, there are several conflicting reports when it comes to the individuals who first had the idea to mount the camera on Freund's chest in *Der Letzte Mann*. In some scholarship, such as Siegfried Kracauer's accounts, the idea first came from screenwriter Carl Mayer.[8] However, in the "Making 'The Last Laugh'" documentary, several unreliable reports are shown to highlight this issue, that even first-hand accounts from the members of the crew present conflicting information. Essentially, the exact decisions and individual decision makers who were responsible for the final product of a film are muddled. The nature of using secondary sources, such as articles from *Der Kinematograph, American Cinematographer, UFA Magazin*, and others, provide extremely valuable insights into the views and practices of 1920s filmmaking, yet as these publications are produced with the intention of advancing profits and progress of their higher organizations whether that be the generally with German audiences, or more direct with the interests of UFA and the ASC. This potential for presenting information that

[8] Kracauer, *From Caligari to Hitler*, 105.

suits these entities is important to recognize since I have used this evidence frequently throughout this study. Despite these limitations, I believe that my arguments have validity and veracity that offer valuable insight into the complex relationship between cinematographic innovation, technological invention, and creative agency among the practitioners.

Next, it is important to acknowledge the existence of the cinematographic techniques studied in this thesis that appear prior to the discussed films. There were early experiments in camera movement in many places in the 1910s and early 1920s. For the most part these movements were transitional movements, tilts, and pans, that break from a system of rapid cuts to convey continuous action.[9] One national cinema undertaking these small transitional device movements, along with experimenting with subjective point of view movements was France. It is posited by scholar Kristin Thompson that these films by the French impressionist filmmakers in the early 1920s "were not widely circulated, but they influenced the Germans."[10] Because these films were not revered in the same way that *Der Letzte Mann* was, they have largely been lost in the shuffle of time and progress. A similar phenomenon occurred with Karl Hasselmann and Guido Seeber's work on the 1924 film *Sylvester: Tragödie einer Nacht* (in English, *New Year's Eve: Tragedy of a Night*), which exhibits instances of camera mobility – primarily tracking shots. Moreover, in less frequent cases, there are examples of radical camera movements much earlier, including an impressive dolly-like pull-back motion through a pane of glass – much like the dramatic pull-back in *Der letzte Mann* when the porter receives his demotion – in the 1916 Danish film *Blind Justice*.[11] Thus, the unchained camera has many sources of shared inspiration,

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[9] St. Pierre, Paul Matthew. *Cinematography in the Weimar Republic: Lola Lola, Dirty Singles and the Men Who Shot Them.* Farleigh Dickinson University Press, 2016, 54.

[10] *Kristin Thompson on Variety (1925, dir. E.A. Dupont).* YouTube, 2009.

[11] *Blind Justice*. Denmark. 1916. https://www.youtube.com/watch?v=7HSOxH_J_7Y&t=1130s. The pull-back movement occurs at 00:18:52 in the YouTube video.

but these previous instances of camera movement do not take away from the efforts of Freund in *Der Letzte Mann* and *Variété*. In fact, they speak to the development of the transnational nature of cinematographic innovation, and the culture of collaboration in Germany. Freund's use of the unchained camera was also the defining cinematographic quality of these two films, especially *Der Letzte Mann*, where it is impossible not to take notice of the sustained use of radical camera movement. While this thesis cannot focus on the entire expanse of transnational influences, I acknowledge these combined efforts and the multifaceted nature of innovation.

In the same vein, there are similar accounts relating to the progression of chiaroscuro lighting. While in the end it is clearly a German innovation, it remains a technique with multiple avenues of exploration in many areas. For instance, the Danish film industry was known for their contrasting lighting in the 1910s, and also for bringing these first experiments to Germany through an influx of Danish immigrants and temporary emigres working in Berlin.[12] Additionally, I've already acknowledged that Hollywood also conducted lighting that resembles the chiaroscuro of Weimar. Most importantly, the dominant style of Hollywood rejected this lighting and in later years, the conception of chiaroscuro and visual darkness and shadow was perceived as a German legacy, and found in the scholarship regarding Hollywood Noir and post-WWII cinema. Again though, this speaks to transnational elements in cinema production.

Overall, the transnational nature of cinematographers, other filmmaking crew members, and technology was not fully explored in this paper. Thus, opportunities to continue this work and examine larger pieces of the web of intersecting circumstances which have led to the development of cinematography and cinema in general are opened. As Beach claims the "intersecting career paths of producers, directors, writers, cinematographers, editors, and art

[12] Eisner, *The Haunted Screen,* 60.

directors" must be more intently studied to "yield new insights" in the field of Cinema Studies.[13] This study does not fully account for the intersecting career paths of each individual but attempts to unravel Weimar cinematographic influence away from an auteurist bias.

Future Studies and Final Thoughts

There are a wide variety of avenues to continue to explore branching from this thesis. Further studies could ask a myriad of questions expanding several ideas I've brought up. For example, one could ask what happened to this collaborative culture during the Nazi regime? Does a collaborative attitude prevail in other national contexts experiencing economic, political and social strife? What do the early instances of specific cinematographic experimentation – such as the French's camera work – offer to the larger conversations of their ongoing legacy? How does the work of set designers, screenwriters, producers, and/or editors influence visual style and the collaborative culture? Most relevant to explicitly expanding this thesis would be to further investigate the idea of transnationalism in cinematography, and how Weimar's legacy became successful through German emigres, and Hollywood emulation. One could analyze more films and study more cinematographers, as well as provide more Hollywood points of comparison. Each possible investigation would further the battle against entrenched auteurism in Cinema Studies.

This thesis elevates the work of silent era Weimar cinematography and the greater industry's milieu. Ultimately, the tight-knit group of German filmmakers, which included Freund and Wagner, made a conscious effort to push the limits of cinematography for the advancement

[13] Beach, Christopher John. *Hidden History of Film Style: Cinematographers, Directors and the Collaborative Process.* University of California Press, 2015, 16.

of national pride, profit, and cinema arts. This culture of collaboration was instrumental in expanding techniques of lighting and camera movement during the 1920s in Weimar Germany.

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