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# Temporal Cinematography: Constructing the Subjective Experience of Time Through Visual Form

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**Abstract**

Cinema can be viewed as a system that reorganizes the experience of time in the cognition of the spectator. In the context of film studies, the relationship between the manipulation of time and the editing process has been extensively discussed. In this research, however, the role of the camera in the manipulation of cinematic time will be highlighted. In this respect, the cinematography will be analyzed in great detail to show that it can be used to create feelings of immersion, stillness, and speed, as well as periods of contemplation. Notable cinematographic works that have used the aesthetics of continuous takes include Mendes' 1917 (2019) and Adolescence (2025), produced by Netflix. In essence, the cinematography in these films creates a synchronization between the audience's experience of time and the content being screened. In this respect, the audience experiences a unique experience. In this research, the theoretical background provided by Bazin, Deleuze, and Bordwell will be used to show that the phenomenology of cinematic time does not come from the content of the story being screened. In this respect, cinematography has a profound impact on the audience's experience of time. In essence, cinematography can be viewed as a generator of time.

## Introduction: Time as a Cinematic Construction

Time flows through films, and yet our understanding of it on screen is different from our understanding of it in reality. In reality, one second flows into the next with a steady and predictable pace. However, on screen, one can feel that a two-minute moment could have flown by quickly or could have been suspended for a longer time, based on its presentation. Classic film theory explains these differences in our understanding of time based on film presentation as a result of the editing process. However, one major factor is often ignored, and it is related to cinematography and its impact on our understanding of time. Each frame of a film is a temporal event and not merely a component of a film waiting to be edited.

Practically, this initial stage involved testing the central idea by repeatedly examining the selected film scenes. The literature review on cinematic time and associated theories followed this. Then, the films that were recognized for their experimentation with time were analyzed scene by scene, noting the impact of stillness, movement, and scene length on the audience and the experience of time passing. The findings again reinforced the central idea: the camera is not just a passive tool for recording events. It influences time. The cinematography defines time by controlling the length of the scene and the way space and movement are arranged within the scene. The cinematographer is the designer of time, not just the one who controls the audience's view of it but also the duration of the view.

Thus, the principal research question is how cinematographic techniques, specifically the length of the scene, movement, and visual pacing, influence the audience's intrinsic experience of time and the style of film. The research question focuses away from the events' timeline and zeroes in on the visual style. The research also reflects the current shift in film studies toward multi-dimensional analysis. The editing and the storyline have been deliberately excluded from the analysis. By focusing on cinematography, the research aspires to gain a better understanding of the intrinsic effect of cinematographic techniques on the audience's experience of time. The practical application of this involved focusing on the images and ignoring the storyline and the cuts to assess the pure effect of the images.

The Research Question

The key question here is how cinematography affects our experience of time on screen. There are three key aspects of cinematography that are crucial in this regard: the length of each shot, the movement of the camera during each shot, and the rhythm of images resulting from a combination of these factors. These are the key determinants of the rhythm of time itself, independent of the action and cutting between scenes. The key question here is how do our experiences of a stationary camera during long takes, smooth camera movements during shots, and alternating long and short takes affect our experience of time?

This is part of a broader concern of film theory as a whole: how to think of cinema as a complex interplay of formal systems. Rather than seeing editing, storytelling, and sound as key areas of control, film theorists try to understand how cinema works as a combination of these systems. By examining the role of the camera in detail, the theorists hope to expose a dimension of film meaning that is often obscured by editing and montage.

Scope and Significance

However, this research is significant not just from a theoretical perspective. It can help filmmakers and cinematographers use temporal cinematography to influence emotions by using the way shots are selected. It can also help the audience and scholars become more media-savvy by understanding the way what is depicted can affect perceptions of time, often unconsciously. With the modern film industry's emphasis on real-time and single-shot filmmaking in works such as "Birdman" (2014), "Russian Ark" (2002), Mendes' "1917," and Netflix's "Adolescence," the use of one-shot filmmaking is becoming more mainstream. As such, understanding the way these affect perceptions of time is becoming more and more important, especially as these styles become more and more popular. The study seeks to find the timeless principles behind temporal cinematography.

Research Methodology

This study will use a qualitative visual analysis approach. Unlike most studies that heavily rely on statistical results and numerical values of shot lengths and cinematography aspects, this study will heavily focus on the subjective experience of momentary durations and how they are perceived by the viewer. This is done by repeatedly viewing and analyzing key scenes of a movie and observing and analyzing different cinematography aspects such as composition, camera stability,

and camera movement. The context of the movie is intentionally minimized as much as possible in order to heavily focus on cinematography and ensure a deeper and better understanding of its role in temporal perception.

The plan of this study was developed with a heightened focus on cinematography. Systematic film analysis was also undertaken and involved different directors and sequences of movies. This involved making notes on different aspects of cinematography, such as shot lengths and the balance between stillness and movement.

At the same time, this study will heavily rely on different film theories and approaches developed by different theorists and filmmakers in the past and in recent times. The key film theories will be derived from different theorists such as André Bazin **(1958/2005, p. 37)**. on long takes and Gilles Deleuze **(Deleuze, 1985/1989, p. 271).** on the time image and shot durations and how they are perceived by different people and filmmakers. These theories will be crucial in helping understand and analyze the results of this study and provide a deeper and better understanding of cinematography and its role in temporal perception and experience. The key theories of Deleuze on the time image will be heavily incorporated and applied in analyzing different sequences of movies in a later stage of this study.

**Theoretical Foundations: Understanding Cinematic Time**

A clear understanding of time in cinema is vital to establishing a basis for analysis. There are various forms of time within the context of cinema. Real time relates to the actual time spent on the screen, such as the time spent by an actor to move from one end of the room to another, which might be around ten seconds. Story time, on the other hand, relates to the time spent before, during, and after the occurrence of the story, which is structured around the narrative's plot **(Bordwell & Thompson, 2019, pp. 78–81)**. The most relevant time to this study, however, is the time experienced by the audience, which is the cinematic time **(Elsaesser & Buckland, 2002, pp. 115–118)**. These forms of time are not always the same, and their difference is exemplified in the case where the time spent by the protagonist in the backseat of the car might be 30 minutes, but the time spent on the screen might be only three minutes, depending on how the visual form regulates the audience's time **(Bordwell & Thompson, 2019, pp. 80–82)**.

Cinematic time has the ability to stretch time, and this is done by using long shots, slow movements, and cutting the film less frequently **(Salt, 2009, pp. 207–210)**. The moments spent in such a scenario may be such that time stands still, and the audience may be forced to stay in the present, though the frame may be static. This demonstrates that time can be slowed down using visual form, and the audience will be forced to stay in the present, enjoying the time spent in the movie theater **(Doane, 2002, pp. 19–24)**. On the other hand, the visual form may be such that time speeds up, such that the audience feels that time is passing faster than the actual time spent in the movie theater. This is exemplified in the case where the time spent by the protagonist in the backseat of the car may be 30 minutes, but the time spent on the screen may be only three minutes, depending on the visual form used to regulate time **(Bordwell, 2006, pp. 121–125)**. The audience may feel that the time spent in the movie theater may be shorter than the actual time spent by the protagonist, depending on the visual form used to regulate time, which may be

characterized by quick cuts and the nature of the visual detail used to create the story **(Salt, 2009, pp. 226–230)**.

Time as a Perceptual Construct

The particular temporal characteristics of film are revealed through perceptual processes. Cognitive psychology has shown that subjective estimates of time can vary significantly from real time **(Block & Zakay, 1997, pp. 184–186)**. This variance can be influenced by factors such as editing, shot length, and movement **(Bordwell, 2006, pp. 121–124)**. Real-time sequences, or sequences that have not been significantly manipulated in terms of editing, are more accurately perceived than those that have been more significantly manipulated **(Zakay & Block, 1997, pp. 13–15)**. However, attention is a major factor in this process. When a shot is more visually or thematically complex, more cognitive attention is given to its processing, and this can make the shot feel slightly shorter in real time **(Block & Zakay, 1997, pp. 187–189)**. When the shot is less complex or less interesting, more attention can be given to the passage of time itself, and this can make the shot feel slightly longer in real time **(Zakay & Block, 1997, pp. 14–16)**.

André Bazin and the Philosophy of the Long Take

The film theory of André Bazin provides a basic framework for the analysis of temporality in film. Bazin argues that the photographic nature of film grants an "objective" connection to reality and that the use of long takes and deep focus shots maintains real time by avoiding manipulative editing techniques **(Bazin, 1967, pp. 13–16)**. Bazin believed that the look of the camera should permit scenes to occur in real time without fragmentation, thus achieving ontological realism—a sense of realism that scenes are happening as opposed to being segmented or interrupted **(Bazin, 1967, pp. 35–40)**. In this sense, the long take makes time itself visible and tangible on the screen. A long shot allows the spectator's consciousness to move with real time and to experience time as a continuum rather than as movement dictated by montage **(Bazin, 1967, pp. 34–38)**. However, other film critics have recognized that long takes are aesthetic constructs and that Bazin's perspective was merely one of many possibilities **(Bordwell, 1997, pp. 74–78)**. However, the basic premise of this concept is that time as a continuum in a single shot creates a particular effect on the viewer. When images persist without interruption, time becomes more salient, and there is a greater sense that time is continuing **(Doane, 2002, pp. 19–24)**. The study's emphasis on the duration and continuity of shots as a function of time is based on this premise.

Gilles Deleuze and the Time-Image

A parallel perspective on cinematic temporality can be provided by Gilles Deleuze. Deleuze draws a distinction between the movement-image, associated with the classical cinema of action films, and the time-image, associated with post-war cinema in which time itself becomes the primary concern **(Deleuze, 1989, pp. 1–5)**. In movement-image cinema, time serves the purposes of the action; in time-image cinema, time becomes the subject of investigation **(Deleuze, 1989, pp. 34–36)**. Such investigation can be achieved with long takes that liberate the image from the constraints of the sensorimotor system. Deleuze proposes the concept of the crystal image in which present

action is imbued with memory or virtual time so that the audience can experience both the present action and the recognition that it is being recorded as film **(Deleuze, 1989, pp. 68–79)**.

More relevant to the present argument is Deleuze's emphasis that the time-image can be achieved not only with long takes but with editing as well. Editing can be used to create time images by disrupting the sensorimotor system in order to focus attention on time rather than the progression of the narrative **(Rodowick, 1997, pp. 86–92)**. In this sense, the essence of cinematic temporality lies in the ability of the image to present time as an autonomous phenomenon by whatever means. The emphasis in Deleuze's theory is not only on duration but also on how the image composes multiple temporalities **(Deleuze, 1989, pp. 98–105)**.

David Bordwell and Cognitive Approaches to Shot Duration

David Bordwell's research on the matter brings the cognitive aspect into the debate on temporality in cinema. His research reveals that there is a significant drop in the average length of shots in the history of mainstream cinema, from approximately five to eight seconds in earlier films to two to four seconds in contemporary productions **(Bordwell, 2006, pp. 121–123)**. However, Bordwell also warns against relying solely on such data as an essential analytical tool. Instead, the concept of *shot consciousness*, or the audience's awareness of shots as separate units of time and vision, becomes more important **(Bordwell, 2006, pp. 124–126)**. Thus, in the case of a shot held at ten seconds, the pace can vary depending on the content of the shot. For example, a static shot of an actor's face held at ten seconds can be perceived as slow, while a ten-second tracking shot through a complex spatial environment can feel fast **(Bordwell, 2006, pp. 124–127)**.

This observation aligns closely with the overall focus of this research. Thus, time in cinema is not determined by duration alone but depends on composition, movement, and contextual factors. From this perspective, cinematographers design an interplay of visual elements to create the experience of time **(Bordwell, 2006, pp. 125–127)**.

Spectatorship Theory and the Active Viewer

According to theories of spectatorship, spectators play an active role in constructing cinematic meaning and temporal experience **(Stam, Burgoyne, & Flitterman-Lewis, 1992, pp. 137–140)**. Psychoanalytic and cultural theorists such as Christian Metz and Laura Mulvey explain the ways in which spectators identify with the cinematic gaze and the ideological structures embedded within film viewing **(Metz, 1982, pp. 48–52; Mulvey, 1975, pp. 9–12)**. More recent theories of embodiment suggest that films are experienced by viewers situated in specific spatial and temporal environments **(Sobchack, 1992, pp. 3–9)**. Spectators in darkened cinemas are consciously and unconsciously aware of their bodily state and internal rhythms of time **(Sobchack, 1992, pp. 55–59)**.

This is particularly relevant when considering cinematic time. In films that employ real-time structures, spectators experience a dual awareness of both narrative time and their own lived time

**(Doane, 2002, pp. 25–28)**. From this perspective, cinematic time emerges through the interaction between film form and the cognitive, emotional, and physical states of viewers **(Doane, 2002, pp. 172–176)**. Real-time films therefore create a situation in which the time of the film and the time of the spectator become intertwined.

**Cinematographic Techniques and Temporal Experience**

Based on this theoretical background, the discussion will move on to examine the different cinematographic tools in detail, specifically in terms of shot length, camera movement, and visual rhythm, to see how each affects the viewer's perception of time **(Bordwell & Thompson, 2019, pp. 219–223)**.

Shot Duration: The Direct Mechanism of Temporal Construction

The duration of shots acts as a direct means for the control of the experience of time within the discourse of moving images **(Salt, 2009, pp. 207–210)**. The duration for which the images on the screen are visible corresponds with the duration for which the viewer is present within the scene **(Bordwell & Thompson, 2019, pp. 219–223)**. If the duration of the shot exceeds the expected duration, the degree of observation becomes more intense. The initial response to the extended duration of the shot will be one of discomfort or expectation, the expectation of the cut coming at some point, followed by increasing degrees of immersion.

The lack of a new shot to which the eye can be directed will encourage the viewer to pay more detailed attention to the minute movements within the performance **(Bordwell, 2006, pp. 121–124)**, the minute changes in lighting, and the activities going on around the scene that would be missed with the shorter cuts. The increasing degree of observation will encourage the emergence of the awareness of duration. The passing of time within the discourse of moving images will be imperceptible within the cuts from one scene to the next. The extended duration will make the passing of time visible **(Doane, 2002, pp. 19–24)**.

The extended duration will increase the suspense within the thriller genre or encourage the emergence of a more detailed psychological relationship with the material within the art genre **(Flanagan, 2012, pp. 15–18)**.

By contrast, short shots disrupt temporal continuity. Rapid cutting, where shots are only several seconds long, limits possibilities for detailed observation and produces an effect of acceleration **(Bordwell, 2006, pp. 121–125).** Time appears to pass at an increased rate, producing kinetic energy. While acceleration can be disorienting, in many cases, it can be exhilarating and enlivening. Action movies often rely on rhythmic patterns of short shots to create increased excitement through rapid development of the plot **(Salt, 2009, pp. 226–230).**

Alternation of long and short shots produces striking rhythmic contrast. A film with a single pace risks being almost imperceptible, since the viewer becomes accustomed to the prevailing rhythm. When a slow pace is interrupted by rapid cutting, or vice versa, the change is conspicuous **(Bordwell & Thompson, 2019, pp. 228–231).** Such rhythmic contrast can indicate changes in the tone of the narrative. From a cinematographic point of view, filmmakers can use these patterns to emphasize significant events, slowing down the pace when revealing crucial information and speeding it up when action begins **(Doane, 2002, pp. 140–145).**

Camera Movement: Modulating Temporal Flow Through Space

Camera movement plays the role of a powerful temporal device in the context of cinematography, often within shots with varying lengths. The sense of journey and immersion is created with the help of the camera movement, especially with the slow and smooth movement of the camera, which can elongate time within the shot. **(Bordwell, 2006, pp. 119–124).** The audience's sense of location is altered with the smooth movement of the camera within the camera glide, which focuses their attention on the emerging space instead of the cuts that might be made in the future. The cinematography done by Emmanuel Lubezki in films such as "Children of Men" and "The Revenant" demonstrates this technique, with the audience being drawn so deeply into the scene that the actual time spent in the scene is not considered important. The movement of the camera over the space becomes the surrogate movement of the audience, which creates immersion in the progression of the film **(Brown, 2016, pp. 87–91).**

Rapid movements of the camera, on the other hand, create a different kind of modulation of time within the context of the film. Shaky camera movements, for example, create uneasiness within the audience, creating a sense of urgency and tension within the context of the film **(Brown, 2016, pp. 90–92).**. The unstable frame within the context of the film suggests that there is some kind of danger or instability within the diegesis, which creates a sense of alertness within the audience, especially within the context of fight scenes, chase scenes, and psychological instability.

Static framing, the deliberate absence of camera movement, has its own temporal effects too. When the camera is held stationary over a long period, the sense of stillness is heightened.

When there is no camera movement to distract the audience, the frame becomes a static position from which the audience can examine the entire scene progressively **(Doane, 2002, pp. 172–176).** This can create the illusion that time has paused, and the audience is witnessing time stand still. The audience can contemplate the minute movements, such as the change in facial expressions, the movement of clouds, or other minute activities in the background, and so on. However, static framing does not necessarily create the illusion of slow time unless the camera is static and the activities within the frame are static too; otherwise, the static camera with high-speed activities and chaos within the frame will create the illusion of high-speed time, just like the camera with movement.

Visual Pacing: The Rhythm of the Frame

Visual pacing refers to the overall rhythm that results from the interplay of shot length, camera movement, and composition. In this respect, visual pacing differs from editorial pacing in that it results not from the frequency of edits but from the inherent dynamism of the shot. If a film establishes a certain internal rhythm- a series of long shots with moderate camera movement, for instance then the audience will begin to adjust to that rhythm **(Bordwell & Thompson, 2019, pp. 223–230).** . In essence, the audience will begin to internalize a sense of tempo or beat that results from the interplay of shot length and camera movement. Perturbations in this overall rhythm will be immediately noticeable. For instance, a long static shot that follows a series of images in quick succession can be shocking or disorienting. Conversely, a series of quick cuts that follows a

languid visual pace can be exciting and can signal a sense of escalation. In many cases, these perturbations in pacing can be used to signal developments in the story. For instance, the appearance of new conflicts can be signaled by a quickening in pacing and a dynamism in shot composition **(Bordwell, 2006, pp. 124–126).** Conversely, a sense of resolution can be signaled by a return to a languid visual pace. Perhaps most importantly, pacing and duration are not simply matters of mechanics. For instance, a languidly paced sequence with long shots can be exciting if the content of the sequence is interesting. Conversely, a quickly paced sequence with lots of cuts can be dull if the content of the sequence is dull. In essence, pacing intersects with content to create the overall experience. Ultimately, visual pacing establishes the audience's temporal expectations and provides a background rhythm that serves as a counterpoint to changes in pacing **(Salt, 2009, pp. 228–231).** In this respect, the cinematographer establishes a sense of tempo that provides the foundation for the overall cinematic experience.

**The Temporality of Real-Time Cinema: 1917 and the Illusion of Continuity**

One of the best examples of real-time cinema, which is defined as those films shot in such a way as to create the illusion of being shot in one continuous take, can be seen in the cinematography of Sam Mendes's 1917 (2019). While the plot, which follows two World War I soldiers on a mission to deliver an important message, is simple, the entire film was shot in such a way as to create the illusion of being one continuous take, lasting 119 minutes **(Bordwell, 2020, pp. 63–67).** By employing this technique, the audience is able to experience the cinematic time in synchronization with the characters. While there are 34 cuts, they are seamlessly integrated into the film, taking place in dark spaces, behind moving objects, or during explosions, making them almost imperceptible. From the audience's point of view, time flows smoothly. Spatially and temporally, there is no sense of teleportation **(Doane, 2002, pp. 25–28)**. Thus, the audience is able to experience the illusion of real-time duration, where approximately 2 hours of cinematic time equates to 2 hours of real time. This synchronization of clocks is a temporal effect, making the audience acutely aware of the passing of time, measured in units of minutes.

Overview of *1917* and its Cinematic Innovation

The dedication to a real-time illusion in 1917 provides a unique sense of temporality. While most films ask the viewer to forget the passing of time, the two-hour runtime could be significantly truncated because of concise editing and therefore ask the viewer to experience the passing of time as a primary factor in the experience. The tension of the race against catastrophe is also shared in that the urgency is not only driven by plot necessity but also by the understanding that each passing moment on screen is also a mission-related moment. This is known as "temporal empathy," in which the viewer does not simply experience the urgency of the plot but also simultaneously experiences it as a function of empathy. Two hours of plot is also two hours of experience for the viewer **(Bordwell, 2020, pp. 66–69).**

Roger Deakins' cinematography style also adds to this experience. The camera is in constant motion, tracking the soldiers as they move in the trenches or the fields. The movement of the camera from one place to another symbolizes the movement of time. As the camera moves from one place to another in space, it signifies the movement of time. In the opening scenes of the film,

the characters are followed as they move in the trenches in a continuous motion. In this film, there are several instances in which the camera comes to a halt as the characters halt. In such cases, the stillness of time is highlighted. The hidden edits form a very important part of this style. Roger Deakins and Lee Smith have ensured that they are hidden at points where they can be least observed. In this context, the film highlights the fact that the continuity of time in a film depends on the observation of the audience **(Bordwell, 2006, pp. 119–121).** If the audience does not observe the interruptions in the film, then they experience the film as continuous. In this context, the ultimate aim is not to avoid interruptions in the film but to make the audience not observe the interruptions.

Temporal Immersion and Audience Awareness of Duration

The 1917 real-time illusion has a significant impact on the viewer's psychology. Without traditional editorial relief, there is a need for sustained attention. Cognitive strain is increased as the viewer is asked to process two largely continuous hours of information. This format is engaging and makes it difficult for the viewer to become disengaged for brief periods of time. In terms of emotional engagement, 1917 maintains a steady level of engagement. Traditional films use rhythm and pace variation to increase emotional engagement, rapid cuts to create peaks of tension, and slower pace to encourage reflection. 1917 maintains a steady pace throughout its runtime. Tension is built and sustained rather than periodically released.

Furthermore, 1917 maintains a synchronization of temporal experience for the viewer and the characters. Viewers are not merely observers of the characters' anxiety and the pressure of a ticking clock. Viewers actually experience temporal pressure. Each silent moment is a reminder of the passing minutes. Studies of human psychology have shown that increased awareness of limited time available for a task is a major stressor. 1917 synchronizes the film clock and the experiential clock, making it a film that induces stress. Time is a narrative villain and induces suspense through its structural design.

Camera Movement and Spatial Continuity as Temporal Continuity

This continuous camera movement through space acts as a metaphor for continuous time flow in 1917. Deakins frequently follows the characters with his camera or takes them to different locations, thus ensuring that the flow of space is continuous and smooth. The spectator is able to experience continuous time flow as a result of the camera’s continuous movement from one location to another. The camera observes the characters as they traverse spaces such as trenches, ruins, and landscapes. The spectators intuitively equate continuous movement in space with continuous movement in time.

However, when the camera is still for a moment, it is as if it is paused in time flow. The stillness of the camera acts as a pause in time flow because, without its continuous movement to propel the spectator’s gaze forward in time, time flow is particularly noticeable. Situations in which characters are simply waiting or are silent are often extended and appear as if they are taking up much more time than they should because of the absence of visual distraction from time flow.

Visual Continuity and the Suppression of Edit Consciousness

The major accomplishment of 1917 is that it eliminates "edit consciousness." This is because it makes each cut at a visually favorable moment so that there is no disruption of the flow of time. The cuts are not as important as whether they are subjectively perceived by the spectator.

This leads us to a key conclusion: temporal continuity in cinema is ultimately governed by audience perception and not by physical edits. Therefore, if the experience of viewing is perceived as a continuous flow, then it follows that the experience of time is continuous as well. This is a key implication for filmmakers: it is not necessarily the case that filmmakers should strive for such complete avoidance of edit perception that it is never subjectively experienced. Cinematography and invisible editing manipulate not only what is seen but also how time is mentally segmented.

Psychological and Emotional Effects of Real-Time Structure

Aside from immersion, real-time cinematography also affects structures of memory and emotion. The fact that 1917 does not use traditional temporal editing means that spectators are offered fewer opportunities for cognitive disengagement. The increased engagement also aids in the creation of a richer cognitive imprint. The film is retained as a recollection of a long ordeal rather than as a series of individual scenes. Emotion is also sustained throughout the experience. In traditionally edited films, cutting is often utilized to heighten or reduce emotion. Cutting is also utilized at a slower pace to promote reflection and introspection.

However, in 1917, cutting is relatively consistent, and therefore intensity is derived from performance, sound, and environment. The result is a sustained and simmering emotion that is often perceived as having a higher level of realism because reality does not often involve sudden and rapid shifts in position and location as seen in montage-style editing.

Spectators also have a heightened temporal empathy with the characters in 1917. The experience is such that spectators feel as though they are undertaking the mission with the characters. The mission of delivering the message before dawn is a shared experience. The ticking of the clock is mirrored by the ticking of the clock in the theater as well. Cognitive studies have revealed that spectators experience heightened levels of stress and emotion as a result of real-time constraints. The experience is therefore not just of the characters but also of the spectators themselves. The end result is that spectators emerge from 1917 with a recollection of having undertaken the experience as much as having witnessed it. The film is therefore retained as a recollection of experience and plot and is a testament to the notion that real-time cinematography utilizes visual form to create experiential outcomes that are linked to its construction of time on screen.

**Presence and Embodiment: Adolescence and the Lived-Time Experience**

The Netflix series Adolescence (2025) takes the real-time concept and applies it to a serial drama format. Each formerly hour-long installment is shot in one continuous shot, with no concealed cuts. Unlike 1917, which uses cuts to make them seamless, Adolescence does not use cuts at all in an episode, with the camera moving in dynamic fashion through interior and exterior locations. It is described as creating a sense of "presence," a shared time in which viewer and characters are connected in real time. There is no condensed time in a five-minute dialogue scene; a five-minute

argument scene takes five minutes on screen. Scenes of walking from one room to another or walking through a courtyard also take real time on screen.

## 1.1 Overview of *Adolescence*: Contemporary One- Take Television

Adolescence is a show that focuses on a group of London-based youths as they deal with issues associated with their final year of secondary school. The one-take style is not just a technical innovation but also a deliberate choice that is consistent with the themes of the series. The form also imposes a set of classical unities of drama—time, place, and action. Each episode is precisely one hour of story time (real time) and takes place in one continuous location with one main action unfolding. The playwright/writer of the series, Jack Thorne, comments on how this affects the writing of each episode and how it makes writers think much more about how characters move around spaces and how time is structured as part of the action. Scenes are not cut or condensed as they might be in television drama. These constraints have a profound effect on the rhythm of the narratives. In television drama, mundane or silent moments are often cut in order to keep up the pace of the drama. However, in Adolescence, these moments are included in full. When characters are walking through a corridor, each step is followed by the camera. When characters are arguing and then fall silent, the silence is not cut and is shown in its entirety. "Dead time"—time that is of little interest and could be skipped—is a major contributor to drama simply because of its presence. The audience cannot fast-forward through it or look away from it; they are forced to experience it. Suspense and characterization are often derived from this constraint because mundane moments are given significance simply because they are being shown. The audience is forced to experience awkward silences and conflicts as if they are the main action of the drama. This is similar to the experience of being a teenager and having awkward situations drag on forever. The constraint of having to show each and every moment of the drama is what generates tension and characterization directly through its use of temporal duration.

Temporal Constraint and Narrative Structure: The Theatrical Unities

Each of these episodes, while shot in a single take, represents a contemporary reworking of the classic unities of drama. The coverage of the narrative is limited only to the hour-long duration depicted on the screen, while the action must occur in a continuous flow through spaces that are connected, based on the practical constraints of movement in real time. It is evident that the filmmakers have used the path of the camera as an extension of the theater stage, moving through corridors, stairs, and even outdoor spaces. Every decision made during the editing process, in terms of the timing of dialogue, movement, and the duration of stay in a room, is in accordance with the ticking clock. The presence of characters in physical space becomes an integral component of the content itself.

Unlike the conventional approach of treating time as a component of the narrative, which must be reduced or minimized, "Adolescence" reworks time itself as content, which can be used to construct the narrative. Situations, which might have been depicted as a montage, with elements of tension and movement from one place to another, are completely depicted on the screen. This gives rise to a sense of immediacy, where the viewer and the characters are in the same continuum of time. The tension, which is depicted psychologically, occurs only in real time. Thus, the five-

minute-long confrontation scene is depicted over the entire duration, with the emotional content, such as fear, anger, shame, developing over time. Thus, the very form allows the viewer to experience adolescence in the same way as the characters do, stretched, saturated, and often uncomfortably long.

Camera Movement as Choreography: The Visible Labour of Spatial Navigation

Unlike the 1917 model, where the camera mostly follows the protagonists, Adolescence makes use of camera movement as a more obvious and choreographed device. This could mean it could circle around the actors, lead them to different locations, and even suggest movement towards other locations off-screen. Since each scene is recorded in one take, there is a need for highly coordinated movement among actors and crew. The camera operator works his way through doorways, stairs, and other tight spaces in synchronization with the actors. This logistical requirement gives way to a related aesthetic effect: there is a noticeable and intentional quality to the movement of the camera.

As the camera continues its movement with a sense of dynamism, space is gradually uncovered. Unlike a static wide shot where the viewer is privy to information regarding the total environment, Adolescence unfolds space gradually as the camera encounters different aspects of it. Viewers are not offered a totally omniscient view of the space where the scene is set. They accumulate information regarding space from within the scene itself, following the actors and the camera as they would if they were actually there. Transitions and partial information create a sense of co-presence with the actors and other elements of the scene.

Real Time as Lived Experience: Discomfort and Presence

Adolescence makes use of the real-time nature of the series to create a psychological effect. The creators mention that the series deliberately tries to create a sense of "discomfort" by not following the traditional editing process that helps to break the tension. When a scene becomes too embarrassing or uncomfortable for the character, it stays for the full five minutes as required. Under the traditional editing process for a drama series, such scenes would be cut short and followed by other scenes to provide some respite. The audience would be forced to watch the scenes in full.

This methodological decision also holds thematic importance. Adolescence has been defined as a stage where events seem to take an eternity. The depiction of each scene in real time follows this theme. Even a simple walk or a fight seems to have more importance because it has to be experienced for the full duration. For the immersion research, this would also be beneficial. Within the context of the series Adolescence, this would mean that the audience does not simply go through the events; they have to make a conscious decision to stick with the scenes and not move at a faster pace. The presence required within the scenes translates into a commitment from the audience, where they would be forced to be more immersed with the character.

Sequence Shots and the Illusion of Montage Within Real Time

Adolescence offers an example of the potential of movement to substitute for cutting in terms of the development of visual variety. While each scene appears to be shot in a single take, the series

achieves the compositional possibilities of multiple shot scales and angles through movement. The camera can zoom in on the actor for a close-up, then pull back for a medium shot, or pan to another actor without the need for cutting. These "sequence shots" are, in effect, several shots within one time unit, providing many of the possibilities of montage while maintaining real-time action.

This blend of styles demonstrates, in effect, that the real-time style and the edited style are not mutually exclusive. Cinematographers can use movement to create the effects of editing, which are traditionally the domain of the film editor. Close-ups, medium shots, and point-of-view shots continue to occur, but in a fluid way, without the omission of time. With movement-based variety, there is no omission of time; rather, all changes in shot occur as part of the unbroken timeline, ensuring that the viewer is aware of every second of the narrative's progression. It is, in effect, one-to-one correspondence with real time, while maintaining visual variety. Adolescence thus demonstrates the potential of film and television series to blend the compositional possibilities of montage with the time-based possibilities of real-time style.

**The Phenomenology of Temporal Cinematography: Audience Perception and Psychology**

In addition to the study of the films themselves, the audience's perspective on time must be considered, and the field of psychology/cognition can shed considerable light on the power of these filmmaking techniques

Temporal Duration Estimation and Cognitive Processing

The audience's judgment of the duration of events in cinema is influenced by allocation of attention and the complexity of on-screen information. Empirical research has shown that real-time information, i.e., information not altered through editing, acceleration, or deceleration, is likely to be judged more correctly than altered information **(Block & Zakay, 1997, pp. 184–186).** However, there are some conditions. Salience of attention plays a crucial role. Scenes with high visual complexity and high emotional content are likely to place high demands on attention, which can, in turn, make time pass faster **(Zakay & Block, 1997, pp. 13–15).** Scenes with low visual complexity, on the other hand, can make time appear to have passed longer, as the audience becomes more aware of time passing. In the 1917 narrative, the complex cinematography and detailed sets can, to some degree, counteract the audience's awareness of real-time duration through the maintenance of attention through abundant information, thus reducing the audience's awareness of the long duration of the scene.

Adolescence, on the other hand, combines real-time information with emotionally charged content. Each second can be seen as having greater importance as attention is captured by the characters' struggles.

Immersion and Embodied Spectatorship

The experience of immersion, or the sense of being immersed in a film world, can be described as spatial (i.e., the sense of being in the film locale), narrative (i.e., the sense of investment in the narrative), or temporal (i.e., the sense of being immersed in film time). Real-time cinema, as represented in "1917" and "Adolescence", significantly enhances the experience of temporal

immersion. In real-time cinema, film time and physiological time are directly correlated with each other. Research on embodied spectatorship has shown that film spectators experience and think as embodied beings with internal time that coincides with film time **(Sobchack, 1992, pp. 3–9).** When film time and real time move at the same rate, the spectator unifies with film time and experiences a single time, not two different times (film time and real time). Research has shown that affective responses are intensified in the experience of immersion. In real-time film structures, the coincidence of film time and experience time heightens spectator engagement. It has been shown that film spectators do not experience film time as something separate and different from their experience of real time **(Sobchack, 1992, pp. 58–62).** Rather, their experience of real time is assimilated with film time and heightens their affective responses.

Attention, Memory, and the Experiential Record

It is possible to make a distinction between prospective time perception (the awareness of temporal progression during an event) and retrospective time perception (the evaluation of temporal progression after an event). In fast-paced films, there is often a reduction of prospective awareness. Time is often not noticed, and it is only noticed when the film is over and it is of a certain length. In films where there is real time, there is an increase of prospective awareness. People are able to recognize they are watching a film and are able to recognize that time is passing. This change in focus affects memory. People who are able to actively focus on the passing of time during an event have a different memory of the event encoded by the brain. For people who have watched a film in real time, such as 1917, there is a different way of recalling films. They recall them not only as a narrative but as an experience of endurance. This is possible because there is an experiential record of what is remembered.

Psychological Mechanisms of Tension and Suspense in Real-Time Cinema

Suspense is often associated with narrative uncertainty and editorial pacing. The real-time cinema genre shows, however, that time itself can create suspense. As long as the audience is aware that the movie is playing out along a linear timeline, untainted by any major interruptions, and that the characters are under some kind of temporal imperative, time can function as a villain. Each and every instant is precious, and every instant is also a wasted opportunity.

Suspense in 1917 is heightened by the fact that the two soldiers are racing against time to prevent disaster and also by the fact that the movie is structured in real time, where every minute of screen time is also a minute of real time. There is no editorial trickery speeding up the action, and every delay has a direct and immediate consequence. Psychology has proven that awareness of time constraints can cause stress, and real-time cinematography capitalizes on this fact. It can cause physical stress not just in response to shocking images but also in response to the ticking away of the clock.

## Comparative Analysis: Temporal Signatures Across Cinematic Approaches

To contextualize real- time cinema, it is useful to compare it with other styles that foreground duration differently.

Continuity and Contemplation: The Slow Cinema Alternative

On one end of the spectrum, it is associated with directors such as Béla Tarr and Apichatpong Weerasethakul, whose films incorporate long shots and minimal editing **(Flanagan, 2012, pp. 12–18)**. Although discontinuity of time may be present, the defining feature of slow cinema is the duration of the visual. The shots go on for longer than the action, allowing the audience to view the characters simply standing, walking, or waiting. Movement of the camera is scarce or exceptionally restrained, and the audio levels are typically muted and realistic.

The impact of this type of film is contemplative. The audience becomes engaged with the desire to take in the details, the lighting, and the silence. The passage of time seems to be stretched out, though not necessarily stressful. The audience becomes immersed in a type of trance, where the awareness of the world around them becomes diminished, giving way to a sense of cinematic presence. Therefore, the way that slow cinema views time as a medium for observation and contemplation is different from the sense of urgency and importance associated with the use of time in films such as 1917 and Adolescence.

Kinetic Temporality: Fast Editing and Accelerated Duration

On the other end of the spectrum, films with quick editing and high kinetic energy include many contemporary action films, music videos, and advertisements. These films generally have very short mean shot lengths, often around two to three seconds, and high visual energy. The viewing experience is quick-paced and energetic and often has a sense of time compression in retrospect **(Bordwell, 2006, pp. 121–125).**

However, Bordwell's discussion of the subject reminds the reader that the speed of the editing does not necessarily determine the sense of speed, which is an important consideration in this discussion. Quick cuts can be used to tell a slow-paced story by cutting between long-duration events, and a long take with high-speed activity can be used to create the illusion of slow speed, but films with extremely short shots and high kinetic energy are the epitome of what could be called the "kinetic temporality" that has become so popular in contemporary cinema. The quick cuts and camera movements create a sense of high speed, increasing the emotional excitement and arousal, but possibly sacrificing the ability to retain the information.

Montage Sequences and Temporal Compression: A Different Temporal Language

Another form of temporality that contrasts with the former ones can be identified in the montage sequences. In the classical montage style, several short shots are combined to create the illusion of a long period of time passing. For example, training exercises, seasons passing, or long journeys can be represented in a montage sequence. In this style, each shot acts as a snapshot in time. A montage sequence lasting a minute can be used to represent several weeks, months, or even years passing in the film.

Montage sequences create a temporality that can be considered distinct in its own right. In the montage style, change, progression, or evolution is highlighted. In this style, the audience cognitively understands that time is passing. At the same time, they do not experience the passing of time as it happens because they do not have the opportunity to linger in that particular shot. The

cinematographic choice to use either long takes or montage aesthetics can be considered a choice between different forms of temporality rather than different visual styles **(Eisenstein, 1949, pp. 72–76).**

**The Viewer's Temporal Agency: Control, Participation, and Discomfort**

Temporal experience in cinema is shaped not only by formal choices but also by viewer expectations and agency. Real- time cinema, in particular, reshapes the spectator's position in relation to time.

The Loss of Editorial Control and Forced Presence

In conventional editing, the audience uses the cuts to control the pacing, under the unspoken agreement that the film will not prolong a scene beyond what is necessary. Real-time cinema challenges this unspoken agreement by eliminating cuts and forcing the audience to stay with the scene, even if it is uncomfortable. Scenes depicting anger, shame, and violence in "Adolescence" are not cut for time constraints and therefore remain as long as they occurred in real life.

The deviation from the audience's habitual viewing experience has a psychological impact on them. They are forced to make a conscious decision to engage with the film and cannot use the cuts as a cue to understand that the scene is moving forward. Real-time cinema, therefore, challenges the audience to endure the experience of watching the film. Studies on immersive media have shown that "forced presence" can increase audience engagement with the film.

Since there is no escape in editing, the audience is more immersed in the characters' experience of time. The exertion of watching uncomfortable scenes makes them more psychologically involved in the film and leaves them with a more vivid recollection of the experience.

Temporal Autonomy and Subjective Time

Ironically, the absence of editorial conventions grants spectators a unique form of agency. With a real-time film, spectators have a relatively clear understanding of time remaining, owing to the direct relation between cinematic time and real-world time. This knowledge grants spectators a new level of agency. Instead of awaiting the editor's cuts for respite or awaiting structural shifts in the narrative, spectators can anticipate the progression of the story due to their knowledge of the remaining time.

For example, in a real-time narrative such as 1917, in which the story is structured as a mission, the spectator can estimate the remaining portion of the character's objective merely by understanding the remaining time. This grants spectators a form of temporal agency, albeit at a cognitive level, in which they can anticipate the occurrence of climactic events. Temporal agency and constraint are two sides of the same coin, and spectators cannot accelerate the narrative or skip sections. The film must be watched at an unwavering pace, adhering to the internal clocks and time constraints. This is the paradoxical role of the spectator in real-time cinema: the structure is both transparent and unchangeable.

The Spectator's Embodied Suffering and Endurance

The mode in which "Adolescence" presents the viewer with a sense of endurance is worthy of critical analysis in its own right. "Adolescence's" use of a single shot that lasts an hour without cuts demands that the viewer engage physically and mentally with the film, forcing them to think about their body as it sits in the dark, about feelings of agitation, and about the passage of time. Research in psychology has shown that when people are more aware of their bodily conditions and the passage of time, their emotional responses are more in line with the story that is being told.

In real-time cinema, this is the case throughout the film. Physiological and behavioral responses to time, such as the viewer's heartbeat and movement, occur simultaneously with the characters' experiences as they go on their own temporal adventures. The requirement that the viewer wait until the end of the film to see its conclusion binds the viewer's body and mind to the world of the film, making endurance a key aspect of the viewer's experience of the film.

**Theoretical Synthesis: Cinematography as Temporal Authorship**

Bringing these strands together yields a clear theoretical conclusion: cinematographers function as temporal authors, not merely as image- makers.

Reframing the Cinematographer's Role

It has been common for discourse around film to discuss the cinematographer as the visual stylist of the film, concerned with framing, lighting, and overall visual aesthetics. The current study, however, will highlight the fact that this too is a fundamentally temporal act, as the cinematographer directly controls the length of the audience's experience of each scene simply by moving the camera. The cinematographer, therefore, controls the tempo of time within the film. Even though this is not necessarily an element of the film with which the audience will be consciously engaging, it is still a very real and relevant factor. For instance, the decision to use a static frame as opposed to a moving one will make the passage of time seem more suspended for the audience. The cinematographer, therefore, becomes the

co-author of the audience's experience of time, the designer of cinematic time.

Integration with Other Temporal Systems

However, cinematography does not operate in a vacuum. It works in close collaboration with editing, sound, performance, and story. For instance, a long shot followed by disjointed editing can disrupt the sense of continuous time, while sound elements or performances can extend or contract time regardless of the length of the shot. Therefore, the control of time requires cross-disciplinary collaboration.

Cinematographers must also work with directors and/or editors to achieve the intended effect with time. If the goal is to create a sense of immersion, the cinematography should be used to create a sense of continuity, while if the goal is to increase the audience's awareness of time, the cinematography can be used to highlight stasis or transitions. While cinematography can be studied as a singular element, it becomes apparent that the control and management of time involve the interrelated systems of production.

Temporal Literacy and Viewer Education

A major implication of contemporary real-time cinema is the possibility that a new level of temporal literacy among viewers will emerge as a consequence. When major movies engage with time to a considerable extent, viewers will grow more aware of the manipulation of time in general. Those watching "1917" will realize that the film is meant to be seamless and will therefore be more inclined to examine the film's editing, while those watching "Adolescence" will realize that a minute on screen is a long time and will therefore be more inclined to examine the film's use of time.

In the long term, this could make the temporality of cinematography more intentionally visible to viewers. They will realize that visual timecraft is a calculated aspect of filmmaking that can be talked about, and this will make them more inclined to engage with a culture that prioritizes time, pacing, and structure in film, as well as narrative and performance.

**Practical Implications: Cinematography as Intentional Temporal Design**

The findings of this study have concrete implications for film practice.

Decision-Making for Cinematographers

As cinematography is understood as a form of temporal authorship, shot planning is seen to consistently take into account the effects of time. When the goal is to build suspense, long shots can be used to heighten the sense of time. When the goal is to create an immersive, dreamlike effect, slow tracking movements and smooth motion can be used. Camera movements should be seen not only as spatial but also as tempo regulators. Slow, continuous movement can be used to stretch time, while rapid, hand-held movements can create a sense of urgency.

Visual complexity should also be seen as an element that requires careful planning. When the goal is to capture the viewer's attention, busy shots with high visual complexity can be used, which can have the effect of reducing the sense of time. Conversely, simple shots can leave room for the viewer's experience of time. When the goal is to create the effect of time passing, reducing the visual field can enhance the experience of waiting. Continuity, whether spatial or disorienting, should be seen as having effects on time.

Collaboration and Communication

The intention to design time requires collaboration. It can benefit the director and cinematographer to clearly define their intentions with respect to time at the beginning of a project, determining whether the story calls for suspense, patience, exhilaration, or calmness. In turn, the cinematographer can define how the length of shots, composition, and movement can be used to support this intention. It can be very beneficial to have all the people involved in the project working with a common intention with respect to time, whether this intention is to create a real-time experience or otherwise.

Genre-Specific Applications

Different genres of cinema are likely to suggest different temporal approaches as well. For suspenseful and thriller movies, increased sensitivity to time could potentially increase tension. For intimate character studies and similar genres, long takes and relatively stationary camera

positions could allow the audience to focus on subtle details of performance and inner change. For action and adventure movies, variation in tempo could be useful, with rapid sections followed by stillness and possibly slow-motion sections for added interest and complexity. Horror movies also frequently exploit temporal design in a highly effective fashion. Here, long periods of stillness and silence could be much more unnerving than rapid cutting and shocks. In each case, cinematographic decisions are as much informed by temporal considerations as by visual considerations and are intended to tailor the experience of the viewer to generic expectations.

**Limitations and Future Directions**

This research, like all research, has its limitations. By definition, cinematography is analyzed in isolation, while editing, sound, narrative, and performance are held constant. While this allows for useful insights into the role of the visual, it is, of course, an incomplete picture of cinematic time, which in fact results from the interplay of all these subsystems.

This research focuses on a limited selection of contemporary exemplars, "1917," "Adolescence," and traditions of slow cinema. While useful in understanding current trends, this research does not, and cannot, capture the full range of global cinematic practices. Future research might seek to broaden the scope of this research, looking at the long takes of the silent era, comparing these with modern digital techniques, or examining the ways in which various national cinemas conceptualize and manipulate time.

Furthermore, while this research has utilized existing research into cognitive processes, there are many unanswered questions regarding the ways in which cinematography influences the brain and body. Future research might seek to answer these questions through further studies, perhaps using eye-tracking and neuroimaging techniques to compare the ways in which the brain processes long takes and rapid cuts, varying shot length and movement while measuring subjective time and physiological responses. Such research might reveal interesting

cross-cultural variations in response to time in cinema. With the advent of VR, new questions regarding time in environments devoid of cinematic time are raised.

Finally, there are several practical applications of this research, which might be used as the basis for workshops where cinematographers are invited to experience the effects of differing shot types firsthand, comparing the experience of shooting a 30-second steadycam shot with rapidly cut coverage. Similarly, archival research might reveal the ways in which cinematic time has been conceptualized throughout the history of cinema, from the silent era onwards.

**Conclusion: Cinematography as Temporal Architecture**

This dissertation proves conclusively that decisions regarding shot length, movement, and rhythm are crucial determinants of the overall audience experience of duration.

Cinematographers are revealed as temporal architects who design the length of a moment, rather than merely as producers of visually attractive images.

The case studies of 1917 and Adolescence provide particularly clear evidence of the application of this key filmmaking principle. Both films use extended continuity to produce a particular psychological effect of increased temporal awareness, presence among characters, and emotional

engagement with each passing moment. Viewers of these films often report having experienced them, not merely having watched them. Real-time cinema demonstrates conclusively that extended temporal continuity, when skillfully employed, is as powerful a filmmaking device as any other. Theoretical frameworks offered by Bazin, Deleuze, Bordwell, and spectatorship theory explain why these effects are created and what they mean. Bazin explains how long takes make time visible, Deleuze explains how film can make time its own subject, Bordwell explains how shot length affects cognitive pace, and spectatorship theory explains the role of embodiment. These theories, combined with those offered here, conclusively prove that time is not merely a backdrop for film but is actually created and designed.

Throughout the research process, from initial research and literature review through to writing, each week of work built on and consolidated the arguments. Early stages of research identified key research questions and sources, subsequent stages focused on research and analysis of visual evidence, and later stages brought together theories and ideas into a cohesive and coherent argument. This dissertation reframes cinematography as a temporal design process rather than an aesthetic one and challenges readers of these films to rewatch them with new eyes, recognizing each movement of the camera and each extended take as a purposeful design of time created for them to inhabit.

References


- Anderson, J. D., & Anderson, B. (1998). The myth of persistence of vision revisited. *Journal of Film and Video*, *50*(1), 3–12.
- Arnheim, R. (1957). *Film as art*. University of California Press.
- Balázs, B. (2010). *Theory of the film: Character and growth of a new art*. Dover Publications.
- Bazin, A. (2005). *What is cinema?* (Vols. 1–2). University of California Press. (Original work published 1958)
- Block, R. A., & Zakay, D. (1997). Prospective and retrospective duration judgments: A meta-analytic review. *Psychonomic Bulletin & Review, 4*(2), 184–197. https://doi.org/10.3758/BF03209393
- Bordwell, D. (1985). *Narration in the fiction film*. University of Wisconsin Press.
- Bordwell, D. (2006). *The way Hollywood tells it: Story and style in modern movies*. University of California Press.
- Bordwell, D. (2007). *Poetics of cinema*. Routledge.
- Bordwell, D., & Thompson, K. (2019). *Film art: An introduction* (12th ed.). McGraw-Hill Education.
- Branigan, E. (1992). *Narrative comprehension and film*. Routledge.
- Buckland, W. (2009). *Puzzle films: Complex storytelling in contemporary cinema*. Wiley-Blackwell.
- Carroll, N. (1996). *Theorizing the moving image*. Cambridge University Press.

- Chatman, S. (1990). *Coming to terms: The rhetoric of narrative in fiction and film*. Cornell University Press.
- Chion, M. (1994). *Audio-vision: Sound on screen*. Columbia University Press.
- Cutting, J. E., DeLong, J. E., & Brunick, K. L. (2011). Visual activity and cinematic film. *Psychological Science, 22*(6), 820–825.
- Deakins, R., & Newman, C. (2020). *1917: The art of the movie*. Insight Editions.
- Deleuze, G. (1986). *Cinema 1: The movement-image*. University of Minnesota Press.
- Deleuze, G. (1989). *Cinema 2: The time-image*. University of Minnesota Press.
- Doane, M. A. (2002). *The emergence of cinematic time: Modernity, contingency, the archive*. Harvard University Press.
- Elsaesser, T., & Hagener, M. (2015). *Film theory: An introduction through the senses* (2nd ed.). Routledge.
- Flanagan, M. (2008). Towards an aesthetic of slow in contemporary cinema. *16:9 Film Studies*, 1–18.
- Gunning, T. (1990). The cinema of attractions: Early film, its spectator and the avant-garde. In T. Elsaesser (Ed.), *Early cinema: Space, frame, narrative* (pp. 56–62). British Film Institute.
- Hansen, M. B. (2004). *New philosophy for new media*. MIT Press.
- Keating, P. (2019). *The dynamic frame: Camera movement in classical Hollywood*. Columbia University Press.
- Kovács, A. B. (2007). *Screening modernism: European art cinema, 1950–1980*. University of Chicago Press.
- Manovich, L. (2001). *The language of new media*. MIT Press.
- Marks, L. U. (2000). *The skin of the film: Intercultural cinema, embodiment, and the senses*. Duke University Press.
- Metz, C. (1982). *The imaginary signifier: Psychoanalysis and the cinema*. Indiana University Press.
- Mulvey, L. (2006). *Death 24x a second: Stillness and the moving image*. Reaktion Books.
- Plantinga, C. (2009). *Moving viewers: American film and the spectator's experience*. University of California Press.
- Prince, S. (2012). *Digital visual effects in cinema: The seduction of reality*. Rutgers University Press.
- Rodowick, D. N. (1997). *Gilles Deleuze's time machine*. Duke University Press.
- Salt, B. (2009). *Film style and technology: History and analysis* (3rd ed.). Starword.
- Smith, T. J. (2012). The attentional theory of cinematic continuity. *Projections, 6*(1), 1–27.
- Sobchack, V. (1992). *The address of the eye: A phenomenology of film experience*.

Princeton University Press.

- Sobchack, V. (2004). *Carnal thoughts: Embodiment and moving image culture*. University of California Press.
- Stam, R., Burgoyne, R., & Flitterman-Lewis, S. (1992). *New vocabularies in film semiotics: structuralism, post-structuralism, and beyond*. Routledge.
- Thompson, K. (1988). *Breaking the glass armor: Neoformalist film analysis*. Princeton University Press.
- Turvey, M. (2008). *Doubting vision: Film and the revelationist tradition*. Oxford University Press.
- Zakay, D., & Block, R. A. (1997). Temporal cognition. *Current Directions in Psychological Science, 6*(1), 12–16. https://doi.org/10.1111/1467-8721.ep11512604
- Sokurov, A. (Director). (2002). *Russian Ark* [Film]. Hermitage Bridge Studio.
- Cuarón, A. (Director). (2006). *Children of Men* [Film]. Universal Pictures; Strike Entertainment.
- Iñárritu, A. G. (Director). (2014). *Birdman, or (The Unexpected Virtue of Ignorance)* [Film]. Fox Searchlight Pictures; Regency Enterprises.
- Iñárritu, A. G. (Director). (2015). *The Revenant* [Film]. Regency Enterprises; RatPac-Dune Entertainment; Anonymous Content; Appian Way.
- Mendes, S. (Director). (2019). *1917* [Film]. DreamWorks Pictures; Reliance Entertainment; New Republic Pictures.
- Netflix. (2025). *Adolescence* [TV series]. Netflix.
- Iñárritu, A. G.
- • *Birdman, or (The Unexpected Virtue of Ignorance) (2014)*
- • *The Revenant (2015)*
- Cuarón, A.
- • *Children of Men (2006)*
- Sokurov, A.
- • *Russian Ark (2002)*
- Mendes, S.
- • *1917 (2019)*
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