

Spring 2014

The Perception of Time: An Artistic Exploration of Rhythm Within the Frame

Andrei Molchanov
University of Colorado Boulder

Follow this and additional works at: https://scholar.colorado.edu/honr_theses

Recommended Citation

Molchanov, Andrei, "The Perception of Time: An Artistic Exploration of Rhythm Within the Frame" (2014). *Undergraduate Honors Theses*. 167.
https://scholar.colorado.edu/honr_theses/167

This Thesis is brought to you for free and open access by Honors Program at CU Scholar. It has been accepted for inclusion in Undergraduate Honors Theses by an authorized administrator of CU Scholar. For more information, please contact cuscholaradmin@colorado.edu.

The Perception of Time: An Artistic Exploration of Rhythm

Within the Frame

Andrei Molchanov

Undergraduate Honors Thesis

Department of Film Studies

Advisor: Dr. Reece Auguiste

April 2, 2014

Committee Members:

Dr. Reece Auguiste, Film Studies

Dr. Melinda Barlow, Film Studies

Dr. Wes Morrison, Philosophy

Table of Contents

Abstract.....	3
Introduction.....	4
Part I: The Language of Film	6
Part II: An Analysis of 3½.....	9
Part III: Cinema That Challenges Time.....	17
Conclusion	19
Bibliography	20

Abstract

Some of life's grandest mysteries have not yet been solved, and the answers may lie beyond the capabilities of man and science. Yet science, religion and art, including cinema, explore unanswerable questions and offer ways to explore the designs of the universe. Some of the most interesting and eternal quandaries concern the notion of time. Does time exist and is there an objective reality to time? This thesis explores the ways that cinema captures, organizes and reconstructs time, affecting our perceptions of the passage of time. In addition I make a comparison in the rhythmic theories and tendencies of Russian filmmakers Andrei Tarkovsky and Sergei Eisenstein. In conjunction with this thesis, and to help illustrate its ideas, I created the film *3½*. The film and this thesis demonstrate how time is principally a subjective concept that is different for each person, and how a filmmaker uses the lens of his or her own experiences to convey perceptions of rhythm and provide viewers with a personally constructed sense of movement through time.

Introduction

As an art form, film fundamentally conveys meaning with the passage of time. Like music, films rely on changes through time to be perceived. Music and film tell stories that take time to experience. By contrast, painting and sculpture usually trap and freeze single moments in time. And just as any one note from an instrument carries an emotion with it, so does every single frame captured on film. One note may be perceived as happy or pleasant on its own, but when placed adjacent to another note, the combination of notes may create negative emotional sensations. The same is true for film. Sergei Eisenstein, the father of Russian cinema, had a theory of montage, which is rooted in a Marxist reconstruction of the Hegelian dialectic known as historical materialism. According to director Eisenstein's theory, when two or more shots are combined, new meanings and emotions arise that could not have been derived from either shot individually. It is among the infinite combinations of ideas, emotions, sounds and images that may be pieced together that cinema is born. The tempo with which each bit of film is combined with the next helps determine the rhythm and flow of time in a film.

Every artwork, whether it is a painting, a play, a musical composition, literature, a photograph or a film, captures an essence of the time in which it was created and conveys to future generations a sense of that lost era. A book leaves behind a footprint of its era by the vocabulary that is used and the behavior of the characters, among many other indicators of time and place. Film, more than any other art form, has an especially accurate ability to capture a time and immortalize it. The way in which cinema is able to convey motion and emotion, sounds, color and light, brings a visceral sense of life to the art that can not be matched by any other medium. The great Russian director Andrey

Tarkovsky claims, “No other art can compare with cinema in the force, precision and starkness with which it conveys awareness of facts and aesthetic structures existing and changing within time.” (Tarkovsky, 68)

Part I: The Language of Film and Expression of Time

There are a number of theories that attempt to explain the fundamentals of cinema and how the manipulation of those fundamentals affects the viewer, including the viewer's sense of time. Among them are Andre Bazin's theories on the language of cinema, and Siegfried Kracauer and Walter Benjamin's theories on memory. Eisenstein's theories of dialectic and montage¹ are frequently studied in order to answer questions about how to use film to achieve particular effects. By contrast, for Tarkovsky, everything begins with rhythm. Tarkovsky maintains:

“The dominant, all-powerful factor of the film image is *rhythm*, expressing the course of time within the frame. The actual passage of time is also made clear in the characters' behaviour, the visual treatment and the sound—but these are all accompanying features, the absence of which, theoretically, would in no way affect the existence of the film. One cannot conceive of a cinematic work with no sense of time passing through the shot... the distinctive time running through the shots makes the rhythm of the picture; and rhythm is determined not by the length of the edited pieces, but by the pressure of the time that runs through them.”
(Tarkovsky, 113)

This argument forms the basis of Tarkovsky's counterpoint to Eisenstein's fundamental theory regarding montage and generating meaning through editing. Where Tarkovsky is conceptual by focusing spirituality and the ontology of man, Eisenstein is concrete, cultivating his film theories based on their social effect, specifically with regards to the Russian Revolution. Tarkovsky chooses to focus on the rhythm within individual frames as opposed to Eisenstein who focuses on creating meaning through editing. The two Russian schools of thought, both based around rhythm and therefore time, offer filmmakers competing yet potentially compatible ways to convey thoughts and emotions

¹ See also Eisenstein, Sergei. (1949). *A Dialectic Approach to Film Form*.

to an audience. In Tarkovsky's theory of "time-pressure" each shot has its own pressure based upon the reaction it draws. For example, a shot of a man sprinting will contribute far more pressure than that of a man sitting and reading. According to Tarkovsky, it is with shots of varying levels of pressures that a filmmaker may create a flow of time, according to a sense of subjective reality. The shots must also be aligned, keeping in mind the respective pressures. Two shots with very different pressures will not match up. Whether or not a filmmaker is effective at conveying his or her intent depends on whether the artist's rhythm is able to transport the viewer to the places the filmmaker wants to carry the audience. In some cases, viewers may be entranced by the story and temporarily transported into another space and time; in other cases, the story may drift by without truly engaging the audience.

Eisenstein and Tarkovsky agree that a film's passage through time is the key to capturing and portraying an emotion. In film theory, Eisenstein's most significant contributions come from his definitions and visualizations of the various types of montage (metric, rhythmic, tonal, associational and intellectual). Within montage types, Eisenstein was able to express the most significant meanings in intellectual montage. A commonly referenced example of intellectual montage is in Eisenstein's film *Strike*, where a shot of striking workers being attacked is cut with a shot of a bull being slaughtered, metaphorically signifying that the workers are inhumanely treated, as if they were animals. Following an alternative philosophy, Tarkovsky preferred to stress the movements and passage of time with a minimal amount of cuts. In his film *Stalker*, which runs for 163 minutes, there are 142 shots, meaning that the average length of a shot is longer than one minute.

Film not only has the ability to bring together various events of the past, but also to reconstruct the fabric of time and existence. Over the relatively short course of cinematic history, filmmakers have discovered multiple ways to perform these magical reconstructions of time. For example, time-lapse photography is able to compress time by playing in rapid succession a series of still photographs taken at a single location in order to observe changes in scenery that would otherwise be invisible to the naked eye, which is bound by a normal rate of perception. At the opposite end of the spectrum, by shooting at a high frame rate, slow-motion filming is able to reveal movements or events that occur too quickly to observe using ordinary techniques. And with stop-motion animation, inanimate objects may become animated.

As cinema and cinematography progress, new ideas and techniques will almost certainly push their boundaries further. Many of the sequences and images depicted in contemporary films likely would have been virtually incomprehensible to early film audiences. Relative to other forms of art, cinema is still quite young and we can expect manipulations of time as portrayed in film to develop beyond Eisenstein's and Tarkovsky's imaginations. The film associated with this thesis attempts to imprint a distinct 21st century sensibility, style and rhythm on the screen, carrying forward the precepts of Eisenstein and Tarkovsky.

Part II: An Analysis of 3½

The rhythm of a film is unavoidably derived at least in part from the director's own perceptions, thoughts and life experiences. In his book *Sculpting in Time*, Andrei Tarkovsky asks,

“What exactly is this past? Is it what has passed? And what does 'passed' mean for a person when for each of us the past is the bearer of all that is constant in the reality of the present, of each current moment? In a certain sense the past is far more real, or at any rate more stable, more resilient than the present. The present slips and vanishes like sand between the fingers, acquiring material weight only in its recollection.” (Tarkovsky, 58)

In developing the idea for the film *3½*, I sought to create a story that alters the sense of time's rhythm to the point where the very flow of time seems disjointed. The premise of *3½* is that the protagonist has suffered a trauma that adversely affects his ability to perceive time “normally,” thus creating an uneasy and irregular sense of time flow for the viewers.

The film contains numerous but irregular references to numbers and time, starting with the title, *3½*, named after the film's three and a half minute duration. Other numerical references, many of which are symbols for the passage of time, include prices (\$3.50) in the window of a store, the number pad of a phone, the numerals of an alarm clock and the countdown of a microwave. Although the film does not directly alter the audience's own fundamental perception of time, it offers a means of perceiving time the way another person would. By creating a sense of empathy for the character and his struggle within the flow of time, the viewer may briefly experience time in a new way, as intended by Tarkovsky. The disjointedness of time felt by the film's character is mirrored in the film's editing. Unlike most films, this film is not pieced together so that one scene

leads smoothly to another, the way we normally experience life. Each scene, as it is being viewed, is a distinct moment that exists independently of all others, even if it is a memory. Time is a collection of moments rather than a river of experience. Deleuze supports this approach by answering the question,

“Can the present in turn stand for the whole of time? Yes, perhaps, if we manage to separate it from its own actual quality, in the same way that we distinguish the past from the recollection-image which actualized it. If the present is actually distinguishable from the future and the past, it is because it is presence of something, which precisely stops being present when it is replaced by *something else*. It is in relation to the present of something else that the past and future are said of a thing. We are, then, passing along different events, in accordance with an explicit time or a form of succession which entails that a variety of things fill the present one after another.” (Deleuze, 100)

The film *3½* is intended to be, in part, a demonstration of Deleuze’s concept and viewed as a succession of events that pass through the plane of the present. It is doubtful, however, that Deleuze considered the notion of non-sequential time passing through the present as an objective reality as opposed to a conceptual expression designed for the editing table.

If it were possible to truly cause a disassociation with the regular perception and flow of time which Deleuze alludes to, the viewer would need to be deprived of any recognizable references for a significant period. This may be achieved through one of two (or a combination of both) means: deprivation and overload. Deprivation is essentially sensory deprivation, which is also a method of torture. Overload is a heightened stimulation of the brain, and occurs so routinely that it is said that one “loses track of time.” In either case, a number of hours are required to achieve the desired effect via film, and that is beyond the scope of *3½*.

Although the protagonist in *3½* is not named in the film, this thesis refers to him as J. In the film, J suffers a brain trauma that disorients him and distorts his perception of time. The past, present and future no longer flow chronologically to him, and as viewers of his perspective, they do not for the audience as well. To underscore this sense of disorientation, the scenes of the film are not in chronological order. J has an imperfect awareness of pacing and timing, and his sense of the passage of time is similarly impaired. Some events seem to whirl past J, without sufficient time for him to complete a thought, while in other cases time appears to slow down to render J almost catatonic. Time may feel like a blur to J, or J may be caught in a trance with time stretching well beyond its actual proportions. J has little control over these space-time anomalies, and is even drawn into trances by certain triggers.

The opening sequence of the film is shot at a canted angle so that an immediate sense of J's disruption is conveyed. The film then exposes the various lifelines and strategies that J has developed in his attempts to maintain his mental stability. Among these strategies is J's dependence on an old pocket watch that J refers to in his efforts to ground himself in the present. By watching the seconds go by, J attempts to add an objective perspective to his irregular perception. Just as carsick children might correct the imbalance of their inner ears by focusing on the horizon, J's focus on the watch's steadily ticking seconds provides him with a sense of comfort. Whenever J feels as if he is being drawn away from his present reality, he stares at his watch. The watch, however, is a crutch, not a solution or a cure for J's disassociation with time. It is notable that in the second scene of the film, J looks at his watch, yet is still drawn into a trance-like state,

plagued by the memory of his trauma. Despite the comfort of the watch, J remains a hostage to the vagaries of time.

Another of J's strategies to cope with disorientation is listening to an old voicemail from J's father. The melancholic and accented voicemail helps J place his mind in a pre-trauma condition by stimulating thoughts and memories that are otherwise inaccessible. Because of J's impaired perception of time, J usually senses that he exists along an alternate flow of time from all others around him. He mostly feels alone in his journey through time, and his loneliness is highlighted by the absence of any other people in the film. Indeed, the only voice in the film is the sound of a disembodied voicemail. This voicemail is J's only human contact with life outside his own isolated flow of time. The voice on the phone serves as a bridge for J between his lonely space-time reality and the standard flow of time in the real world. The voicemail is not tethered to any moment in time and may be accessed by J whenever needed, and may be replayed endlessly to help bring J back into the "normal" world. J is attached to the timelessness of the recording. He can relate to it and connect with the memories it triggers for him. Because J has access to his father's voice at any time, whether or not his father is present or even alive is less important. In any event, J's father, like the rest of the world, exists on a different plane than the one J now experiences due to his injury.

In the voicemail, J's father wishes J a happy birthday, but the sadness in the father's tone reflects that he is upset that he is not wishing J a happy birthday in person or even to him on the phone, rather than to his voicemail. The bittersweet sentiment of the voicemail is something with which J can identify. He grasps onto the voicemail the way a child does a photo of parents he will never see again, saddened by his inability to have a

meaningful communication with his father. The temporal connection between birthdays and the passage of time makes J's listening to the voicemail even more melancholic. For J, birthdays of the future as well as of the past have lost much of their meaning because they no longer clearly mark the passage of time in his mind. Struggling enough with the difficulties of perceiving the present, J has less concern for the past or future. The milestones of birthdays that normally help guide people through the course of life and mark time and personal history are not available to J. To J, the past and present coexist and are woven into one indistinguishable package of time.

The film contains other visual symbols and edits to create a mood of a disjointed flow of time. In the first scene of the film, J places a call to his voicemail using a pay phone. In the second scene, he uses a cell phone to access the message. The notable change in telecommunications technology denotes that a significant amount of time has passed between the two calls. Aesthetically, the payphone also helps to create the retro and out-of-time atmosphere that is one aim of the film. Although payphones still exist in 2014, they are rarely used. Instead, they serve as an atmospheric reminder of a bygone era before ubiquitous mobile phones. Similarly, the use of an old-fashioned pocket watch, as opposed to a modern wristwatch, also contributes to a recycled sense of time. The costuming of J is further meant to add to this out-of-time aesthetic, as is the almost completely desaturated imagery. The slight, almost unnoticeable glimmer of color that is left in the shots functions as a metaphor for the thin grasp that J has on the reality of the present. The barest bit of color represents J's slight grounding in the present and his fleeting ability to tether himself to the current flow of time in motion.

In the second scene of *3½*, there is a very short shot in which J is sketching. Sketching is another technique that J uses in order to make sense of time and the present. For J, like Tarkovsky says, the present is constantly slipping between his fingers. Just as a blind man may create an image in his mind by touching the things around him, J attempts to perceive the passage of time through the progress of the image he is sketching. In addition to the sketch serving as one of J's tools in navigating through his disrupted flow of time, the sketch is a more universal metaphor for captured or recreated time. Like a photograph or film, a sketch immortalizes an image of the past. A sketch is a timeless representation of a single moment in time that is preserved for the future. But just as a sketch captures and encapsulate one frozen and fleeting instant in time, J's sketch is on the screen for a mere instant before it fades away. It leaves the viewer quickly, just as J's grasp of time leaves J rapidly, like sand running through fingers.

The soundtrack of the film is also deployed to render a sense of disrupted time. Many of the sounds used in the film help illustrate J's perspective on time. The first sound that each mammal hears, even before it is born, is the sound of its mother's heartbeat. For J, the heartbeat is the first sound he remembers hearing after the crash. In a sense, J is reborn after the crash, as life with its alternate flow of time begins with the sound of a heartbeat. The heartbeat is also important because it is symbolic of the rhythms and divisions of time that are so deeply engrained in our nature. Although it is preceded by the vicious memory of the crash, the heartbeat calms J and, like the watch, grounds him in time. The sound of the heartbeat in the film is followed by the noise of hospital equipment and then the squawk of an alarm clock. Each of these noises divides time into even segments, creating regular pacing, just as the heartbeat does. Other aural

cues provide similar texture to the film. For instance, when J slips into the trance of the bicycle memory, the sound of the ticking clock accelerates until it becomes the sound of a bicycle. The audio provides a smooth transition that serves as an analogy to J's slipping and losing control. The lack of an auditory break channels the two scenes seamlessly into one, the way that J perceives time and the flow of events. Both aural and visual cues are woven throughout the film to contribute to the viewer's experience of J's sense of time.

The film ends with a metaphorical scene. J uses a microwave and falls into another trance whereby time is condensed and reversed. A microwave's sole purpose is to compress the time it takes for traditional heat sources to do their work. In some respects, the microwave's agitation of molecules breaks the rules of time. As J stares at the microwave, he starts to sink into a daze. Although the microwave display shows that J originally entered 2:30 as the operating time, J hallucinates that the microwave is beginning to count down from 99:92. To J, two minutes and thirty seconds is experienced in the same way as an hour and a half, or even as five seconds might be.

Time is all the same to J, and the relative differences of time have faded if not disappeared completely for him. In his trance, J sees a time-lapse of the stars travelling across the sky. He relates to the timelessness of space and its infinite temporal quality. In the vastness of infinite space, J's alternate temporal flow bears no relation to the standard flow of time. J's next thought is a memory of early childhood relived through a home movie. It is played in reverse, as are the next two clips, which serve as a metaphor for J's reaching back at childhood from the present. In the way that a person might use a mirror to see what is behind him, only to see the image reversed, J hallucinates his past in much the same backwards way. For example, the transformation of plants symbolizes both birth

and death, particularly with their cyclic nature to one another. For J, the cycle of life has become more of a spiral, and the hallucinatory images yielded by the shots are indicative of J's disjointed emotions regarding the nature of life and its temporal quality. The space shuttle, emblematic of one of the great developments in modern history, serves as J's attempt to place his life in the context of a broader history. For J, the shuttle is both a symbol of his time and his anchor to the events of history.

But where does that leave J at the end? Tarkovsky says that "time and memory merge into each other; they are like the two sides of a medal. It is obvious enough that without time, memory cannot exist either. But memory is something so complex that no list of all its attributes could define the totality of the impressions through which it affects us." (Tarkovsky, 57) To J, there is no conception of beginning and end, only present and memory coexisting free from the flow of time. At the same time, the end is inevitable and ever-present. To a man without time like J, birth and death become one.

Part III: Cinema That Challenges Time

Much of the inspiration for the film *3½* came from Alain Resnais' *Last Year at Marienbad*. In *Marienbad*, the sense of reality and time portrayed in the film is blurred. Recalled memories are the driving force for the narrative, but the viewer is left uncertain as to whether or not those memories reflect events that actually happened, or whether they happened in one past but not another. There may be multiple pasts coexisting and colliding with the present, but it is not clear. The beautiful melancholic portrayal of characters is what sets *Marienbad* apart.

The main parallel between *3½* and *Marienbad* is that time as experienced in each film does not seem to follow the same rules as it does in the real world. In *Marienbad*, the characters repeat certain lines as if they had not been said before, and locations are seemingly switched in the middle of a scene. All the while, the characters seem to be aware of these inconsistencies, but not in control of them. In *3½*, J fights for control of his own reality in order to act within it and upon it. The same is true for the character A in *Marienbad*. Presumably, *Marienbad*'s X is aware, or at least more aware than A, of how to navigate through and make sense of time and space.

In another French exploration of time within cinema, Chris Marker uses still photographs to tell a story in *La Jetée*. The film's use of stills, shown as if they were moving images, is successful in removing the audience from temporal space and placing the audience into an alternate space that resembles reality. In contrast to the moving image film, which forces the audience to be in the present moment with the characters, still photographs separate audience and characters into two very distinct temporal and spatial locations. However, for Deleuze, "It is not quite right to say that the

cinematographic image is in the present. What is in the present is what the image 'represents', but not the image itself, which, in cinema as in painting, is never to be confused with what it represents.” (Deleuze, xii) In *La Jetée*, the resulting effect is a remarkably successful exploration of a future dystopia and time travel.

Conclusion

The experience of the rhythm of time in cinema as in life is subjective because of the unique lens through which each individual perceives time. In viewing the same film, as in perceiving the events of real life, two spectators may have vastly different experiences regarding the passage and sensation of time. A key attribute of film is its ability, through the creative powers and manipulations of directors, to intensify and expand our experiences of time by offering alternative subjective ways to understand the passage, meaning and rhythm of time. As Robin Le Poidevin posits in his article on the perception of time,

“In giving an account of the various aspects of time perception, we inevitably make use of concepts that we take to have an objective counterpart in the world: the past, temporal order, causation, change, the passage of time and so on. But one of the most important lessons of philosophy, for many writers, is that there may be a gap, perhaps even a gulf, between our representation of the world and the world itself, even on a quite abstract level.” (Le Poidevin)

The film *3½*, created by a 21st century acolyte of Eisenstein and Tarkovsky, attempts to use and build on their techniques and precepts to tell the story of a man disconnected from his time. Reflecting the sensibilities of the time and place it was made, *3½* gives the audience a glimpse of a new temporal reality as well as a window onto the director's own aesthetic and concerns about time.

Bibliography

- Deleuze, Gilles. (1986). *Cinema 1: The Movement-Image*. Minneapolis: University of Minnesota Press.
- Deleuze, Gilles. (1989). *Cinema 2: The Time-Image*. Minneapolis: University of Minnesota Press.
- Eisenstein, Sergei. (Director) (1925). *Strike* [DVD].
- Le Poidevin, Robin. (2011). The experience and perception of time. Edward N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2011 ed.). Retrieved from <http://plato.stanford.edu/archives/fall2011/entries/time-experience/>
- Marker, Chris. (Director) (1962). *La Jetée* [Web]. Retrieved from <http://www.hulu.com/watch/215917>
- Resnais, Alain. (Director) (1961). *Last Year at Marienbad* [DVD].
- Tarkovsky, Andrey. (1987). *Sculpting in Time*. (K. Hunter-Blair, Trans.) Austin: University of Texas Press.
- Tarkovsky, Andrey. (Director) (1979). *Stalker* [DVD].
- Time Perception. (2014), In *Encyclopedia Britannica*. Retrieved from <http://www.britannica.com/EBchecked/topic/596177/time-perception>