

-Research Article-

Rhythm in Cinema: An Analysis of the Movie Raging Bull

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Abstract

The phenomenon of rhythm in cinema plays an important role in shaping film language, aesthetics, and the viewer's cognitive and emotional engagement with a film. Rhythm emerges through the collaborative efforts of various film team members, including the director, screenwriter, editor, cinematographer, and music and sound designer. It serves as a guiding force that navigates the audience through the narrative, providing a structured framework for interpreting the film's emotional depth and underlying meaning. This study aims to reveal how the elements that constitute rhythm in cinema are constructed in Raging Bull (1980). In the literature review section, the fundamental components that determine the cinematic rhythm and how they are constructed in cinema from past to present are explained with example scenes from world cinema. Subsequently, the film is segmented into sequences, and an analysis of its constituent elements—encompassing cinematography, editing, and sound and music design—ensues. As a result, the examination reveals that the elements that make up the rhythm form the rhythm in a structure that serves the whole in a fragmented manner and that the rhythm has an important role in the creation and strengthening of the film not only in the film's formal attributes but also in its narrative development, aesthetic qualities, and cinematic language.

Keywords: *Rhythm and Cinema, Raging Bull, Martin Scorsese, Film Analysis, Rhythm.*

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Sinemada Ritim: Raging Bull Filmi Üzerine Bir Analiz

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Özet

Sinemada ritim olgusu, film dilinin, estetiğinin ve izleyicinin bir filmle kurduğu bilişsel ve duygusal ilişkinin şekillenmesinde önemli bir rol oynamaktadır. Ritim, yönetmen, senarist, kurgucu, görüntü yönetmeni, müzik ve ses tasarımcısı gibi çeşitli film ekibi üyelerinin ortak çabalarıyla ortaya çıkmaktadır. Filmin duygusal derinliğini ve altında yatan anlamı yorumlamak için yapılandırılmış bir çerçeve sağlayarak, izleyiciyi anlatı boyunca yönlendiren yol gösterici bir güç olarak hizmet etmektedir. Bu çalışma, sinemada ritmi oluşturan unsurların Kızgın Boğa (1980) filminde nasıl inşa edildiğini ortaya koymayı amaçlamaktadır. Literatür taraması bölümünde sinemasal ritmi belirleyen temel bileşenler ve bunların geçmişten günümüze sinemada nasıl kurgulandığı dünya sinemasından örnek sahnelerle açıklanmıştır. Ardından film sekanslara ayrılarak, sinematografi, kurgu, ses ve müzik tasarımını kapsayan kurucu unsurları incelenmiştir. İnceleme sonucunda, ritmi oluşturan unsurların parçalı bir şekilde bütüne hizmet eden bir yapıda ritmi oluşturduğu ve ritmin filmin sadece biçimsel özelliklerinde değil, anlatısal gelişiminde, estetik niteliklerinde ve sinema dilinde de filmin yaratılmasında ve güçlenmesinde önemli bir role sahip olduğu görülmüştür.

Anahtar Kelimeler: Ritim ve Sinema, Kızgın Boğa, Martin Scorsese, Film Analizi, Ritim.

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Introduction

The implementation of rhythm in cinema is regarded as an important aspect that contributes significantly to the establishment of a narrative, direction of audience attention, tempo setting, and creation of a sense of tension and relaxation. Rhythm plays a critical role in setting up a scene and strengthening or weakening its dramatic impact. The scenes and sequences linked together through editing by the director and the editor create a cinematic rhythm by helping establish a pace that is appropriate to the narrative. In this context, rhythm encompasses all the elements that are manipulated by determining the appropriate tempo for the story.

It is important to remember that rhythm is not only limited to the editing process but is also a multi-layered concept that includes camera angles, movements, music, and sound design. Rhythm which is often invisible to the audience plays a crucial role in aiding the audience's comprehension of the film and strengthens their emotional attachment to the narrative. According to Mitry, rhythm in cinema is a concept that is constructed through the manipulation of time and finds its target as soon as it fulfills its aesthetic function (1997, p. 90). According to Petrie and Boggs, the construction of rhythm in a motion picture is the result of many factors working separately but in harmony. The position and movement of the camera, the music, the story, and the rhythm of the actors' movements and speeches naturally create rhythm. However, the most important basic component that creates the rhythm in a movie is the cuts in editing (2018, p. 174). In most films, the average shooting time varies between four and six seconds before moving on to the next plan. Nevertheless, the duration of these transitions may vary, depending on the genre of the film and the emotional intensity of the scene.

On the other hand, studies on rhythm in cinema (Pearlman, 2016; Block, 2008; Dancyger, 2019) have shown that there is no consensus on how rhythm is constructed. However, it is possible to examine the elements that constitute rhythm in a film under categories such as script, cinematography, editing, sound and music design, color and tones, and acting. How these elements will be determined by the screenwriter, director, editor, and film crew and what criteria will be taken into consideration while creating the rhythm is a phenomenon that varies according to personal creativity.

According to Pearlman (2016, pp. 108-112), *Raging Bull*, one of the most important films in the history of cinema, is an example of physical storytelling in terms of rhythm. Likewise, it is one of the films in which the director, with his editor Thelma Schoonmaker, creates a new story for each boxing fight, and "each is cut accordingly to be a pure physical expression of what is going on narratively and dramatically. The fights don't represent other ideas; their composition in movement, frame, and cuts is the meaning, the story, physically told". Similarly, Block (2008, p. 7) asserts that each boxing sequence in *Raging Bull* progresses as part of a whole based on a story, sound, and visual intensity, evolving from the simple to the complex.

In order to reveal the conceptual and theoretical background of the rhythmic elements in the film *Raging Bull*, the literature section of the study explains the phenomenon of rhythm in cinema, and the types of rhythm and the elements that make up the rhythm are given with sample scenes from world cinema. In the findings section of the study, the film was primarily divided into sequences and the elements that make up the rhythm were analyzed. In the discussion and conclusion section, the findings are interpreted and discussed, and the study is concluded with suggestions for further studies.

The Concept of Rhythm in Cinema

The concept of rhythm in cinema is one of the issues on which there is no consensus among academics, critics, screenwriters, directors, and editors from past to the present (Block, 2008). Although the phenomenon of rhythm can first be associated with other branches of art

such as music, Timuçin (2013, p. 182) states that “every work of art is necessarily rhythmic, if not necessarily symbolic”. The phenomenon of rhythm acts as the common denominator of all arts and is one of the most reliable parameters for making sense of time and space in a work of art (Kulezic-Wilson, 2015, p. 37). The emotional charge in a work of art first gains meaning through its rhythm and gives the essence of emotion (Timuçin, 2013). If the work of art is without rhythm, it creates a void of meaning. In this regard, “rhythm makes an artistic meaning possible: Rising or falling, slow and fast, light and dark, the dissonance of synchrony and sudden bursts of harmony revitalize inner realities; these are the means of transforming emotions into motion” (Biro, 2011, p. 161).

The rhythm of a film is unique and can only be evaluated within itself (Petrie & Boggs, 2018, p. 174). In this context, it is difficult to talk about a set of rhythmic rules or formulations that apply to all films. Since a movie is created by the combination of multiple variables, such a formulation cannot be expected to be valid for all films. On the other hand, it is possible to detect similar rhythmic patterns in films with similar genres, themes, and stories.

How the rhythm is established in a motion picture and at what moment the cuts are made is a complex issue. The rhythm of a movie is an individual and intuitively decided process (Pearlman, 2016, pp. 25-27; Dancyger, 2019, p. 405). When a movie has a ‘proper’ rhythm, the editing seems unproblematic to us. This smoothness makes it easier for the audience to establish a direct connection with the characters and the story, whereas in the opposite case, the audience is dragged towards a point where they have difficulty making sense of what they see (Bordwell & Thompson, 2008, p. 226; Dancyger, 2009, p. 405; Oumano, 2011, p. 80). Films that are constructed with the right tempo and set the rhythm accordingly by establishing the dramatic conflict convincingly persuade the audience more easily (Reisz & Millar, 2010, p. 201). According to Pearlman (2016, p. 44), a film editor understands what the director has in mind and the essence of the story and uses tools that make it suitable for storytelling.

According to Lefebvre (2013), repetition (gestures, acts, situations, repetition of differences) creates a rhythm. The term rhythm in cinema refers to the cyclical repetition of a particular event at regular intervals (Kulezic-Wilson, 2015, p. 52). Nişancı (2009) states that when it comes to cinema, the repetition of the elements that form the basis of a movie rhythm throughout the movie draws the audience into the movie and makes it easier to understand it.

When the rhythm increases, our breathing speeds up, and when it decreases, the rhythm drops. But there is always a repetition. The point where the repetition and rhythm stop in the movie is when we hold our breath. However, if this period is too long, the movie, just like the human being, dies and breaks away from its audience (Nişancı, 2009, pp. 206-207).

Block (2008) states that the components that make up a rhythm in cinema can best be defined by the metronome used by a musician. He divides the phenomenon of rhythm in cinema into three parts, “alternation, repetition, and tempo.” Rhythm in cinema, just like the working principle of a metronome, is created by the existence of sound followed by silence. The sound emitted by the metronome and the silence that follows it works dialectically to create rhythm. The intervals between silence and sound determine the tempo of the rhythm (p. 198).

The phenomenon of rhythm in cinema is not a new concept. It is possible to see the traces of rhythm in cinema since the early films. In Soviet cinema, directors such as Eisenstein, Vertov, Kuleshov, and Pudovkin have shown through their films and theories that controlling the rhythm and tempo of a film has an important role in capturing the emotional intensity of the film and increasing or decreasing the tension in the narrative. The Odessa Steps sequence in Eisenstein’s *Brnyenosyets Potyomkin (Battleship Potemkin, 1925)* is a good example of how rhythm is constructed. In this sequence, the tempo is increased, a conflict is established between the movements within the frame and the editing, and a contrast is created between light and shadow.

One of the most important scenes in the history of cinema, renowned for its adept manipulation of rhythm, occurs in Alfred Hitchcock's *"Psycho"* (1960). This scene, often referred to as the "shower scene", employs rapid transitions between extreme close-ups of various elements: the shower curtain, flowing water and blood, knife movements, and the victim's face. These swift cuts collectively cultivate a sense of chaos and confusion, effectively immersing the audience in the tense atmosphere.

The rhythmic structure of this scene can be divided into three parts: the prelude leading to the attack, the attack itself, and after the attack. As the female actor enters the shower, initiating the sequence, tension begins to build. This tension escalates with each cut, intensifying the audience's anticipation. During this suspenseful 72-second interval, a total of 13 cuts are made to coincide with the rapid knife thrusts and the victim's fearful expressions. These precisely timed cuts contribute to the scene's rhythm, enhancing the overall feeling of unease and upheaval. The average duration of each cut until the attack is 5.5 seconds, which corresponds to the average shooting time in a movie. The shot just before the first attack with the knife is shown for 18 seconds without any cuts and then the attack with the knife starts with music accompaniment. Through adept manipulation of rhythm, Hitchcock demonstrates how pacing, rhythm, and precise editing collaboratively immerse viewers in a whirlwind of emotions.

In the climactic stabbing scene, which lasts for twenty-two seconds, a total of thirty-one cuts are used, reducing the average running time to 0.71 seconds. After the knife attack, the number of cuts decreased again and dropped to eight. The average duration of the scenes shot after the attack increased to 8.4 seconds. However, the director, just as he did before the attack, conveyed the first scene after the attack to the audience in eighteen seconds and again without any cuts. In this way, the attack and its aftermath are divided equally by eighteen seconds. The figure below shows the cuts in this scene. The cuts before and after the attack and the cuts during the attack are prominent.



Figure 1. Cuts from shower scene from movie Psycho.

A conflict is also established between the dark sharp knife and rough movements of the killer and the white skin and soft movements of the victim. The silence before the attack is replaced by screams as the attack begins. The harmony of the music with the knife movements is another element of conflict (Pearlman, 2016, p. 176). Although we do not see how the knife pierces the body and where the blood comes from, the scene becomes more horrifying through the rhythm. In this context, the cuts that begin at the beginning of the action take place in a manner reminiscent of rapidly increasing breathing. Thus, the rhythm constructed formally has a great effect on the creation of tension. On the other hand, the music used in this scene creates a sense of uneasiness and tension in the audience with the knife strokes and its sudden stop creates a shock and surprise effect on the audience.

Elements Determining Rhythm and Rhythm Types in Cinema

Pearlman (2016) categorizes the concept of rhythm in cinema as "physical, emotional and event rhythm." In physical rhythm, there is a direct relationship between action and meaning. The action that begins in one shot continues in the next scene and completes its curve and establishes its rhythm. This form of rhythm is the rhythm created by the editor while prioritizing the flow of every physical movement seen and heard in the film (for example, the emotional interactions of the characters) over other types of movement. It gives clues to the audience as to when each cut that directs the rhythm is made and whether or not it gives meaning to the movement. For example, in a boxing fight, if one of the fighters later gains an

advantageous position, after which movement did this occur? In this regard, all the beats in the movie are vital for the construction of the story (2016, p. 111).

In emotional rhythm, the priority is not on the action itself, but on the emotions created by the action, focusing on the tensions and relaxations in the film. In this type of rhythm, the actor's movements and energy facilitate the editor's work. As a matter of fact, in scenes where emotional intensity is created, every movement, voice, gesture, and mimicry of the actor signals to the editor when to cut. Thus, the editor takes the energy from the actor and carries it to the next scene to build the rhythm (Pearlman, 2016, pp. 126-143).

Event rhythm is a comprehensive concept that involves the timing, pace, and trajectory phrasing of events in a film, encompassing both visual and aural elements such as cuts, camera angles, dialogues, sound effects, silence, and stillness. One of the key aspects of event rhythm is "the release of new information or change of direction for characters as they pursue their goals" (Pearlman, 2016, p. 85). The duration and placement of these events are crucial for creating a sense of pace, and structure, and emphasizing certain themes or ideas. For instance, a fast-paced movie might have many quick transitions between shots, while a slower-paced one might have longer event durations with fewer cuts and longer takes. Overall, event rhythm is a complex but essential concept in a film that can significantly impact the viewer's experience (Pearlman, 2016, pp. 144-150).

Although each film narrative has its own elements of rhythm, according to Block (2008, pp. 213-214), there are three types of rhythm in most motion pictures. The first of these is undulating rhythm. Flow-line rhythm rises and falls like mountain ranges. Films like *The Godfather* (Francis Ford Coppola, 1972) and *Citizen Kane* (Orson Welles, 1941) are examples of this type of rhythm. The second is the staccato rhythm, which "represents a faster, more energetic rhythm." Films such as *A Night at the Opera* (Sam Wood, 1935) and *Back to the Future* (Robert Zemeckis, 1985) are examples of this type of rhythm. Films with this rhythm are mostly used in the physical comedy genre. The last type of rhythm is a slowly undulating flow-line rhythm in which the beats in the movie cause much less change and "makes gradual, milder changes." *The Sixth Sense* (M. Night Shyamalan, 1999) and *Hannah and Her Sisters* (Woody Allen, 1986) are examples of this type of rhythm (pp. 213-214).

The aim of editing is not only to mathematically prepare the rhythm based on certain formulations but also to understand and strengthen the emotional character of the scene. To do this most effectively, the editor must understand both the narrative and subtextual goal of a scene and act accordingly (Dancyger, 2019, p. 406). The phenomenon of rhythm is not only linked to the cuts that separate scenes in editing, but the rhythm is also related to other filmmaking techniques. *Mise-en-scène*, the position and movement of the camera, sound and music design, and in general, every context that encompasses the entire form and narrative determines the rhythm of a film (Bordwell & Thompson, 2008, p. 226).

For example, camera shots and angles are one of the elements that determine the length or brevity of a scene and therefore its rhythm and tempo. Wide shot plans are kept on screen more because they contain more information for the audience. This plan provides a new flow of information for the audience and allows the audience to assimilate the information given. On the other hand, since close-up shots are faster to be perceived, they are kept on the screen for less time than general shots and are often not necessary to be repeated. Although close-ups and wide shots are constructed with similar durations, the wide shots create a perception in the audience as if it is longer, and close-ups as if it is shorter. In this context, shooting times should be evaluated not in terms of seconds, but in terms of the information and action they contain. This interaction between duration and information is known as the "content curve". Cutting is done when the curve reaches its peak (Barsam & Monahan, 2018, p. 297).

While rhythm is related to the whole of a movie, the tempo is related to the moment. The tempo is determined by the length or brevity of a scene or shot and the intensity of the cuts between these scenes. Successive short shots can speed up the tempo and create a dynamic rhythm or long shots can gradually slow down the tempo (Bordwell & Thompson, 2008, p. 226). Speeding up or slowing down the pace can increase or decrease the tension in the movie. For example, in action movies, we often encounter a fast-paced editing style in chase scenes, heated arguments, or scenes of violence and bloodshed. Romantic and drama films, on the other hand, are edited in a slow-paced way (Pramaggiore & Wallis, 2008, pp. 193-200).

Increasing the pace does not always mean cutting too much. Pearlman categorizes rhythm as “timing, pacing, and phrasing.” For example, in a 5-second scene “the door opens- the vase falls over- the cook screams - and the burglar slips out. Immediately afterwards this scene can continue as the thief is cornered - he kicks the cop - he gets bitten by the dog and jumps over the wall.” If the editor tries to show each of these events in separate shots, the scene becomes longer, and the pace slows down. Therefore, instead of creating action, cutting too much can have the opposite effect and slow down the pace. This means that the pacing of the scene is wrong. In this context, these three phenomena should act in harmony with each other (Pearlman, 2016, p. 70). For example, in a romantic movie in which two lovers run towards each other, cutting too much, and increasing the tempo may not give the desired dramatic effect in the scene. It is important to distinguish between mechanically adjusting the speed of transition between scenes and the speed inherent in the narrative in order to capture the intensity of emotion. From this point of view, it would not be wrong to say that one of the factors determining the rhythm of the movie is the genre of the movie. For example, it is not usual for a movie in the action genre to reduce the tempo¹ by keeping the time between two plans long. The cuts are made at fast intervals and the tempo is thus accelerated. Therefore, the rhythm is manipulated according to the intensity of emotion dominating the scene.

While a quicker pace can generate excitement and tension, a slower pace achieved through longer shots has the potential to create a unique rhythm that draws audiences into the narrative in a different manner. By allowing scenes to linger, filmmakers provide viewers with the opportunity to immerse themselves in the nuances of the story, characters, and environment. This unhurried approach fosters a sense of anticipation, enabling viewers to absorb the subtleties that might otherwise be missed in a faster-paced editing style. A key technique in developing this deliberate rhythm is the meticulous management of composition and camera movement within longer shots. Even though a shot might extend for an extended period, the inclusion of distinct frames within that duration adds depth to the viewing experience. These varied perspectives within a single take have a dual purpose: extending the shot’s length to enhance the film’s rhythm and offering diverse visual angles to maintain audience engagement.

Although there are no strict rules about how long or short a scene should be, if the time between two shots remains the same throughout the whole movie, there is a risk that the rhythm becomes mundane. Dancyger (2019) explains that the prerequisite for creating rhythm in a movie is “variety” in shooting times. “Shots should never be all the same length” (p. 406). The similar duration of all shots or lack of diversity is one of the obstacles to the creation of rhythm. Diversifying the shot lengths in the transitions between scenes is also one of the important elements that save the rhythm from mediocrity. If the cuts between scenes have similar durations, it makes the movie rhythm monotonous and difficult for the audience to watch (Barsam & Monahan, 2018, p. 297; Dancyger, 2019, pp. 405-406).

Other elements that determine the rhythm of a film are the color, tone, and color palette used in the film. For example, the color palette of warm colors used in Wes Anderson’s *The*

¹ Sometimes the pace can be deliberately manipulated by cutting early without following the “content curve” in order to increase excitement and confusion in the audience. See also: *Run Lola Run* (1998) (Barsam & Monahan, 2018, p. 298).

Grand Budapest Hotel (2014) creates a rhythm by creating contrast and harmony in the film (Attademo, 2021). On the other hand, saturated and energetic colors used in an action genre film can create a rhythm. The choice of colors used in drama genre films, where camera movements are slow and the pace is relatively low, will naturally change accordingly. The colors used in a scene or whether the scene is light, or dark is a process that changes according to the emotional intensity of the scene and transforms not only the form but also the meaning with the contrast created through light.

Aim and Methodology

This study aims to analyze how and by which techniques rhythm is constructed in the film *Raging Bull*, based on the idea that rhythm in cinema is an important component in creating the emotional intensity of a film and its language and aesthetics. Although the film has been analyzed in the literature around topics and themes such as violence (Tomasulo, 1999), psychoanalytic (Grist, 2007), and postmodernism (Mortimer, 1997), it has been found that there is no comprehensive study on rhythm. This study aims to expand the discussions on cinema and rhythm and to guide future studies in the context of rhythm analysis in cinema. The research questions formulated are as follows.

1. In light of the information given in the literature section, what/ what kind of rhythm is used in the movie?
2. Which rhythmic techniques were used to increase and decrease tension?
3. How did the non-linear editing structure of the movie affect the rhythm of the movie?
4. How did the sound and music design contribute to the rhythm?
5. How did shooting angles and camera movements contribute to the rhythm?
6. How did the formal elements of rhythm contribute to the narrative? What is the relationship between form and narrative in terms of rhythm?

The concept of rhythm in cinema is a complex and difficult process to analyze (Adams, Dorai & Venkatesh, 2001, p. 1056). Rhythm studies span a wide range of interdisciplinary fields such as music, dance, philosophy, poetry, painting and sculpture, and cinema. In order to analyze rhythm in *Raging Bull*, this study focuses on the formal, stylistic, and narrative aspects that construct the rhythm of a film. This study is guided by Pearlman's (2016) conceptual and theoretical framework on rhythm and case studies. The elements of the film that contribute to the creation of rhythm, such as editing, camera angles, and movements, sound and music design, color, acting, and pacing, were examined. The film was re-watched and notes were taken at each of these stages to identify each element and ensure the accuracy and consistency of the analysis. At the beginning of the analysis, the film was first divided into sequences and the beats and repetitions in the rhythmic elements were analyzed. The techniques used to create tension and relaxation and finally how these elements work together to create a certain rhythm were analyzed. The aim is to reveal how the rhythm created contributes to the language and aesthetics of the film.

Findings

In order to analyze the rhythmic elements in the film, the film was first divided into sequences and the elements that determine the rhythm were searched for in the form and narrative. The film is divided into sequences as follows:

To examine the rhythmic components within the film, an initial step involved segmenting the film into sequences. These segments were then explored for rhythm-defining attributes, considering both visual composition and storytelling. The film is divided into the following sequences:

1. The opening scene and the introduction of the character Jake LaMotta (Robert De Niro) as a boxer.
2. Jake's first fights at the beginning of his career and his rise to fame.
3. His relationship with his brother Joey (Joe Pesci) and his neighborhood.
4. His marriage to Vickie (Cathy Moriarty) and the subsequent jealousy and violence.
5. Jake's fall from grace and his descent into alcoholism.
6. Jake's comeback and his fight against his biggest rival.
7. The period after his retirement from boxing.
8. Closure and Jake's reflections on his own life.

Rhythm in Raging Bull

Raging Bull opens with a slow-motion sequence of Jake LaMotta, the boxer protagonist, warming up in the ring. The deliberate pacing of the footage is a significant aspect, as boxing is a sport that emphasizes speed and agility. This opening sequence not only sets the tone for the rest of the movie, but also gives a preview of the rhythm and pace that will persist throughout, hinting at the rhythm and pace that will be prevalent throughout. When Jake starts warming up on the left side of the screen and shadowboxing² towards the space in front of him, the audience's attention is directed toward him and the space in front of him. This careful positioning of the character in the boxing ring within the frame serves to define the rhythm of the film from the very beginning.

According to Biro, in this opening scene, boxing, one of the most aggressive sports based on physical strength, is transformed into dance (2011, p. 57). It starts in slow-motion, which the audience does not expect from a boxing and action genre in general (Tomasulo, 1999, pp. 177-180). The slow-motion technique used in this scene plays an important role in shaping rhythm and emotion. "Slow motion changes the energy or quality of a normal movement and thus gives it a greater emphasis" (Pearlman, 2016, pp. 205-206). Block (2008, p. 183) states that slow motion in cinema is used to make fast-motion elements more prominent, and it also makes it easier for us to perceive a real-world phenomenon as if we were in a dream. It is seen that the slow-motion technique used at the very beginning of the movie is frequently used in the following minutes of the movie. According to Nişancı (2009), the repetition of the components that make up a cinematic rhythm throughout the film draws viewers in and simplifies understanding. The repetition of the elements that create rhythm at certain intervals (slow-motion technique in this case) strengthens the effect of rhythm.

Most of the film is shot in black and white, except for brief color scenes depicting Jake's happy moments with his family and friends. These scenes are shot on 16mm film and are edited at a faster pace, creating a noticeable contrast to the slow-motion shots of Jake's boxing matches and disappointments from his life. The use of color and the difference in tempo not only create a contrast in form, but also in content, as the happy moments are in stark contrast to the violence, jealousy, and lack of color in Jake's real life. This contrast between color and black and white, slow and fast, happy and violent, helps to establish the film's rhythm and gives it a dark and pessimistic atmosphere.

In the film, Scorsese effectively uses editing techniques to intertwine footage of Jake's boxing matches with scenes from his turbulent personal life. This creates a strong sense of rhythm by skillfully alternating between the fast-paced energy of the boxing matches and the slower-paced, emotional family life of Jake. The contrast between the two aspects of Jake's life

² The main character's warming up by throwing punches into the void symbolizes his battle with himself from the very first moment.

is heightened through this technique, and it highlights the tension between his professional and personal lives. Scorsese's use of editing techniques draws from Soviet cinema's editing techniques that propose the idea that the collision of shots can evoke meaning and emotional resonance. This dialectical³ editing technique is frequently employed in subsequent scenes to further highlight the contrast and tension between Jake's professional and personal lives.

The film uses an editing technique that was frequently used in Soviet cinema. For example, in one scene, Jake wakes his wife Vickie from her sleep and asks her about the "good-looking man" comment she made earlier in the day in front of others about his next opponent named Janiro. Jake looks thoughtful and unsatisfied with his wife's answers. The scene is completely silent. This is where the acting comes in and gives the editor clues as to where the scene should be cut. In the cut that immediately follows, we see a close-up of Jake punching Janiro in the face. Janiro is punished for being found attractive by Jake's wife.

Another scene based on this technique is when Jake claimed that his brother and his wife Vickie were having a secret affair which has led to his violent behavior towards them. Despite initially preparing to leave Jake, Vickie ultimately chooses to stay with him. This decision positions Vickie as an innocent victim in need of protection from Jake's abusive behavior. They end up hugging. For the audience, Vickie is now an innocent victim who needs to get rid of this man. The use of silence at the end of this scene builds tension and highlights the emotional intensity of the moment. This hug scene is again interrupted by a cut and the first shot that appears on the screen is the punch to Jake's face. This use of the editing technique, often utilized in Soviet cinema, creates a striking contrast between the scenes and builds rhythm. As a result, the audience perceives Jake as the villain and views his subsequent punishment as a form of retribution for his violent behavior earlier in the scene.

The film employs a range of shooting techniques, such as jump cuts, match cuts, shot reverse shots, and POV shots (the view of the protagonist's point of view) to effectively convey the physical and emotional state of the main character. For instance, when Jake becomes jealous and loses his control while watching Vickie talk to some other male characters, the director utilizes close-ups, POV shots, and slow-motion techniques to visually depict his emotional turmoil. The dynamic camera movements and editing rhythm work together to heighten the dramatic effect, allowing the audience to gain a deeper understanding of Jake's thoughts and feelings. The ambient sound decreases, and the synchrony shifts in his conversation with the other men of his wife. Thus, through editing, we enter directly into the character's thoughts and feelings.

On the other hand, the film also employs a contrast in lighting techniques between inside and outside of the boxing ring. According to Bordwell and Thompson, the use of light inside the ring is another important element. The lighting behind the characters, supported by spotlights, makes the sweat and blood splashes of the boxers more striking and visualizes the violence (2008, pp. 426-430). The dynamic lighting within the ring, particularly the spotlighting on the boxers, accentuates the violence and action of the sport. This rhythmic interplay between light and shadow mirrors the intensity of the matches. This use of lighting contributes to the overall effect of the film, emphasizing the brutal nature of boxing and heightening the dramatic tension of the story.

The film employs a non-linear editing technique that effectively blurs the lines between different periods in Jake's life, creating an ambiguous sense of time and space. This non-linear progression of the story allows the audience to gain a deeper understanding of Jake's inner conflicts, as his chaotic thoughts and ideas are depicted alongside acts of violence and identity

³ Eisenstein's theory of fiction, influenced by Hegelian philosophy, asserts that new meaning, or synthesis, can arise from the collision of two different shots - a thesis and antithesis. According to this theory, it is only through conflict that a new meaning can be generated (Hayward, 2012, pp. 272-273; Berliner, 2005, p. 3; Nişancı, 2012, p. 65).

crises (Karahan, 2021, p. 84). This intermingling of different aspects of Jake's life highlights the complex, intertwined nature of his experiences and emotions. By paralleling the form of the narrative with the character's inner world, the non-linear editing technique enhances the overall effect of the film, creating a sense of contrast and instability that mirrors Jake's erratic and often violent behavior. Overall, the non-linear narrative structure of the film contributes to a richer and more nuanced understanding of Jake's character, his motivations, and the forces that drive him to both succeed and self-destruct.

Jake's final fight with Sugar Ray in the film is highly significant due to its tempo. As Sugar Ray corners Jake, the tempo slows down, and time almost stands still. This moment marks the height of the tension in the scene. The film employs a sequence of rapid cuts and close-up shots to match the high tempo, and flashes of light that start with irregular bursts contribute to an overall sense of rhythm irregularity. Each flash is synchronized with the blows landing on Jake's face, and the droplets of blood running down Jake's face and body are shown in close-up shots. In these moments when Jake is cornered, the cuts reaches its climax.

Block states that he likens rhythm in cinema to a metronome and that the sound coming from the companion of silence is important in constructing rhythm (2008, p. 198). The zoom-in on Sugar Ray's boxing glove at the climax of the film and the rising tempo after the silence created in an instant, the chaos that starts with punches, prove this. After the silence, the succession of punches and animal sounds is broken by flash bangs. Sound design is accompanied by cinematography. Very fast cuts in a row are presented with close-ups, and the most brutal form of violence is revealed through rhythm. Thus, a technique of tension and relaxation is used to create rhythm on stage.

This climatic fight scene in *Raging Bull* is reminiscent of the editing techniques, camera angles and movements used in the famous shower scene of *Psycho*. The director kept the duration of the scene long just before the moment of attack begins. The moment the fatal punches begin, the pulse suddenly accelerates and a total of fifty cuts are made in a row. Multiple shots are shown in the same second, creating chaos on the stage. According to Berliner, Scorsese also violates the basic rules of continuity in editing to convey a subjective impression of LaMotta's brutal experience in the ring (2005, p. 5). These violations and the chaos that dominates the scene are accompanied by sound effects. Thus, the dramatic effect and rhythm of the scene are strengthened. In these moments when the violence reaches its peak, the average cutting time drops below 1 second. The first scene that comes after this explosive moment remains on the screen for about 7 seconds. The graph below shows the frequency of these cuts.

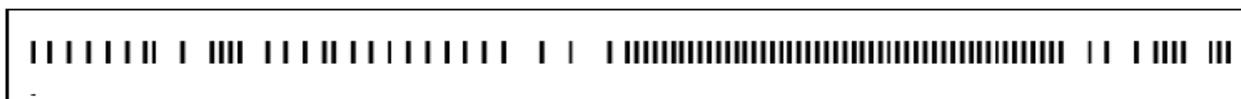


Figure 2. Cuts from final boxing match scene in the movie Raging Bull.

Sound and music design is one of the important elements that create the rhythm of a movie. In *Raging Bull*, these elements can be divided into diegetic and non-diegetic. Especially the punches thrown in the boxing ring and the blows to the body are amplified in the non-diegetic universe with sound effects. In some scenes, animal sounds are added to these sound effects to reinforce the animalistic feelings of aggression and violence. According to Barsam and Monahan, the sound effects in boxing scenes, such as knife sounds, the sounds of blood gushing from the face, animal sounds, and airplane noise, are all created through foley techniques (2018, p. 332). These sounds are accompanied by the flashes⁴ of the photographers and the noises made by the audience.

Not only sound and music, but also the use of silence creates a contrast and establishes the filmic rhythm. For example, the scenes dealing with Jake's personal problems just before

⁴ The frequent use of flashbulbs dominates the soundtrack, evoking a time when sports news was largely confined to newspapers rather than television (Pramaggiore & Wallis, 2008, p. 254).

his boxing matches ends often in silence. Silence can often evoke calm and peace, but in some cases, it can also foreshadow the violence that is about to erupt. The final boxing match with Sugar Ray is significant in this respect. For example, as Sugar Ray raises his fist high and prepares to deliver the final blow, the camera zooms in on his glove and the scene falls into complete silence.

The use of classical and jazz music in *Raging Bull* not only creates a contrast with the violence and 'rough' aspect of boxing but also adds an air of nostalgia to the movie. The use of music from the past helps to place the film in a specific historical context, evoking a sense of the era in which the story takes place. The music also provides a counterpoint to the more dramatic and intense scenes in the film, giving the audience a moment of respite from the intensity of the boxing scenes. In this way, the use of classical and jazz music in *Raging Bull* serves multiple purposes, contributing to the overall effect and impact of the film.

Discussion and Conclusion

This study focuses on the rhythm analysis of the film *Raging Bull* in the context of rhythm discussions in cinema. The elements that determine the rhythm in a film and how they are constructed are analyzed with the conceptual framework given in the literature section and the film is analyzed under categories such as cinematography, editing, sound, and music design, which are the elements that determine the rhythm in a film.

The cinematography of a film plays a crucial role in determining its language and aesthetics, but it also contributes significantly to the film's rhythm by enhancing its atmosphere and emotional intensity. The frequent use of techniques such as zoom-in, zoom-out, and slow-motion both inside and outside the ring to reveal Jake's jealousy and violence motives in the film shows that "repetitions", one of the elements that constitute the rhythm, take place. For example, in the opening scene of the movie, when Jake is shadow boxing alone, the wide-angle lens, composition, slow-motion technique, and classical music flowing in a non-diegetic environment make the ring seem bigger than it is, thus Jake's loneliness and his battle with himself are supported both formally and narratively by creating a rhythm from the first minute.

The movie is shot in black and white, and it uses a unique technique where only the happy moments in Jake's life with his loved ones are portrayed in color. These moments are fleeting and short-lived, which contrasts sharply with the darker aspects of Jake's life, such as his struggles in the ring, his bouts of jealousy, and his domestic violence outbursts, which are depicted in slow-motion and in colorless hues.

By using this technique, the film creates a visual contrast that not only enhances its aesthetic appeal but also contributes significantly to its overall meaning. The vivid colors of Jake's happy moments serve as a reminder of what he stands to lose due to his self-destructive behavior. At the same time, the colorless and slow-motion scenes emphasize the bleakness and hopelessness of his life and the consequences of his actions. Therefore, despite being shot entirely in black and white, the film's visual language and use of contrast effectively capture the dark and brooding atmosphere of Jake's world.

The editing style of *Raging Bull* is a crucial component in determining the film's rhythm. The rhythm in *Raging Bull* is created using a style that is similar to the editing techniques used in Soviet cinema. This technique involves using two different scenes and combining them to create a new meaning. Throughout the film, the editing technique is frequently used to create a contrast between scenes, which strengthens the narrative and helps to construct the film's rhythm. The contrast between the two scenes creates a sense of tension and emotion that is essential to the film's overall tone and mood. As Block (2008) has noted, the rhythm in *Raging Bull* is constructed in a "flow-line" manner, which means that it rises and falls like mountain ranges. This technique creates a dynamic and emotionally charged rhythm that captures the film's themes and messages.

The non-linear editing used in *Raging Bull* serves to emphasize Jake's inner conflicts, erratic behavior, and chaotic life. This style of editing creates rhythm by highlighting the contrasts in the narrative and breaking away from traditional narrative structures such as setup, development, and resolution. The climax of the film, which features a boxing match with Sugar Ray, is edited similarly to the iconic shower scene in *Psycho*. This scene was analyzed comparatively, and it was found that *Raging Bull* is constructed in a similar way to *Psycho* in terms of cinematography and editing. On the other hand, it was determined that the rhythm created by the increasing tempo and dramatic effect was constructed in accordance with the "timing, pacing, and trajectory phrasing" as stated by Pearlman (2016, pp. 65-81). Pearlman (2016) emphasizes the importance of using cuts strategically to build rhythm in a film, warning that making too many cuts can decrease the tempo and negatively impact the film's pacing. However, in this scene, the cuts are used effectively to increase the tempo and heighten the drama and tension of the scene.

In addition to editing, sound and music design also play an essential role in determining the rhythm of *Raging Bull*. The sound and music design in the movie can be divided into diegetic and non-diegetic. The director supports the acts of violence in the ring with Foley techniques in non-diegetic environments such as animal, airplane, blood gushing sounds. Silence is also used effectively to create rhythm in the film. By using moments of silence before an explosion of violence, the director effectively builds tension and emphasizes the impact of the action. This technique is especially effective in heightening the drama and creating a sense of rhythm during the film's most intense scenes.

On the other hand, the transitions between scenes in a movie and "the variety of techniques" used are important for ensuring fluidity in rhythm (Barsam & Monahan, 2018, p. 297; Dancyger, 2019, pp. 405-406). The variety of formal features such as cinematography, editing, sound and music design, color and tones used in the film *Raging Bull* plays an important role in creating the rhythm of the film.

As a result, it has been determined that rhythm in *Raging Bull* is used in the rise and fall of the character Jake in both his private and public life through "tension and relaxation", the correct use of "timing and pacing" and "repetitions" of cinematographic techniques, the contrasts created by "color and toning", the energy given by the actors, and the cuts made in accordance with the "content curve" through editing. Thus, the formal and dramatic structure of the scenes and sequences was constructed flow-line like mountain ranges thanks to rhythm. While building this structure, the film was influenced by the techniques and theories of editing and cinematography of Soviet and Hollywood cinemas. Ultimately, rhythm serves as a vital tool in creating a diversified, fluid, and formally constructed narrative structure that drives the film's overarching message and themes.

The study of rhythm in cinema is a rich area of research that has the potential to yield valuable insights into various aspects of film studies. Research on rhythm in cinema can be extended to discussions on rhythm between film genres, remake films, and similarities and differences between rhythm in cinema and other art branches.

Conflict of Interest Statement

The author of the article declared that there is no conflict of interest.

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