# CINEMA STUDIES: PERSPECTIVES ON SOUND

## ESTUDOS DE CINEMA: PERPECTIVAS SOBRE O SOM

**Leilane Serratine Grubba**[1]
**Rui Carlos Dipp Júnior**[2]

**ABSTRACT**
The article focuses on cinema studies. The objective is to present a model for cinema sound analysis. The proposed problem is the extraction of cinematic sound elements, as well as their functionality. Methodologically, in the first section, we presented introductory perspectives on cinema´s sound. Sequentially, in the second section, we presented the discursive idea of sound, with emphasis on voice, music, and noise, aiming to show a way to understand sound language. With the deductive method, the article is conceptual and realized through linguistic-discursive analysis of sound.
**KEY-WORDS:** Cinema. Media Studies. Sound Studies. Music. Soundtrack.

**RESUMO**
O artigo enfoca os estudos do cinema. O objetivo é apresentar um modelo de análise de som para cinema. O problema proposto é a extração de elementos sonoros cinematográficos, bem como sua funcionalidade. Metodologicamente, na primeira seção, apresentamos perspectivas introdutórias ao som do cinema. Sequencialmente, na segunda seção, apresentamos a ideia discursiva de som, com ênfase na voz, na música e no ruído, com o objetivo de mostrar um caminho para a compreensão da linguagem sonora. Com o método dedutivo, o artigo é conceitual e realizado por meio da análise linguístico-discursiva do som.
**PALAVRAS-CHAVE**: Cinema. Estudos de Mídia. Estudos de som. Música. Trilha sonora.

## 1 INTRODUCTION

Lumière brothers conceived cinema for scientific research. Just later on, it became an art (CARRIÈRE, 1995, p. 22). In addition to its artistic dimension, cinema is also perceived as a strong means of communication and expression (TUDOR, 2017; AGEL, 1986, p. 9). Thus, since 1950, cinema has become inseparable from Cultural Studies and Media Studies and has come to be reviewed as social practice: as language, meaning, and communication (DESHPANDE, 2007, p. 96). This fact is due, in large measure, to "[the] insertion in cinema

[1] Doutora em Direito (UFSC), Mestre em Direito (UFSC) e Mestre em Ciências Humanas (UFFS), graduada em Direito (CESUSC). Professora da Faculdade Meridional – IMED, Dept. Direito e Dept. Psicologia. E-mail: lsgrubba@hotmail.com

[2] Mestre em Direito (IMED), Especialista em Direito e graduado em Direito (UPF). Graduado em Música (UPF). Professor da Universidade de Passo Fundo – UPF, Dept. de Música. E-mail: ruidippjr@gmail.com



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

studies of methods extracted from other disciplines, such as linguistics, psychoanalysis, anthropology and semiotics" (TURNER, 1997, p. 48), that is, of studies that are concerned with the notion of representation[3] - with the process of making the narrative, image, sound, lighting, and other artifices create meanings.

Assuming the idea that cinema is a means of communication, it becomes impossible to disregard the effects caused by cinematographic creation in the 20th and 21st centuries. As "an industrial object, essentially reproducible and intended for the masses, cinema revolutionized the art system, from production to diffusion" (KORNIS, 1992, p. 237). With this article, we aim to present an idea for the understanding of cinematographic language, with delimitation in the sound language of cinema. In this sense, how to understand the sound?

> [...] sounds are defined as that class of perceived vibrations - and, in a more accurate sense, sympathetically produced - by the ear that is working when they travel through a medium that can transmit changes in pressure (like air). The numbers for reaching human hearing (which do not matter for this study) it's twenty to twenty thousand cycles per second, although, in practice, most adults in industrial society cannot hear either end of that interval. We are thus presented with a choice in our definition: we can say that sound is a class of vibration that can be heard or that it is a class of vibration that is heard, but in either case, the hearing of the sound is heard. My point is that human beings reside at the center of any meaningful definition of sound. When hearing other animals, it is usually contrasted with human hearing (as in "sounds that only a dog can hear"). As part of a wider physical phenomenon of vibration, the sound is a product of human senses and not something in the world apart from human beings. Sound is a small piece of the vibrant world." (STERNE, 2003, p. 11).

Besides, Sterne (2003) suggests: if there is no innocent description of the sound, then there cannot be an innocent description of the sound experience. It is impossible, says the author, to describe the faculty of hearing in its natural state. "Even trying to do so is to pretend that language does not have a figurative dimension of its own. The language we use to describe sound and hearing is loaded with decades and centuries of cultural baggage" (2003, p. 10).

Indeed, the interest in the cinematics language, including sound language, is an integral part of the object of modern linguistics, suggests Jakobson (1970, p. 13). Based on the assumption raised by Jakobson (1970, p. 14-15), that language is a system of signs;

[3] For this research, we adopt the notion of representation based on Cultural Studies, especially Stuart Hall´s (2016) notion, for whom representation appears as a central idea of media effects; in the sense of connecting meaning and language to culture. Still, the idea of representation is used mainly in a discursive approach, according to the postulates of Michel Foucault, for whom discourse is a system of representation.



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

semiotics is the general science of signs (Pierce or Saussure); as well as the idea raised about linguistic diversity (sociolinguistics), surpassing the model of "*langue* [language is spoken verbally] as a static, uniform system of mandatory rules and supplanting this oversimplified and artificial construct through the dynamic vision of a diversified code" (1970, p. 28), for the diverse functions of language and the time/space factor, then it seems possible to consider:

a) the "lack of training in *formal linguistics* prevents workers in social sciences from reaching a productive interest in language" (1970, p. 30);
b) verbal messages are connected to the communication of non-verbal messages;
c) "The object (optical and acoustic) transformed into a sign is, in fact, the specific material of cinema" (1970, p. 155); and,
d) just like optics/image, sound (dialogue, music, and noise) in cinema seems to communicate specific messages and can be a rich object for analysis.

Sound, as a language, tells a story directly or indirectly (HOLMAN, 2002, p. xi); acting in the viewer's subconscious. Therefore, analyzing the language of cinema can be an important tool for research. In this article, the research object is restricted to the analysis of sound language - *sound studies*[4], with an emphasis on *film sound studies*. In this sense, it questions the extraction of the fundamental sound elements of cinema, as well as their functionality. We present, therefore, a conceptual article, carried out through a linguistic-discursive analysis of the sound, based on the notion of representation.

## 2 INTRODUCTORY PERSPECTIVES ON SOUND IN CINEMA

Cinema was not born spoken[5]. In the beginning, films were silent. However, the screening of the films was accompanied by music played live. Therefore, despite being unspoken, cinema was sonorous (HAUSSEN, 2008, p. 18-19).

> The cinema was never "non-sonorous", the cinema was silent, that is, literally deprived of words. For this reason, cinema did not become sound but became spoken. Since the first films, there has always been the presence

[4] Sound Studies is "[...] an emerging interdisciplinary area that studies the material production and consumption of music, sound, and silence, and how these have changed throughout history and in different societies. But it does so from a much broader perspective than standard disciplines such as ethnomusicology, history of music and sociology of music" (PINCH; BIJSTERVELD, 2004, p. 636).

[5] The distinction between "spoken" and "sonorous" cinema was suggested by Clair (1985: 92), for whom "spoken cinema is not everything. There is also the sound film - in which the last hopes of the defenders of the silent film are placed. They tell the sound film to ward off the danger posed by the advent of spoken cinema, striving to convince themselves that the sounds and noises that accompany the film can be sufficient entertainment for the audience".



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

> of sound interventions, whether live with the use of musical accompaniment performed by a pianist, an improviser or, sometimes, by a small orchestra; or in recorded form, with the combination of the phonograph and the cinematograph (CARVALHO, 2007, p. 2).

Despite the differentiation established between spoken and sound cinema, the date of 1927 was formally agreed as the opening moment of sound cinema (ALVES, 2013, p. 10-11). Thus, with the emergence of spoken cinema, the sound has acquired importance not as an accompaniment to the image, but as essential since the creation of the film's script. If in the beginning, the sound didn't occur due to technical limitations, the mechanical inventions allowed the creation and development of sound in cinema (ESPOSITO, 2011, p. 14). Among the technical limitations, the search for the recording of sounds (capture and transmission), as well as the synchrony between image and sound. About the acoustic history of cinema:

> Still, in 1876, Graham Bell's telephone presented the possibility of electrical signals being produced for recording sound. But, only in the middle of the first decades of the twentieth century, Bell's theory of electrical transmission of sound joins the mechanical technology of the phonograph.
> Hence reports from the kinetochore (1894), by Edson, and Cronophone, in 1902, by Leon Gaumont - a display system that connected the projector to two phonographs through cables that had the objective of sound/image synchronism. There is also the return of the kinetochore in 1913, improved from a large phonograph that guaranteed the amplification and synchronism of the voice linked to the lip movements of the actors - but that lost the synchronism after 10 to 12 seconds of continuous speech.
> […] Between 1926 and 1928, the main studios adopted the Vitaphone from Western Electric, used as the basis for the first lines. In 1927, the film "The Jazz Singer" was released, using the Vitaphone system, which uses sound recorded on a disc synchronized with the film from the connection of the record player to the projector.
> This chronological exhibition can be important as a driver of the countless attempts to synchronize sound and image in cinema. But, until 1929, cinema was called silent, it may be interesting to evaluate some reflections on this period (HAUSSEN, 2008, p. 20).

Allied to mechanical inventions, the sound appears in a period in which the viewer begins to demand activism in the observation of the film. Opolski (2015, p. 4) states that in this context of immersive aesthetics, "sound can be discussed as an essential communicational element for cinematographic narrative". Alluding to the "point of view" - the framing of the camera in the cinema, which can assume the point of view of a character or the point of view of the viewer, making him a third member of the film -, Opolski suggests the notion of "listening point", which defines the place where the viewer is located in the scene:

> It is the perspective created by the sound that defines which location should be assumed by the viewer in the image, based on the sound indexes transmitted to the audience. In the same way, as discussed the camera angle, the listening point can be subjective, that is, the viewer can assume the




Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

> character's listening point. The most common, however, is that sound interchange subjective listening points with external listening points, generating different degrees of involvement for the viewer during the work, so that the audience can maintain the expectation and interest in the narrative (OPOLSKI, 2015, p. 5-6).

Thus, with the development of sound, a "hierarchy was established in the way in which sounds were reproduced, the speech would be the most important, having to be clearly understood by the viewers" (ESPOSITO, 2011, p. 14). After the word, music, which has the function of generating continuity of the narrative, generating emotions, as well as accompanying characters. Finally, the noises, with "the function of promoting all actions, disguising discontinuity of scenes, creating spatial and temporal units where all the noises are linked to what is seen" (2011, p. 15).

Since the appearance of Vitaphone[6], Esposito (2011, p. 17) suggests there has been an "evolution in the area of audio editing" through digital media, which allows the creation of several versions of the sound material. So, sound in the cinema is no longer the result of capturing a single microphone, but a combination of sound recording during filming, sound recording at a time other than filming, as well as sound manipulation at the time of post-production. In addition to the "sound capture" team, there is a "sound post-production" team. As Esposito explains, the audio post-production process for cinema "consists of several well-defined stages, where several professionals share functions, among them: the capture of direct sound; editing dialog; ADR; Foley Art; Effects Editing; the Ambience Edition; Sound Design and the Soundtrack" (2011, p. 18-19).

The use of sound post-production in cinema is of great importance, mainly:

> 1. Improve the flow of the narrative, locating the viewer concerning the environment, time, and period through the use of dialogue, music, and sound effects.
> 2. Add impact.
> 3. Complete the illusion of reality and perspective through the use of sound effects and recreating the acoustics of the natural environment in the mix, using equalizers and artificial reverbs.
> 4. Complete the illusion of unreality and fantasy through the use of specific sound designs and processed effects. […] (WYATT; AMYES, 2005).

From silent to spoken film, cinema has always been sonorous. From the introductory perspectives on sound in cinema, we sought to trace not its historical evolution but to point

[6] To learn more about Vitaphone, we recommend the work *The fiftieth anniversary of Vitaphone*, by Kreuger Miles.



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

out the importance of sound since the beginning of cinema, as well as the development of its use in line with the evolution of sound technologies that made it possible.

## 3 THE SOUND ELEMENT IN CINEMA

Cinema presents a discursive system that manages to produce and reproduce social meanings through its language - lighting, sound, the arrangement of the scenery, camera position, costumes, editing, etc., elements that communicate a message to the viewer. Thus, very little seems to be up to the viewer to interpret the film or assign meaning to it, since the cinematographic arrangement was thought to communicate specific messages.

> At the level of the signifier, cinema has developed a rich set of codes and conventions. When the camera makes a *close-up*, this indicates strong emotion or crisis. At the end of the love scenes, we can see a *slow fade* or a slow loss of focus, or a modest panoramic shot above the lovers' bodies - timid imitations of the spectator looking away, but signifying the continuation and conclusion of the act. The system *shot-reverse-shot* is a convention to represent a dialogue. The use of music to signify emotion is also a convention, as there is no real reason for the orchestra to evolve in a crescendo during an embrace. Slow-motion sequences are often used to aestheticize - beautify and instill relevance in your themes (TURNER, 1997, p. 55).

Sound, among other elements, plays a role in narrative communication, providing a "strong emotional accompaniment to the crucial moments of a film" (TURNER, 1997, p. 63). In its diegetic use, the sound increases the reality sensation created in the viewer, especially when it reproduces noises that generally accompany visually represented actions. An example of this type of sound use can be seen in cartoons, as in the classic Tom & Jerry, in which various musical instruments (percussion, piano, strings, among others) follow the movements of the characters. In this context, a *glissando*, which according to Med (1996, p. 327), is "an ornament [...] that consists of the rapid sliding between two real notes", that can represent a succession of notes that represent someone slipping, or even, rising quickly one ladder.

Used in a non-diegetic manner, sound fulfills the main function of the setting, with the music. The soundtrack seems to efficiently achieve the role of creating the viewer's affective participation, amplifying an emotional state: the music that accompanies a hug, a sad or happy moment in the film. Chords in higher tones normally awaken an emotional memory of joy; also, it is believed that chords in lower tones can convey to the spectator a sensation that refers to dramatic moments, feelings of anguish, sadness, and unhappiness. In this sense, Turner suggests that cinematographic music can have physical effects: "it makes the spine



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

shiver or stimulates the person to follow with the feet. It has already been said that music in the cinema 'feels for us', telling us when a strong moment occurs and indicating what we should feel through the emotional state of the music" (1997, p. 65).

In its diegetic and non-diegetic use, there are various sonic components used in cinema to increase creative possibilities - the voice, the silence, the music, and the noises. The sound "participates in the articulation and organization of the cinematographic narrative, composing an element of its montage. And in this way, the film perception is "audio-visual" and allows numerous combinations between sounds and visual images" (CARVALHO, 2007, p. 2).

From current *sound studies*, with emphasis on *film sound studies*, we intend to present the mentioned elements, raising practical examples that facilitate the reader's understanding. Still, to facilitate the practical understanding of the possible analysis of the sound, we intend to relate the elements of voice, noise, and musicality with the analysis carried out by Márcia Carvalho (2007), based on the semiotic categories of C. S. Pierce. According to the author, the images (visual or sound) are divided into three categories, being:

a. representative: predominances of voice, such as dialogue and narration. It is a hybrid element composed of verbal and oral language [...] agreed upon by language, accent, and intonation" (2007, p. 4);
b. non-representative: it is the sound predominated by music, as long as it "awakens attention to the possibilities of meaning and qualities inherent to its elements, which are: the melody, the harmony, the rhythm, the timbre, etc." (2007, p. 4); and,
c. figurative: predominated by the sound effect (noises). It is the sound "that predominates in the registration of the image/action due to its need to constitute a sign and that refers to a "concrete" object. These are "environmental sounds, steps, [...] or effects produced electronically or digitally" (2007, p. 4).

Finally, before analyzing the sound elements, it is important to note that the construction of the landscape sound, contrary to what one might think, is not fully recorded at the same time that the images are filmed (OPOLSKI, 2009, p. 17). Most of it "is added in the last stage of the post-production of the film, after the editing of the images has already been completed", aiming at creating synchrony with the film's history. What differentiates sound post-production, in this sense, is both the budget allocated to the film and the characteristics of the film.

**3.1 The voice: characters and narrator**



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

The voice appears in the dialogues of the characters, as well as in the narration of the story (*voice-over*), consisting of the most important sound element of cinema. According to Chion (2011, p. 13), the voice is the mainstay of verbal expression. The author states that if a person hears voices amid other sounds, such as the blowing of the wind, their attention is captured and focused on the voice. Only then, if you "know who is talking and what they say, then you can take an interest in the rest. If these voices speak in a language that is accessible to you, you will start looking for the meaning of the words, and will only begin to interpret the other elements when your interest in the meaning is saturated" (2011, p. 13).

Therefore, Chion (2011) suggests that cinema emphasizes the voice among other sounds. Moreover, cinema is "speech-centric", prioritizing the voice as a verbal expression to the detriment of other vocal sounds, such as screams. In addition to the meaning of the words expressed by the voice, it becomes an important communicating element, "which merges the character, demonstrates its subtleties, characteristics, and intentions, solidifies the actor's work and, if used properly, brings truthfulness for interpretation" (AMARAL, 2006, p. 6); mainly as an expressive resource.

Concealing the linguistic meaning of words, the voice is an important sound element, with a dramatic, psychological, informative, and emotional function (CHION, 2011, p. 134). This is because "the sound of the human voice is so rich in details, that subtle changes, such as the choice of words with less transient attacks, help to build the character's personality" (OPOLSKI, 2009, p. 24). Furthermore, "a person's physical, biological and psychological characteristics can be transmitted by voice. There are psychological analysis techniques whose main object of study is the contour of the vocal line" (2009, p. 24). In this sense, physiological characteristics of the voice, such as timbre and accents, are relevant for the analysis of the cinema's sound landscape.

Furthermore, it seems possible to distinguish, even with eyes closed, when it comes to a male or female character. From a musical point of view, for example, human voices can be classified in terms of their texture in male (bass, baritone, tenor) and female (contralto, half-soprano, soprano). It is a didactic organization to point out the lowest and highest notes that each singer, in theory, can achieve when performing musical notes (MED, 1996, p. 268).

That way, even when "we hear the words their meaning counts, the sound and intonation and the appearance of the characters who pronounce them can be of equal or greater significance" (STEPHENSON; DEBRIX, 1969, p. 170). For the analysis of voice orality, it is necessary to point out, as has already been outlined above, the acoustic properties.



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

This theme is very well explained by Bordwell and Thompson (1985, p. 184), who advises for the necessary perception of some sound qualities for the understanding of sound in cinema. They point to three properties: (a) noise (*loudness*); (b) *pitch*; and, (c) timbre.

The noise (*loudness*) provides a notion of the volume of the sound. In voice and dialogue, the perception of a character with a soft voice and a harsh voice allows us to understand the construction of his identity. In turn, the *pitch* refers to the frequency of sound vibrations, which can be high or low; being the most important way to distinguish between music and other sounds in cinema. Finally, timbre makes it possible to analyze a voice that is more nasal or velvety (*mellow*), distinguishing characters, for example, by the quality of the voice. The three properties "define the sonic texture of a film" (BORDWELL; THOMPSON, 1985).

In addition to the noise, *pitch,* and timbre, Amaral (2006, p. 67) mentions the importance of articulation, breathing, speed, intonation and pauses in the actor's language for the construction of the characters and their identification by the audience. The mentioned elements, therefore, provide sub textual sound data capable of conveying the characters' ideas, thoughts, and feelings. Finally, the importance of supra-segmental elements - non-verbal sounds - such as screaming, crying, moaning, sighing, among others, that express emotion, feelings, and thoughts (2006, p. 68-69).

Considering the voice as a hybrid phenomenon between written language and orality, the semiotic analyzes raised by Carvalho (2007, p. 8) seem relevant to enable an understanding of the voice as a representative element, as well as to allow an understanding of the voice as a sound manifestation (sonic material) beyond the "written" lines interpreted by the actors in the cinema. Thus, at the first level, attention should be paid to the voice's qualities - its musicality or sound plasticity -, disregarding "language". It contemplates "the sounds of the voice in which speech or whisper carry words that sing, and the language functions as music" (CARVALHO, 2007, p. 8); intonation, tonic, and rhythm. In the second level of analysis, attention should be paid to the tonic elements that characterize the characters, such as intonation, accent, and the way of speaking, which create a sound design that allows the understanding of the characterization of the characters or the narrator.

Finally, at the third level, we should observe what is called *voice off* or *voice over*. As a general rule, expressions are distinguished depending on the country in which they are used. In Brazil, *voice-off* indicates that the source of the speech is not visible at the time of listening (disembodied voice), suggests Carvalho (2007, p. 9). The analysis of tonic elements (second



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

level), applied in *voice off* seems to allow the spectator, for example, the possibility of a rich construction of the characterization of a certain personality. The tonic elements, such as the accent, are used in sync with visual elements that characterize a certain character - the costume and makeup, for example -, then when the visual elements are absent, the receiving spectator is still enabled to understand the individualities of a character through tonic analysis.

Reconstructing a character vocally can be an important element for research. It can be seen that, through the accent, one can perceive the existence of foreigners in the narrative, as well as the indication of the characters' regionalisms. Through vocally, it is possible to see if it is a male or female character. Through intonation, *pitch,* timbre, and supra-segmental elements, you can tell if the character is calm, nervous, or agitated. According to Opolski (2009, p. 41), in post-production of the sound, the "increase of some decibels in certain parts of speech can increase the dramatic load of a character".

**3.2 The music**

Music, as a non-diegetic use of sound, "constitutes one of the most powerful dramatic elements of audiovisual production, occupying a privileged position in the cinematographic soundtrack" (ALVES, 2018, p. 93). Therefore, the current studies related to music are vast. These studies cover everything from listening to music, in general, to technological development and creative processes (2011, p. 93).

In music theory, both Med (1996) and Luciano Alves (2005), say it is possible to deduce some important points about the relationship between music and sound. Therefore, the melody is represented by a successive organization of notes in which the pitch of the sounds alternates primarily. On the other hand, harmony symbolizes a horizontal conception of music whose practical aspect is verified in major, minor, diminished, augmented chords, among others. Also, rhythm is a technique to organize the arrangement of the length of each sound or silence that makes up a sequence of notes and pauses, and may be linked or not with melody and harmony. On the other hand, timbre, together with pitch, duration, and intensity, is part of what is called the musical theory of sound characteristics.

All melody, harmony, and rhythm have in their sounds the combination of pitch, duration, intensity, and timbre. However, not every melody is accompanied by harmony or chords, and not every harmonic basis of a song is fed by melodic phrases. Besides, a song can be composed entirely of patterns and rhythmic phrases without melody or harmony relating to it, in other words, the rhythm can have its autonomy. Nevertheless, it is emphasized that, in all melody, harmony, and rhythm, there will always be pitch, duration, intensity, and timbre.



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

All of this is relevant in what concerns the analysis of any movie soundtrack because it helps the viewer to observe and point out more clearly a specific point that they are interested in bringing to possible debates about the scenes produced (MED, 1996; ALVES, 2005). To paraphrase Schafer (2011, p. 78), these are fundamental assumptions for the construction of what he calls “sound-musical landscape”.

In cinema, music fulfills two important functions in creating the spectator's emotion, as raised by Chion (2011, p. 14). In the first function, *empathetic*, “music directly expresses its participation in the emotion of the scene, giving the adapted rhythm, tone and phrasing, this evidently the function of the cultural codes of sadness, joy, emotion and movement”. In the second function, *anemic*, the music "manifests an ostensive indifference towards the situation, unfolding in an equal, impassive and inexorable way, like a written text". It is possible, however, that there are songs that are neither empathetic nor no empathic, with an “abstract sense or a mere presence function, an informative sign value - in any case, without emotional resonance” (2011, p. 15).

Márcia Carvalho (2007, p. 5), in her classification of music as a non-representative element, addresses three ways of listening to music, namely "the physical", "the emotional" and "the intellectual". According to the author, on a physical level, music is heard with the body, feeling the vibration. For this level, we can analyze the music in its basic properties: pitch, intensity, timbre, and duration. On an emotional level, music enters the field of emotionality, directing the viewer's psychological state – for example: sad music or happy music; is the adjective music. Finally, at the intellectual level, music is thought of as a language, as a choice of sounds and a way of articulating them, constituting structure and form. At this level, considered

> (driving motive) in the soundtrack, and articulates the construction of sound images with the narrative. It is, in short, the repetition of a musical theme or some melodic element that is associated with some character, situation, or idea. This connection makes the spectator have instruments to accompany the plot in addition to those provided by the explicit text. This principle requires intellectual participation or a more rigid interpretant since it takes us to a more specific meaning serving the unity of the narrative, or the dramatic structure. (CARVALHO, 2017, p. 6).

About the functions of music, Viela (2016, p. 32-33) presents an important classification, based on Richard Davis:

a) physical functions: are the definitions of the place (geographic space), the time (the time when the film is set), monitoring the actions of a character, as well as the score of significant moments of the action;



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

b) psychological functions: creating a psychological atmosphere, revealing a character's thoughts and feelings, anticipating and revealing unseen events, as well as deceiving the viewer, creating an expectation of an event that will not happen; and,
c) technical functions: create continuity between scenes and create continuity within the film.

To better explain, as a physical function, musical scales, which are an ordered sequence of notes that make up a musical system, can be useful in this context. For example, when it comes to exotic scales this can be even more evident because the sounds of a scale *blues* (formed by the notes C, E flat, F, F sharp, G, and B flat) can induce in the viewer that the location of a given scene takes place in the USA.

In terms of psychological functions, when long-lasting diminutive chords are used in music, the aim is to awaken a sound sensation of great tension in the listener. According to Med (1996, p. 97), "dissonance provides a sensation of movement and tension". This is because the notes in question form a musical interval (pitch difference between bass/treble sounds) dissonant of 5th diminutive, has the potential to generate an emotional effect that something is about to happen or that something must be resolved. This is explained by the fact that a “musical sound is not just a note. Along with the main sound, secondary sounds are heard, very weak and almost imperceptible” (MED, 1996, p. 92).

Finally, in terms of the technical functions of music such as continuity of scenes, this can be seen when the silence of a scene is broken by musical sounds, whether in a melodic, harmonic, rhythmic way. Modulation, that is, a change in tone, is an example to be pointed out as an important resource in soundtracks, as this leads to other sensations and expectations throughout the plot.

**3.3 Noise Effects**

Noise effects, according to Esposito (2011, p. 43), are all the sounds “added to the film that are not necessarily recorded in sync with the image”. Still, suggests Alves (2013, p. 83; 2018, p. 92), the concept refers to sounds that make up the soundtrack and that cannot be undoubtedly musical or linguistic. Also, they are considered to be those effects that have “a vocation to constitute themselves as figurative signs due to the connection established with the object” (CARVALHO, 2017, p. 6).

Emphasizing the “vocation for the constitution in figurative signs” seems important precisely because the word “noise” indicates, in the theory of communication, any




Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

disturbances that result in the loss of information, says Carvalho (2017, p. 7). They are configured in the "mixture of random and indistinct sounds, without harmony; sounds produced by irregular vibrations, in a confused way" (2017, p. 7). However, the author suggests that noises can also awaken an important sound expression. In this sense, when intentionally incorporated into the cinema as a sound effect, they start to configure the acoustic set design, becoming an important communication.

Luciano Alves (2005, p. 11), clarifies that sounds of symmetrical vibrations produce musical notes, while the noises are sounds produced by vibrations of indefinite height, irregular, such as rain or thunder. In this direction, in film production, it is believed that noise can contribute to the result and the director's intentions. According to Wisnik's (1999, p. 32) reflections on the relationship between music, sound, and noise, this situation is more evident. While, at the same time, certain sounds are accepted by some as music, for others, they can be considered unpleasant noises, noises. Thus:

> A scream can be a usual sound in a schoolyard and a scandal in the classroom or at a classical music concert. [...]. Playing an out-of-tune piano can be an interesting experience in the case of ragtime and unfeasible in the case of a Mozart sonata. A cluster (a chord formed by the cluster of notes together, which a pianist produces by hitting his wrist, hand, or entire arm on the keyboard) can cause astonishment in a traditional recital while being tedious and routine in an academic avant-garde concert. A rock concert can be a nightmare for the father and mother and yet it works for the child as a lullaby in the world of generalized noise (WISNIK, 1999, p. 32).

Usually, noise can be grouped into three categories: (a) *backgrounds* (BG-FX); (B) *hard-effects*; and, (c) *sound-effects*. Before explaining these categories, it is necessary to mention the possibility of analyzing the categories, based on the semiotic considerations raised by Carvalho.

It is vital to consider, in the first level, the "sound effect representing its object only in part, since the plasticity of its presence is more important than the referent itself. It is the approximation of the sign/effect with musical qualities. Hence, "the sound is separated from the source that produces it." (2007, p. 6) At this level, there is no correlation of reality between the sign and the effect; for example, the reproduction and representation of the sound of birds with the sound of violins. Thus, a non-diegetic creative effect is presented to the viewer, approaching mainly the so-called *sound-effect*.

In the second level, the effects are inserted in which the "visual" source that produces it can be identified, with a "perception of reality". These are, for example, the sound of an actor's footsteps, the sounds made by animals in a realistic sense, the "natural" sound of an urban landscape - for example, the sound of cars. "Here, there is a correlation with the



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

technically produced visual image (such as photography), which reaches the maximum level of image reproduction as our eyes see, just as this figurative effect faithfully reproduces its object" (2007, p. 8). Therefore, as a general rule, the second level can be perceived and analyzed in the environmental and *hard-effect*.

Finally, at the third level, suggests Carvalho (2007, p. 8), there is the *leitimotiv* effect, that is, the sound effect "suggests predictability through the pre-audibility of a certain element. In this sense, the sound effect within the narrative can be used to create a convention, determining a specific meaning for a sound". In this way, employing a convention, a certain effect can be used to anticipate a feeling in the viewer - for example, for suspense -, or can identify a specific character, updating an idea previously represented in the film. This level of analysis can be seen in the three categories of cinematic effects.

Therefore, we move on to the analysis of the aforementioned sound effects.

### 3.3.1 *Background* Effects

Background sound aims at the creation of the notion of space, as well as the opening of an environment, seeking the involvement of the viewer and bringing information that the image does not necessarily show. Thus, the set of background sounds helps the viewer to position a character geographically, the type of city he is in, the time of day, his mood, etc. (MANZANO, 2005, p. 53). These diegetic noises, although important for directing the viewer, are rarely heard consciously by people in general, often going unnoticed (ALVES, 2018, p. 92). In the sense: "Ambient sounds portray a place, for example, if a scene takes place in a city, surely the environment will be a mass with sounds of cars, horns, in contrast, if it is a scene in a forest, the sound of the environment will be crickets, birds, the sound of wind on tree branches, etc." (ESPOSITO, 2011, p. 44).

This sound effect also has an important function of continuity of the scene: "if the ambient sound remains constant during the cut of a scene, it is subliminally telling the audience that, although there has been a change in the point of view, the action is still happening in the same place" (ESPOSITO, 2011, p. 45). On the contrary, when there is a change in background sound, it seeks to mean that there has been a scene change. This sound can also generate an emotional state in the viewer, depending on the beat or rhythm, as occurs in suspense films.

For better ambiance, there may also be BG-FX effects (sound events) in the ambit of ambient sound, which are isolated and specific sounds that situate the viewer (OPOLSKI, 2009, p. 32). For example, the ringing of church bells indicates midnight.



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

### 3.3.2 *Hard-effect*

The *hard-effects*, also called *foley*[7], are produced directly by humans, such as firearms, machines, automobiles, etc., and openly contribute to the narrative, suggesting events (ESPOSITO, 2011, p. 46). These effects are, however, recreated in the cinematographic sound creation process, seeking an articulation between image and sound to define a realistic or creative depth.

Therefore, the capture of *hard-effects* requires observing all the possibilities of the sound recording of the specific object to be captured. For example, in "capturing a car, we must capture all possible sounds separately, we must capture the opening and closing of the doors; the seat belt; opening and closing the trunk; [...] changing gears; [...] and in the case of motorization; turning the car on and off; the different speeds" (ESPOSITO, 2011, p. 46-47). These possibilities of sound recording must still be performed with at least three levels of intensity, suggests Opolski (2009, p. 36), so that the sounds can be used in a wide way and match the intention of the scene.

An interesting example of *hard-effect* is the noise of the car engine together with the sound of a siren, before any vehicle image, which can stimulate the viewer's interest in discovering the car that will appear on the scene.

### 3.3.3 Sound-Effects

*Sound-effects* have no "direct relationship with the scene nor scene object, and have the function of creating a dramatic effect in the scene ". Still, they are created by the "sound-designer, with the combination of several sounds that are used to create something that does not exist through the processing of sound waves produced by digital synthesizers or even with a more organic approach" (ESPOSITO, 2011, p. 48). One of the great examples of the sound-effect was the voice treatment for the character Darth Vader, in Star Wars (2011, p. 52).

In this sense, the composition of *sound-effects* usually happens in two ways: (a) the manipulation of natural sounds to modify their characteristics; and, (b) the creation of sound waves by electronic or digital means. It is more related to the narrative than to the sound aspects, suggests Opolski (2009, p. 38), mainly intending to create narrative "climates", such as joy, suspense, etc.

---

[7] Opolski (2009, p. 26) understands the Foley effect independently of the hard-effects. According to her, "the practice of reproducing the sounds of the scene in sync with the image is called foley in honor of its creator Jack Foley" (2009: 26). It also indicates that the foley session is usually divided into (a) steps; (b) clothing; and, (c) scene objects (props); which help in the construction of the soundscape. For example, the noise of clothing that complements the character's gait can help define that character's character.



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

### 3.4 The silence

Silence, despite the apparent impossibility of being considered as a sound element, presents itself as an important artifact for the use of sound in cinema. This is because sound presents itself as the opposite of silence; consequently, considering "duration" as the only characteristic of sound measurable in terms of silence, therefore, any structure involving sound and silence must be based on duration - not frequency (CAGE, 1961, p. 13).

To say that silence does not exist, however, is a false thesis. From an acoustic point of view, there can be no absolute absence of sound. Viela (2016, p. 15) explains that silence is an acoustic environment consisting of sound noises with intensities close to the threshold of audibility, that is, sounds that people have learned to ignore. Despite this, silence must be understood as a sound expression of cinema and "as an efficient way of generating senses and sensations" (2016, p. 19); even though these senses and sensations are learned from silence through speech - the need to translate silence into sound to understand it.

Corroborating this, Wisnik (1999, p. 18) maintains that "there is no sound without pause. [...] Sound is presence and absence, and is, unless it appears, permeated with silence. There are as many or more silences as there are sounds in the sound".

Considering the theories of Gorbman, Carrasco, Chion, and Viela, we can synthesize a classification of the forms of silence in cinema, which are:

a) diegetic musical silence: suppression of music only, with a realistic approach to other sounds;
b) non-diegetic silence: absolute silence, with a total absence of rhythmic activity;
c) structural silence: the absence of a sound expected by the viewer;
d) silence supplanted by music: only music is audible and other sounds are silenced; and,
e) silence represented by sounds: noises that can only be heard in quiet environments or the amplification of these noises to unrealistic intensity.

The centrality of the voice to the detriment of silence, in research on sound, can generate a methodological accident for not considering the important role that silence plays in cinema (COSTA, 2014, p. 144). Alves (2018, p. 94) suggests, for example, that the silence that precedes the sound creates "nervous" anticipation in the viewer, which can be tension, anguish, anger, loneliness, among others. In this and other ways - such as silence at the expense of a sound that should supposedly correspond to a cinematic action - silence can



*Revista Língua & Literatura*, v. 23, n. 42, p. 105-122, jan./jun. 2021.
Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

represent an important tool to ensure the viewer's attention. Still, it presents itself as a syntactic value, used to signal the separation between two sound events.

## 4 CONCLUSION

The extraction of the fundamental sound elements of cinema was problematized, as well as their functionality, through a conceptual article, carried out through a linguistic-discursive analysis of the sound, based on the notion of representation.

Therefore, methodologically, in the second section, the introductory perspectives of sound in cinema were presented, reiterating that the sound was present even in silent cinema. Sequentially, the communicational elements of sound in cinema were approached, with an emphasis on voice, music, effect noises, and silence. Finally, we presented some models of frames that can be used to facilitate the analysis of sound in cinema.

## REFERENCES


AGEL, Henri. *Estética do cinema*. São Paulo: Cultrix, 1986.

ALTMAN, Rick. *Silent film sound*. New York: Columbia University Press, 2004.

ALVES, Bernardo Marquez. *Os estudos do som no cinema*: evolução quantitativa, tendências temáticas e o perfil da pesquisa brasileira contemporânea sobre o som cinematográfico (Dissertação de Mestrado). São Paulo: USP, 2013.

ALVES, Bernardo Marquez. Trilha sonora: o cinema e seus sons. *Revista Novos Olhares***.** v.1. n.2. 2017.

ALVES, Luciano. *Teoria musical:* lições essenciais: sessenta e três lições com questionários, exercícios e pequenos solfejos. São Paulo: Irmãos Vitale, 2005.

AMARAL, Vitória Rocha do Prado. *A voz na mise em scène*: o filme cidade de Deus sob a escuta fonoaudiológica. Dissertação (Mestrado em Fonoaudiologia). São Paulo: PUC, 2006.

BORDWELL, David & Thompson, Kristin. *Fundamental Aesthetics of Sound in the Cinema – Theory and Practice*. New York, Columbia University Press, 1985.

CAGE, John. *Silence*. Middletown: Wesleyan University Press, 1961.

CARRIÈRE, Jean-Claude. *A linguagem secreta do cinema*. Rio de Janeiro: Nova Fronteira, 1995.

CARVALHO, Marcia. A trilha sonora do cinema: proposta para um "ouvir" analítico. *Revista Caligrama*. v.3. n.1. p. 1-15. 2007.

CHION, Michel. *Voice in cinema*. New York: Columbia University Press, 1998.

CHION, Michel. *A audiovisão*: som e imagem no cinema. Lisboa: Edições Texto & Grafia Ltda., 2011.

CLAIR, Rene. The art of sound. In: WEIS, Elisabeth; BELTON, John (Org.). *Film sound*: theory and practice. New York: Columbia University Press, 1985.

COPLAND, Aaron. *Como ouvir e entender música.* São Paulo: É Realizações, 2013.

COSTA, Fernando Morais. Silêncios e vozes no cinema: tabu e stereo. *Revista Significação*. n. 41. v. 41. p. 140-155. 2014.




Recebido em: 02 fev. 2021 | Aceito em: 05 jun. 2021.

DESHPANDE, Anirudh. Indian cinema and the bourgeois nation state. *Economic and political weekly***,** v. 42, n. 50, p. 95-101. (Dec 15 – 21, 2007).
ESPOSITO, Maurício de Caro. *Criando o mundo com sons: pós-produção de som e sound design no cinema*. São Paulo: Universidade Anhembi Morumbi (Dissertação de Mestrado em Comunicação). 2011. Disponível em: http://portal.anhembi.br/wp-content/uploads/dissertacoes/comunicacao/2011/mauricio_caro_esposito.pdf. Acesso em 10 de junho de 2018.
HALL, Stuart. *Cultura e representação*. Rio de Janeiro: Ed. Puc-Rio, 2016.
HAUSSEN, Luciana. Som, câmera, ação: a relevância do som na história do cinema. *FAMECOS/PUCRS*. n.20. 2008. P. 17-22.
HOLMAN, Tomlinson. *Sound for film and television*. Oxford: Focal Press publications, 2002.
JAKOBSON, Roman. *Linguística*. Poética. Cinema. São Paulo: Perspectiva, 1970.
PEREIRA, Kira S. *Se podes ouvir, escuta*: A gênese audiovisual de Ensaio sobre a cegueira 2010. V.1 97 f., V.2 123 f. Dissertação (mestrado) – Escola de Comunicações e Artes, Universidade de São Paulo, São Paulo, 2010.
KORNIS, Mônica Almeida. História e cinema: um debate metodológico. *Estudos Históricos*. v. 5, n. 10. Rio de Janeiro. p. 237-250. 1992.
KREUGER, Miles. *The Fiftieth Anniversary of Vitaphone*. New York: The Institute of the American Musical, 1976.
MANZANO, Luiz Adelmo Fernandes. *O som no cinema*: da edição de som ao sound design - evolução tecnológica e produção brasileira. Tese (Doutorado em Comunicação e Estética do Audiovisual). ECA, USP. São Paulo, 2005. 2 volumes.
MED, Bohumil. *Teoria da música.* 4. ed. Brasília: Musimed, 1996.
OPOLSKI, Débora Regina. *Análise do design Sonoro do longa-metragem*: Ensaio sobre a Cegueira (Dissertação Mestrado). Universidade Federal do Paraná: Setor de Ciências Humanas, Letras e Artes, Curitiba, 2009.
OPOLSKI, Débora Regina. A comunicação no cinema dos sentidos: abordando a imersão sob a perspectiva do som. *Revista Ação Midiática:* estudos em comunicação, sociedade e cultura. n. 9. 2015. Disponível em: https://revistas.ufpr.br/acaomidiatica/article/viewFile/37954/25860. Acesso em 9 de maio de 2018.
PIERCE, Charles Sanders. *Semiótica.* São Paulo: Perspectiva, 1977.
PINCH, Trevor; BIJSTERVELD, Karin (2004), Sound Studies: New technologies and music. *Social Studies of Science*, 34/5, 635-648.
SCHAFER, R. Murray. *O ouvido pensante*. 2. ed. São Paulo: UNESP - Universidade Estadual Paulista, 2011.
SILVERMAN, Kaja. The Acoustic Mirror: The Female Voice in Psychoanalysis and Cinema. *Indiana University Press*, 1988.
STEPHERNSON, Ralph; DEBRIX, J.R. *O cinema como arte*. Rio de Janeiro: Zahar, 1969.
STERNE, Jonathan. *The Audible Past***:** Cultural Origins of Sound Reproduction. Durham and London: Duke University Press, 2003.
TUDOR, Andrew. *Teorias do cinema*. São Paulo: Martins Fontes, 2007.
TURNER, Graeme. *Cinema como prática social*. São Paulo: Summus, 1997.
VILELA, Diogo de Oliveira. *Os sentidos do silêncio*: formas e funções do silêncio como elemento narrativo da linguagem cinematográfica. 2016. Dissertação. (Mestrado em Comunicação) – Universidade de Brasília.
WISNIK, José Miguel; ZISKIND, Hélio. *O som e o sentido:* uma outra história das músicas. 2. ed. São Paulo: Companhia das Letras, 1999.
WYATT, Hilary & Amyes, Tim. *Audio Post Production for Television and Film*. Focal Press, 2005.