A question of method: notes on sound and music analysis in films

Uma questão de método: notas sobre a análise de som e música no cinema

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ABSTRACT

To establish accurate methods that enable the rigorous study of the soundtrack in audiovisual products has been a recurring problem in film studies in Brazil. This essay critically examines manuals, books and articles from different areas of study, including Social Communication, Film Analysis and Sound Studies, in order to compile suggestions of methods of sound and music analysis in audiovisuals that may help future researchers.

Keywords: Methodology, audiovisual, sound analysis, music analysis

RESUMO

Estabelecer métodos precisos que possibilitem o estudo rigoroso da banda sonora em produtos audiovisuais tem sido um problema recorrente na área dos estudos do cinema no Brasil. Este ensaio examina criticamente manuais, livros e artigos de áreas diferentes, incluindo Metodologia em Comunicação, Análise Fílmica e Estudos do Som, a fim de compilar sugestões de métodos de análise do som e música no audiovisual que possam auxiliar futuros pesquisadores.

Palavras-chave: Metodologia, audiovisual, análise de som, análise de música

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INTRODUCTION

TO TALK ABOUT analysis methodologies of audiovisual products can mean, in some cases, discussing a subject surrounded by controversy. In Brazil, that controversy starts with a singularity: our country has Cinema and Audiovisual researches academically inserted in Social Communication area of studies, which may imply a greater emphasis of research around media issues, and a lesser emphasis on investigations around narrative, stylistic, visual and audio themes.

The broad spectrum of research possibilities within the film and audiovisual studies helps to enhance the issue of methodological accuracy. This problem can be seen more clearly when we examine the content of some books that are themed around research methodologies in Social Communication. These volumes have very little systematization of methods on analyzing audiovisual materials. This is particularly salient when the focus narrows to film sound.

Explaining the principles and operating modes of methodologies of analysis of the film soundtrack is a complex task, subject to ambiguities that may create the impression of lack of accuracy, especially within researchers not used to the idiosyncrasies of sound studies. In this sense, evoking the imprecise term *film analysis* to try to explain how one intends to dissect the sound of a movie is very different than simply mentionning specific techniques of research and methods in the field of Social Communication, as, for example, *participant observation*, *semi-structured interview* and *content analysis*. These terms bring to mind more accurate and stable methodological foundations and concepts, but they are not so frequently mentioned in Cinema and Audiovisual studies.

In this essay, we aim to minimize the relative absence of rigorous concerns with the description of analytical methods of soundtracks, as observed in Brazil. To achieve this goal, we will proceed to three successive stages. The first step will be to critically examine much of what has been written about film sound analysis in Social Communication publications. Then we will do the same thing with books on film analysis; we will discuss in this passage authors such as Jacques Aumont, Michel Marie, Francis Vanoye and David Bordwell, who wrote about analytical methods on film sound. In the third stage, we will analyze many methodologies to research film sound, presented on books and essays on sound and music film studies, as described by authors such as Claudia Gorbman, Royal Brown, Michel Chion, Rick Altman and David Neumeyer. We hope, in the end, to compile suggestions of sound research methods on audiovisuals that could help other researchers to select effective ways to examine soundtracks of audiovisual products.

Before starting the first stage of the essay, however, we would like to highlight the difficulty of naming analysis methodologies that focus on aesthetic features of the use of film sound. Some terms that appear in different manuals show the lack of accuracy on the specificity of researching, and also expose an absence of unified technical vocabulary shared by researchers. In the book of Aumont and Marie (2004), for example, the "analysis of the soundtrack" takes a whole chapter topic titled "Analysis of image and sound", a term used by those authors as analogous to a research method, although they never make clear on what grounds and processes this method is supposed to be anchored.

In essays on film sound, it is also common to see mentioned as methodology the strategy that Michel Chion (one of the most prolific authors in film sound studies, a true pioneer on film sound studies) calls "the masking method", which means "to screen a given sequence several times, watching it with and without the soundtrack, sometimes masking the image, sometimes cutting out the sound" (Chion, 2011: 146). In our opinion, however, the suggestion made by Chion is not exactly a method, but rather something the author calls an "observation process", or, as we believe, a way of raising awareness to sound among researchers, who usually highlight the visuals. We ensure that the procedure has no fundamental methodological issue, because the film sound cannot be analyzed in a completely separately way from the image track[1]. In this sense, Chion also lists a second process of observation: the "forced marriage" between sound and image.

We start, then, from the principle that so far no indisputable term was suggested to name a clear method of analysing the soundtrack based on aesthetic features.

THE METHODOLOGY FOR SOUND ANALYSIS IN SOCIAL COMMUNICATION'S BOOKS

In the anthology book *Methods and techniques for researching in Social Communication*, Antônio Barros and Jorge Duarte (2005) present, over 27 chapters, methods and techniques as diverse as "folkcomunicacional methodology" and "content analysis". While some of those methods are in common use among researchers from various theoretical lines of audiovisual studies, such as *semiotic* and *case studies*, there is little specific information on analysis of audiovisual content itself.

On the chapter "Reading and analysis of the image", Iluska Coutinho (2005) limits her approach, as the title shows, to suggestions of examination of image elements, but she does not mention the existence of the soundtrack,

1. Chion´s "masking method" is, in terms of methodological foundations, different of the procedure of reduced listening, which Pierre Schaeffer, the father of concrete music and Chion´s master, proposed for the analysis of concrete music. Reduced listening is the procedure of hearing the sounds only in its materiality, without attributing causes to them or searching for semantic elements. In case of concrete music, this kind of auditory reading makes sense, since that music is not attached to images, no even those of musicians playing their instruments, as all its sonorous elements are already recorded and edited e editados when heard. In the case of cinema, as Chion (2011) claims, sound needs to be evaluated inevitably in relation to an image, even when there are acousmatc and off-screen elements.

even when she reffers to "moving images" (cinema, television and video). She notes that one must take into account the temporal aspects of visual record, which would lead us to think of sound components, but the essay never goes beyond this observation. Nevertheless there is, in Coutinho's analysis (2005), stages of a methodological procedure that can be evoked by film analysis researchers: reading, interpretation and synthesis. The author also states the need for a "media transcoding", that is, the transposition of the codes of a specific media (in the case of Coutinho´s study, visual codes) into linguistic codes. This need is also a challenge to the sound researcher, who needs words to describe a sound or the elements of a musical piece.

In the printed version of the book there are only 24 chapters, but the remaining three are available on the publisher's website[2]. Among them is chapter 25, "Sound media analysis", written by Wilson Corrêa da Fonseca Junior. The author highlights the objects of interest in this area of research as follows: "the speakers systems on streets of poor communities, radio emissions, the use of sound in audiovisual and multimedia environment, and the study of languages, experiences and technologies with audio support (audioart, electroacoustics, phonographs, digital audio)" (Fonseca Junior, 2005: 2).

2. http://gen-io.grupogen.com.br/gen-io/index.php?option=com_content&view=article&id=1330

Because of all that variety of objects, the author states that there is no specific research method to sound media analysis, and therefore chooses to demonstrate the use of some methods in the study of a specific object, a radio program in the rural environment of Brazilian State Mato Grosso do Sul. This case study relies on the theoretical framework of reception studies and methods derived from ethnographic analysis of the region in which the program was aired. Content analysis is also discussed.

Another important textbook on research methodologies for Social Communication, *Qualitative research with text, image and sound*, organized by Martin Bauer and George Gaskell (2002), brings the word "sound" in the title and generates an expectation of some exploration of sound analysis methods. Two chapters of the part "Analytical approaches for text, image and sound", called "Moving images analysis" (Rose, 2002) and "Analysis of noise and music as social data" (Bauer, 2002) call attention to possible methodological approaches to be used.

In "Moving image analysis", Rose (2002) exposes her research on representations of madness by English television news in prime time, seeking mainly the kind of framing (such as close-ups) used in television news with this theme. Although the chapter takes into account mainly the visual and verbal elements, and makes the tabulation of results mainly on a form of content analysis (ie, quantitatively), the author sets out steps of her process that could be useful in a sound analysis on audiovisuals.

Just as the notion of "media transcoding" that referred Coutinho (2006), Rose believes that a translation is needed for a complete analysis of audiovisual materials. "For example, when transcribing television material, we must make decisions about how to describe the visuals, if we should include pauses and hesitations in speech, and how to describe […] music or changes in lighting" (Ibid.: 344). She stresses the need to decide on the unit of analysis (in the case of her research, the shot tipe used in television news about madness), the transcription of the material (with a column for images and another for verbal material) and its exposure in the form of tables. In fact, these analysis strategies are widely used in articles about film sound and music, as we shall see.

The need for transcription is also highlighted in the chapter written by Martin Bauer (2002). He states that, in the case of music, there are important elements to be described as rhythm, melody, harmony, dynamics, form and orchestration. As for sound elements, cycles, sounds and types – but Bauer does not go into detail. Much of the chapter is devoted to the discussion of the musical meaning and connotations. He points out that these associations depend on the particular social group to which the listener belongs: "a song, a piece of music for orchestra, or a pop group becomes the symbol of the listener group's history and their struggles" (Ibid.: 371).

The books that specifically discuss the methods used in Social Communication researches, as we can see, are very little rigorous in regard to sound analysis. We miss a more detailed description of methods for aesthetic analysis of audiovisual products, in particular with regard to sound elements. In an attempt to find ways to carry out this type of analysis, we set out to study books from the academic area of Film Studies. We shall start with books on film analysis available in publishing Portuguese-speaking market: *Analysis of the film* (Aumont; Marie, 2004), and *Essays on film analysis* (Vanoye; Goliot-Lété, 1994).

THE BOOKS ON FILM ANALYSIS

Although it was not published by a Brazilian company, *Analysis of the film* (Aumont; Marie, 2004), is one of the most important textbooks to establish ways of studying audiovisual materials. The title runs since 2009 in Portuguese (from Portugal) language. The two authors, both professors at the University Paris 3 and both prestigious film theorists, defend the position that the film analysis, though treated by many researchers (Ramos, 2010) as a discipline, must be understood more as a methodological procedure than as an autonomous research area.

In fact, Aumont and Marie make an extra effort to approach the film analysis procedures as a "set of discourses about the cinema" (Aumont; Marie, 2004: 14), which is conventionally called "film theory". Stressing that the production in this field has never been gathered or will never be gathered under an unified theory for understanding films, the authors ensure that film analysis and film theory share many characteristics, namely: they are predominantly descriptive, they start from the individual product (the movie) to reach a reflection on the collective (the cinema), and they have earned a prominent place in teaching and researching audiovisual in universities.

Thus, in the beginning of the book, Aumont and Marie ensure that there is not and there will never be a general method of film analysis. "To a certain degree, there can be only individual analyses, entirely appropriate on method, extent and subject, to the particular film the researchers are dealing with" (Ibid.: 15). Therefore, as argued, each researcher must strive to build his own analysis model, which, in turn, will be valid only for the film – or fragment of it – chosen to be analyzed. However, without discarding the ambiguity of the statement, the two authors note that all film analysis will always tend to provide the outline of a method of more general analysis, which can even be presented later in the form of a theory.

Having these statements on the horizon, Aumont and Marie reserve a chapter – more precisely, the fifth on the book – to deal with methods of image and sound analysis. In this chapter, effectively, the authors do not attempt to formulate or suggest any specific method; they try, more modestly, to enumerate a number of historically important film analysis that occupy the most thorough examination of the imagery band and the film's soundtrack.

The specific area of film sound studies gains a specific subtopic, which, in turn, is divided again in five items: starting with the assertion that the analysis of music has predominated in film sound studies, the authors discuss the possibility – that they consider to be difficult – to examine the soundtrack as a whole. They estimate that there are "multiple narrative functions" (Ibid.: 133) in the audio track, including lots of non-diegetic information. Such amount of information may require, in most cases, that the researcher divides the analysis on distinct parts: music, speech and voice, noises and background environments, sound effects, and so forth.

Each of these categories would be sufficient to support specific analysis, something that Aumont and Marie exemplify citing pieces of analysis written by Michel Chion (analysis of the acousmatic voice and the use of offscreen sound effects), Kristin Thompson (a detailed examination of the two parts of the movie *Ivan, the Terrible*, or *Ivan Groznyy*, made in 1945 and 1958 by

Sergei Eisenstein), Dominique Chateau (a semiologic proposal of a sound effects taxonomy) and Francis Vanoye (a discussion, made from the rigorous transcription of the dialogues of a collection of films, about the use of the human voice as the main conductor of the narrative). Briefly commenting on these essays, however, Aumont and Marie do not detail or criticize the ways in which each researcher handled, described and interpreted the film material within the respective analyses.

The second textbook of film analysis available in Portuguese is written by the professor of the University Paris X, Francis Vanoye, along with Anne Goliot-Lété, professor at Paris-Diderot University. *Essays on Film analysis* (1994) has a different approach to Aumont and Marie's work: instead of highlighting famous texts, the book published by Papirus begin with a historical contextualization of film analysis, from the 1960s, and then the authors suggest several possible approaches.

The chosen approach, however, opens up few possibilities for the specific discussion on the soundtrack. After mentioning, in the first chapter, the importance of defining the origin of the sounds you hear (the text proposes three possibilities: coming from an image element, off-screen or out of diegesis, evoking a preliminary version of the famous circular diagram that Michel Chion designed in the 1980s and perfected latter in his book Audio-vision), the authors emphasize the importance of the concept of point of listening, which is analogous to the notion of point of view.

Thus, in the second chapter, in which they take the film analysis to practice, with a long and detailed analysis of Alfred Hitchcock's *Rebecca* (1940) key scene, the authors suggest some aspects of soundtrack that need to be carefully examined: "dialogues, sound effects, music; noise level; intensity; sound transitions; continuity/rupture sounds". They continue: "sounds in/off/off-screen; diegetic or non-diegetic sounds; synchronism or asynchrony between images and sounds" (Vanoye; Goliot-Lété, 1994: 70). It is important to note that many of these items are derived from popular theoretical essays published in France between the 1960s and the 1980s, like the aforementioned Chion's work and the chapter on sound in *Praxis of cinema* (1968), by Noel Burch, which highlights issues related to the use of offscreen sound and the break of classical continuity system as examples of aesthetically bold use of sound in the service of the film narrative.

In the analysis of the Hitchcock film (*Rebecca*, 1940) excerpt, the authors suggest a method that divides the work in two phases, the first dedicated to the description, and the second to the interpretation of what we see and hear. They create a chart in two columns, in which the first describes in detail what you

see. The second column is reserved for the description of the soundtrack, but it is far from being so thorough or careful, consisting essentially of short descriptions (one or two lines each) of the music's intensity and the transcription of the dialogues. Even more curious is the complete absence of mentions to the sound elements in the second part of the essay, in which the researchers attribute meaning to the elements described before. The book seems to be, then, little useful for the construction of analytical methods on film soundtrack.

Although it has not the main objective of teaching film analysis, another textbook that brings together formal elements necessary for analytical discussion about the film sound is *Film art: an introduction*, written by David Bordwell and Kristin Thompson (Bordwell; Thompson, 2014), two of the most known theoreticians of cinema and teachers of Wisconsin-Madison University (USA). The seventh chapter is dedicated to the creative use of film sound. Followers of cognitive theory, which highlights how viewers receive, process and give meaning to the constant flow of images and sounds, the two authors emphasize, as well, some perceptual property that sound has.

They point out, for example, the importance of mixing in the production chain of film sound, since it is at this stage of sound construction that filmmakers decide how to combine the sounds available. For Bordwell and Thompson, the analyst of film sound must be aware of the volume, pitch (low, medium and high frequencies) and timbre of each sound object, as these acoustic qualities shape the understanding of the plot in more subtle ways than the purely semantic content of the dialogues, and the affective emphasis of music.

Throughout the chapter, Bordwell and Thompson flirt with film analysis as they examine excerpts from several well-known films such as *Letter from Siberia* (Lettre, 1957) and *Jackie Brown* (1997). They are insightful examples of the creative power of sound, although the discussions do not provide much detail. However, the authors do not propose any method of analysis, but merely enumerate formal elements on the creative use of voices, sound effects and music. They show some tools, but do not explain effectively how to use them.

THE BOOKS ON FILM SOUND AND MUSIC

Since the beginning of cinema, there were publications about the use of music in films, usually lists and tables containing information and suggestions of how music should be used in the accompaniment of silent movies. In the first decades of the sound film, we highlight the essays and books of Kurt London (in the 1930s), Sergei Eisenstein (specially the text from the 1940s "Form

and Content: Practice") and Hanns Eisler (in the book written togheter with Theodor Adorno, *Composing for films*[3]).

3.We had access to the French version, *Musique de cinéma*, published in 1972.

The fact that most of those studies had been conducted by composers may explain the more focused approach in a prescriptive aspect, and less on the discussion of the interaction between music and image. Among those early studies, there is – despite the criticism he suffered latter – the essay originated not from a composer, but from a director, Sergei Eisenstein (2002), also reflecting on his practice. Explaining his creative process, in which he sought a rigorous correspondence between the movements of the image and the music, Eisenstein developed a framework in which he presented each take from an entire sequence of his film *Alexander Nevsky* (Aleksandr, 1938), along with the sheet music written by Sergei Prokofiev.

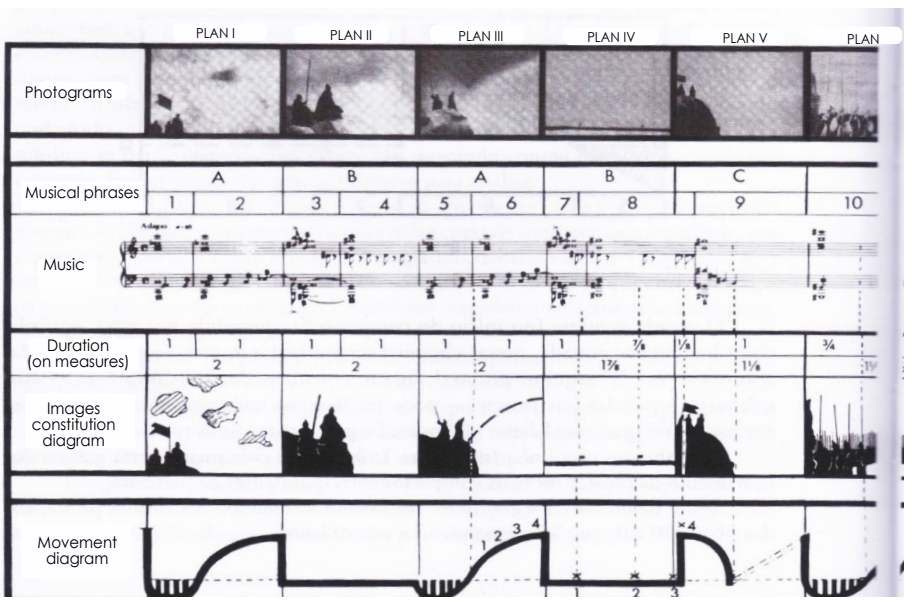

FIGURE 1 – The initial part of Eisenstein´s analysis on a sequence from Alexandre Nevsky

Fonte: Eisenstein (2002)

Eisenstein was heavily criticized by Adorno and Eisler (1972) for considering that the music was just something drawn in the score. Anyway, the theoretical-filmmaker effectively conducted a detailed analysis (unusual then) of the film music and the rhythmic relationship of it with images.

A more consistent theoretical and analytical study of music in cinema appeared only in the 1980s: the book *Unheard Melodies* (Gorbman, 1987). Although the main thesis of the author applies more to American classical

cinema, in the last chapters of the book we find analyses of two French sound films of the early 1930s. Among them, the analysis of the prologue of *Zéro de conduite* (1933)[4] presents, in a similar manner than the anterior analysis made available by Eisenstein, the piano reduction of Maurice Jaubert's sheet music together with film frames (Figure 2). Royal Brown (1994), author less known in Brazil but with many publications on film music since the early 1980s, also proceeds this same way in his analysis of Erich Von Korngold's music in *The Sea Hawk* (Michael Curtiz, 1940).

4. This analysis by Gorbman was initially published as an independent essay in 1977 (Vigo/Jaubert, Cine-Tracts, v.1, n.2, Summer 1977) and later incorporated in the book.

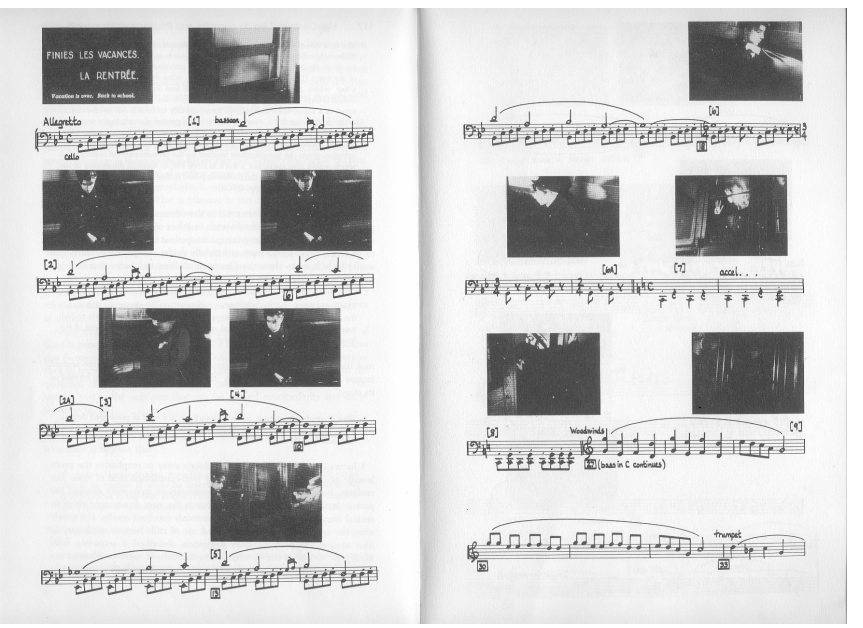

FIGURE 2 – The initial part of Gorbman's analysis of Zéro de Conduite
Source: Gorbman (1987)

We do not want here to advocate that film frames and writing scores are absolutely essential in a music analysis on film, although Gorbman's essay can be considered a very good example of a dense analysis on the musical element in relation to the images. What to do, then, on an analysis of sound and music in a film? Which elements should we seek? And how can we associate them to the images?

Besides Gorbman, another theoretician of film sound is the aforementioned Michel Chion. In the book *Audiovision*, published in French in 1990 (Chion, 2011), the author presents a clear example of how to proceed in an audiovisual analysis using the prologue of *Persona* (1966) as an example. Chion's analysis (2011) is not limited to music, but the relation of all the sound elements to the image.

After quoting, as observation process, the masking method and the need to analyze sound and image together, Chion (2011) carries out an outline of steps and pertinent questions to an audiovisual analysis[5]. The first step consists in identifying each sound element (voices, music and sound effects), and considering if any of them is highlighted (for example, in the prologue of *Persona*, the author draws attention to the absence of voices and differences of sound effects between those more lasting and punctual ones[6]; the music, when it occurs, is usually represented by atonal instrumental figures). In the second step, one should identify synchronization points. In Chion's example, these constitute the sounds of the three hammer blows to the image of a hand being nailed.

From there, a "narrative analysis" is carried out from two key questions: "What do I hear of what I see? What do I see of what I hear?" (Ibid.: 160). This analysis continues the comparison at different levels of image and sound, taking into account parameters such as shapes, sound textures, velocity etc.

Chion´s analysis (2011) highlights the relations between sound and image in a complex and non-narrative sequence, and he makes an important attempt to describe sound effects (using terms such as treble and bass sounds, punctual or lasting, *glissando*, with strong or weak reverbs, considerations on their rhythm). However, at first, what would be the aspects to be valued in each sound element at the description's stage? How to classify and identify them?

Another fundamental author to the field of film sound studies who was concerned with the question of the method was Rick Altman, one of the pioneer researchers of film sound, and professor at the University of Iowa (USA). He addressed the issue in at least two texts. In the first, called "Inventing the film soundtrack" and presented in the anthology *Music and Cinema* (2000), Altman and coauthors McGraw Jones and Sandra Tatroe – his students – tried to create a system of ratings, inspired by the musical scores, to describe all movie sounds and relate them to each other and to the image. The resulting graphs have three columns: first, the authors describe the imagistic content of each take, explaining frameworks and camera movements, and including the transcription of the dialogue. The second column provides the durations of each take, while the third column establishes a numerical gradation (1 up to 7 points), drawing lines corresponding to the volume of music, sound effects and dialogues. This chart helps explain the mixing relationship between the components of the soundtrack.

Altman´s method inspired many researchers to attempt similar approaches. In Brazil, for example, two books recently published present film

5. Before doing that, Chion (2011) made a decoupage, separating image and sound elements.ementos sonoros.

6. We find, in the sound effects description, an altered use of the terminology created by Pierre Schaeffer, as we may read in the book *Traité des objets musicaux* (1966), but Chion does follow it strictly.

analyses derived from the rating system created by Altman, Jones and Tatroe. The first was *Introdução ao Desenho de Som* (2013), by Debora Opolski, professor at the Federal University of Paraná. Interested in discussing the sound design of the film *Blindness* (Fernando Meirelles, 2008), the author describes and analyzes all sequences in three columns' graphics containing the timing (1st column), descriptions of the images (2nd column) and the soundtrack (3rd column). Opolski decided to discard the information on volume and loudness to be able to focus on the interaction between each sound and image.

The second Brazilian author who sought inspiration in the same text was Filipe Falcão, of the Federal University of Pernambuco, in the book that conducts a comparative study of the Japanese film *Ringu* (Hideo Nakata, 1998) and its remake *The Ring* (Gore Verbinski, 2002). To demonstrate that the US version uses a sound dynamics more expressive and noisy, Falcão picked two sequences that appear in both titles and described each take, writing down the results in charts of five columns containing the timing (column 1), the image (2nd column) and sound (3rd column) description, an image of the audio track waveform (4th column) and the level in decibels of each sound take (5th column).

As it turns out, the system developed by Altman, Jones and Tatroe has the potential to become an effective method of the soundtrack analysis, being flexible enough to allow adjustments to the objectives of each researcher. This did not prevent Altman himself to classify the system as incomplete in an essay published in 2014. In the newer text, Altman insists that the development of a consistent method of film sound analysis (which, he states, has been an obsession in his academic career) requires the use of reliable visual records of the soundtrack.

For Altman, film analysis that uses images has won precision and reliability since the 1980s, when the use of freeze frames or still images from the films allowed researchers to describe in much more detail what is seen. He points out the need to get a way to do the same thing with film sound. Throughout the essay, the author describes previous attempts to analyze the sound through image records and rating systems – including studies made by Eisenstein and Gorbman, mentioned above – but comes to the conclusion that the development of really accurate methods has not been achieved yet.

The textbook *Hearing the movies*, signed by a trio of prestigious researchers on music studies and film sound – James Buhler, David Neumeyer and Rob Deemer – and released in 2010, is another example of research that took inspi-

ration from the Altman, Jones and Tatroe essay to create film analysis pieces. However, the three American authors never point out the original test as a comprehensive method of analysis, but only as one of the possible methods to examine the soundtrack. And they cite the work of another pioneer in sound studies: James Wierzbicki.

In the analysis carried out on *The Birds* (1963) on the essay "Shrieks, Fluttes and Vocal Curtains" (2008), Wierzbicki proposed a rating system similar to that developed by Altman, Jones and Tatroe, only more complex and virtually unintelligible to laymen. The system records the precise timing of the film on a horizontal line, including symbols and musical notes combined to describe the sound events more accurately. Buhler, Neumeyer and Deemer agree, however, that the system is much more efficient to discuss music than the other elements of the soundtrack (voices and sound effects).

Although the dialogues in movies are always on top of the concerns of professionals responsible for building the soundtrack, studies of that element are among the most unusual in film sound studies. Therefore, methods that allow an accurate analysis of voice uses are quite rare. Michel Chion wrote on the subject in *La voix au cinéma* (1993), but he did not discuss about methods to give precision to the analysis. Such attempt was made by Jeff Jaeckle, on the introduction of the anthology book titled *Film dialogue* (2014).

Jaeckle explicitly suggests that any methodology for the analysis of the film dialogues must follow at least four steps: (1) transcription of the words spoken by the actors, (2) rigorous verification of the accuracy of the transcription of the speeches, (3) analysis of verbal and acoustic components of spoken speech, and (4) analysis of the literal and figurative components present in those speeches. For Jaeckle, any analysis that has the dialogues of a film as a goal will be incomplete without following these four steps. He tries to prove the thesis citing a bunch of film analyses that examines *Psycho* (1960), and he points out inaccuracies in all of them, for reasons always linked to four steps. The irony is that, over the essays presented in the same book, the authors do not follow the prescription issued by the organizer. Thus, his method remains unproven.

Although it is not a study focusing on voice analysis, in the end of the last chapter of her doctoral thesis, Alvim (2013) studies the voices in films by French filmmaker Robert Bresson beyond its semantic aspect (although the author has been concerned effectively with the transcription of the dialogues in the original French), also considering its rhythm, indicating pauses in speech, and intonation (rising or falling in vocal emission, indicated by arrows), essential elements in the Bresson´s works.

IDENTIFICATION AND CLASSIFICATION OF MUSIC IN FILM

We consider here separately, in this subsection, some more recent analyses of music because of the specificity of the musical element. By itself, it could be analyzed through a number of methods of the Music field, but, in a film, the scritinity always has to be adapted to the characteristics of music discontinuity and its need to be analyzed in connection to the images.

In the book *Overtones and undertones: reading film music*, Royal Brown (1994) develops historical and aesthetic aspects of music in film, with further analysis in classic American cinema, films of Sergei Eisenstein, Alfred Hitchcock and Jean-Luc Godard. In the appendix, the author outlines a classification scheme for music in the film, indicating important aspects to be observed by the analyst. Brown (1994) highlights several elements[7]:

a) the origin of music, if composed specifically for the film or if taken from preexisting compositions;

b) the music genres, subdivided into "classical"[8] (in a rather ambiguous concept of word; Brown subdivides this item in a romantic style, such as Max Steiner´s and John Williams´; modern, such as Bernard Herrmann's compositions; modern advanced, as Pierre Barbaud's music and electronic music; minimalist, like the music of Philip Glass; musique concrète, which is the case of Michel Fano compositions for the films of Alain Robbe-Grillet. Brown also considers the instrumentation: full orchestra, chamber orchestra, solo instrument, with solo voice or choir, and electronic); jazz; popular (pop style with or without associated lyrics, rock, country, disco, rap); and ethnic;

c) the style within a specific genre, taking into account melody, motifs, rhythm and instrumentation;

d) the way of use of music in movies, for example, the points at which it is used in the film (considering if there is use of leitmotif technique, if there is recurrence of musical excerpts in the film, the relationship of music with other sound and image elements), its duration and volume, as well as an analysis if the music is diegetic or non-diegetic.

e) other important aspects: the composer's relationship to the film and its genre, the existence of important collaborations between director and composer, the existence or not of an arranger, the commercial implications of music/movie songs, the documentation available on the music (score, original recordings, letters, interviews etc.).

7. We have quoted only the aspects listed by Brown (1994) that we have considered as the most significant for music analyses in cinema.

8. The quotation marks are not from Brown (1994), who does not refer with that word to preexisting classical music repertoire. As a matter of fact, he classifies the music genres of the the score composed originally for the film.

There is no specific method name that encompasses all of those aspects to be sought. In fact, depending on the focus of the analysis, some are more important than others. Therefore, the ideal is that, when describing the methodology of a music analysis in a movie, the parameters on which such analysis will be developed are cited at first.

However, in general, observing the tables Brown (1994) develops himself, and a number of others present in many studies which followed him – such as in Marks (2000), McDonald (2007) and Alvim (2013), just to get a few examples of authors who clarified the tables used for the development of their analysis – we can see that, as a basic method to be followed, the tables are constructed in a similar way to a cue sheet[9], with the precise moment on film that presents each song entry, its origin (if original film music or preexisting and a mention to the composer), if it is diegetic or non-diegetic, with a general description of the sequence/images of the film in which it is inserted.

9. Document with data compilation of the musical pieces present in an audiovisual product, such as: name or indication of the piece, time-code, how many times it is heard, classification of the musical themes or motifs.

[Note: "Reel" and "Part" numbers are given as they appear in Steiner's manuscript. Timings are mine, and approximate.]

1) Reel 1, Part 1 (0:00–2:35) = Beginning of film.

WB logo	main title (credits)	"Music by Max Steiner," etc.	narration + montage	Scene 1, shot 1	shot 2
fanfare	*frenzied exotic dance*	*Marseillaise*	*impassioned lament*	Casablanca	teletype machine i
			street scene	police station	
				pseudo-Arabian fragment (like source music)	*"Deutschland über alles"*

2) Reel 1, Part 2 (2:35–5:30) = Plot preliminaries.

roundup of "usual suspects"—courier shot	outside Palais de Justice: tourists + pickpocket	airplane lands
agitato (tuneless)	*Marseillaise + funereal phrases . . . misterioso*	*impassioned lament*

Source Music (performed in Rick's café, by Sam and the band, etc.)—not in the Steiner score:

1) It Had to Be You
2) Shine
3) Crazy Rhythm
4) Knock on Wood
5) The Very Thought of You
6) Baby Face
7) I'm Just Wild About Harry
8) Heaven Can Wait
9) Parlez-moi d'amour
10) Love for Sale
11) Tango della Rose
12) Avalon
13) As Time Goes By (chorus 1st half [A A] sung)

3) Reel 4, Part 7 (33:30–36:05) = first meeting of the four principal characters.

eye contact—Rick sits at table	conversation	Victor and Ilsa depart
CASA chord 1 + ATGB var. 1	*ATGB var. 2 versus Dtsch*	*. . . ATGB fragments*

Source Music:

14) [Sam: "just a little something of my own."]
13a) As Time Goes By (1st phrase [A] on piano, joined to next cue)

FIGURE 3 – Marks' table for the music of the first and the forth reel in Casablanca (Michael Curtiz, 1942)

Source: MARKS (2000).

In some tables, a preliminary classification of the musical structure can be included, as in the analysis of Michel Legrand´s music for the movie *Vivre sa Vie* (Jean-Luc Godard, 1962), developed by Royal Brown (1994). The author divides, in the column *Music*, the three different portions of Legrand´s piece (actually, variations from the same material), which Godard used throughout the film by selecting one or engaging them in a different order. The identification in the table can make it easier for the analyst to further appreciation of the way of music utilzation in the movie.

CONCLUSION

As it becomes evident from the different approaches described in the previous topics, that show how to make the most different analyses of the soundtrack of audiovisual products, any claim of lack of accuracy (or excess of ambiguity) on the issue of research methodology should be placed in the proper perspective. Methodical and thorough investigation of the sounds of a film allows an almost infinite number of approaches, but it can be done properly, in a scientifically reliable way, as it is evidenced by the numerous examples cited here.

On the other hand, it is not possible to claim the existence of a unique method of observation, interpretation, and analysis of the film sounds because the approaches possibilities are so many. No methodology, as elastic and adaptable as it can be, is able to deal with all those approaches. This lack of a single method has been enhanced by all film analysis´ books. Jacques Aumont and Michel Marie are incisive to mention that "there is no universal method of analysis of the film" (Aumont; Marie, 2004: 7). They say that an analysis always depends on the type of object-film, and it can be made under different theoretical paradigms.

It is, however, essential for any researcher to avoid mentioning the term *film analysis* to try to describe any specific working method (or, at least, one should explain what one means exactly by that), since, as we saw earlier, film analysis is closer to a description of a set of procedures, interpretation and analysis of audiovisual products, without ever intending to become a method.

Numerous film sound analyses mentioned in this essay are attempts to formulate sound research methods in Cinema and Audiovisual studies. They provide us with an inventory of possibilities. However, ultimately each research needs to be considered individually. Based on the type of object-film to be analyzed and the results one wants to achieve, every research must select the best available approach and work hard to adapt, reformulate and correct elements of this approach, which will allow the development of a specific method for the solution of specific research problems, which are also unique. M

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