

Creating a Sound World for *Dracula* (Browning, 1931)

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Abstract

Creating a Sound World for *Dracula* (Browning, 1931)

The first use of recorded sound in a feature film was in *Don Juan* (Crosland 1926). From 1933 onwards, rich film scoring and Foley effects were common in many films. In this context, *Dracula* (Browning 1931)¹ belongs to the transitional period between silent and sound films. *Dracula's* original soundtrack consists of only a few sonic elements: dialogue and incidental sound effects. Music is used only at the beginning and in the middle (one diegetic scene) of the film; there is no underscoring. The reasons for the 'emptiness' of the soundtrack are partly technological, partly cultural.

Browning's film remains a significant filmic event, despite its noisy original soundtrack and the absence of music. In this study *Dracula's* original dialogue has been revoiced, and the film has been scored with new sound design and music, becoming part of a larger, contextual composition. This creative practice-based research explores the potential convergence of film sound and music, and the potential for additional meaning to be created by a multi-channel composition outside the dramatic trajectory of *Dracula*. This research also offers an analysis of how a multi-channel composition may enhance or change the way an audience reads the film.

The audiovisual composition is original, but it uses an existing feature film as an element of the new art piece. Browning's *Dracula* gains a new interpretation due to the semantic meaning provided by associations with major cataclysmic events of the 20th century, namely the rise of two totalitarian powers in Europe. The new soundtrack includes samples from the original that are modified, synthesised and re-worked: elements of historical speeches; quotes from Stoker's *Dracula*; references to the sounds of the time period (Nazi rallies, warfare, Soviet prosecution), and the original recordings of Transylvania (similar to the geographical location and season Stoker describes in *Dracula*).

¹ *Dracula* (in italics) will refer to Browning's film (1931) throughout this paper.

The soundtrack composition also includes elements of a new, specially composed *Requiem*, which share the same sonic and musical expression tools: music language, varying sound pitch, time stretch, granular synthesising, and vocal techniques such as singing, speech, whispering, etc.)

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Author's Declaration

The author has used the existing film *Dracula* (Browning, 1931) to develop an approach to film sound. The artefact is intended solely academic research purposes, and no further dissemination is intended.

Introduction

Studies on film sound and music have increased over the last few decades. Notably there are several studies about the practical implication of sound and music in film. For example, Evans (1979), Burt (1994), Buhler, Flinn, Neumeyer (2000), Gorbman (1988) and others discuss film composers and their work. Chion (1992, 1994, 2009) puts film practice into a theoretical framework, while Weis and Belton (1985) offer a superb historical perspective on film sound practice and theory. Manolas and Pauletto (2009) and Holman (2008) provide a conceptual and technical discussion on surround sound. The novelty of this study is, however, there is no practice-based research on how 5.1 surround sound systems may be used unconventionally to create an expanded aesthetic implication of a film, or to enhance the meaning of an existing film through sound. The reason why experiments with 5.1 surround sound in films are rare may be due to conventions and time constraints within the film industry². Kerins (2006) found that practitioners are prevented from taking risky artistic approaches as they can result in drastic aesthetic changes. Chion (1994, p.152) argues that ‘many European directors have simply ignored the amazing mutation brought on by the standardisation of Dolby’. Experiments with surround sound systems are more frequently encountered in audiovisual art installations. Stockhausen, Varèse, Xenakis began experimenting with multichannel speakers in the 1950s, and since then many artists have successfully applied sophisticated surround technology in their recent performances³. Manolas and Pauletto (2009) argue the surround sound for film is still a rather unexplored area, but the development and availability of sound technology will make it even more significant. The question of this research is how a multi-channel sound system may be used to create an enhanced, contextual meaning of the film, when the film becomes a part of the composition.

Filmmakers usually separate the post-production of sound design and music. Weis and Belton (1985) argue that sound design was considered as technical work, while composers as a rule stepped into the production chain as the last element. The same individual rarely delivered

² Commercial cinema usually operates under strict restraints of time and budget. That may result in the need for proven practices rather than experimentation.

³ For instance, Finnish accordionist Kimmo Pohjonen uses surround system to perform his music.

both tasks, because scoring for live instruments required a theoretical background in music, while sound design demanded practical skills to work with sound technology. Thus the entire process of sound design and music composing were quite separate from each other until recently. Contemporary computer technologies allow film sound and music design to be carried out by one person, thus blurring the line between the two traditionally separate professions.

The aim of this research was to create an original multi-channel composition, which would be supported by a theoretical framework and would be reflected in a contextual analysis. The supplementary goal was to explore the convergence between music and sound.

The objectives of the research included the following steps:

- To define *Dracula* in the context of early sound film; identify the film's aesthetic factors that influence the nature of creative choices and strategies taken for the new composition (both the film soundtrack in mono and multi-channel composition);
- To revoice *Dracula* with new soundtrack in mono that would adequately include the original dialogue in balance with coherent music and sound effects (literal and emotive sounds). This soundtrack aims to keep the dialogue lines intact in terms of their comprehension, while also giving an appropriate emotional texture and colour of the horror genre as well as to increase the dramatic pace of the second part of the film;
- To determine the philosophical implication of the multi-channel composition, which expresses the author's moral values and attitudes based on the chosen philosophical, cultural and religious symbolism of *evil* in the Western European context. This research aims to create an emotional impact on audience that links the artefact to the historical circumstances of Europe in the 1930s and 1940s;
- To indicate the relationship between the film soundtrack in mono and the rest of the multi-channel composition; to describe the creative practices that link the revoiced soundtrack with the multi-channel composition (such as the use of original source dialogue to create new spatial sounds).

This research provides a new soundtrack for the film. First, the new music and sound design provide an emotional context that is relevant to the style of late silent and early sound films. Second, *Dracula* is screened in the context of a multi-channel composition; one element of the artefact is the original film soundtrack. Technically the project is in surround (5.1) sound and as such can be played on a domestic DVD player. However, the nature of the project is unrelated to that of the conventional understanding of surround film soundtracks; in this case the surround sound system is treated as a multi-channel setting, rather than a sound enhancing or surround 'fill', which serves the purposes of the composition. Since the composition has a larger structure, sometimes tangentially related to the film, the work is not meant to be considered as a renovated film soundtrack (contrary to the mainstream tradition of silent and early sound film revoicing). The work uses the original soundtrack (dialogue) as a creative element for a new composition that locates *Dracula* in the context of the atrocious European historical time-period of the 1930s-1940s, which is the time when the film was produced. The multi-channel composition incorporates and essentially respects the film and its structure, however together with the new art piece, it provides additional meaning.

The research was carried out in two phases. The first phase included the technical preparation of the entire original soundtrack (dialogue) and the composition of a new sound design and music score relevant to the horror genre. The revoiced soundtrack provided an original dramatic trajectory for *Dracula*. The second part of the research used this soundtrack as an element of a larger multi-channel composition, which liberates itself from *Dracula's* plot and, with the new contextual composition, creates new philosophical meaning. Although the new composition is independent of the film, there are several significant dramatic points in *Dracula* where the prepared original soundtrack is synchronised to the multi-channel composition. The reason for this synchrony is to keep the audience connected to the film material and maintain the implied dramatic points of the piece. Otherwise, the artefact may become merely a concert piece divorced from the actual film.

There is no attempt to measure audience responses in any way, as this is beyond the scope of the study. The Exegesis element of the project, the contextual analysis, is intended to create a link between the creative process and theoretical sources. Therefore the methodology in this research is based on a reflective analysis of the creation of the artefact, which aims to contribute to a greater understanding of the creative process and how it generates new

knowledge. As the study progressed, incremental reassessment of the methodology reflected the practical findings from the composition process. The outcome of the first part of the research (revoicing *Dracula* in mono) created new possibilities for the creative choices and strategies in the multi-channel composition. The implication of the composition is discussed in the second part of this document, and the Conclusion chapter addresses the research questions, summarises the findings, and considers possible further studies.

This study should provide insights for practitioners and academics who work with film sound and its creative application in arts. Video and audio clips are provided as illustrations for the points made in the document, which can be accessed in the accompanying disc. Please refer to the specific files (e.g. V01_Pretransfer_Original Soundtrack.mp4) noted by brackets in the text.

Methodology and literature review

The methods of creative arts research are evolving because digital media is ‘forging an identity and appropriate pedagogy and methodologies’ (Smith and Dean 2009). Scrivener (2002) indicates that any academic creative research aims to contribute to the understanding of the creation process and how it generates new knowledge. An art piece without contextual analysis is not appropriate for academic research because it creates no link between the practice of the creative process and supporting theory (context). The researcher should explore and obtain the required resources to create an artefact as well as indicate why certain artistic devices were used. Scrivener (2004) asserts:

It is therefore important that the creative production process is self-conscious, rational and reflective. It may be more useful to consider practice as an activity that garners and exploits mental and physical resources through thinking, reading, imagining, looking, reflecting, drawing and painting, etc., to achieve goals relevant to a given domain, such as Fine Art.

There is an established assumption that knowledge usually takes verbal or numerical expression. However, this may not necessarily reflect the arts, because interpretation of the arts usually needs to acknowledge non-verbal forms that have no mathematical proof whatsoever (Smith and Dean 2009). Haseman describes the embedded epistemology of creative research and defines multiple methods, however, practice is ‘the principal research activity’, and ‘practitioners ‘tend to “dive in”, to commence practising to see what emerges’ (Haseman 2006 cited Smith and Dean, 2009, p.6). Similarly, this practice-based research on

film soundtrack started from a conceptual framework, that sought to explore how a new composed soundtrack for *Dracula* may enhance the contextual meaning of the film. As the composition project progressed, the research findings led to an adjustment of the initial objectives and called for an additional theoretical reassessment. A further analysis of creative based research helped to shape the objectives for this research, as well as to develop its methodology.

Studies grounded in art praxis require other than qualitative or quantitative methodologies. Barone and Eisner (2012) argue that established mathematical methods to calculate the findings of quantitative research prevailed because they were a convenient way to measure the outcomes of a research. However such a narrow methodology based on pure statistics does not allow the use of more flexible research tools that would bring positive possibilities in the arts based field. 'Arts based research is an approach to research that exploits the capacities of expressive form to capture qualities of life that impact what we know and how we live' (Barone and Eisner 2012 p. 5). Smith and Dean (2009) take it even further by arguing that practice-based research has bi-directional qualities. It can expand academic knowledge, and academic knowledge may influence creative practice. Instead of focusing on the final art product, Barrett and Bolt (2007) suggest that contextual analysis should analyse the process of creating the artefact and distinguish its philosophical meaning in the context of knowledge. It is also essential to detach art criticism from the self-evaluating artist who seeks to comment on the value of the artistic process (Barrett and Bolt 2007). New knowledge in creative arts may appear from the application of new material, tools, methods, ideas and practice. The exegesis reveals a critical and complementary role in revealing the work of art.

Whilst the artwork is imminently articulate and eloquent in its own right, tacit knowing and the generative potential of process have the potential to reveal new insights: both those insights that inform and find a form in artworks and those that can be articulated in words. (Barret and Bolt, p 31)

Barone and Eisner (2012) argue that beyond the traditional form of education research, arts-based research employs feelings, thoughts, and images into an aesthetic form. The way we interpret certain facts depends on the perspective from we approach it, and its comprehension may have other than verbal or quantitative meaning:

Sound, which reaches its apotheosis in music, makes possible meanings and other forms of experience that cannot be secured in non-musical forms. (Barone and Eisner 2012)

Sullivan (2009) admits that research findings in creative arts can be delivered through music, dance, design, film or exhibition. Therefore, practice-based creative research takes place in various forms, including music and its cohesion with other arts (film and multi-channel composition in the context of this research). Leavy argues that music has been a part of sociological research for a long time. Anthropological studies on folklore, as well as music education, have been an object of social science. Music was defined as a device that can transcend multicultural borders and serve the purpose of commodity, ideology, political tool, or become a part of cultural or social life. Music connects people and ‘transcends language, economic and other social barriers’ (Leavy 2009, p.102). Leavy finds that music mixes the sounds, genres and of various cultures, and therefore can be analysed through the collective identity:

In other words, hybridity we are seeing in music creation is also found in the creation of music based research methods. (Leavy 2009, p. 105)

Music has found its own methods that comprise music parameters (rhythm, dynamics, timbre, melody, polyphony) and form. Leavy indicates that Bresler’s conceptualisation of music methods includes three major techniques associated with qualitative research and are delivered through perception, conceptualisation and communication (Leavy 2009). Bresler’s research is carried out through qualitative methods, and results vary according to culture and social background. Leavy also discusses an example by Terry Jenoure, who applied qualitative methods based on musical portraiture. This process includes coding of musical structures that create sonic narrative such as jazz riffs. Another method of performance collage ‘refers to the process of musically coding and writing up data culminating in a musical performance’ (Leavy 2009, p. 109). Leavy (2009) argues that the need for dedicated research methods in arts-based projects developed when researchers felt there was something missing in the end result. However, Leavy also finds it challenging to evaluate the objective quality of art when artists’ subjective decisions take over. She describes how Jenoure’s musical portraiture method was used to reveal the artist’s portrait, which was the object of the project:

I realized that what I had was a series of short conversations. I was composing sound again. I was making songs and I could hear them in my head and it felt perfect. Best of all, I felt more like myself... (Jenoure, *in*: Leavy 2009, p. 110)

Using recorded interviews, Jenoure created a composition which had distinct dynamics, rhythm, tension and colours and expanded Bresler's original conceptualisation of music. The new sounds became original instruments that would recall 'hushes', 'screams', 'drum rolls' and 'cymbal crashes' (Leavy 2009, p.110). This methodology proved to be innovative because using the existing object (material) the artist was able to create a piece that gained a new meaning.

Leavy emphasises that arts-based research cannot avoid the influence of the artist's identity (artist-self). This is another reason why qualitative research methods are not valid, because they ultimately call to 'disavow researcher's identity' (Leavy 2009, p.111). Her experience is that mixing music performances with musicians' interviews creates an interesting artistic collage. Such performance reveals more sides of the object's identity and enables the creation of a composition with more dimensions rather than a pure music performance (Leavy 2009). Leavy suggests her methodology for arts-based research can bring interesting aspects to approaching the creative process⁴. The research on the *Dracula* soundtrack is also based on the creative skills and aesthetic choices in the context of Western European music. In addition, it is impossible to avoid the researcher's professional identity, as a composer, or style which is the norm in this kind of study. *Dracula's* structure and style affected the creative choices taken in the composition. Certainly, the deconstruction of other early horror genre sound films would result in their different philosophical contextualisation. For instance, the Spanish version of *Drácula* (Melford 1931) would probably seek for another interpretation of vampirism in the historical context of 1930s and 1940s, or perhaps even another historical contextualisation. However the artistic decisions taken by the nature of the object, in this case Browning's *Dracula*, has not influenced the way the creative process was approached or the consistency of its methodology.

According to Daykin, Richardson acknowledges 'the move toward art-based methodologies has also been linked with postmodern trend toward the breaking down of disciplinary boundaries and the use of reflexive and situated accounts of research' (Daykin *in*: Leavy 2009, p.123). Richardson argues that the creative process provides knowledge about art itself and its relationship to the audience (Daykin *In*: Leavy 2009). Post-war music focuses on the meaning of the text and sound. Daykin argues that composers such as Luciano Berio has been

⁴ This methodology can be found in appendix A.

influenced by the structural anthropology of Lévi Straus and has composed music using a wide range of vocal expressions. Berio's *Sinfonia* (1968) for eight voices and orchestra is seen as an example of the modernist manifesto. The second movement *O King* is dedicated to Martin Luther King whose name is performed in pieces, handed back and forth between the voices. Its complete resolution is heard only at the end of the piece. Berio suggested that the human voice evoked connotative meaning, however its signifying effects are deliberately minimised in order to explore the meaning in the sonic expression (Daykin *in*: Leavy 2009).

The review of Leavy's (2009), Smith and Dean's (2009), Scrivener's (2004), Barrett and Bolt's (2007) practice-based creative research methodologies helped to design the framework of this study. The nature of such research requires self reflective documentation from the author. The studies on *Dracula* from various perspectives helped to build the required theoretical foundation that became the conceptual framework in creating the praxis. Before starting to compose the revoiced soundtrack, or proceeding to create the soundtrack composition of the artefact, it was important to lay down the conceptual foundation of the praxis (the music and sound material) that would link to the topic of the research.

The initial task was to define the implication of Stoker's *Dracula* in our culture, its symbolism and meaning. *Dracula* became an iconic symbol of supernatural horror thriller films, however the following questions had to be answered: why does the film contain no original score?; why does the film become slower-paced from the middle of the story with predominant indoor shots only?; what is so prominent about the film's style that made it an established icon of the first sound horror film together with the Universal's *Frankenstein* (Whale, 1931)? There are no definitive answers to these questions, as the Hollywood system was experiencing turbulent change: the unprecedented transition from silent cinema to sound. Moreover, most late silent films in the 1920s and sound films after 1931 were almost always accompanied by music, while the visual style of *Dracula* is not far removed from these productions.

The creation of the artefact consisted of two phases. The initial objective was to prepare the original soundtrack for revoicing (clean the hiss and adjust appropriate audio levels), make the film map (lay-out of the new soundtrack), score new music and create sound design. The map of the film clearly indicates the structure of the revoiced film soundtrack and its dramatic purpose, while the main themes were composed and discussed in the context of the

Western musical tradition. The composition of the new score for the film is realised through convergence of the soundtrack (music and sound) elements. Aside for some instrumental and orchestral recordings, the film soundtrack is performed entirely using digital computer music technology⁵. The availability and affordability of sample-based and electronic music has been a decisive factor in choosing this technology for the research project.

Further stages of this research rework *Dracula* and its prepared soundtrack as a multi-channel composition. For practical purposes a traditional 5.1 surround channel setup was chosen, however its application was different from the usual surround film scoring⁶. There was no intention to score *Dracula* in a conventional cinema setting, i.e. the usual practice of putting the audience within the diegetic context of scenes, or creating the music score in 5.1. Instead, *Dracula* has become a multi-channel composition essentially independent of the film soundtrack. It has its own structure and meaning, and it creates a contextual relationship with the film.

The new composition contextualizes the film in the European history of the 1930s – 1940s, giving Count *Dracula* an allegorical connection with two totalitarian regimes (Stalinism and Nazism) that were set up in such a way that millions of people were killed. As mentioned, the implementation of this methodology and creative choices taken to make the multi-channel composition and its contextual relationship with the film is discussed in the second part of this document.

There are quite a few instances where composers have created or musicians have arranged new soundtracks for existing silent and early sound films. Ben Model and Neil Brand currently provide live music for silent films; Adrian Utley and Will Gregory composed and performed music for *The Passion of Joan of Arc* (1928, Dreyer); Phillip Glass created music for the same Browning's *Dracula* (1931). These compositions usually adhere to the traditional convention of subordination to the film's dramaturgy. In addition none of them take the original soundtrack (dialogue) to transform and use it as an element of a new composition unrelated to the film's narrative, which is the method this research proposes. In

⁵ The list of software and hardware equipment used in the project can be found in the Appendix I.

⁶ Technically, the artefact does not use LFE (the subwoofer channel), therefore the composition could be played on five surrounding channels only (5.0). However, the presence of subwoofer is welcome, because most of the 5.1 home systems usually have small surround speakers, therefore a subwoofer helps to recreate the lower part of the frequency range.

this way the new composition transcends the traditional conception of a film soundtrack, because sound is used to communicate beyond the film's explicit narrative.

There are two methodologies operant in this study. The first concerns the creative methodology of producing the artefact, and the second involves the research undertaken for the contextual analysis. This study includes description, exploration and discovery of new practices in creating a film soundtrack. The preparation of the original film soundtrack for the project (cleaning the optical hiss from the dialogue track) provides the technical base for further creative direction. The subsequent development of the composition's structure (The Map of *Dracula*) allows for the presentation of the intended outcomes of the composition in a structured form. The contextualisation of the research from various perspectives (early film sound, sound restoration, scoring for films and sound design, using multi-channel audio system to express the thematic connection to the European history of 1930s and 1940s) links the artefact to the research objectives.

This study called for a significant literature review⁷. A major part of the available literary material included works on film sound and music that laid the foundation for an understanding of the historical development of film art as a whole. Comprehensive film literature sources such as *Film Art* (Bordwell and Thompson, 2004), *Image, Sound and Story: The Art of Telling in Film* (Potter, 1990), *Film Genre Reader III* (Grant, 2005), *Film Sense* (Eisenstein, 1975), *Film/Genre* (Altman, 2002), *Thrillers* (Rubin, 1999) and others helped to distinguish the development and segmentations of film genres. Further emphasis was put on reviewing historical studies of film sound and music. The usual film music sources by Burt (*The Art of Film Music*, 1994), Kalinak (*Settling the Score: Music and the Classical Hollywood Film*, 1992), Gorbman (*Unheard Melodies: Narrative Film Music*, 1988), Kassabian (*Hearing Film: Tracking Identifications in Contemporary Hollywood Film Music*, 2001), Adorno and Eisler (*Composing for the Films*, 1947, 2005) provided insight into the formation and tradition of classic Hollywood film music, while a series of works by Chion (*Audio-Vision* (1994); *The Voice in Cinema* (1999); *Film, a Sound Art* (2009) revealed the theoretical and practical relationship between sound and images in audio-visual media. The contemporary discourses in academic journals such as *The New Soundtrack* placed the historical study of film sound in the context of contemporary academic literature.

⁷ See the source list below for bibliographic details.

Having this foundation research in place, studies on the silent cinema era and early sound films were conducted; Altman's *Silent Film Sound* (2004), O'Brien's *Cinema's Conversion to Sound: Technology and Film Style in France and the U.S.* (2005), Eyman's *The Speed of Sound, Hollywood and the Talkie Revolution, 1926-1930* (1997), MacDonald's *The Invisible Art of Film Music* (1998), as well as Crafton's *The Talkies: American Cinema's Transition to Sound, 1926-1931* (1999) provided valuable knowledge about the nature of early sound films and an explanation why Tod Browning's *Dracula* sounded the way it did when it was released in 1931. The study about early sound films helped to highlight the context of Hollywood's transition period, the technological determinants as well as the social and psychological background of the film industry at that time.

Further study on Bram Stoker's *Dracula* and the adaptation of the story for the Universal Pictures film highlighted important historical aspects for this research. Riquelme's (2002) edition of *Dracula*, with analytical essays by Eltis, Foster, Castle, Wicke and Riquelme, accentuated the critical social, political, economic and cultural aspects of Stoker's story that became influential in developing innovative objectives for the new soundtrack. Herzogenrath's edition of *The Films of Tod Browning* (2006), Edwards' *Bela Lugosi: Master of the Macabre* (1997), Lennig's *The Immortal Count: the Life and Films of Bela Lugosi* (2003), Skal's *Hollywood Gothic: the Tangled Web of Dracula from Novel to Stage to Screen* (2004) and Spadoni's *The Uncanny Bodies, The Coming of Sound Film and the Origins of the Horror Genre* (2007) provided a comprehensive overview of Tod Browning's *Dracula* (from the first release of Stoker's book in 1897 through to the film production in 1931). These books disclosed noteworthy details about the authors (Stoker, Browning), and revealed facts about shooting, while film crew memoirs gave an insight into the movie from the production perspective. This part of the research placed *Dracula* in the context of early sound films and answered the question why it became a horror sound film classic in the history of cinema. In addition, it revealed the strengths and weaknesses of its production.

Research about the horror film genre, with the emphasis on vampirism, helped to formulate the sonic features and associations needed for the new soundtrack of *Dracula*. The historical insight about the tradition of vampirism in Western European culture established the place of *Dracula* in the proper political, social and cultural context of 1930s. Skal's edition *Vampires: Encounters with the Undead* (2006) was a valuable collection of folklore knowledge about

vampires, and as such was analysed in the context of storytelling in the monumental volume *The Seven Basic Plots* by Booker (2004). Since the new soundtrack composition implied a coded symbolic meaning through sound, Biedermann's (1992) *Dictionary of Symbolism* and Chevalier's (1997) *The Penguin Dictionary of Symbols* were the guiding sources for the connotation of symbols in Western Culture. They helped to identify the social-historical roots of 'modern draculism' that could lead to establishing its sonic expression.

The multi-channel composition and its concept was created after the analysis of surround sound issues discussed by Holman (2008), Manolas and Pauletto (2009) and Chion (1994).

Numerous books and electronic sources were compiled to reflect the social, political and cultural context of European history during the 1930s and 1940s. The books by Tzouliadis (2008), Engerman (2003), Courtois, Werth, Panne, and other (1997), McLoughlin and McDermott (2003), Luban (1994), and the documentary films by Clarke and Costelle (2009), Kosh (2006) and Stevens (1945) helped to systemise and select the essential notions of evil that struck humanity in the form of the totalitarian regimes. This history review was used to create an allegorical link between the murderous Soviet and Nazi systems and the concept of a blood-sucking vampire.

The coherence of the soundtrack and music signification was studied in contemporary music and sound literature. Huron's *Sweet Anticipation: Music and the Psychology of Expectation* (2006) was useful for statistical findings about the way people interpret music and which emotional qualities they assign to it (studies on melodies, rhythm, association with other music). Navickaitė-Martinelli's volume *Before and After Music* (2010) from the International Congress of Musical Signification in 2008 provided additional theoretical and practical knowledge of scoring music for films and included contemporary discourse on music studies. The symposiums of *School of Sound* (2007, 2009 and 2011) and the academic journal *The New Soundtrack* proved to be the guiding material to track the contemporary discourse of film music and sound, concentrating on the issues of coherence between music and sound, the signification of the soundtrack to the audience with the latest findings and publications in this area. Sonnenschein's *Sound Design: the Expressive Power of Music, Voice, and Sound Effects in Cinema* (2001) was a valuable resource not only for finding creative ideas in sound design but also giving the research a proper industry standard and practices while working with film sound. It was found that much of the industry discussion about the technological

solutions of film sound are transferred to virtual media – blogs and forums such as *gearslutz.com*, *soundandpictureonline.com*, *filmmusicmag.com* and others.

***Dracula's* original soundtrack in the context of early sound films (1926-1931)**

The production of *Dracula* falls into the transition period of sound films (1926-1931). It was the period when the American film industry was searching for an appropriate way to make sound movies (defining the standards). During these five transitional years sound films, the so called 'Talkies', were seeking a new identity in terms of how and when music underscore should be present, or what sound effects, in addition to the dialogue, should be used.

The transition from silent to sound films created a psychological and social tension among workers in the American film industry. Eyman (1997) explains that between 1926-1931 film production technology changed significantly, leaving some people unemployed (mostly actors and musicians) while creating new positions for newcomers. Doane (1985) asserts that most sound engineers came from radio, the phone industry or were electricians, and as such influenced the aesthetics of film sound. Few directors of the early thirties knew the possibilities of sound as the whole process was left to a niche group of specialists (Doane 1985). While this technological novelty caused discomfort for some film makers, others welcomed the arrival of sound and its possibility for creativity. Josef von Sternberg, among others, realised this potential.

Josef von Sternberg instinctively understood that words could carry a plot and establish character, but were useless in providing atmosphere, the ne plus ultra of his art. "I want immediate sound, "he proclaimed at a dinner table while planning his first all-talkie. "Swamp the audience immediately. Envelop them with raw sound... Early morning sounds... Hard heels on cobblestone streets, the slap of water thrown on a storefront from a metal bucket... Dogs barking ... Rattle of thick breakfast dishes. A canary sings... From the first moment, the audience must be deluged with sound, conditioned instantly, it must learn to concentrate on hearing, to listen to dialogue above the klang. (Eyman 1997, p.158)

Reuben Mamoulian used sound to direct his audience's anticipation, as the sound of an upcoming shot begins in the last frames of the previous one (Eyman 1997, p.327). Mamoulian's first talkie *Applause* (1929) has attributes of a fairly advanced conceptualisation of sound and is regarded by Scott Eyman (1997) as one of the first truly exceptional talkies. Rouben Mamoulian's memories illustrate how difficult it was to seek innovative solutions in the stagnant studio system:

The soundman... was a dictator. They had one microphone hanging, and if you rehearsed a scene he would say, no, he has to come closer, and he can't sit down, he has to stand... Whatever I asked for, they said "That's impossible". (Eyman 1997, p.225)

Mamoulian also recalls that:

The usual way was to film a scene with three cameras: Two close-ups and a medium shot. "They could shoot the whole scene and cut that in the cutting room, and the result was what people in their wisdom called "talkies". (Eyman 1997, p.225)

Mamoulian had a strong intuition that although films were a visual medium, sound could provide a significant dramatic element without trying to reflect reality, because he believed in 'stylisation, which if properly done comes over as greater truth than reality'. (Eyman 1997, p.224). Mamoulian's work is only one example that in spite of technical and psychological challenges of transition to film sound, an artist could explore creative ideas in film making.

European filmmakers were also searching for sound identity in their films. Fritz Lang in *M* (1931) imaginatively uses the murderer's whistling of Edvard Grieg's *Troll Dance* to add tension to the climax point when a blind man recognises the criminal (Cavalcanti, *in*: Weis and Belton 1985, p108). Noël Carroll regards *M* as:

...an exemplary case of an organic film. The narrative structure, the framing, the use of sound to present off-screen traces, the over-head angulation, and the order of editing, all seem coordinated to induce an investigatory attitude on the part of the audience – thereby simulating, to a limited extent, the fictional experience of the characters in the viewing experience of the spectators (Carroll, *in*: Weis and Belton 1985, p.269).

Carl Theodor Dreyer's *Vampyr* (1932) did not survive in full with the original sound version, however the available reels skilfully demonstrate Dreyer's attempt to balance the sound effects with music and dialogue. Similar to Lang's *M*, Dreyer masterfully creates dramatic tension with off-screen sound when Allan Gray, the main protagonist of the film, hears a monotonic spell coming from the other room without seeing its source. Such a genuine, hypnotic sound combined with expressionistic images works well for a horror film and creates a subtle experience – a familiar attribute of the German expressionist film-making tradition of the time. Luis Buñuel's *L'Age d'Or* (1930) opens with the title that the film is 'Film sonore et parlant' (sound and speaking translation from French), but his production does not come close to the German techniques, for instance, Fritz Lang's storytelling style, involving the greater use of off-screen sound in narrative. The French studio had access to a relatively advanced sound recording technology for the time, and the film was mixed at Tobis Klangfilm, one of the European sound film pioneers, However, Buñuel reveals his own

search for sound in films. *L'Age d'Or* is rich with original music by Luis Buñuel and Georges Van Parys (both uncredited) that emotionally contextualises the narrative, while the dialogue is sparse, on-screen and delivered without underscore. Such scoring techniques are widely encountered in operas and musicals.

The Soviet transition to sound took a slower pace due to a technological lag in sound recording technology (Egorova 1997). In *The Deserter* (1933) Vsevolod Pudovkin recreates his own visual style from the silent era, giving the film only the most significant loud effects such as whistles, crowds and speech (outdoor dialogues are relatively loud). The Soviet film tradition was philosophically based on the comparative juxtaposition of story-telling, when several meanings (either through editing or sound when such became available) portray a different emphasis on narrative. The dialogue in Pudovkin's films appears either off-screen or barely synchronised. Egorova (1997, p.14) asserts the Soviets intensively searched for 'polyphonic interaction of word, music and sound effects, the latter being often shot on location, synchronically with the picture representation, and then music was superimposed'.

Dracula is an excellent example of the transition period from silent films to talkies. The American film business was experiencing tremendous changes in regards to sound in the late 1920s and early 1930s. Eyman reports that, 'Eight hundred feature films a year were being turned out for an audience of 100 million people who attended 25,000 movie theatres every week' (Eyman 1997, p.16). The pace of wiring the cinema theatres with sound equipment was unprecedented in history, so too was the fast changing aesthetics of recorded film sound. Hollywood studios were searching for an appropriate film sound, and a few years after *Dracula* was released, many Hollywood films began to utilise continuous underscore orchestral music and sound effects (MacDonald 1998). Max Steiner, Franz Waxman, Erich Wolfgang Korngold, Alfred Newman and Miklós Rózsa (except for Newman, all of them are Eastern or Central European immigrants) made a significant contribution to the creation of the Hollywood tradition of film music. Evans (1979) recognises Korngold's ability to produce a dramatic sense and excellent concert music within a film. Steiner masterfully balances between the visual image and musical pulse in *King Kong* (1933), *The Informer* (1935) and *The Lost Patrol* (1934). This tradition is echoed strongly in contemporary films, and *Dracula's* soundtrack would probably seem strange not only for the modern audience, but for a viewer one decade after the film's release in 1931.

It is fascinating to find relative ‘emptiness’ in *Dracula’s* soundtrack (01V_PreTransfer_Original.mp4)⁸. There are significant portions of the film where there is nothing more than optical hiss, which most viewers came to ignore and treat as ‘silence’. Spadoni cites *Variety* (18 February 1931) which finds *Dracula* an eerie and well crafted mystery story:

On the screen it comes out as a sublimated ghost story related with all surface seriousness and above all with a remarkably effective background of creepy atmosphere. So that its kick is the real emotional horror kick. (Spadoni 2007, p.46)

The increasing unpopularity of musicals in the 1930s, after their initial success, inspired the studios to look for alternative solutions for sound in films (Eyman 1997, p.349). Many American producers believed that music may disturb the audience when watching the film and sound effects should only be present to make certain dramatic points. The early talkies like *Cimarron* (Ruggles 1931) and *Arrowsmith* (Ford 1931) ‘have almost no score, with music inserted mainly during the opening and closing credits’ (MacDonald 1998, p.25). As Steiner stated, ‘sound film producers before 1932 considered background music unacceptable, fearing that spectators would demand to know where the music was coming from’ (Gorbman 1988 p. 54).

It became customary to put ‘No Music in This Picture’ signs to attract audiences, as Oscar Hammerstein II observed in 1943 (Eyman 1997, p.349). The economic depression of the 1930s pushed the leading Hollywood studios to produce films which would have a better chance of immediate profit. The safe mode reflected an:

Integrated style in which neither speech nor music stood out as a special effect, the films of the early thirties subsumed sound in a “natural” way which supported action. (Crafton 1997, p.216)

Dracula appeared during this short period when producers were trying to establish a suitable film sound concept. Universal’s production of *Frankenstein* (Whale 1931) features a similar visual and editing style to that of *Dracula*, which leaves enough space for music underscore. However, contrary to *Dracula*, the seven months ‘younger’ *Frankenstein* already reveals some music underscore composed by Bernhard Kaun. No evidence was found during this research that *Dracula’s* producers were looking for an original soundtrack, except for the tradition of adding occasional sound effects such as winds, thunders, bangs etc., that according to Altman (2004), were also occasionally performed live during silent film

⁸ Please refer to the video and audio clips in the accompanying supporting disc for this paper.

screenings. Universal Pictures was probably still exploring how the film should sound, as Spadoni suggests *Dracula* is one of the first horror sound films (Spadoni 2007). The studio successfully used sound effects such as creaking hinges, banging doors, shrieking women, and howling cats in the production of *The Cat Creeps* (Julian and Willard 1930). Spadoni notes William Everson's discovery of the soundtrack of *The Cat Creeps* in the early 1980s has the female star's 'screams and sobs in the best Fay Wray tradition' (Spadoni 2007 p.56). *The Cat Creeps* was the studio's starting point for making a sonic world for future films, including *Dracula*.

Dracula contains examples of advanced sound editing features that became an archetypical form in future film productions. Instead of showing an actor delivering dialogue lines, the film editor Milton Carruth creatively uses off-screen sound to reveal the reaction shots. Other early sound films such as *Frankenstein* (Whale 1931) used a similar method of editing. It is thought that the reaction to a character's action has a deeper dramatic impact and may bring stronger emotional links with audiences (Bordwell and Thompson 2004). However this type of editing in *Dracula* causes an awkward effect during some scenes, because the audience notices the cut just before the actor is about to deliver a line, not well ahead of or during it (for example, when Count Dracula arrives to see Mina, he apologises for his late visit - 02V_Editing.mp4, or approx. 41 min 10 sec of the film)⁹. Another creative example of off-screen sound is the howling of wolves that is heard several times, but there is no actual animal seen throughout the film; even Count Dracula's transformation into a wolf is described with dialogue and takes place off-screen. The lack of visual effects can be explained by *Dracula's* tight production budget; also, the industry censorship would not allow scenes which contain explicit violence to be shown. McGlasson argues that the Universal's producers had engaged in a long discussion since 1927 about how to portray Dracula and how much of Stoker's embodiment of the bloodsucking nobleman could be shown on screen (McGlasson 2007). *Dracula's* creators exploited *acousmatic* sounds, which Chion refers to as 'sound that is heard without its cause or source being seen' (Chion 1999, p.18). The source for such sound is never revealed and, if it is disclosed, it manipulates and builds dramatic tension in the scene before it is shown on screen. In *Dracula*, Renfield's insane laughter is heard well before the character is seen, and it leads the audience's

⁹ It could have been the case that Carruth was using Lugosi's lines from another take and had to cut before the Count is seen delivering them. Otherwise, the sound from one take and image from another would instantly cause sync problems.

imagination towards visualizing its source. Another example is the howling of wolves, that is heard entirely off-screen throughout the film. The solution of using off-screen sounds to convey essential horror elements of *Dracula* (metamorphosis into a bat, wolf or fog) probably comes from its previous theatre productions, as the producers at Universal were ‘... most likely to study the cost-saving possibilities of the stage version over the book’ (Skal, 2004, p. 168). Due to the strain studio’s economic situation, the filmic effects were rather complicated and expensive at the time¹⁰. As for the sound effects, Crafton finds that engineers in the early 1930s became much more experienced in placing the microphones so that they picked up the voices of the actors isolated from the ambient sound (Crafton 1997). However the sound effects of *Dracula* most probably had to be recorded while filming the scene because the engineers had limited mixing possibilities in post production. As Salt notes, the sound engineers could record either dialogue or music on the soundtrack up to 1932, and all the sound effects were taking place while filming the scene (Salt 1985).

Spadoni (2007) and Skal (2004) argue that due to Universal’s tight budget and potential conflict between the film’s director, Tod Browning, and its chief director of photography, Karl Freund, the film production was relatively neglected. *Dracula*’s technical limitations in sound perhaps could have been improved by including close-ups in the critical dramatic moments of the film, when the main characters have to make hard decisions and drive the narrative. Indeed, looking at the film in comparison with other films of the period, one could find no technical reason why Browning could not have used more effective editing, especially in the second part of the film. On the contrary, Skal (2004) notes that due to personal reasons and the loss of his favourite actor Lon Chaney, Browning lost his strong association with the film.

In one story that circulated around Hollywood – possibly apocryphal, since it has no firm attribution – Freund became so fed up with Browning’s static ways that he finally just turned on the camera and let it run unattended. Indeed, there is one endless take in the finished film featuring Manners, Chandler, and Van Sloan that runs 251 feet, nearly three minutes without a cut, that was clearly meant to be broken up with close-ups and reaction shots. (Skal 2004, p.183)

There is a certain controversy over the extent to which the survived soundtrack of *Dracula* is the same as the audiences of 1931 heard. Crafton (1997) describes the sound effects and even

¹⁰ However, some European productions, especially German expressionist films such as *Faust* (Murnau 1926) or *Metropolis* (Lang 1927) employ sophisticated and well crafted visual effects for the time.

musical elements which are not present in the published film DVD by Universal Pictures in 1999:

The sound track [*Dracula's*] is rich in ambient effects (including the Count's "children of the night") that conjure a creepy atmosphere (analogous to Murnau's stock-footage inserts of weird nocturnal creatures). "As the scenes flash by," smiled Hall, "there are all sorts of queer noises, such as the cries of wolves and the hooting of owls, not to say anything of the screams of Dracula's feminine victims, who are found with twin red marks on their white throats". Hungarian-born Bela Lugosi's liquid, if sepulchral, voice had just the right mixture of seduction and Transylvanian chill. (Crafton 1995, p.371)

Dracula's original soundtrack (as currently available) has only three music inserts. The opening title music is a segment of Act II from Tchaikovsky's *Swan Lake* (Universal Pictures would often begin their horror films from early 1930s with this piece of music). The scene in the concert hall starts with a diegetic piece from Schubert's First Movement of Symphony No. 8 (*Unfinished*) and finishes with the Prelude to Wagner's *Die Meistersinger*. Besides the music box in the bedroom scene, when Lucy and Mina share their experiences of meeting Count Dracula, and several other places (the horse and coaches), the film's soundtrack plays either dialogue or a sound effect, but neither at the same time. This was a critical advantage for the preparation of the original soundtrack, because it allowed the separation of the soundtrack elements (either sound effect or dialogue) in the project.

It is interesting to note that the Spanish version of *Dracula*, directed by George Melford (1931), has been recently released on DVD. The Spanish film was produced simultaneously with the English production during night shifts with another crew. The two versions of the same film appear different in terms of sound application. Paul Kohner, the associate producer of the Spanish version, allowed more instances when the music was present in the film and even played constantly. For instance, almost the entire scene at the concert hall is covered with diegetic music coming from the concert. Unfortunately, hearing a concert piece under the dialogue makes it difficult to understand the lines. It seems that with more music, the Spanish version of the film, compared to its English counterpart, was slightly predictive of how the Hollywood studios were beginning to approach music in films. Later productions featured continuous underscore and intensive sound design; for instance in *The Most Dangerous Game* (Pichel and Schoedsack 1932) the performances are underlined with Steiner's grand orchestral music. This shows how transitional the year of 1930 was for the Hollywood system because Universal Pictures treated simultaneous productions of *Dracula* (in English and Spanish) differently. *Dracula* is unique not only as an early sound horror

film, but because of the nature of its soundtrack (by offering the possibility to obtain dialogue uncovered by sound effects) it affords a rare opportunity to create a new sound artefact. There are significant differences in the soundtracks of the two versions (English and Spanish) of the films. This research focuses only on the English version of the film.

The preparation of the original soundtrack for the research

The film and soundtrack of *Dracula* was taken from the DVD released by Universal Studios in 1999¹¹. The purpose of the preparation of the original *Dracula's* soundtrack was to obtain the cleanest possible audio signal (with no hiss, smooth in level and with comprehensible dialogue) that could be later used for creative purposes. This process was delivered using contemporary software plug-ins that involved compression, de-noisers and equalizers¹². Each step of the preparation process as it is described in Appendix B was balance-checked by the frequency analyser, because it assured that compressing and de-noising (with *iZotope RX*) gave desirable results. For example, the overuse of the audio restoration tools could create filtered, unnatural sound, which can be noticed by hearing, and most important, detected by a spectrograph (the deficiency of audio signal in frequency registers).

The analysis of the original soundtrack showed that there is no higher frequency than 7,000 Hz. Eyman finds that Vitaphone systems could achieve about 4,300 Hz while optical soundtracks could reach up to, in some perfect cases, 8,000 Hz (Eyman 1997, p.154)¹³. Besides, *Dracula's* dialogue contains constant hiss, the white-noise, coming from original optical soundtracks of the time. The hiss was produced as a result of the photoelectric system of recording which resulted in the fact that any visual 'noise' (e.g., the background grain of the film itself, dust, wear, etc.), would create unwanted sound. The background grain produced the hiss we associate with early sound film. Some of *Dracula's* scenes which were filmed in large sets (Concert Hall, *Dracula's* Castle Hall, Carfax Abbey) have natural long reverberation that makes it hard to clean the optical hiss. When a phrase of the dialogue is spoken in such an echoing environment, the dry signal mixes with the fading tail of reverberation. The cleaning of the optical hiss becomes challenging, because it is difficult to separate it from what needs to remain. One good example is the scene by the fireplace in the castle, starting at approximately 11 min and running through to 16 min. It seems that for

11 For reference to a particular version of the film and its soundtrack, the DVD disc code is 9032499.

12 Some contemporary equalizers are sophisticated tools that can compensate the loss of quality in a particular EQ band by processing new data from adjacent frequencies.

13 A healthy human is capable of the hearing range between 20-20,000Hz (Caldarelli and Campanella, 2003). The upper frequencies are attenuated over time, however, and the age of peak hearing is about 17 years of age.

some reason the audio engineers had to record Renfield and Dracula from a distance, consequently their lines have long reverberation. In addition, the dialogue in this scene has different audio qualities between the shots (03V_Complicated restoration.mp4). Therefore the preparation of the soundtrack in such a scene was only partially successful.

Another challenge for the de-noising was the inconsistency of hiss. Various parts of the film have a different quality of hiss, and it occasionally changes within a scene. For example, after the initial cleaning of sound in the opening scene, when the travellers discuss *Nosferatu*, due to varying hiss and the original sound of the coach and horse, it was barely possible to recover the dialogue line of Carla Laemmle, who plays a coach passenger and opens the film with the first line of dialogue. Sound engineers in the early 1930s simply placed the microphones on set or tried to come as close to an actor as possible without the camera filming the boom or its shadow. The problems arose when actors delivered their lines at different volumes, because quiet passages would have an unfavourable noise-to-signal ratio while the louder ones would cause overload (Crafton 1997). Such differences in sound quality required individual approach on the soundtrack preparation of each scene in *Dracula*, taking in mind particular reverb and equalisation attributes of the original dialogue phrases that determined the choice of de-noising parameters.

The development of computer technology provided the possibility to organise a detailed soundtrack preparation. It was impossible to control and adjust soundtracks with such precision before the digital age. Godsill and Rayner found that although computers allow the application of audio processing methods with flexibility, the digital domain creates unforeseen consequences if it is applied inappropriately (Godsill and Rayner 1998). Experts in audio restoration and signal recognition argue about the extent to which it is possible to restore old recordings. The mathematical information from the audio signal and psychological cognition of human hearing do not necessarily match. Cohen and Neoran's (2006) research demonstrates that the restoration of old audio material is rather a subjective matter, because human hearing is subjective. Human hearing is psychologically selective, instead of keeping the focus on the sounds to which we have become accustomed, our attention selects new sonic elements or those which have irregular, unexpected rhythmic or frequency patterns¹⁴. For example, people living by a train station usually get used to the

¹⁴ An audience can adjust to the hiss of an optical track if it is relatively quiet and continuous.

sound of passing trains and they do not even register their presence consciously. When working on computers, the sound of the ventilation fan fades out and we hear it only when we pay deliberate attention to it. Therefore the preparation of *Dracula's* soundtrack was also approached creatively: if the achieved result sounded convincing and reasonable (believable) in accordance with the black-and-white image, it was decided to keep it at an appropriate level of de-noising. On the other hand, too much cleaning could not be applied, because it caused an unwanted metallic quality in the sound (usually called 'squawks' in the post production sound industry). Leaving a certain amount of hiss in the original soundtrack achieved a better unity and balance between the cleaned audio elements (dialogue lines) and the background (relative original silence) in such a way that the altered and cleaned dialogue lines did not stand out when they emerged from the silence. Later in the creative process, the exterior scenes were subtly mixed with various atmosphere and ambient sounds that usually covered the presence of hiss. The indoor scenes were relatively more difficult to compose because they had fewer options for off-screen sounds that could be used to layer the soundtrack¹⁵.

Another problem with the original soundtrack is its inconsistency of information. The original film contains not only constant optical hiss but often omits parts of words. For example (04V_Restoring phrases.mp4), Harker says (44 min 15 sec of the film):

[Pro]fessor, vampires only exist in ghost stories. (missing the beginning of the word Professor).

or Van Helsing (approx. 48 min 20 sec of the film):

Please, please Mr Har[ker]...(missing the end of the word Harker).

It was possible to recover these samples by taking similar parts of the words from other places of the film delivered by the same character. The pitch bend tool was used to achieve the required intonation of syllables (usually to lower the articulation by 1-1.5 semi tones), because the context it was taken from was usually different from what was needed in the destination word (for example, to imitate an end of sentence). Subsequently, the adjustment

¹⁵ Outdoor scenes may feature wind, birds, and animals while indoor scenes are not that rich in choice, because they immediately question the origin of sound. Placing the sound of wind, thunder or rain during indoor scenes distracts from the action, therefore the hiss had to be covered using other creative solutions such as music or other emotive sounds.

of audio formants ensured that the included syllable fragment was adequate to overall speed of the phrase. Lastly, since the parts of the words were taken from other scenes, they had mismatching acoustic features. Therefore a slight reverberation (5-10% level) helped to gain acoustic ‘sameness’ of the entire phrase without feeling reverb presence.

There were several approaches used to obtain the best of the existing film sound¹⁶. The deficiency of the frequency range in the original soundtrack (predominant audio data of the dialogue is between 1kHz and 4.5kHz) challenged what could be achieved, while the addition of artificial harmonics in higher frequencies did not bring desirable results, because it sounded unnatural. Eventually, each segment of the film (usually divided by shots, sometimes scenes) that has particular dialogue qualities was transferred into restoration software *iZotope RX*. The entire process became essentially manual, making individual adjustments to the dialogue track. Similar methodology and equipment are used by Andrew Rose, who professionally restores old recordings¹⁷. The focus of this research was to prepare the soundtrack to the quality that would be appropriate for further composition purposes. This research does not intend to explore the restoration of old recordings fundamentally, as this is the scope of another science field that includes sophisticated mathematical methods. Due to the limited frequency range of the original dialogue, the new elements (film sound design in particular) had to blend with the soundtrack and form an acoustic unity. Therefore, it is evident that the nature of *Dracula’s* soundtrack influenced the way the new composition was created.

The implication of the revoiced soundtrack for the film

The prepared original (dialogue only) soundtrack of *Dracula* became the basis for further experimentation on the artefact. As the original soundtrack was mixed in mono, the additional sonic elements were also placed into a one dimensional trajectory (mono) for the purpose of maintaining consistency with the original material. The decision to mix the soundtrack in mono is based on the precedent set by Walter Murch, who reconstructed *Touch of Evil* (Welles 1958) using modern digital audio technology. Murch had a pristine negative and the director’s notes on how he wanted the final film to be post-produced. Although

¹⁶ A more detailed description and discussion of the soundtrack preparation process can be found in appendices B and C of this paper.

¹⁷ Sound on Sound provides a detailed article about Andrew Rose’s restoration methodology. The article is available at <http://www.soundonsound.com/sos/apr11/articles/andrew-rose.htm> [Accessed 09/2/2013].

Murch had the opportunity to mix the film in surround sound in 1990s, he mixed the revised version in mono, because it better suited the film style of the original period. Murch mentioned it was the ‘most unusual, artistically successful and emotionally gratifying undertakings I have ever been involved with’¹⁸. Similarly with *Dracula*, for stylistic consistency new sound elements have been mixed in mono, although the music and sound design have been composed in stereo and eventually mastered in mono.

Prior to the de-noising process, initial tests of placing music or sound on the original (un-prepared) soundtrack showed that ambient effects (such as exterior night, interior room atmospheres) or quiet music were almost inaudible. The optical hiss overwhelmed them and obscured the comprehension of certain phrases of dialogue. In addition, there was no option to compose a subtle music or sound design when the original hiss was present. Therefore the prepared soundtrack had a broader frequency and volume range that gave greater possibilities and freedom in composition.

As mentioned, the prepared dialogue of the film still contained original reverb, so new sound, especially literal, had to take this reverb quality into account in order to achieve cohesion between the new sound design and *Dracula’s* dialogue track. This demanded an estimated calculation of the reverb time (duration of fading tail), evaluation of the room size, and absorption of walls for the original dialogue in the places where it was most affected. After assigning such reverb parameters to the new sounds, the old dialogue and new soundtrack elements were eventually assimilated and this created a cohesive unity.

Mapping the film

Dracula is rich with visual and dramatic development in the first part, however the problem of its slow pace (after 31 min 29 sec of the film) is also emphasised in the papers by critics Skal (2004) and Spadoni (2007). The ‘Map of *Dracula*’ (appendix H) was created to organise the lay-out of the new soundtrack parts and how they can add dramatic value to the film’s narrative. In addition to the time-code and a brief description of the plot, the notes from Stoker’s book were added to give more details about the characters or their actions in the ‘Film/story details’ column. This column also included relevant sound elements or the emotional trajectory from Stoker’s novel that could be incorporated in the film soundtrack.

18 Murch, W., *Touch of Evil* (1958) at Reel Classics: Article: Restoring the Touch of Genius to a Classic. Available from: <<http://www.reelclassics.com/Articles/Films/touchofevil-article.htm>> [Accessed 18/1/2012].

As the original film had no score, the arrangement of the film's editing left sufficient space for the creation of new music or sounds. The 'Composed soundtrack' in the map was divided into three subdivisions that gave further details on 'On-screen', 'Off-screen' and 'Non-diegetic' sounds within the soundtrack. 'On-screen' sounds also helped to focus on the places that required technical attention, i.e. adjusting dialogue or inherent sound effects that come on top of the dialogue and, therefore, cannot be removed. For instance, the sounds of the horse and cart or sea storm merge on top of the dialogue (fortunately in this research there were remarkably few places where this occurred). In addition, this column signified essential Foley and sound effects that are needed in the soundtrack. In contrast with the other characters, Count Dracula's vampire nature is supernatural, therefore it was creatively decided that he has no Foley footsteps or literal sound effects throughout the film. 'Off-screen' and 'Non-diegetic' sounds were usually unrelated to any particular visible object on screen (for instance, howling of wolves or Dracula's transformation into a wolf or bat), as a result such sounds had more freedom for interpretation and could produce an emotive quality. Almost all (with few exceptions) on-screen sounds were removed from the original and replaced with my sounds instead, including Foleys, sound effects and ambiances. The few exceptions when the original sound effects from the film remained were the places where it was mixed together with dialogue and therefore were impossible to separate. Such places were the opening of the film when the passengers discuss *Nosferatu* against the background sound of the horse and cart (approx. 1 min in the film), Dracula's voyage on the ship (Renfield's dialogue is covered by a high pitched wind sound, approx. 17 min 40 sec), the killing of the flower girl on a London street (21 min 20 sec), and the music box in Lucy's bedroom (25 min 25 sec). Also in two instances, the doors in Dracula's castle (8 min 22 sec) and Carfax abbey (67 min 34 sec) were acoustically renovated and left in the film because they were adequately suitable within the context of the soundtrack. All the other Foleys (footsteps, doors, various other objects) and ambiances were completely recreated to make the film 'believable'.

The mono soundtrack was mixed from five mono audio tracks that were developed in two separate premixes. The sound design part that included audio tracks with treated original dialogue and sound effects (ambiances, Foley and sound effects) were developed and arranged in one pre-mix, while the orchestral score and electronic or musical effect audio tracks were created in another project. The final mix included four stems (dialogue, film sound design, film music, and convergent musical sound effects) and was finalised with an

appropriate mastering for film (selecting the general sound peaking -5dB; dialogues averaging from -12 to -18dB accordingly). The production of the entire film soundtrack for mono included over two hundred audio tracks that had distinct functions in various parts of the film. The complexity of such an arrangement between the two premixes (sound design separately from music) was dictated by the limitation of the digital audio workstation (DAW) processing power that demanded the most resources of the modern computer based studio¹⁹. The preparation of the dialogue, and all the composed sound design and music for the project are the research author's original work.

¹⁹ My studio ran two quad core PCs connected in a network at the time of the research. This enabled the outsourcing of the most MIDI orchestra samples from the slave computer. For the detailed description of DAW and software settings please refer to Appendix I

The composition process of the film soundtrack

Dracula resembles a stage production, as many of the scenes were taken directly from Hamilton Deane's theatrical production (Skal 2004). Since *Dracula* is considered a classic Hollywood horror sound film by Skal (2004) and Spadoni (2007), the decision was taken to look for a music score that would reflect the American music style of the late 1930s, however including the contemporary approach to composition that highlights the cohesion between sound design and music. Appendix D describes how the coherence between the choice of music instrumentation and film dialogue was approached in the project. The "classic orchestral set-up" was selected to implement the music ideas, while solo instruments such as harpsichord, piano and flute provided the desired emotional textures for the characters. The balance between the classical orchestra and other acoustic and electronic instruments aims to create an appropriate horror mood for the film and coherence with the sound design elements. On the other hand, there was no intention to score *Dracula* completely in the fashion of the 1930s (for example, in Max Steiner's style) where music is almost constant and reflects the emotional action transmitted from the screen, because such an approach would diminish the sound design role in the project.

A wide music and sound palette has been used in my soundtrack for *Dracula*. The horror genre calls for imagination and innovative treatment of the soundtrack, as most horror films heavily rely on precise sound design and music (*Ring* (Verbinski 2002), *The Exorcist* (Fredkin 1973), *1408* (Håfström 2007) to name a few). Horror films are about fear and disgust that call for an emphasis on fearful psychological experiences in human nature. Most films' visual composition and editing are designed in such a way that the audience fearfully anticipates the inevitable. Verbinski creates anticipation in the audience by hiding the cause of the cruel killings that take place after mysterious phone calls (*Ring* 2002). Takashi Shimizu's monster in *The Grudge* (Shimizu 2004) crawls towards the protagonist and ultimately builds tension before the resolution takes place. Huron (2006) comprehensively discusses in his research the effect of suspension. He finds that people enjoy music, because they build certain expectations through rhythmic and structured patterns. The repetitiveness forms psychological anticipation, and even though the anticipated event is unpleasant, it creates pleasure because it was predicted. Similarly in horror films, the audience expects a

character to face the antagonistic force, and although this conflict may be fatal, it imparts cinematic pleasure because such an outcome was expected. The soundtrack takes on an essential role in building up the anticipation of horror films. Both *Grudge* and *Ring* contain cruel supernatural powers that are mainly convincing because of the successful composition of sound effects blended with dissonant or anxious music.

Creating film sound and music separately is a typical practice in the professional film industry. Two different artists (sound designer and composer) usually work separately and unite their creative results in the mixing stage of the film. Barely any film credits show that the principal sound design or music was carried out by the same person. This segregation can be understood in part because of the different backgrounds of the composers and sound designers. Composers usually had a music education while film sound was most often regarded as technical work (Kalinak 1992, p.72). Exceptions exist because computer technologies have blurred the line between the two and there are cases when sound design and music are carried out by the same person (most often in student and low budget independent productions). The choice to revoice *Dracula* with a classical orchestral setting, with hints of the 'Hollywood style' of the 1930s, was based on the assumption that this soundtrack would be part of a larger, multi-channel composition. Since the final artefact explores contextual material placed within the soundtrack, it was important to give the film a transparent dramatic development of its own, and equip *Dracula* with a conventional film score that has an explicit narrative reinforcement of the images seen on screen. However, contrary to the traditionally dense symphonic orchestrations of this period, the music in my soundtrack is relatively transparent; therefore it can successfully incorporate sound design in the mix.

It was an advantage to work on the soundtrack from two different positions (sound designer and composer) because it provided an insightful experience. Being a composer by nature, I started to develop themes for *Dracula* and attempted to depict significant emotional lines in the film. I set the tone and mood for the film, checked how this worked with the images, and then decided where to take the film score. The process of applying instant soundtrack examples on the film before developing a detailed cue-map for the necessary themes was a practical decision, because it allowed me to see how many themes *Dracula* may need, and how music works with the film. Such improvisation with the musical material proved to be

useful in defining which music (timbre, melody, rhythmic and other music language elements) suited the film best. However, it did not help to achieve consistency of the music material because, without an actual plan, I tended to compose according to the mood and visuals of a particular scene, therefore losing the entire picture of the film. The video clip 05V_2009_Apr.mov shows an early attempt to solve Renfield's arrival in Transylvania which becomes too intrusive and distracts the viewer from focusing on the film story. This example has interesting musical material, but it faced the following drawbacks in order to proceed further:

- The music reflected the plot too closely, as the same emotional information could be understood from the action of the characters. There was no need to hear what could already be seen. Besides, the music was too late in terms of action, resulting in a 'dragging back' effect to the film narrative. This usually happens in cases when a composer creates music to fit the picture rather than developing themes in the beginning and attempting to match them to the film.
- The music material did not have consistency in terms of melody and texture. Instead of gluing the scene, fragmented music material (even though it resembled the film style and avoided the dialogue) generated confusion about the development of the narrative. Usually a more successful approach is to select the right texture and instrumentation for a melody and harmony and then to perform the required arrangement to a selected moment of the scene (adjusting the score to the dialogue, sound effects and pace of editing).

The next task was to compose music themes that could have coherent, identifiable melody, and supporting harmony. Usually, such themes in films are expressed through a distinctive instrumentation or sonority. Once it is established in the film, only a few notes from the theme are needed to provide an instant association with its purpose. Nino Rota's famous trumpet theme in his score for *The Godfather* (Coppola 1972) serves as a leitmotif to give an immediate clue to the established music. Similarly in the score for *Dracula* each theme was explored in terms of what musical instruments or sounds could transmit an appropriate and immediate symbolism.

As the sound and music tracks developed, another challenge occurred: the soundtrack contained too many simultaneous elements for mono output. The sonic information was

significantly overwhelming during the dialogue lines. In addition, there were scenes where sound design and music were aiming for the same effect, therefore competing in the wrong places and giving vague dramatic support. As *Dracula* is a static picture (nobody runs or chases in the film and the most of the drama is carried through the dialogue in interior scenes), music and sound were intended to create an intense atmosphere (such as a contemporary audience would probably expect from a thriller film). However, the obligation to the dialogue and scene structure influenced and usually limited the choices or decisions for a scene by providing only a few feasible solutions. For instance, the scene where Van Helsing explains Dracula's vampire nature (approximately from 43 min 42 sec to the moment when the maid finds Mina), or the asylum staff's discussion about the mysterious attacks on children (47 min 45 sec of the film) take place entirely indoors and are heavily based on dialogue. These scenes serve merely as fact exposition rather than driving the narrative and action of the characters. Therefore a constant switching between the audio and music software sequencer setups was essential to identify an appropriate balance between the soundtrack elements and search for the best, sometimes fresh dramatic development of the film.

Music and sound palette for *Dracula*

As mentioned above, a 'classic' approach to film scoring was employed, where film music themes attempt to guide the audience in the dramatic development of the story, and their identification serves to distinguish either certain characters or film themes. Certain key arguments are present in this paper in order to understand how *Dracula's* score functions in this project.

Gorbman (1988, p.115) notes that there are few comprehensive studies about the impact of music on film narrative: 'Although writers on film music frequently allude to specific parts of scores, exhaustive analyses of an entire score and its narrative functioning have been rare'.

Kassabian finds that:

Film criticism has historically been concerned with the visual and narrative aspects of fiction film, for the most part omitting any serious discussion of the score and its relationship to the film as a whole. (2001, p.37)

It was probably Eisler and Adorno (1947, 2005) who were the first authors to develop a thorough analysis of film scores and their function within films. Although it has been sixty years since the first publication (1947) of Adorno and Eisler's study, Graham McCann

confirms the core ideas about film music generated by the two authors as a fundamental analysis of the social, political and aesthetic significance of film music (In: Adorno and Eisler 2005). Eisler argues that composers should participate in the film process much earlier, preferably from the script stage. Instead of supplying music and reacting to the picture at the very end of its production, they should become a part of the creative film making process. Unfortunately, the Hollywood studio system became a 'manufactory' that was producing a 'cultural product for the masses', and composers had a certain position in the hierarchical chain of industrial command. This method resulted in rather standard and uninventive composing techniques that turned into established practices. Instead of progressing the narrative or searching for a particular identity, Hollywood scores of the 1930s and 1940s mostly reacted to what was being shown on screen. For example, romantic scenes would be accompanied by a sentimental string melody and foreign cities or cultures would immediately have folk music in the background; such universal styles would become common for almost all Hollywood film genres. Adorno and Eisler noted that this approach acquired certain predictability and monotony, and deemphasised the true potential of music: 'All music in the motion picture is under the sign of utility, rather than lyric expressiveness' (Adorno and Eisler, 2005, p.8). According to the two authors, such film music inherited two fundamental features from the Romantic Wagnerian and post-Wagnerian period. Leitmotif was taken from operas and other scenic (plot) based music compositions to support the dramatic presence of the main characters in movies. It was widely accepted for composers to possess a wide music palette to serve as a dramatic structure underneath the story on stage. As Adorno and Eisler (2005, p.5) put, 'the atomization of the musical element is paralleled by the heroic dimension of the composition as a whole'. Although Adorno and Eisler conceded that leitmotifs serve a profound dramatic purpose in operas, film producers accepted the term because it was easier to explain the need for music in film in their discussion with a composer. Contrary to films, plot continuity in staged theatrical productions does not have frequent interruptions and a disruptive flow of narrative, therefore music material has sufficient time for thematic development. Adorno and Eisler use the terminology of leitmotif with caution, because they believed that in filmic use the leitmotif was 'downgraded to pure musical lackey and became an ineffective duplication' (2005, p.6). Film composers such as Steiner, Newman, Korngold and others, quickly realised that leitmotif could be used to convey its immediate association or recognition to the audience, because the nature of film editing does not allow long

introductions or musical development. Historically American film studios were using various music resources to underscore movies (from popular songs in comedies to electronic music in sci-fi films in the 1950s), but leitmotifs and the persuasive power of a conventional symphony orchestra were never abandoned. Kalinak (1992) argues that it was probably John Williams who managed to establish instantly recognisable music material within film using the resources of the classical symphony orchestra. His score for *Jaws* (Spielberg 1975) demonstrates how a short motif with careful choice of instrumentation enhances the suspense in an intense and fast-paced action film.

The leitmotif Williams composed for the shark itself, a deceptively simple yet unnerving alternation of two notes, scored for eight basses and five trombones. (Kalinak 1992, p.190)

On the other hand, a leitmotif might consist of a simple musical or sonic gesture that does not need extensive musical development to establish its meaning. The selection of distinct timbres for characters can be a useful technique to signify their unique association. For instance, music performed on a piano may be linked to 'love' and 'compassion', while low electronic drones can signify 'destruction' and 'perdition'. When such leitmotifs are already linked to the characters, filmmakers gain an ability to manipulate different meanings of a scene by 'playing' other themes for the characters. This notion worked well for my score in *Collectress* (Buozyte 2008), when the piano signified 'love' and 'devotion'. The juxtaposition of the established 'love' leitmotif with the main character's traumatic expression through low drones explains the dramatic breakthrough of the protagonist at the end of the film, who previously was unable to experience emotions. The director purposely left the scene running for music, and the music successfully conveyed the message.

Adorno and Eisler suggest that due to the nature of film editing and presentation of narrative, one should instead use the terminology of tune than leitmotif:

The Tune consists first of all in the uninterrupted flow of a melody in the upper voice, in such a way that the melodic continuity seems natural, because it is almost possible to guess in advance exactly what will follow. (Adorno and Eisler 2005 p.7)

Kassabian (2001) also notes it is tune rather than leitmotif that should be used in film music terminology, because tune might be associated with smaller and more delicate music material (motif or phrase expressed through distinct sonority) than the usual comprehension of leitmotif in the classical music discourse. She argues that film music and tune serve three broad goals: identification, mood and commentary. My music themes in *Dracula* also provide

certain traditional music associations or gestures that help to illustrate the main film idea, and ideas about character. For example, Dracula's ancient nobility was linked through the sound of a harpsichord that plays a Baroque style theme. Also Renfield's madness was expressed through random piano notes, the seduction theme was assigned to the flute, righteous Van Helsing was expressed through a French horn. The 'Blood' theme's fatal texture is implied by a descending music melody that, according to Kassabian's 'identification, mood or commentary', signals an immediate association with Dracula's murders. Each theme for *Dracula* is discussed in more detail separately in this document.

On the other hand, a contemporary music commentary may employ allegorical and subtle nuances that are in contrast with the action or events seen on screen. It is fairly common for film music to convey a broader meaning of the story. It can serve to suggest social context, prehistory of the characters, or simply resonate with the core idea of the film. In some comedies such as *Old School* (Phillips 2003), the situations that the characters face are underscored with light-genre rock or pop tracks that give an entertaining feeling, but the actors create a dramatic irony by giving a serious and emotional performance. On the contrary, the funny and psychic Joker in *The Dark Knight* (Nolan 2008) is underscored (music by James Newton Howard and Hans Zimmer) with dramatic music which emphasises the wickedness and horror of this unpredictable character. Film music is used to contrast his sarcastic action that is sinister in its origin. For *Dracula* the music aims to give 'gravity' and 'credibility' to the characters' emotions and their interactions. Instead of mimicking the action on screen, the music themes aim to create an emotional trajectory just before or after the dramatic peak of a scene. For example (06V_mirror.mp4), when Dracula smashes the mirror, the music intensifies and reaches its peak before Lugosi actually strikes the mirror from Van Helsing's hands (41 min 47 sec in the film). Naturally, music helps to communicate the importance of the event without emphasizing or overexposing the action itself, and *Dracula's* new soundtrack reflects the established scoring practices of the late 20th century.

Much Hollywood film music was characterised by easy intelligibility as well as a harmonic and rhythmic symmetry that became the major practice to convey essentially clear emotional meaning through the classical Romantic period harmony. Rabiger (2003) notes that the most successful way to communicate the narrative meaning within a scene is to have actors

performing one emotion at a time. The synthesis of several emotions leads to confusion rather than subtlety of drama. Similarly, tonal relationship in classical harmony helps to focus on an emotional trajectory, because it creates an anticipation of what will happen next. On the other hand, Adorno and Eisler point out that film music should not aim for an unobtrusive presence, and there are plenty of examples when prominent and leading music helps the narrative. There is an established rule that dialogue is the central element of a soundtrack. Adorno and Eisler observe that the Hollywood studio system, due to economic reasons, focuses on the actor, so anything that may ‘overshadow him is considered disturbing’ (Adorno, Eisler, p.9). In fact there are situations when casting an intense score over the dialogue would cause a disturbing experience, because the audience gives priority to verbal information.

Gorbman (1988) illustrates how these broad guidelines are suitable for scoring most films. The audience should be unaware of the speakers, with no over clipping, distortion or poor signal transmission that would deflect their attention. Aesthetically, a film soundtrack should aim for the balance in instrumentation: a single note or sound element should not pop-out from a mix unless its purpose is for dramatic amplification. The main elements of the soundtrack - dialogue and literal sounds should be clear and intelligible compared to music and sound effects. Music has to submit to the volume level of the dialogue otherwise it can become too obtrusive and break the main rule of invisibility. The purpose of film music is to signify emotion or cue film narrative. As a powerful film language device, music is used to balance the rhythm of the film (the flow of viewing). The audience gets used to similar or repeated images. Variety might be achieved by including additional music in a scene. The presence of a new film language element (in this instance music) provides new information. The repetition of music serves to form dramatic unity.

The sonic palette of *Dracula* consists of on-screen and off-screen sounds, diegetic, and non-diegetic music. Film sound could be categorised by its nature belonging either to literal and emotive sounds, or both²⁰ that create the coherence between the sound design and music. The

20 It has become common to assert that all sounds in cinema are emotive while some of them also obtain literal function. Literal sounds help the audience to believe what is seen on screen (footsteps, sliding doors, dialogue). Emotive sounds suggest emotional context to the narrative, and as such are usually predominant in film music (Deutsch, 2013).

reconstruction of literal sounds such as Foley and ambient sounds²¹ had to match the quality of the original dialogue. The original dialogue has a narrow frequency range (up to 7kHz), so the new sounds required a similar adjustment, because modern library sounds or location recordings are high definition audio samples. While high quality ambient sounds could be used in most parts of the film (because their source is unseen), the effects of footsteps, door squeaks and other ‘on-screen’ sounds had to be equalized to match the quality of the original dialogue. Otherwise, the sound of Foleys would be disconnected from the character’s original dialogue and break the cinematic illusion.

The emotive sounds of *Dracula* contain both musical and non-musical elements²². For example, a melodic flute melody turns into a wolf’s howling, while Count Dracula’s main music theme played on the harpsichord morphs to a muffled obscure drone according to the mood and emotional gravity needed within a scene. Literal sounds are primarily described as *on-screen* sounds, and emotive sounds are usually expressed via *off-screen* or *non-diegetic* sounds²³. *On-screen* sounds, except for the original dialogue, were replaced and adjusted in most cases by sound effects taken from sound libraries or the author’s original recordings. Some of the emotive sounds were created by original recordings of flute, violin and double-bass performing sound effects rather than music notes. The continuous harmonics of the violin played in high frequency created a strong association with the notion of coldness and death (Dracula’s castle, Carfax Abbey, and Dracula’s murders). The harmonics of the double-bass served a similar purpose to the violin, as well as providing thicker sonority in the dramatic places in the film. The double-bass harmonics worked well to expose a stronger suggestion of Dracula’s threat. The recording of blowing air through the flute implied the connection to Dracula’s voluptuous wives, which echoes the idea of seduction in the film. The non-vibrato flute suggests ‘coldness’, and its mellow sonority evoked the notion of a ‘feminine vampire’. Emotive non-musical sounds were also created using synthesizers and library samples (altered piano, drones and pads) that linked closely to the samples of wind,

21 The sounds of the coach and a horse, for instance, can be described as literal sounds, because their absence would break the cinematic illusion, while the howling of wolves has emotive origin and its presence is imbued with the implication of a dangerous and frightening atmosphere.

22 In this project, musical sounds refer to the systematic association with a melody, harmonic scale or identifiable rhythm that is an accepted music concept in the Western culture. Therefore, non-musical sounds are those that lack connection to the systematic parameters mentioned above. However, although they are created as sound effects, using musical instruments (acoustic and electronic), the non-musical sounds still carry emotional signification because the audience assigns specific ‘emotional qualities’ to such sounds.

23 The ‘Map of *Dracula*’ in appendix H describes the purpose of each sonic division.

wolves, horses, sea and city sounds. The mix between natural and synthetic or recorded material served the same purpose of convergence in sound.

Once the map of the film was created, it was the right time to develop music themes and place them in the timeline of the film. A map of a film is a convenient tool to ensure that a composer does not lose the entire scope of the film while addressing details. The essential layout was marked in the sequencer program; therefore it was possible to organise the work flow of the project, which contained numerous audio and midi tracks, in an efficient way.

Although *Dracula* is considered a horror film, it has few film language elements later associated with that genre. Visually, *Dracula* shows no typical horror film symbols because the Count does not have monstrous features. On the contrary, many find Lugosi an attractive vampire dressed in a tuxedo with no sign of fangs (Skal 2004). *Dracula's* protagonists show little fear, helplessness or emotional anxiety. Instead, Harker's, Seward's and Van Helsing's behaviour reminds one of a detective's investigation and their actions are reasoned. *Dracula's* protagonists are not in real danger from the monster either. In contrast to Browning's film, Murnau's silent masterpiece *Nosferatu* (1922) is much more visually elaborate in the horror film style, and Graf Orlok's make up is a significant part of the film's horror effect. On the other hand, Skal is certain that it was Dracula's ambiguous appeal and 'emphatic white tie and black cape' that made the film memorable. Count Dracula is an atrocious killer that 'looks too much like one of us' (Skal 2004, p.4). *Dracula* was a perfect inspiration for many later thriller films about maniacs and serial killers that called for a thrilling rather than a disgusting atmosphere for the audience. *The Silence of the Lambs* (Demme 1991) is an excellent example which shows how its main antagonist Dr. Hannibal Lecter resembles everything that Lugosi's Count Dracula is revealed to be – an aristocratic, sophisticated heartless killer.

Count Dracula's psychological portrait could be described as a serial killer who has supernatural powers. Dracula manages to hypnotise people and telepathically control their actions, and such dominance over his victims usually causes their perdition. Although the film shows no disturbing images, it attempts to create tension in its dramaturgy. Since most of the action in the second part of the film takes place indoors, the soundtrack has to reinforce the plot and give the film an appropriate thrilling atmosphere.

The musical themes in *Dracula* are developed from the dramatic reflection of the film's plot and interaction between the characters on screen. The main antagonist of the film is Count Dracula. His followers or victims (Transylvanian wives, Renfield, Lucy and Mina) may also act antagonistically; however, their dramatic function within the film is entirely dependent on Dracula's behaviour. Hence these characters do not have independent antagonistic lines. Dracula is the only true antagonist of the film because his neutralisation immediately cancels out his influence on the others (Mina becomes instantly sane). Renfield's belonging both to the real life (protagonists) and realm of vampires (antagonists) creates a vibrant performance because his character has a proper dramatic conflict (contrary to the flat dramatic development of the main protagonists Van Helsing, Harker and Seward). The initial task was to create an appropriate theme for Dracula, i.e. its quality had to be suitable for the character's lines in the film. Music had to enhance the narrative and not disturb Lugosi's performance, while the theme's dramatic weight had to be equal to the rest of the film music.

Reflecting Count Dracula in film

The enormous attention devoted to Dracula in the film and television industry has resulted in him becoming the prime symbol of vampirism. Dracula is one of the most frequently portrayed characters in the mass media with over two hundred different film and TV productions that relate to him as the main or participating character, or incorporating the name²⁴. Dracula and vampirism have deep roots in various cultures.

Without knowing anything of the myth's origins, most of us can recite without prompting the salient characteristics of the vampire- how it sleeps by day, rising from its coffin-bed at dusk to feed on the blood of the living; its ability to take the form of a bat, a wolf, or mist; how it can be destroyed by a stake driven through its heart, and effectively repelled by garlic, wolfbane, the crucifix, or the power of the Eucharist. (Skal 2002, p.4)

Dracula shows his ambiguous character in Browning's movie. The Count greets the arrival of Renfield with courtesy and respect, yet his killer's nature can be always 'felt' in the air. Dracula also behaves cordially when he arrives in London. His aristocratic dignity in the concert hall reveals no danger whatsoever (he is polite and engaging). However, the film's plot clearly demonstrates the evil Count's intentions because just after arriving in London, Dracula kills a flower girl in the street.

²⁴ Typing 'Dracula' in the International Movie Database (www.imdb.com) prompted more than two hundred results that relate to or have this keyword.

a symphonic work²⁷. The 8 minute piece for a brass band employs the main themes from the film soundtrack (Count Dracula, Van Helsing and Mina) which provides thematic integrity with the rest of the soundtrack. Furthermore, it was more appropriate to use a live music recording to convey the realism of the performance. For the purpose of the stylistic cohesion of the concert piece, atonal music material to convey Renfield and other minor themes was not incorporated (see 11V_The Legend about Dracula.mp4, the entire composition of the live recording (performed on August 7, 2010)).

Dracula's character is also implied through sound design. The howling of wolves is connected to vampires in folklore (Skal, 2006). Stoker fairly regularly refers to howling dogs and wolves in his book and links them to the nearby presence of Dracula. Biedermann (1992) explores the representation of wolves in a European context and suggests that this animal symbolises evil spirits and a menacing threat. In the Bible, the danger the wolf poses for the flock of sheep has an allegorical meaning of 'the attack on innocent believers'. In Browning's movie, the characters often refer to a wolf as the source of the off-screen sound. Dracula invites Renfield to listen to the beautiful music of wolves in his castle (approx. 10 min 15 sec; 12A_The music of wolves.mp3), Van Helsing and Seward react to the howling sound of a wolf at 32 min 56 sec (13A_The wolves.mp3). To diversify the monotony of howling, the sound of wolves is blended with musical instrumental effects. The recording of air being blown through a flute without attempting to play notes gives an airy sound. A similar recording of the flute was made while trying to make a sound at different pitches. Various sounds were obtained while blowing air at different intensities and gently pressing random tonal holes. Musically it could be considered as a glissando effect between randomly adjacent notes. This sound effect resembled howling and was subtly mixed with the library recording of the sound of a wolf (35 min 08 sec; 14A_The wolves.mp3).

Van Helsing as the main protagonist

The main protagonist of Browning's film is Professor Van Helsing. He enters when the plot is well advanced and, by this time, Dracula is already established as an inescapable villain. The English doctor's early counsel around the table (a symbolic representation of Victorian society) provides no indication of the cause of Lucy's and the flower girl's death; they are unable to understand the evil they are facing. This creates a unique dramatic niche for the

27 The original Universal's soundtrack plays F. Schubert's The First Movement from Symphony No 8 (*Unfinished Symphony*).

main protagonist Professor Van Helsing. The Professor's mythical, quasi-scientific methods are as odd to Victorian society as the menace coming from Dracula. Castle (2002, p. 534) observes, 'Van Helsing's medical procedures resemble Dracula's vampirism'. In Browning's film, when Van Helsing indicates they are dealing with a vampire, he receives suspicious feedback through the facial reactions of the other gentlemen (the introduction scene of Van Helsing at 29 min 53 sec). Strangely enough, Van Helsing and Dracula have much in common. Both of them are foreigners, therefore Dracula's supernatural powers and Van Helsing's superstitious methods of treatment against vampires are incomprehensible to ordinary English people. According to Arata, 'Van Helsing and his tradition have polished teeth into hypodermic needles, a cultural refinement that masks violation as healing' (Arata cited Castle 2002, p. 534). Furthermore English society becomes vulnerable and dependent both on the evil Count and the mysterious Professor. While Dracula has hypnotic and supernatural powers, the Professor manages to establish his authority without the other protagonists' doubt or questioning. Browning shows Van Helsing's ultimate persuasive power over Seward and Harker (even though Harker is hesitant about the Professor's methods) quite promptly, when he manages to take control of the struggle against Dracula.



Figure 3. Browning portrays Van Helsing with similar gestures to Count Dracula. He insists on examining Mina with everyone's acquiescence.

Van Helsing's hand reminds one of a vampire (at about 37 min 45 sec), the act of the inspection is choreographed to be as threatening (in the style of this film) as Dracula's feast on the flower girl or Lucy. No record has been found to indicate whether Browning portrayed the ambiguity in Van Helsing's character intentionally, and why his visual symbolism is

similar to Dracula's. Van Helsing is also shown in an ambiguous way after he kills Dracula, as he expresses no fear or joy after he manages to overcome the dreadful enemy. It seems that the Professor 'knew' the outcome of the story well before it even started, which results in even stronger doubts about his real intentions. As Van Helsing remains in the cellar and makes Harker and Mina leave before the end of the film this probably implies that some task is still incomplete²⁸.

Nevertheless, Van Helsing's music in the movie soundtrack implies order, rule of law and justice, and it juxtaposes Dracula's threat. The theme is presented at the introduction of Van Helsing's character (29 min 53 sec; 15A_Introduction of Van Helsing.mp3) and consists of a solo melody played on the horn and backed up with church choirs in dissonant harmony. The melody line features subdominant and dominant chords that Huron's (2006) statistical analysis also suggests as 'strong, muscular and balanced'. The French horn brings its symbolic meaning from hunting and, along with other wind instruments, was widely used to represent the military. Therefore, the suggestion of Professor Van Helsing's theme and its arrangement implies his powerful spirit and search for justice (expressed through the French horn solo) in the background of a constantly changing and unpredictable environment (dissonant harmonies by choirs). However, Van Helsing's theme played on the flute emphasises the importance of wolf bane weed in the film. This variation on the theme appears twice (approx. 34 min 40 sec when Van Helsing explains what wolfsbane is and its significance in keeping Mina safe at approx. 51 min of the film). Furthermore, Van Helsing's theme is transformed again and recorded live using double bass harmonics. It is heard when Renfield pleads the other protagonists to follow the Professor's recommendations on how to destroy Dracula (approx. 45 min 10 sec). Lastly, Van Helsing's theme returns to its initial orchestration again at 52 min 36 sec when the Professor discovers Dracula's vampire nature and reveals the Count's intentions (16A_Van Helsing.mp3). This creates a classic three-part music structure (with reprise) that serves to establish Van Helsing's character in the film.

However, the main soundtrack representation of Van Helsing's character is established through the sound design of the wind blowing and a clock ticking. Biedermann (1992) finds the wind usually has a symbolic, invisible and substantial divine power. In the Western

²⁸ We could assume that Van Helsing is after Dracula's wives. However, as the action takes place in Carfax Abbey rather than the Transylvanian castle, there should be no one else in the cellar.

European tradition, the wind symbolises the Holy Spirit that is present during the service sacrament. Therefore, the decision to use the sound of wind to illustrate Van Helsing's character works well because the actual conflict between Van Helsing and Dracula never takes a physical form. Instead, it is based on an invisible, mental and telepathic battle (approx. 56 min).

Van Helsing's link to Dracula is conveyed through a similar selection of sound design elements - a clock ticking rhythmically and water dripping. Van Helsing's presence during the ticking implies the notion of time, urgency and life, whereas Dracula always wakes in cellars and secret places, and his action is symbolised with the sound of dripping water. Biedermann (1992) notes that underground water usually signifies primordial chaos and disorder. The two rhythmic sounds mix well in the soundtrack and the transition between Dracula's and Van Helsing's characters works well, especially when Van Helsing explains Dracula's conspiracy (from 51min 50 sec through approx. 52 min 30 sec). The culmination of the effect of dripping water takes place at the end of the film, when Harker and Van Helsing break into the cellar of Carfax Abbey at 68 min 7 sec (17V_Sound design connects characters.mp4 demonstrates the associated sonic link between Dracula and Van Helsing). The sound of drops of water during Dracula's rise in two previous scenes creates a repetition effect. The visual absence of the Count in the final scene builds dramatic tension, because it creates a feeling that the Count is present although unseen.



Figure 4. Van Helsing remains calm throughout the film. He does not show any emotional change even after Dracula's neutralisation. Furthermore, he decides to remain in the cellar as he has 'more things to do' after Harker and Mina leave.

Renfield

Renfield's theme signifies madness and unpredictability. Renfield used to be a normal Westerner, but when he returns from Transylvania to England he becomes frantic and obsessed with odd things, such as the need for living animals. His craziness is also portrayed visually – Renfield's frantic walking, whispering and sudden movements contrast to his restrained posture seen at the beginning of the film. Such alienation to traditional behaviour norms and psychic instability may also be suggested through music, especially dissonant harmonies, melodies and structures based on atonal compositional techniques. Renfield's presence in the movie is signified through an irregular melody line. Such musical uncertainty creates natural anxiety because it creates a frustrating effect of unpredictability (Huron 2006). Therefore, similar tension may be created to portray Renfield's character by composing a piano melody with random notes and pitches. However, the culmination point of Renfield's melody is expressed through the cluster choirs that are heard for the first time at 17 min in the film. *Lux aeterna for sixteen solo voices* by Gyorgy Ligeti (1966) achieves a horrific effect of awe in Kubrick's film *2001: A Space Odyssey* (1968) when mankind faces an unknown, more intelligent civilisation. Renfield's character represents the madness that comes from those who become affected by Dracula. Renfield visualises the horror of what happens if other people (Lucy and later Mina) come under the influence of Dracula. Renfield is like the living dead and is totally addicted to blood, while an atonal flute melody supports Dracula's influence on his dependent victims. In terms of music, Renfield's theme reaches its culmination at the Sanatorium (approx. 28 min 40 sec; 18A_Renfield.mp3) because this scene portrays the dramatic change in his character - a solicitor, who did not initially believe in Transylvanian superstition has become insane, requiring the lives of bigger and bigger living species.

The sound design for Renfield's character is achieved through whispering voices that imply his madness and secrets. Renfield knows that Dracula is the cause of Lucy's death, but most important, he is aware of the Count's dreadful plan to seduce Mina. Renfield gives hints to the film protagonists, and they are just in time to save Mina from her death. Whispering is the most prominent at 32 minutes, when Renfield is questioned by Van Helsing.

Frantic atonal music expressed through lush orchestration and variations in rhythm and timbres was appealingly used in Jerry Goldsmith's score for the film *Freud* (Huston 1962). The dark side of human unconsciousness is revealed through a wide range melody shifts and clashing unresolved harmonies that build tension. The irregular piano and string pizzicato notes accompany Renfield's character from the moment he becomes Dracula's slave. Renfield pledges his loyalty to the Count, when they both travel to England on a ship (at approx. 18 min; 19A_Renfield's transformation.mp3). As Renfield's need for living animals becomes stronger (he needs spiders - flies are not enough), the madness expressed through music also intensifies. Therefore, his theme connects to Dracula fairly early in the film because the Count is the cause of his disaster.

Mina and Harker's Love theme

One of the main purposes of Mina and Harker's theme in the film is to give a thematic opposition to the prevailing sound world that portrays Dracula's horror. In a traditionally constructed drama, the protagonists usually have to overcome many inner or outer obstacles in order to defeat their antagonists. The dramatic tension increases when the audience is aware of what would happen if the antagonists prevail (Booker 2004). The 'Love' theme suggests a beautiful, yet vulnerable relationship between Harker and Mina, while major harmonic scales contrast with the rest of the film's 'dark' and 'sorrowful' musical material²⁹. This theme appears in the bedroom scene (25 min 43 sec; 20A_Love theme.mp3) for the first time, and it initially contains only the harmony line, because the melody would distract from the dialogue (unfortunately, the music box music remains from the original soundtrack since it was impossible to remove it from the simultaneously recorded dialogue). Mina's music phrase of the love theme is established through the polyphonic technique of thematic exposition and development, while the arrangement of the composition segment takes account the importance of the dialogue (when Mina is telling her nightmarish dream at 36 min 34 sec; 21A_Love theme.mp3), therefore certain layers are partially removed or mixed subtly.

²⁹ It is quite speculative to suggest what feelings music may evoke, as music is interpreted individually and other psychological factors of listening have to be taken into account. Nevertheless, David Huron's (2006) statistical findings confirm that certain patterns relate to how we feel about music still exist. My professional experience as a composer confirms the idea that producers and directors usually seek a rather traditional (illustrative rather than abstract) music solution and emotional impact. The traditional (classical Romantic) harmonic development enables the audience to follow and understand fairly explicit emotional implications. Unfortunately, this practice in Hollywood has often become misused by imbuing almost every single narrative cue with a music texture that suggests the same emotionality.

The considerable musical development of this theme takes place at 49 min 30 sec when Mina confirms that she is turning into a vampire (22A_Love theme.mp3). Harker has to face the drastic truth - their relationship has to end because Mina has been infected by Dracula. The 'Love' theme is accompanied by a sequence of minor harmonic chords that suggest the frustrating situation for the characters. Since this scene is shot from one angle Skal (2004) suspects this was due to some personal tension between the principal cinematographer Karl Freund and film director Tod Browning. The music serves to emphasise the dramatic beats that are needed to drive the story³⁰. When Harker enters the scene, he attempts to invoke optimism by suggesting that Mina is going to live. However, Mina turns him down and insists that for Harker's own safety, he should not touch her. The next dramatic beat of the scene comes when Harker is completely rejected by Mina when she says that they should never kiss again. The tension is lifted by a transposing shift of the melody and harmony. This builds to a climax when Mina gathers herself (she wishes Van Helsing would uncover the truth but he retreats) and confesses that it is 'all over, their love, their future'. Harker faces the reality that Dracula has sneaked into their relationship, and their future is ruined. This is a sorrowful romantic moment, and the 'Love' theme, constructed on Romantic harmony, ends with a deceptive cadence (23V_Promise to Mina.mp4). Harker's frustration is implied again at 58 min 50 sec when Mina is ready in her 'wedding' dress for Dracula (24V_Mina turns to vampire.mp4). The music progresses and gains a dangerous intonation when Mina is about to turn into a vampire and attack Harker. The darker version of the same music texture is achieved using a thicker harmony accompaniment (essentially the same harmonic progression with added 9th and 11th chords). However, the 'Love' theme returns in its light and simplified orchestration version at the end of the film, when Harker and Mina ascend the stairs. It implies a happy ending to the story. Nevertheless, the last note performed by cello tremolo, suggests Dracula's threat may never be over (25V_The ending.mp4; 71 min 17 sec in the film).

Other musical material

In addition to the main themes, the soundtrack contains a considerable amount of other musical material that serves either as transitions between the main themes or becomes an

30 'A scene is a section of a narrative in which there is one clearly defined purpose and intention, the space occupied by a single predominant episode of dramatic tension, though contained within the scene might be a series of smaller steps or story beats' (Mackendrick 2005, p.47).

extension to them. For instance, a music passage connects two scenes at 1 min 45 sec (26V_Musical transition.mp4) and adds to the anxiety of Renfield's journey to Transylvania; similarly music has the same purpose at 17 min 25 sec to transfer from Dracula's castle to the scene at sea (27V_Musical transition.mp4). When the soundtrack for *Dracula* was being created, priority was given to the film's dramaturgy, reflecting the visual narrative, capturing the horror mood, and creating an adequate balance with the dialogue, therefore it was felt that the main film themes needed additional music support.

The 'Destiny' theme is an example of such themes. It opens the film and signifies the thirst for blood in the story. It reappears when Renfield cuts his finger and the audience is introduced to Dracula's true nature (approximately at 14 min 12 sec; 28V_Destiny theme.mp4). The 'Blood' and Dracula's theme interweave when Dracula's ship arrives in England. The newspaper headlines give an exposition of the strange events happening at the harbour, while the 'Destiny' and Dracula's themes develop and imply the growing menace of the Count. The 'Destiny' theme is also present when Dracula kills Lucy. However, this theme has a close link to Dracula's theme, therefore it has merely a supporting purpose to give the soundtrack variety, rather than gain independent status from the two Dracula themes.

The other minor theme, an airy female choir that emerges twice in the film (29V_Dracula's wives.mp4 at approx. 16 min and 30V_Lucy.mp4, 47 min 30 sec), is connected to Dracula's wives. Dracula's Transylvanian wives stand for the loss of youth and life, and their white dresses make them eternal brides. Lucy is also seen dressed in white as she passes the cemetery. The same musical motif implies that she has become one of Dracula's vampires. The relationship between women and Dracula suggests passionate elements in Browning's movie³¹. Dracula passionately looks at Lucy and Mina when the concert starts; also his presence at Seward's house has an apparent romantic texture, reminiscent of a scene from a romantic film rather than the horror genre (aprox. 39 min in the film). David Huron's analysis of the emotional significance of particular musical intervals confirms that the submediant range suggests 'airy, open, temporary suspendedness', and strong emotional (sentimental)

³¹ Skal (2006) among other authors hesitates over the romantic textures in Coppola's (1992) movie, because he argues that Stoker's Dracula is after blood and life only.

implications (Huron 2006, p.145)³². Since the Transylvanian wives never speak in the film, the female choir has been used to give them ‘voices’.

Each musical theme discussed consists of a relatively short motif that purposely has a simple melodic development. For instance, Count Dracula’s main theme has long notes circling around the tonic note with slight variations within the interval of sixth. Despite its atonal nature Renfield’s music contains steady rhythmic and dynamic development. Even the romantic ‘Love’ theme has a predictable melody and harmonies with no substantial culmination. The place where this music could take over (when Mina and Harker ascend the stairs at the end of the film) there is no chance for bold music development of the ‘Love’ theme, because the picture ends shortly after that. The purpose of limited musical expression was chosen due to the reason that the sound design elements (both literal and emotive) acquired more possibilities for convergence with such music. In contrast, the concert piece that was especially composed for the diegetic concert scene, contains few sound design elements due to its intensive compositional structure. Therefore although *Dracula’s* film music cues would hardly make an independent composition, they create an appropriate texture for dramatic development of the narrative.

³² Appendix E illustrates David Huron’s statistical analysis of tonality and its implications for perception.

The multi-channel composition of *Dracula*

The completed preparation of the film soundtrack provided a foundation for creating a multi-channel composition of *Dracula*. The topic of *Dracula* is rich in contextual material because it can be analysed through various aspects and angles: the notion of evil, otherness, morality, horror, folklore, culture, gender, social, historical studies etc. This section discusses the concept of the new artefact and its relation to the film.

The multi-channel composition becomes unconventional in this regard as it uses an existing feature film as an element of the new art piece. Browning's *Dracula* gains an original interpretation due to the new meaning it is given through the associations of the major cataclysmic events of the 20th century. As mentioned, the research takes *Dracula* and its prepared soundtrack in mono as an object to create a multi-channel composition. Among the usual composing techniques and composer's tools, that allow it to be independent, the soundtrack includes the *Requiem*. Traditionally a *Requiem* is a church mass for the dead. In this way, the artefact becomes an artistic device to suggest prayer against the evil that humanity creates. At the time the film was produced the consequences of the First World War were still conscious in the minds of many Europeans, while it was also the dawn of the two new brutal totalitarian ideologies establishing their power. Fanatic Bolshevik and Nazi political regimes cost millions of lives due to ideology, greed and fear. Adolf Hitler and Joseph Stalin managed to consolidate power and deceived millions about their real intentions. Like *Dracula*, Hitler and Stalin were able to mislead, seduce and kill those in their paths while their thirst for power allegorically is expressed by *Dracula*'s affection for blood. Count *Dracula*'s bite and ability to turn his victims into vampires implies the fanatical part of 1930s society that believed in the Nazi or Soviet ideologies and ruthlessly executed their policies without questioning or doubting the reason for such action. The masses marched and followed their leaders blindly, as in Browning's film when Lucy is passing through the cemetery thirsty for blood. The vampire infection was released, and, metaphorically, the cruellest social systems evolved with the foulest crimes against humanity committed by the two tyrants and their henchmen. Bela Lugosi provides striking visual similarities to that of

Hitler. His frantic look and gesture of the raised hand to control the crowd resembles Hitler's 'draculism' that he masterfully shows in controlling the masses in the 1930s. The film stylistically echoes the overall cultural fashion of the time to portray strong leaders, who autocratically use their authority to rule their nations. The admiration for 'strong hand' rulers grew along with the increasing negative effect of the economic turbulence (the Great Depression). The democratic countries were situated in the challenging circumstances of the 1930s. The outer glare of the totalitarian regimes created myths in the West, and the massive psychosis of fascism and communism were a real threat for the most liberal societies (Engerman 2003; Brent and Naumov 2003; Tzouliadis 2008).

The second theme of 'draculism' is devoted to the Soviet ideology and its cruelty. Joseph Stalin is another brutal leader of the 20th century, perhaps even more atrocious and ruthless than his rival Adolf Hitler (Courtois et al. 1997). Hitler claimed war would purify Germany and establish the rule of the Aryan race. Stalin, on the contrary, declared peace and an international union of labourers, which was initially accepted as a welfare policy in the West (Engerman 2003). Besides, since Stalin was among the winners of the Second World War, his political methods were never publicly questioned in the Soviet Union. Millions were killed in systematic repressions, exiles, interrogations and executions that even took place during the process of international justice at the Nuremberg Trial (McLoughlin and McDermott 2003). As Stalin was among the winners of the war, no one really brought his crimes to justice (Luban 1994). In the context of this film, it is possible with bold exceptions to make an allegorical connection between Stalin and Van Helsing, who, like Stalin, manages to consolidate power around him by threatening his own followers of the outside evil, embodied by Dracula. No-one is able to question the Professor's methods, and it seems he is the only one to protect the country from Dracula's threat. Although Van Helsing (Dutch) and Dracula (Romanian) act as antagonistic characters, both of them have much in common – powerful foreigners who are able to control others³³. Browning even provides visual similarities between Dracula and Van Helsing, which can be seen in Van Helsing's predatory leaning on Mina when he inspects her neck (approx. at 38 min into the film; Figure 3). The Professor acts ambiguously throughout the film, as he never exhibits fear of Dracula. On the contrary, Van Helsing forces Seward to relinquish all his power to him in the fight against Dracula; otherwise he will not be able to help save Mina. Harker is the last sceptic who

³³ Both Stalin (Georgian) and Hitler (Austrian) were also foreigners in their respective countries.

surrenders to the Professor's autocracy, and similar to the nature of totalitarian regimes, Van Helsing has unlimited freedom to manipulate Dracula's real threat. Symbolically, the Iron curtain of the Soviet Union is a good example of an isolated country being fed with various propaganda stories about the monsters who threaten the state from outside as this can be seen in the documentary *Stalin and the Man of Steel* (Kosh 2009). Indeed, the trio of Seward, Harker and Van Helsing create a sense of a closed community within the film story, and the outside world has merely no existence after the Professor is introduced. Van Helsing does not really seem relieved at the end of the film either, when Dracula is destroyed. Undoubtedly, Van Helsing's character has one substantial difference from Dracula, and his direct comparison to Stalin is therefore attenuated. Unlike Stalin Van Helsing had not murdered anyone and his performance in the film cannot be made historically congruent. Van Helsing's link to Stalin is purely an artistic choice, although some parts of his performance support the comparison.

It is here interesting to observe that when Bela Lugosi descends the stairs in the castle and greets Renfield at the beginning of the film, he wears a six-pointed medallion, very like a Star of David (approx 13 min in the multi-channel composition). Nazi propaganda escalated the notion of blood-sucking Jews in the 1930s, so it seems strange that the Jewish Universal confirmed such a striking prop for Lugosi's vampire in the film. Both the star and cape became iconic symbols for the portrayal of Dracula's character in Lugosi's performances, which the Hungarian actor even took to his grave (Lennig, 2003). The provocative correlation between blood-sucking Jews and the vampire, wearing David's star, also appears in other productions. According to Skal (2004), it was only in the 1980s, when the studios received complaints from the Jewish society, that any symbolic Judaic connection with Lugosi's established Dracula character in the studio's visual franchise was replaced.

These allegorical associations with the historical epoch are my artistic choices for portraying the film in a new light. Since this project is based on the artefact, the historical research or interpretation of certain events serve the purpose of creating the composition and analysing how an object (in this regard *Dracula*) can be used to create a new artwork. In this regard, although the research is based on the historical events, it does not provide chronological accuracy or reveal particular events, because this is not the purpose of this work. Further

discussion on the evil symbols reflected in the artefact provides a philosophical and historical context of Europe in the 1930s and 1940s, and how it relates to the composition.

The symbolism of malevolence in the artefact

Dracula, from a theological or philosophical perspective, is associated with many malevolent symbols that are established in the Christian tradition. Stoker reveals the prehistory of the Count, who once was a nobleman fighting for the freedom of his country against the evil other-believers. However the cruelty of Dracula was so dominant that, obsessed by dark powers, he became a monster. Based on the Bible, the fallen angels are those who, affected by pride, use their power for selfish reasons and drain energy from others (weaker ones). Instead of serving God on earth, they turn themselves into the devil. Fallen angels are often portrayed as blood-thirsty bats. They inherited hooves, tails and horns from cows. They smell strange and darkness is their shelter (Skal 2006). The danger is that, despite their wickedness, they can turn themselves into tender and polite figures when they want to seduce their victim. Stoker's *Dracula* closely resembles the archaic European tradition of devil symbolism. Dracula has frequent transformations into bats as he preys on his victims. Jeffrey Burton Russell argues that the modern world desperately longs for a clear distinction between evil and good and a sense of direction and meaning. He quotes Van Helsing who urges listening to 'wise men' in this age of enlightenment (Russell cited Hallab 2009, p.92). The belonging to malevolence in Dracula is enhanced through the Count's supernatural features. Dracula stands for the devil because he can control other powers of nature that usually are unavailable to mortals. Dracula's ability to turn into fog, a wolf, or hypnotise people and read their minds for malicious purposes makes this character supernaturally powerful. These qualities are also close to those of the devil. Stoker seems to gather a collection of major European folklore prejudices and superstitions about vampires. Biedermann (1992) notes that blood is a vital element for life and it cannot be substituted by anything else. Numerous vampire folklore stories are based on society outsiders, who drain the blood (or energy) of common people. Their existence on earth is evil because they kill for selfish purposes (Skal 2006). Blood also stands for race and purity. Dracula is an outsider in England and he spreads his evil 'eastern contamination' among English society (Riquelme 2002). In Browning's film *Van Helsing* easily identifies that Renfield has been contaminated and does not belong to the community any longer (approx. 38 min in the multi-channel composition). This creates a dramatic boundary between the society that Van Helsing wants to protect and evil in the character of Dracula.

Moral, philosophical and religious dualism based on the Western tradition is at the core of this multi-channel composition. The artefact is grounded in the interpretation of Christian values in the context of 20th century history. The philosophical background of the composition has been developed from the discourses of Biedermann (1992), Pickering (2001), Booker (2004), Peterson (1992), Riquelme (2002), and others who have analysed the dualism from various angles: symbolism, gender and social studies, literature, and religion. The question of evil and good is a fundamental concept, relevant from the times when Homo sapiens became social human beings. As social interaction and relationships among people involve morality, an indication of what is appropriate ethically concerns most societies in any historical context. Hence the question of goodwill versus malevolence becomes a dominant issue in European art, from the dogmatic expression of dualism in religious medieval artworks³⁴ to the polysemous expression of war tragedies in Pablo Picasso's painting *Guernica* (1937), during the same decade *Dracula* was produced. Art helps to make sense of human nature, explain social interactions and provide aesthetical meaning in the cultural context of the society. By using innovative expression methods, European artists cover sensitive issues about society during their period. The historical events of the 1930s and 1940s are no exception, because they drastically changed the political, social and cultural development of Europe. It also seems that historically, competition among people, nations and civilisations is natural. On the other hand, technological developments enable and increase the scale of atrocity, so that violence can be carried on a massive scale. It seems still incomprehensible how the holocaust or sovietisation could have happened in a culturally developed 20th century civilisation. Unfortunately, there is no ground to believe that humanity will not repeat these historical crimes or even exceed the extent of the cruelty in future, as can be seen in Edvins Snore's documentary *The Soviet Story* (2008). This is probably the reason why so many documentary and fiction films are still being made in Europe about the Second World War and the humanitarian crisis it caused. Recent history leaves unhealed scars in the lives of many Europeans. The consequence of the belief or disbelief in the new social systems resulted the deaths of many people. The persuasive power of cinema was turned into a propaganda tool that was used by the Nazi and Soviet regimes to

³⁴ For instance, the day of wrath exposed in the painting *The Fall of the Damned* by Dirk Bouts (1450).

portray a utopian future and hide the bloody side of the reality. The shining facade³⁵ of the Soviet Union is contrasted by the atrocities described in Alexandr Solzhenitsyn's *One Day in the Life of Ivan Denisovich* (1962) and documentary images from *Declassified: Joseph Stalin* (2006). It took more than fifty years to reveal documents which contained the appalling truth of Stalin's purges, terror and gulags. Sadly, the research for the documented Soviet slaughter also revealed that the modern Russian government has little or no repentance for Stalin's rule, as Tzouliadis (2008) quotes the Russian President Vladimir Putin, 'Russians have nothing to be ashamed of concerning the Terror'. Courtois (1997) provides evidence to show that the regime was probably one of the most brutal and cynical in human history, and it still needs a proper historical context. Fifty years of the Iron Curtain helped to hide the crimes against humanity. Unfortunately, contrary to the German contrition for their past, today few recognise the importance to learn the dark past of the Soviet communism. Therefore, the ignorance motivated by economic benefits relating to Russian exports of oil and natural resources cast a shadow over the core European value of human rights. The concern for democracy and future existence of a united European community that lacks shared fundamental values is expressed by the speakers in Edvins Snore's (2008) documentary. Hence, the multi-channel composition suggests both the totalitarian regimes were similar, and their crimes blend in nature. The menacing culmination³⁶ of the piece summons the audience to stay alert about present time and our future. A society based on human rights, free will, speech, and justice, is always jeopardised by the dark human nature that is able to reveal its killing and destructive power. The composition implies the growing emotional uneasiness and concern about the future of humanity. When the culmination reaches its peak followed by a nuclear explosion, parts of the original dialogue are played backwards at increased speed. This creates the symbolic meaning that the conflict between good and evil has timeless, infinite boundaries. Afterwards the visualisation turns into a black screen and the last part of requiem the *Libera Me* ends the composition.

The multi-channel composition clearly marks the entrance of the second, Soviet theme by including creative inserts of various historical audio archives. The speeches of Adolf Hitler,

35 For example, Grigori Alexandrov's *Tsirk* (1936) is a propaganda movie showing an American vaudeville artist, who with her Afro-American son flees from the United States to find a political and ideological shelter in the Soviet Union (USSR). The USSR is shown as the place that welcomes all international cultures. However, the historic reality was quite opposite, because several thousand Americans who emigrated for USSR during the Great Depression times had been systematically killed by the Soviet regime in 1930s (Tzouliadis 2008).

36 It is implied through the use of dissonant harmonies and a dynamic culmination.

Joseph Stalin, Harry Truman, and Winston Churchill appear at certain points in the film. Though they are modified, their recognisable presence creates an immediate link with the historical context. When Dracula arrives in London and walks the streets, it becomes an allegorical example of Hitler attacking Britain during the war. Air raid sirens sound, while Winston Churchill is giving his speech about the war ('we will never surrender'). Also, the multi-channel composition features sonic illustrations of important historical events or symbols (Nazi pre-war rallies, air-raids over Britain, war sounds, and the Soviet executions). These soundtrack elements have been creatively incorporated into the composition, making a balance with the film dialogue. The sound techniques and modulation led the composition to the main climax at the end with the desired structure and intensity. The entire multi-channel composition reaches the end when the last sounds of rumbling wind fade out.

The artefact reveals the connection between the previously discussed symbolism of malevolence and film in the following three notions:

- The repression of civil rights and the denial of freedom of speech. The totalitarian regimes required fanatic obedience. The Soviet and Nazi systems created unprecedented organisation of society, so the others (intellectuals, artists, Jewish, Slavs, business owners, homosexuals, handicapped or people unacceptable in other ways) considered by the two ideologies were excluded from society, and either socially, or physically destroyed (Brooks, in: *Declassified: Joseph Stalin* 2006). Allegorically, Browning's *Dracula* shows two characters who have no intention of making peace. Count Dracula would never give up killing, while Professor Van Helsing would insist on destroying Dracula at any cost. Their characters show authoritative and uncompromising qualities that are contrary to the liberal ideas of freedom and any aspiration to respect social (in USSR) and national (in Nazi society) variety.
- The uniformity of society was achieved through fear, because differences were not tolerated and led to fatal results. The total fear grew, because potentially everyone become a part of the rejected society based on subjective reasons, and therefore would be constrained or killed (Brent and Naumov 2003). The fear created cultural and humanitarian decline, and social trust was replaced by total suspiciousness. The psychological or physical tortures suppressed the will to stand for freedom, the

violence traumatized civilians and forced them to surrender and cooperate with the regimes. Dracula's victims, Renfield, Lucy and Mina, are turned into obedient servants that allegorically serve the ideology and their masters.

- The most atrocious consequences of the totalitarian regimes were the holocaust, Soviet purges, collectivisation, and gulags that resulted in the deaths of millions people. Humanity witnessed the most flagrant demagoguery, apathy and delusion about what men can do against each other (Brzezinski in: *Declassified: Joseph Stalin* 2006). Millions were forced into killing, raping and torturing, while millions were subject to violence. This is reflected in the artefact through Van Helsing's and Harker's breaking into Carfax Abbey in the last scene to look for Mina. They are searching for the living as if they were looking for survivors from the concentration camps. Recognising the terrible historical outcome is the dramatic culmination of the piece, and it is present near the end of the composition.

The creative process of the multi-channel composition

Since the early inception of sound on film, filmmakers have been looking for an immersive cinematic experience. A single loud speaker transmitting synchronous audio from behind the screen inspired engineers to develop the technology that would allow expansion of the aural panorama. Experiments with multi-channel sound date back to the 1930s when the Hollywood studio system established recorded sound on film as a standard practice in filmmaking. A further challenge for producers was to find ways of achieving a better quality of sound that could be accomplished through multiple speakers. This transition took place gradually from mono to two-channel stereo sound and later to surround sound (Holman 2000). Walt Disney used his innovative *Fantasound* solution to a visual and aural experience, which could be considered as a prototype of surround sound. In *Fantasia* (1940 Algar, Armstrong and others), the engineers paired three different microphone positions while the surround effect was achieved by mixing the different angles/directions of the same recorded material³⁷. At the time this complicated project proved to be a tremendous success; however, it also revealed the need for exploration into better technology in cinema surround sound (Holman 2008). However, not until the arrival of Dolby in 1970s did cinema theatres gain the frequency range and improved sound fidelity (Sergi 2004). Dolby introduced noise reduction, which enabled film makers to use relative filmic silence, while their stereophonic surround gave wider choices in film soundtracks. This development of film sound technology increased the possibilities, but Manolas and Pauletto (2009) argue the full potential has yet to be explored. Chion (1994) asserts that surround sound was never independent of the film visuals, and complicated editing was the main reason why spatial sound could not be used more imaginatively. Cinema surround sound technology is developing further, opening new horizons for creativity and inspiration. The introduction of Dolby *Atmos* has created a new cinematic experience; the setting allows sound localisation and playback precise accuracy thanks to the 64 channel system.

Since cinema theatres are relatively large spaces, the concept of ‘what acoustically works and what does not’ has been gradually developed by sound professionals. Traditionally the

³⁷ The detailed description of the system is described by Garity, W. M. E. and Hawkins, J. N. A., 1998. *Fantasound*, American WideScreen Museum. Available from: <http://www.widescreenmuseum.com/sound/fantasound1.htm> [accessed 20/2/2012].

dialogue track is placed in the centre speaker. If the dialogue comes from off-screen it might be slightly moved to the front left or right speakers. The main sound design and Foley come from the front left and right speakers, while the rear speakers are used to create ambience or sound effect purposes only (Manolas and Pauletto 2009). Music is usually heard in the front left and right speaker with possible natural recorded reverb in the rear speakers. Some film productions ‘place’ the audience in the middle of an orchestra. However the established practice is that rear speakers transmit atmosphere ambiences with occasional sound effects if these are required by the genre³⁸. The reason for such a film sound mix is to achieve a balance between what the audience hears in different theatre positions. For instance, overwhelming information coming from the rear speakers would bring discomfort to the back seats, because that would not be balanced with the main source of sound coming from the front. This project intentionally transmits sonic information from various speakers, so the audience seated in different parts of the auditorium or cinema hall experiences a range of multi-channel composition possibilities³⁹. The composition emphasizes varying aspects depending on the viewer’s position, while the soundtrack contains numerous encoded symbols that are discussed in detail in the ‘Map of *Dracula*’.

The first version of the multi-channel composition was designed to create a contextual sound world of *Dracula* from Stoker’s novel only. Although the 1931 film is vaguely connected to the plot of the book, there are aspects of the original novel that could be revealed in the soundtrack. For instance, the film opens with the carriage passing through the Transylvanian mountains, while the novel describes Jonathan Harker’s experiences of travelling on train in Eastern Europe. An analysis of the novel, in terms of what sounds Stoker describes or could be revealed as naturally present, was made so they could be placed in the multi-channel composition and form a contextual relationship. However the drawback of this method was that few such sounds were described (apart from the abundant presence of wolves howling), so most of them had to be creatively interpreted. Stoker reveals emotionally captivating moments of *Dracula* travelling in England as fog. The intention to make a film-length composition with only the sounds associated with Stoker’s novel was challenging and limiting. For example, in the composition the sound of a train is heard (suggesting Jonathan’s

38 Holman (2008) quotes Gallup poll for Consumer Electronics Association that found about 2/3 of listeners prefer a perspective from the best seat in the house, compared to about 1/3 that want to be ‘in the band’.

39 Please refer to the Multi-channel composition channel map in appendix H of this document.

voyage in Eastern Europe) while the opening of the film actually shows the approaching horse and cart. In this way one could vaguely associate the soundtrack's reference to the book. Although this practice proved to be insufficient, it also confirmed that interesting results could be achieved in *Dracula* by applying surround sound unconventionally. The 15-minute experiment (31V_15 minutes of the initial contextual soundtrack.mp4) showed that a more detailed plan of what needed to be accomplished in the composition had to be created. Therefore a column in the 'Map of *Dracula*' described the concept of the multi-channel composition and its delivery in detail.

The further revision of the methodology concerned which sounds should appear in the front or rear channels. The initial design, to put a new contextual composition (unrelated to the film story) both on the front and rear arrays of audio channels, caused confusion. The prepared original and multi-channel soundtracks blended in the front channels, and it was unclear whether the sounds belonged to the film story or implied other meaning (although the contextual sounds had no intended synchronisation with the film). Therefore the multi-channel system was used in such a way that the dialogue and film related music remained in the centre channel; the film sound design was divided between the front left and right speakers, which made it possible to identify it acoustically as the diegesis of the film world. However, the other sound elements of the composition were spread across the multi-channel system, mostly the rear speakers. It became apparent that putting sounds in the front speakers, especially samples containing verbal information, created an unwanted psychological link to the images seen in the film, therefore they required either subtle mixing or, even better, avoidance. For instance, the composition illustrates a political execution in the Soviet Union described by historians such as Brent and Naumov (2003), and Courtois et al (1997) from a victim's point of view: footsteps are heard in the background, then the killer loads a bullet and shoots the victim in the head. The dead body falls down, the executioner leaves. This illustration appears in the film at the moment when off-screen Van Helsing leaves the conversation with Mina (approx. 61 min 55 sec in the multi-channel composition). It was necessary to arrange the compositional elements in such a way that the audience would not unconsciously connect the illustration with Van Helsing's footsteps, which would be misleading in relation to the film plot. When Van Helsing leaves Mina on the terrace, he also gives dramatic space for the upcoming scene between Jonathan and Mina. However the multi-channel composition suggests a contextual relationship with the events seen on screen.

The illustration of an execution in the rear speakers and Mina's confrontation with Lucy's vampire could refer to the witnessing of the Second World War massacres and atrocities. Hence, the front speakers were used to convey contextual soundtrack only in the instances where it would not be confused with the film story. The original soundtrack from the centre and the contextual material in the rest of the speakers interrelated with each other, providing individual storytelling, while their combination created a contextual relationship.

The multi-channel soundtrack attempts to expand the universe of the composition both in time and space. The contextual composition elements are present beyond the visual diegesis of the film and, among other sound elements, they suggest imaginative aural illustrations to the audience. The multi-channel composition categorises the sounds by their origin.

- Verbal sounds have their direct semantic meaning, while their emotive expression becomes the secondary objective. For instance, the phrase 'the blood is the life' was chosen to suggest the global appeal of Dracula's threat. The reading of the phrase in nine major languages (from ancient Greek to contemporary Chinese) emphasizes the vital importance of blood for humankind, and hence contextually suggests Dracula's threat is equally dangerous for all cultures in any historical or social context (starting from 19 min 50 sec in the multi-channel composition). The verbal sounds originated from either the film soundtrack or were derived from other sources (for instance, the nine translation samples of the phrase 'the blood is the life'). Other sources included quotes from Stoker's novel, extracts from Hitler's, Stalin's or Churchill's speeches, Soviet propaganda phrases and the Nuremberg Trial. However the verbal segments were also taken from the film dialogue and, with the help of the composition techniques and placement other than in the original context, created a different relationship with the film. For instance, Dracula's phrase 'I trust you kept your coming here a secret' is used to manipulate and create a sonic segment from the single word 'secret'. Placed to coincide with Renfield's and Dracula's conversation, this piece suggests the ambiguous meaning of Dracula's intention (approx. 17 min in the multi-channel composition). Instead of the direct suggestion of the film plot, that Dracula hides Renfield's arrival, his true intention is to conceal his vampire nature. Allegorically (for the multi-channel composition), Dracula hides the malevolent policies of the totalitarian regimes that will cause Renfield's submission (perdition).

Such compositional segments of the verbal samples also combine with non verbal sonic elements.

- Non verbal sounds suggest a referential implication to the chosen (1930-1940s) historical or culturally established and recognised context and icons. When Dracula arrives in England (approx. from 27 min 30 sec in the multi-channel composition), the sound of air-raid sirens mixes with medieval church bells, which both suggest the historical evolution of how the Europeans expressed their social warning of danger. Similarly, Hitler's speeches were altered to the extent they lost the direct semantic meaning, however the intonation was recognisable and created a strong historical reference to the era of the 1930-1940s. Some other examples include the sound of marching armies, guns, explosions and the Second World War machines; the illustration of the victim's execution in a cellar also contains sonic symbols associated with the historical context of the composition – the sound of a gunshot, soldiers' heavy footsteps and the agony of a man's death.

These sound sources were included, accompanied or interacted with the musical element of the multi-channel soundtrack composition that also seeks to form a dialectic relationship with the film. Primarily the prepared film soundtrack contains the music that serves the film plot, and the multi-channel composition uses it in the instances where the film attracts the main focus of attention. Contrary to the crafted balance and mix between film dialogue and contextual verbal samples, the contextual music contains few synchronised connections with the film, because it is assigned for two different purposes⁴⁰:

- 1) Musical accompaniment required to provide an additional emotional context or develop the dramatic meaning in the movements of the multi-channel soundtrack composition, or connecting its separated sections⁴¹. These segments or movements have their own structure. The sounds included, for example, granulated speeches by Hitler and Stalin, and the introduction to Soviet propaganda, required their own particular compositional solution that music techniques helped to achieve;
- 2) Music reinforces and gives reference to the historical context or philosophical implication of the composition. For example, the historical context is superimposed

40 One of the few examples when the multi-channel composition and the revoiced film soundtrack achieve synchronicity is Renfield's attack on the maid when everybody rushes out to find Mina (approx in 58 minute of the multi-channel composition).

41 Please refer to the 'Map of *Dracula*' table in appendix H for a detailed discussion of the multi-channel composition implication.

through the excerpts and motifs of Soviet propaganda music, which includes haughtily up-lifting orchestral and male choir intonations delivered through the extensive use of subdominant and dominant intervals, and a marching rhythm played on timpani and snare drums. The militaristic engagement is increased by the presence of the trumpet, which was also the leading instrument in Soviet youth organisations. This music language palette contains iconic symbols that imply the referential connection to the totalitarian societies. The philosophical dualism and eternal fight against evil is suggested through the conceptual use of the *Requiem* genre, which, in essence, becomes another composition layer in the multi-channel composition. The implication of the *Requiem* parts is discussed in detail in a separate section.

The diagram below illustrates how the multi-channel system delivers the composition. The front speakers are mainly devoted to the film diegesis. The centre speaker contains the film dialogue, the left and right channels place emphasis on the film's sound design. The decision about how much of the soundtrack is present in the front depends on the intensity of the film dialogue and dramaturgical development of the piece (whether the composition reaches certain dramatic peaks or downfalls). During the *Requiem* parts the front left and right speakers accompany the rear channels.

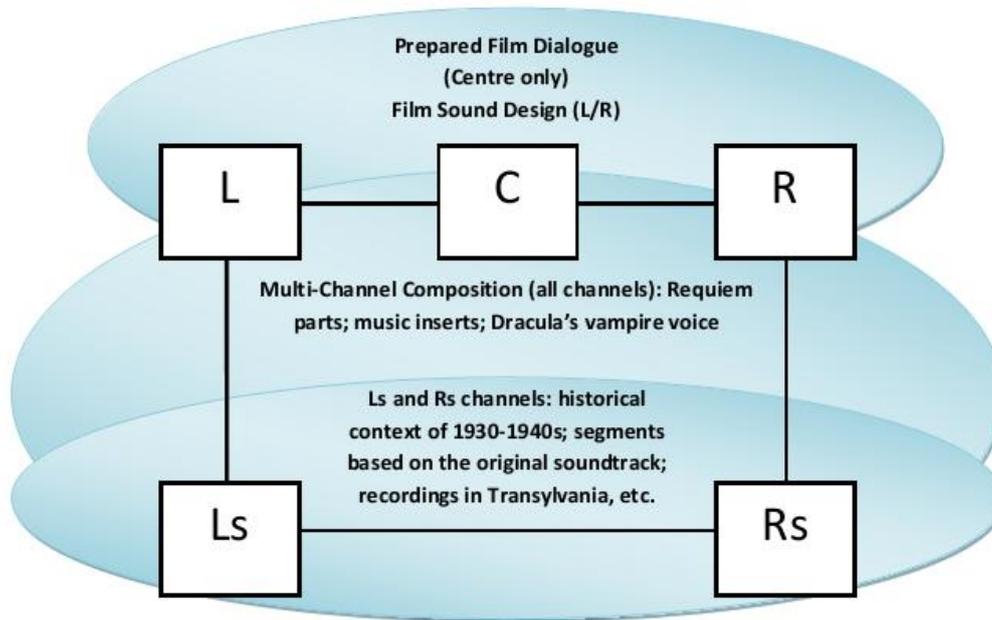


Figure 5. The Multi-Channel Composition Channel Map.

Since there are several simultaneous sources of information in the project: the film images, original dialogue, new film soundtrack (music and sound design), and the multi-channel composition, it was wise to use a limited range of aural elements, so the audience would still feel the homogeneity of the style. The limitations of expression did not interfere with creativity. On the contrary, having selected the sound palette it helped to concentrate on the creation process and look for the compositional links throughout the piece. Hence the following sound sources were used in the project:

- 1) The original prepared dialogue track and the manipulation of it;
- 2) The original recordings in Transylvania (current day Romania) completed in May, 2010 (the same days of the season and location Bram Stoker originates his story);
- 3) Recorded quotes taken from Bram Stoker's *Dracula*;
- 4) Historical audio archives to contextualise the 1930s-1940s.

The structure of the multi-channel soundtrack composition was arranged in such a way that the audio material would not obscure the focus of the film. None of the film's original dialogue has been removed even though there are places where tracks play simultaneously and create a polyphonic relationship. For instance, a variety of Renfield dialogue uses

elements of contrapuntal technique, which in this case is the repetition of the phrase (canonically) at a different pitch, granulated by a synthesiser; sometimes the speed is adjusted or even additional music compositional tools (vertical inversion and interpolation) are applied. This setting helps to achieve the complexity of Renfield's character, when using his own dialogue lines; the change of their intonation and quality create new features in his character. Although the sound from the multi-channel system is unrelated to the film narrative, it does not conflict with the film soundtrack. Otherwise the opposition of the soundtracks would distract from following the dramatic meaning, and would make the piece harder to comprehend. For instance, the blood analysis by doctors, in a figurative sense, suggests the Nazi political rallies and rituals to test the nation's purity in 1930s, while Van Helsing, who positions himself as the saviour of humanity, is allegorically linked to the misleading position of atrocious Stalin, who stopped the Nazi expansion. The original prepared dialogue, with the new score in mono, remains in the composition linking both soundtracks. However with these new sounds contextualising European history from the 1930 to the middle of the 1940s, the film plot supports the new artefact and provides a different context for the multi-channel composition.

The multi-channel composition employs one screen that projects the images of the film. The emphasis is put on the soundtrack and how the contextual material influences the way the audience reads the composition. Although the original idea was to employ four screens for the installation, eventually it was decided to avoid multiple screens. The reason for retaining a single screen was to reinforce the audience's focus entirely on deconstructing the soundtrack, which is the primary objective of this research. On the other hand, it became apparent that a single visual source ultimately created the main visual focus of attention, and it was impossible to ignore or escape the dramatic line of the film. In other words, although the soundtrack composition suggests the film contains unrelated material, the audience's focus remains on the film, and any substantial material that conflicts with the film is regarded as disturbing.

The dramatic opposition to Dracula's evil is expressed through the attempt by the Western democratic countries to bring justice and restore freedom. When Count Dracula lands in England (allegorically attacking it), there is a clear intention (through the voice of Churchill) to fight the invaders back, which creates a plausible dramatic conflict in the piece. The

Nuremberg Trial, towards the end of the composition, is another instance of historical justice for crimes against humanity. Controversially, the outgoing trains carry thousands of exiles to the Soviet concentration camps, while Stalin is representing 'justice', followed by the fading painful lament of a woman lost in the wilderness. So many people have suffered as a result of the War and the tyrants, therefore humanity prays for salvation. Allegorically, during the Nuremberg Trial, Van Helsing drives a stake through Dracula's heart and puts an end to Nazism in Europe, however Stalinism remains.

At the beginning of the composition (before the film visuals) the soundtrack conveys the alien world of Dracula. The sounds feature high pitched whistling and low rumbling winds that suggest a vast lifeless wasteland caused by humanity as a result of the Second World War. Dracula is linked to these events as he is essentially a vampire, an un-dead creature who seeks the blood of the living. The soundtrack palette during the black screen sets the mood for the entire composition. The precedent to establish a certain emotional mood or philosophical context before the film with music was set by Stanley Kubrick. He opened *2001: A Space Odyssey* (1968) with György Ligeti's *Atmosphères* (1961), which is heard for several minutes before the main titles. Stanley Kubrick used existing compositions by Richard Strauss and Johan Strauss, Aram Khatchaturian and György Ligeti in the film, which are strong concert pieces with distinct styles and music languages. Kubrick carefully sets the appearance of the referential music, mostly having no music during the dialogue. In addition to creating an emotional mood, the music in his film is given an important narrative function, suggesting the philosophical implication of the evolution of man.

The inclusion and narrative weight given to the referential music is also suggested in the soundtrack composition of *Dracula*. Though all the music material is the author's original work and does not contain external referential sources *per se*, the selection of the *Requiem* liturgical texts suggest verbal references. The diagram below demonstrates the visual plan of the multi-channel composition and how the instances of the *Requiem* suggest a contextual relationship with the film. The flow of the film is divided into essential film narrative segments (on Dracula's ship bound for England before the sea storm, Mina's surrender to Dracula's embrace, and after Mina's confession when she became a part of Dracula's vampire realm). The film turns to black (stops) during the intermediate segments. These are

the sections when the multi-channel composition is given space to imply the philosophical dualism via the music extracts from the *Requiem*.

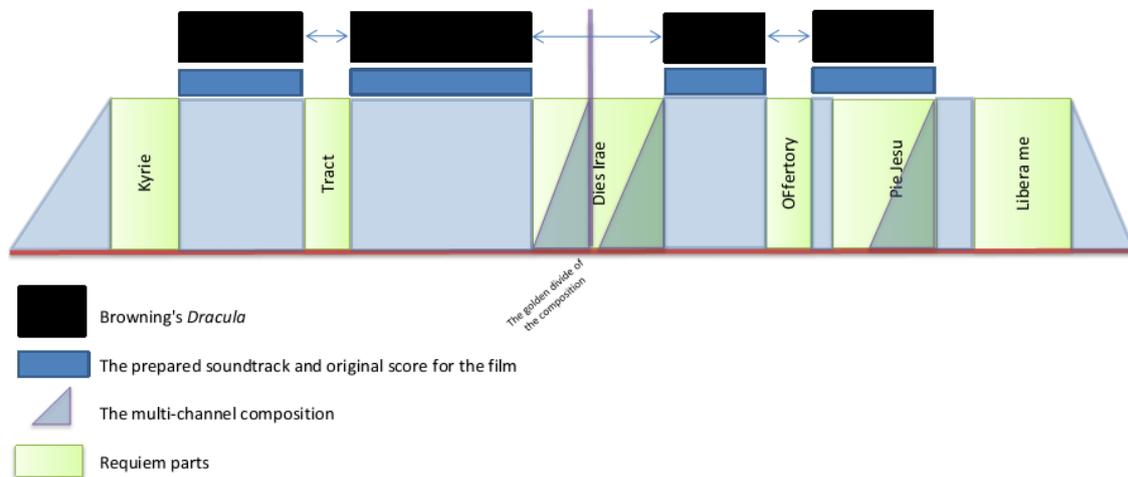


Figure 6.The visual plan of the multi-channel composition.

There are several reasons why most of the *Requiem* extracts appear on a black screen. These independent music pieces in the composition had to address several subjects. The first concern was that the audience may have difficulty decoding the key symbols of the composition. Solely audio references created multiple complicated layers and links between *Dracula* and the implied historical context. The complex *Requiem* parts were overwhelming if they were presented along with the film. Secondly, although the contextual soundtrack may be explicit and the audience could be aware of its philosophical implication, the pace of the film slackened in its second part due to prevailing dialogue, vague action on screen, and predominance of interior shots. Audio compositional choices alone could not break the visual stagnancy and therefore held back the flow of the multi-channel composition. Hence, the soundtrack composition attempts to compensate for the slow progression of the later part of the film by increasing the overall presence of the contextual elements. The visual interruptions (fading to black) help to sustain the dramatic development of the multi-channel composition and prepare the audience for the main climax towards the end of the piece that comes together with the *Pie Jesu*. The multi-channel composition contains a two-part structure with the golden divide in the middle of *Dies Irae* (please refer to the visual plan of the multi-channel composition for a graphic illustration).

Similar to the audio palette selected for the soundtrack composition, the visual part of the artefact employs an additional image, a granulated Dracula still from the film that appears at the beginning of the piece. It sets the style for the composition and shows that this performance is not a mere revoicing of the film soundtrack, but instead the film is expanded into a larger art piece. In this way the visual interruptions of the film during the *Requiem* parts become more natural and acceptable.

The implication of the *Requiem in Dracula*

The desperate consequences of the war encouraged mankind to seek salvation in prayer. A number of Western composers have expressed redemption via liturgical Christian material, especially the *Requiem*, the service in memoriam for the dead. The liturgical text of the *Requiem* dramatically describes man's existence on earth and the seeking of spiritual salvation after death. The *Requiem* becomes a bridge between the world of the living and those who have passed away. It connects with the notion of Dracula in terms of what moral choices and values lead to the defeat of evil. The choice of the *Requiem* in this project draws a line between the allegorical worlds of evil and good. Benjamin Britten's *War Requiem* (1962) and its musical language, which incorporates dissonant, cluster chords, and juxtaposed Wilfred Owen's poems into a grand symphonic, choral and quasi-operatic work, is one of the examples that inspired the search for a similar musical language of the *Requiem in Dracula*. Chaos and perdition, in the rich harmonic arrangement of the music material, lead to the resolution when all the major themes come together in the climactic ending, and the choral 'post-scriptum', similar to the tragedies of ancient Greek dramas, sums up the compositional meaning of the piece.

There are five parts chosen from the *Requiem* that use the same compositional techniques and sound palette as the rest of the soundtrack. The *Kyrie* appears at the beginning of the composition, just before the film starts. A female voice singing 'Lord have mercy, Christ have mercy' sounds isolated in space, and its melody has no particular trajectory. Instead, its atonal presence signifies perdition, post-modernistic deadlock of human beings who have lost their spiritual identity after the Second World War. The singing voice is accompanied by its double, transformed electronically to suggest lifelessness. The second theme also implies the 'shadow' that follows us everywhere and reminds us of the sins and crimes committed by humanity. Sigmund Freud (1923) considered the powerful unconsciousness as the dark power

of destruction that humanity inherited in the course of evolution. The *Kyrie* embodies the internal dualistic conflict within a human soul – greed and egotism versus compassion and modesty. The behaviour and actions of a human being often lead to ambiguous outcomes. Although people seek positive social changes and technological influences on life, the outcome sometimes turns out to be the opposite. Technology can be used for killing, and social philosophical ideas can lead to totalitarianism. Unfortunately, the history of the Second World War shows that humanity committed its cruellest crimes while striving for morally based social utopias. The political radicalism united millions in a quest for justice, however the process was perverted and ignited social movements that killed those who disobeyed, or were simply socially, nationally or racially different in any way. The singing voice in the *Kyrie* suggests a timeless musical structure, as the crimes committed in history have no time limitations. The notion of infinity in this piece is delivered through the absence of apparent pulsating rhythm or motif repetitions. The movement fades out in space at the moment when the film soundtrack takes over.

The *Tract*, the next *Requiem* movement, creates the first cut of the film which appears when Dracula attacks Renfield in his castle (22 min 28 sec in the multi-channel composition). This *Requiem* movement employs whispering - a technique that also appears to convey Mina's hypnotic text from the novel. Whispering signifies secrecy, prejudice and danger, and as such is an expressive technique to convey the threat coming from the totalitarian societies created by Hitler and Stalin. There is no instrumental music material *per se* in this movement, which suggests that an emotional impact can be also achieved using the spoken word only. As the composition progresses, the liturgical phrase 'lux atarnea' intensifies, distorts and transforms to the extent it is reminiscent of an explosive gust of wind. The last sounds of the composition mix with the film sound from the next scene where Dracula is sailing to England in stormy seas.

The sequence *Dies Irae* is the largest part of the *Requiem* used in the artefact (54 min 30 sec in the multi-channel composition). It appears in the middle of the film (aiming for the golden divide⁴² of the entire piece) with the sound of breaking glass (the symbol of Dracula's

42 'Also known as the 'golden ratio', the 'golden section', the 'divine proportion', and the 'sacred cut', the proportion was identified at least as long ago as the third century B.C., when the Greek mathematician Euclid, after observing it in nature as well as in man-made objects, described it as a two-part division of a whole in such a way that the relationship of the large part to the whole is precisely the same as the relationship of the small part to the large part' (Wierzbicki 2011, p.169).

crumbling disguise and the revelation of his vampirism). The *Dies Irae* has several allegorical meanings. First, the film shows the place where Dracula gains his strongest power, because he dares to appear unexpectedly in front of the other protagonists and reveal his intentions to overpower Mina. If this happens, the world is going to end. Therefore the *Dies Irae* suggests that the day of wrath has literally come in the story. The composition employs Thomas of Celano's (13th century) hymn and sequence, that have been extensively used by many composers, including Hector Berlioz, Gustav Holst, Franz Liszt, Gustav Mahler, Sergei Rachmaninoff, Dmitri Shostakovich to name a few. The *Dies Irae* in *Dracula* starts in a tonal music setting that employs the motif and its variation accompanied by the succession of the 19th century style harmonies enriched with 7th, 9th, 11th chords. The selection of the 19th century Romantic music style was encouraged by the fact that it was also the time when the philosophical principles of National Socialist (Nazi) and Communist (Soviet) ideologies took shape, and they were used as the foundation for the forthcoming European totalitarian regimes in the 20th century. Similar to the political historical context, the music in the *Dies Irae* reflects the dramatic ascent, culminating in expanded orchestration and increased tempo. The artefact conveys the anxiety that dangerous philosophical ideas have come about. In the philosophical context of the composition, the situation is complicated as the Draculas (Stalin and Hitler) manage to spread their evil dominance, and the collapse of civilisation is possible at any moment. Van Helsing reveals Dracula's monstrous nature through the sound of breaking glass (breaking the mirror), and he discovers the true picture of the corrupted and distorted world. Then the prayer for salvation is accompanied by the sound of distorted voices singing the *Lacrimosa* and *Pie Jesu* which contrast with the Christian canonical tradition suggesting sorrow or hope. This part of the *Requiem* in *Dracula* suggests the possibility of hope, yet the intonation is fluctuating as if an image is reflected by a distorted mirror. It is also the moment when the conventional harmonies and melody turn atonal. Similar to the *Tract* and the *Offertory*, the composition also interrupts the flow of the film. It starts after Mina is seen approaching Dracula's embrace, and the film is resumed from the next scene, when the trio (Van Helsing, Harker and Seward) are discussing how to fight Dracula.

The compositional technique of the *Offertory* attempts to imply the vocal expression of Hitler's speeches (79 min 32 sec in the multi-channel composition). It uses the liturgical text in a stylistic interpretation, as if it had been spoken by the Nazi leader in front of a cheering

crowd. William Shakespeare (1598) writes in *The Merchant of Venice* ‘the devil can cite Scripture for his purpose’. This compositional device suggests that any word or text can be used for evil purposes, in the way that communist and Nazi propaganda was hiding the real criminal actions of the political apparatus behind the inspiring patriotic speeches. The analysis of Hitler’s speeches showed an unusual intonation trajectory⁴³. Instead of descending at the end of each sentence, as sentences are normally finished in most European languages, Hitler’s intonation rose both in pitch and sometimes in volume. Hitler also features pauses between phrases, while the entire performance has a rising culmination that is usually met with an outburst from the cheering crowd at the end. It was challenging to imitate Hitler’s performance, and the shouting voice demanded a strong emotional focus with enormous anger during the delivery of the text. However, the ending of phrases still required an artificial rise in pitch, so the *Offertory* better resembled the original speeches of the Nazi leader. Similar to the *Tract*, this movement has no instrumental accompaniment, and the entire focus is based on the performance of the spoken word.

The next segment of the *Requiem* in the soundtrack composition is the *Pie Jesu* that leads to the culmination of the entire piece (82 min 11 sec). The musical language consists of an atonal development of the contrapuntal material and a melodic vocal line by a soprano who sings the liturgical text. This part has a tight link with the *Dies Irae* as it continues to employ purely musical expression, contrary to the other *Requiem* parts based on verbal (whispering, spoken word) techniques. However instead of a full orchestra, a string quintet provides the entire accompaniment - an allegorical representation of a few survivors left after the War, and therefore a more personal approach to the issue. The composition suggests the singer is a survivor of the War who sees the burning European cities that once glorified a civilisation based on freedom and liberal dignity. Instead there are piles of dead bodies and memories of atrocities people committed against each other. The survivor, in the context of the atonal music, questions the purpose and reasons for staying alive, only to experience the post-war horror that resembles hell on earth. Visually, Harker and Van Helsing break into Dracula’s realms and try to save Mina from death, as if liberating forces were encountering concentration camps full of people destined to die. Each minute counts for survivors, as the minutes are precious for Harker and Van Helsing because they might be too late to save

⁴³ Hitler’s speeches at Nuremberg Rallies had been carefully prepared and well-planned, because the Nazi regime was in the process of establishing its political power, and Germany was still in pre-war euphoria.

Mina. The *Pie Jesu* signals the culmination point of the entire composition when it mixes with the growing sound of distorted organs – the musical instrument that once signified the Christian glory in Europe. The organ starts from the same cluster of chords as does the *Pie Jesu*, eventually evolving and turning into a harsh high pitched sound that is broken by a nuclear explosion – the ultimate destructive power created by humanity. The *Pie Jesu* is the only part of the *Requiem* that does not interrupt the flow of the film. This was done intentionally for two reasons. First, it creates a subtle contextual background with the film images because the film reaches its own dramatic culmination. The *Requiem*'s music enhances the dramatic allegorical symbolism of the main characters, so their actions imply the search for after-war survivors rather than the film's direct plot to find Mina. Hence this was the place where the multi-channel composition and the film's diegesis aim for the same dramatic synchronicity and support each other. The second reason for the *Pie Jesu* accompanying the film images was dictated by technical and aesthetic issues. The decision was to maintain the liturgical order of the *Requiem* texts (starting from the *Kyrie* and ending with the *Libera Me*). Therefore the previous part *Offertory* and the succeeding *Libera Me* were too close in time to justify several visual interventions in the film. Therefore it made more sense to keep the *Pie Jesu* attached to the film's visuals, while the adjacent *Requiem* parts are thus unchanged.

The *Libera Me* begins when the visual part of the film is over and fades to black, accompanied by the sound of emptiness that implies the deadly outcome of the war. Mankind has the power to create and destroy, while human beings are morally weak and unable to maintain justice on earth. The *Libera Me* calls for sanity and tolerance - however it fades out into the wind, because the piece is cut into the middle of the liturgical text with the words *et timeo* (transl. from Latin *and I am afraid*) repeated three times. The fear is that there is no guarantee such atrocities will never be repeated in the future. However the children's choir implies regeneration and becomes a symbol of hope. The three-voice melody ascends in the harmonic consonance singing 'domine', i.e. praying that light will be shed on humanity after all. The last part of the *Requiem* closes the entire composition.

Compositional devices and references to other works

The expressive techniques of the multi-channel composition establish links with several modern compositions. Their analysis helped to find an original inspiring direction for the multi-channel composition of *Dracula*.

Gavin Bryars created original sounds in *The Sinking of Titanic* (1969) by immersing cymbals into bowls filled with water; different levels of water create a distinct sound. The interaction between musical material, for instance, *The Sinking of Titanic* and *Jesus' Blood Never Failed Me Yet* (1971) uses a repetitive motif, and the manipulation of the recorded sounds or phrases create a changing relationship between the two categories of sounds. *Dracula* inspired a search for original sounds that could be created from the source material of the film soundtrack and juxtaposed with traditional music material.

Whispering and vocal techniques were mainly inspired by the works of Luciano Berio, particularly his *Thema - Omaggio a Joyce* (1958), *Visage* (1961), and *Sinfonia* (1969). The human voice is the oldest instrument of all, therefore singing may imply meaning not only through musical texture, but give contextual meaning to the lyrics. The expression of the human voice provides versatile techniques and Luciano Berio masterfully shows that in his compositions. *Dracula* includes singing (the *Kyrie*, *Dies Irae*, *Pie Jesu*, and *Libera Me* parts) and the spoken word through whispering (in the *Tract* and texts from Stoker's book) and expressive speech (Hitler's style of addressing crowds in the *Offertory*).

Although the multi-channel soundtrack composition is predominantly sounds (speeches, historical recordings or sound effects) certain parts of it have musical material. Dror Freiler's atonal poly-rhythmic piece *Music for Dead Europeans* (1996) is an example. Erkki-Sven Tüür *Symphony No. 6 – Strata* (2007) features dynamic contrasts and cluster harmonies achieved through subtle orchestration for a symphony orchestra. Bruno Maderna's dodecaphonic technique employed in his *Requiem* (1946) inspired a combination of both tonal and atonal music language in *Dracula's* requiem segments, and a search for an original soundscape. The prepared piano sounds helped to create a fear of Dracula that appears in the composition as the sounds imply a guillotine blade. Arthur Honegger's use of wide melodic ranges, polyrhythmic patterns, expressed through thick harmonic textures were also an

inspiration for the tonal segments of the *Dies Irae* part of the *Requiem*. An artist compiles many compositional techniques and creative practices. The connection to these compositions helps to provide an appropriate context for the 20th century music culture and discourse for *Dracula*.

The sound-manipulation techniques

The sound palette of the soundtrack, especially samples from the original dialogue, were modified and transformed, sometimes creating new sounds which were unrecognisable from the originals. The following techniques were applied while working with the audio material:

- 1) Pitch-bend. The change of pitch level was used to create artistic expressions of the sounds. Renfield's crazy laugh, Van Helsing's or Mina's affected intonation have slight adjustments to the pitch, and audio effects were applied (chorus and reverb). The main pitch intervention was for Count Dracula, who is heard in all the surround speakers, when he is revealed as a vampire (32V_Pitch correction_interval.mp4). The original dialogue is practically intact except where the pitch has occasionally been lowered by one or two semitones to make Dracula's voice even more menacing⁴⁴. In some instances the pitch level was variable, when only certain parts of the phrases were lowered or raised. The variable pitch curve was used when the change of the entire fragment did not deliver the desired aesthetic results, and individual phrases or parts of the sound needed manual adjustments. In certain samples or entire segments the pitch was raised or lowered considerably (by 12 or more semitones), depending on the need to fill a particular frequency range. The connection between such sounds and their original identity was often lost, but it created new sound effects that blended well in the audio spectre⁴⁵;
- 2) Pitch correction is a technique used to correct the pitch of singing vocals. It converts audio signals into musical notes that can be manually adjusted (duration, pitch, and level of vibrato). The creative application of this tool, when used to change the sound of the voice, gave interesting results to the dialogue. It was

⁴⁴ Huron (2006) finds lower pitch sounds (including animal roaring) unconsciously signify threat and danger.

⁴⁵ Please see appendix F of this document for the graphic illustration of the technique.

possible to build up or reduce the dialogue's existing emotions and therefore create other meanings. Dracula approaching Lucy's bedroom is an example of a corrected pitch and shows how the altered intonation of Mina's voice makes it more anxious and desperate, so the two heroines become emotionally linked in their destiny (33V_Pitch correction Original Mina.mp4 and 34V_Pitch correction_Transformed Mina.mp4).

- 3) Time-stretch was used either to extend or reduce the length of audio segments so they matched specific dramatic points of the soundtrack. However, it was also used to create new sound effects from the existing material. For instance, the segment 'the blood is the life' was translated into several languages and, played on the Google Translate audio device, was time stretched. Therefore, instead of being an ordinary computerised reading of the text, it gained melodic and musical qualities. This extreme time stretch created metallic artefacts in the audio signal that added to the desired effect to create a robot-like sound. Time stretch was also broadly used to create audio effects from the existing original dialogue (35V_Time stretch on speech.mp4 and 36V_Time stretch and other effects on music.mp4);
- 4) Granular synthesis is a software instrument that allows bits of audio to be taken to create new sounds by changing their start time, duration, speed, direction, quantity, and applying various other morphing effects. Segments of the original soundtrack (words like 'nosferatu', Dracula's words "secret", "allow me", "the blood is the life", "far more things than death", and others) were transformed and used in various parts of the multi-channel composition. The manipulation of the original soundtrack provided artistic freedom to use a wide frequency range and create the desired rhythmic patterns. In certain places the comprehensibility of the contextual verbal sounds was intentionally suppressed, so they would give space to the film dialogue. On the other hand, the gradual application of the granular effect on the verbal contextual material could vary the level of transparency and create a balance between what is verbally present in the film, and what comes from the contextual composition. In such a way granular synthesis was creatively used to develop and portray anxiety in Renfield's character in relation to his original dialogue. Renfield's craziness is superimposed with his own granulated

voices coming from various sides of the multi-channel system; this creates tension and describes his inner conflict (37V_Granular synthesis_Renfield.mp4). Granular synthesis was also used to obtain various other manipulations in the soundtrack (Transylvanian women moaning, Van Helsing's warning of Dracula's threat, the reading in Latin, etc.).

- 5) Equalisation is used to keep the sounds in a particular frequency range, sometimes giving them the effect of high or low band filters. Equalisation was used to create the presence of a coherent frequency in the soundtrack composition, so the sounds would blend and unite rather than 'fight' against each other. Sonic coherence was necessary, because there were at least two different sources of sound – the original prepared soundtrack and the multi-channel soundtrack composition. The inconsistency of audio information or the aural conflict between the two was solved by giving each of the groups plenty of room in the frequency range. Equalisation also helped to assure transparency between several audio sources.

Conclusion

There is an extensive range of research and publications available in the general area of 'film studies' which has been increasing exponentially over the past three decades. However practice-based researches on film sound have emerged only recently. The availability of digital technology to compose and produce film music and sound by single person is one of the reasons why academic experiments in this area have recently become feasible.

This research centres on how a multi-channel composition can enhance the contextual meaning of a film, and especially when the film becomes only a part of the artwork.

The aim of this research was to create and contextualise an original multi-channel composition. The delivery of the composition focused on the cohesion between music and sound, and how the convergence between the two can form a porous relationship.

The objectives of the research involved the definition of *Dracula* in the context of early sound films, the preparation of *Dracula's* original soundtrack (dialogue) and the creation of new sound design and music for the film in mono. In the first stage, *Dracula* became a completely revoiced film soundtrack adhering to the film's dramatic structure. The second stage of the research included transforming the prepared film into the multi-channel composition, which has an original design and philosophical implication, tangentially related to the film. The multi-channel composition expresses the moral values and attitudes based on the chosen philosophical, cultural and religious symbolism of malevolence in the Western European context, and the historical circumstances of Europe in the 1930s and 1940s.

Dracula is one of the first early horror sound-film classics, which became an icon for many future vampire, thriller, and gothic films. The transition from silent films to talkies brought about tremendous changes and challenges for the film industry that also determined the way *Dracula* was produced. Filmmakers in the early 1930s possessed limited creative choices for sound, and only after 1932 did most Hollywood productions begin to include abundant scores. Therefore *Dracula's* relatively empty soundtrack is an important reason why this film has been suitable for this research.

Film scholars Skal (2004) and Spadoni (2007) identified the probable historical reasons which impacted the way *Dracula* was produced. Universal's budget constraints and friction among crew members (Browning's immediate retreat from Universal back to MGM after *Dracula's* release) resulted in the film's lacklustre effect, especially in the second part of its production, which mainly contained indoor shots and few camera positions, thereby slackening the narrative. Such a film design has influenced the artistic choices and preferences in the soundtrack compositions for this research (both in revoicing the film in mono, as well as the multi-channel composition). It has been decided to respect and accommodate the structure of the film and focus entirely on the impact of sound, while the multi-channel composition is aiming to compensate the slackening pace of the latter stages of the film with a dynamic culmination.

The practical element of the artefact reveals that:

- 1) Film soundtracks may be enriched by the cohesion of sound design and music. The exegesis element suggests that instead of traditionally treating the sound design and music as separate elements that meet in the mix, contemporary technology allows a far more productive interaction and porous balance between the two. The artefact offers examples of blending sounds from various sources; or the same source may produce different emotive sounds. For instance, the flute may play either musical material or it can be used to create a wind effect, which eventually mixes with literal wind; the voice can be pitched down or up, so it diverges from its original source and sounds more like a musical instrument. The blurred boundary between music and sound design enriches the artistic devices for the creator, providing powerful yet subtle tools;
- 2) The processed audio samples made of the original soundtrack (dialogue) can be used as a linking element between the revoiced soundtrack for the film and multi-channel composition. In this way the new composition transcends the traditional conception of a film soundtrack, because verbal sounds are used to communicate beyond the film's explicit narrative. The elements of the multi-channel composition extracted from the original dialogue also create an allegorical (conceptual) meaning. For example, Dracula's words taken from one scene and used (in a processed and effected manner) in other film contexts, create a narrative

link between the film scenes. Hence the audience is given information that Renfield is after blood ('the blood is the life') although the character himself does not declare that directly; or, the reversed version of Lugosi's line 'allow me' suggests Dracula's demonic influence on Mina when she tries to hide her infection from the protagonists;

- 3) The temporal flow of the film remains the focus of audience's attention. The synchronous film dialogue should not be obstructed by other sound elements coming from the multi-channel composition. Otherwise, the audience may be distracted by simultaneous unrelated sound sources, especially if several verbal sounds collide. Since the contextual soundtrack contains no link with the film's visuals, the author of such an artwork has to consider carefully the type of sounds placed in the multi-channel composition. One must bear in mind that the audience is focusing on the film, and off-screen sounds should establish a contextual reference that could be decoded by viewers without disrupting the primary narrative trajectory. Otherwise it is difficult for the viewer to follow either the film or the composition. In this research, placing extraneous sonic information (especially verbal) in the front speakers created immediate association to the film's diegesis, and therefore became misleading. However, the visual intersections that included the *Requiem* parts helped to accentuate the dramatic points of the multi-channel composition, while essentially respecting the film's narrative;
- 4) The employment of a 5.1 system (in this instance 5.0, as the subwoofer was not used) can be unconventional. The revoiced film soundtrack may use only one speaker (in this instance the centre), while the other channels imply contextual meaning beyond the film. Instead of placing the audience in the middle of the scene, the soundtrack may communicate an additional historical, philosophical or social context. These sounds vary from generic sources like the sound of war (falling bombs, planes, explosions, machine guns) to culturally established samples, such as speeches of the political leaders in the 1930s-1940s. Music also serves as referential material that suggests particular historical, cultural or philosophical notions (for example the Soviet army choir implies totalitarianism;

the sequence of the *Dies Irae* suggests philosophical dualism, harpsichord instrument implies aristocracy of Baroque). However, the process of creating the composition also revealed that assigning certain sonic features to particular surround system speakers was not particularly successful. For example, transmitting the referential sounds related to the Soviet regime on the right and the Nazi on the left rear speakers proved to be misjudged, because the composition became spatially unbalanced and aesthetically jarring. Furthermore instructions on how to read the individual speaker configuration of the composition could be given prior to the performance, but vaguely they can be the decisive factor, because the visual connection to the film was too strong to ignore its significance. It turned out that the most successful division between the areas of film and contextual sound sources was generally to keep the diegetic material on the front and the contextual material in the rear speakers;

- 5) The composing process is supported by the theoretical framework of the research. The practical work was combined with theoretical research, so both parts of the project supported each other. It was found that the theoretical background helped to bring more versatile details into the artefact, because merely conventional artistic practices led the artist to traditional aesthetic and creative solutions. The planning of the project became essential and the 'Map of *Dracula*' served to create the multi-layered meaning of the composition, which ensured that small details could be incorporated, and they could have links and relationships with each other throughout the composition. Spontaneous creativity also played an important role because the idea of putting a contextual soundtrack with particular film scenes determined how the composition was developed. The artefact aims to be an art object; therefore artistic choices were predominant in creating the composition, while the selected historic context and compositional tools defined the audio palette. In this instance, *Dracula* has been used to create a new art piece that discusses the notion of freedom and human rights in the context of a difficult period in history. This composition is dedicated to all the victims of totalitarianism who suffered the madness and horror of the most dreadful Nazi and Soviet ideologies that brought mankind to such an atrocious outcome – the Second World War.

This method of revoicing old sound or silent films was insightful, as theoretical assumptions about the ways surround technology may be enhanced to imply multi-layer meaning of the soundtrack were tested in practice. Although this method is unlikely to be used to score entire mainstream film soundtracks, as it goes well beyond the usual audience experience; it definitely inspires fresh and innovative ideas for using surround technology in planning the spatial lay-out of the film soundtrack. The structural choice of the multi-channel composition also gives a fresh view on restoring old films. Instead of merely revoicing the film, the composition suggests its own structure and therefore becomes a larger work, where the film is a part of the audiovisual piece. The inclusion of other artistic devices helped to achieve new artistic meaning, while essentially respecting the film's own dramatic structure.

Revoicing films in this way offers the possibility of reinterpretation of artefacts to new audiences, without endangering the integrity of the original art, as it can still be seen as intended. The opportunities for artistic insights using such artefacts as the basis is not new, but they have not been widely developed.

Further studies are suggested to explore how other than horror film genres could include contextual meaning in their soundtracks. *Dracula* was rich in supernatural sounds, while its link to 1930s and 1940s helped to suggest appropriate sonic associations to the historical context. However a research on how this methodology is applicable to other early sound transition-period films like *Cimarron* (Ruggles 1931) and *Arrowsmith* (Ford 1931) would give more details and insights on the implication of this methodology for dramas, Westerns and other genres. Moreover, exploration on the convergence between sound and music, putting emphasis on the function of emotive and literal sounds in film would be helpful to answer the question how much of 'off-screen' composition sounds other genres could naturally incorporate in the front speakers, and what contextual associations they would suggest.

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Arrowsmith, 1931. Film. Directed by John Ford. USA: Howard Productions, Samuel Goldwyn Company, and other.

Cat Creeps, The, Film. 1930. Directed by Rupert Julian and John Willard. USA: Universal Pictures.

Cimarron, 1931. Film. Directed by Wesley Ruggles. USA: RKO Radio Pictures.

Collectress, 2008. Film. Directed by Kristina Buozyte. Lithuania: Reflex.

Dark Knight, The, 2008. Film. Directed by Christopher Nolan, USA: Warner Bros. Pictures.

Declassified: Joseph Stalin, 2006. Film. Directed by Kosh. USA: Ten Worlds Production and History Channel.

Deserter, The, 1933. Film. Directed by Pudovkin. The Soviet Union: Mezhrabpomfilm.

Don Juan, 1926. Film. Directed by Alan Crosland. USA: Warner Bros. Pictures, Vitaphone Corporation, and others.

Drácula, 1931. Film. Directed by George Melford. USA: Universal Pictures.

Dracula, 1931. Film. Directed by Tod Browning. USA: Universal Pictures.

Dracula, 1992. Film. Directed by Francis Coppola. USA: American Zoetrope, Columbia Pictures Corporation, and other.

Exorcist, The, 1973. Film. Directed by William Friedkin. USA: Warner Brothers.

Fantasia, 1940. Animation. Directed by James Algar, Samuel Amstrong and others. USA: Walt Disney Pictures.

Faust, 1926. Film. Directed by Friedrich Wilhelm Murnau. Germany: Ufa-Attelier, Berlin-Tempelhof, and other.

Frankenstein, 1931. Film. Directed by John Whale. USA: Universal Pictures.

Freud, 1962. Film. Directed by John Huston. USA: Bavaria Films.

Godfather, The, 1972. Film. Directed by Francis Ford Coppola. USA: Alfran Productions.

Grudge, The, 2004. Film. Directed by Takashi Shimizu. USA: Columbia Pictures.

Informer, The, 1935. Film. Directed by John Ford. USA: RKO Radio Pictures.

Jaws, 1975. Film. Directed by Steven Spielberg. USA: Zanuck/Brown Productions.

King Kong, 1933. Film. Directed by Merian C. Cooper and Ernest B. Schoedsack. USA: RKO Radio Pictures.

L'Age d'Or, 1930. Film. Directed by Luis Buñuel. France: Vicomte de Noailles.

Lost Patrol, The, 1934. Film. Directed by John Ford. USA: RKO Radio Pictures.

M, 1931. Film. Directed by Fritz Lang. Germany: Nero- Film AG.

Metropolis, 1927. Film. Directed by Fritz Lang, Germany: Universum Film: UFA.

Most Dangerous Game, The, 1932. Film. Directed by Irving Pichel, Ernest B. Schoedsack. USA: RKO Radio Pictures.

Nazi Concentration Camps/ Nuremburg Trials, 2007 (1945). Film. Directed by George Stevens, USA: Alpha Home Entertainment.

Nosferatu, a Symphony of Horror, 1922. Film. Directed by Friedrich Wilhelm Murnau. Germany: Prana Film.

Old School, 2003, Film. Directed by Todd Phillips, USA: DreamWorks SKG.

Passion of Joan of Arc, The, 1928. Film. Directed by Carl Theodor Dreyer. France: Société générale des films.

Ring, 2002. Film. Directed by Gore Verbinski. USA: DreamWorks.

Soviet Story, The, 2008. Film. Directed by Edvins Snore, Latvia: Labvakar.

Silence of the Lambs, The, 1991. Film. Directed by Jonathan Demme. USA: Strong heart and Demme Production.

Touch of Evil, 1958. Film. Directed by Orson Welles. USA: Universal International Pictures.

Tsirk, 1936. Film. Directed by Grigori Alexandrov. USSR: Mosfilm.

Vampyr, 1931. Film. Directed by Carl Theodor Dreyer. Germany: Tobis Filmkunst.

Other

Fall of the Damned, The, 1450. Painting by Dirk Bouts. The Netherlands. Available from: <http://www.museumsyndicate.com/item.php?item=6557> [accessed 21/08/2012].

Guernica, 1937. Painting by Pablo Picasso. Available from: http://en.wikipedia.org/wiki/Guernica_%28painting%29 [accessed 10/10/2012]

Merchant of Venice, The, 1598. Play. Written by William Shakespeare. Available from: <http://shakespeare.mit.edu/merchant/full.html> [accessed 12/09/2012].

Soft Construction with Boiled Beans (Premonition of Civil War), 1936. Painting by Salvador Dali. Available from: <http://www.philamuseum.org/collections/permanent/51315.html> (Philadelphia Museum of Art) [accessed 19/08/2012].

Appendices

A. Examples of practice-based research methodologies

Leavy (2009, p.116) suggests the following methodology when using music in research:

- a) What is the purpose of the study and how can music serve as a medium to shed light on this topic?
- b) What is my [researcher's] conception of music? In this study, is music conceptualised as a text, as an object, as a sign system, as a performance, or as a combination of these? Am I interested in the textual form of music, music at the moment of articulation, or both?
- c) What form will the musical data be in? For example, are the data in the form of compositions, scores, and lyrics, or am I interested in the performative, audible aspect of music? In terms of the latter, will live performance be recorded, or will audiotapes be used? Will the physical performance provide data, or only the music itself?
- d) What is the analysis strategy? For example, will the music alone be analyzed or will data be gathered regarding people's subjective experience of the musical performance via interviews or other methods? In terms of the latter, what do I want to learn from the research participants (e.g. their process of creating meaning out of the music, their identity negotiations, their experience of resistance or community-building, transcendental qualities of the performance)?
- e) If using music as a model for conducting qualitative research, how will I pay attention to dynamics, rhythm, texture, and harmony during my observations and interviews? How will my understanding of form affect my writing process? How will I adapt these principles in order to attend to issues of difference and diversity? What form will my writing/ representation take?

B. The detailed preparation process of *Dracula's* soundtrack

Although the original DVD was produced with a sound resolution of 16-bit, 48,000 Hz, I subsequently converted it to 32-bit 48,000Hz mono audio file, to prevent degradation once the restoration tools and plug-ins were applied⁴⁶. The following preparation process of *Dracula* soundtrack was implemented:

Step 1. The initial original DVD has minus 12dB sound level⁴⁷, which was too low for the purpose of project composition. In addition, the original soundtrack displayed an inconsistent dynamic range, with some parts being too quiet and others becoming relatively too loud. After applying a compressor and raising the soundtrack level (output range between minus 3 - 6 dB), the quieter and louder segments of the soundtrack gained a smooth balance.



Figure 7. Contrary to the conventional audio normalisation, the maximiser plug-in allows to achieve the maximum level of the digital signal through 'lookahead' peak control, whereas its application does not degrade the quality of the initial audio signal (image: Waves L1 Ultramaximizer plug-in).

Step 2. The original soundtrack had a continual hiss coming from the optical track. Using *iZotope RX* audio restoration software, the hiss from the film was reduced. This software

⁴⁶ The application of audio effects (compressors, reverbs, choruses and other) has better results in high definition audio material, although the final product will be converted back to 16-bit audio file.

⁴⁷ Reference to dBFS – decibels relative to full scale, where 0 dBFS is the maximum possible volume level.

learns the hiss pattern from an empty area (a segment where no other audio signal but hiss is present), and applies the noise reduction algorithm. The program successfully cleans the signal even in the presence of the dialogue. The illustration below is a snapshot from the *iZotope RX* working window. The vertical axis displays the frequency range from 0 Hz (at the bottom) to 20 kHz (at the top). The horizontal axis is the timeline of the audio file. The volume of the signal is represented in colours: the dark brown textures are quiet segments, and the yellow dots are substantial audio elements, in *Dracula's* case, the dialogue. Note the area above the horizontal red arrow, which reveals significant absence of audio signal over 5 kHz. According to Eyman (1997), this is a typical frequency quality for optical soundtracks, because they could not re-create higher than 7 kHz sounds, and most often averaging between 4-5 kHz.

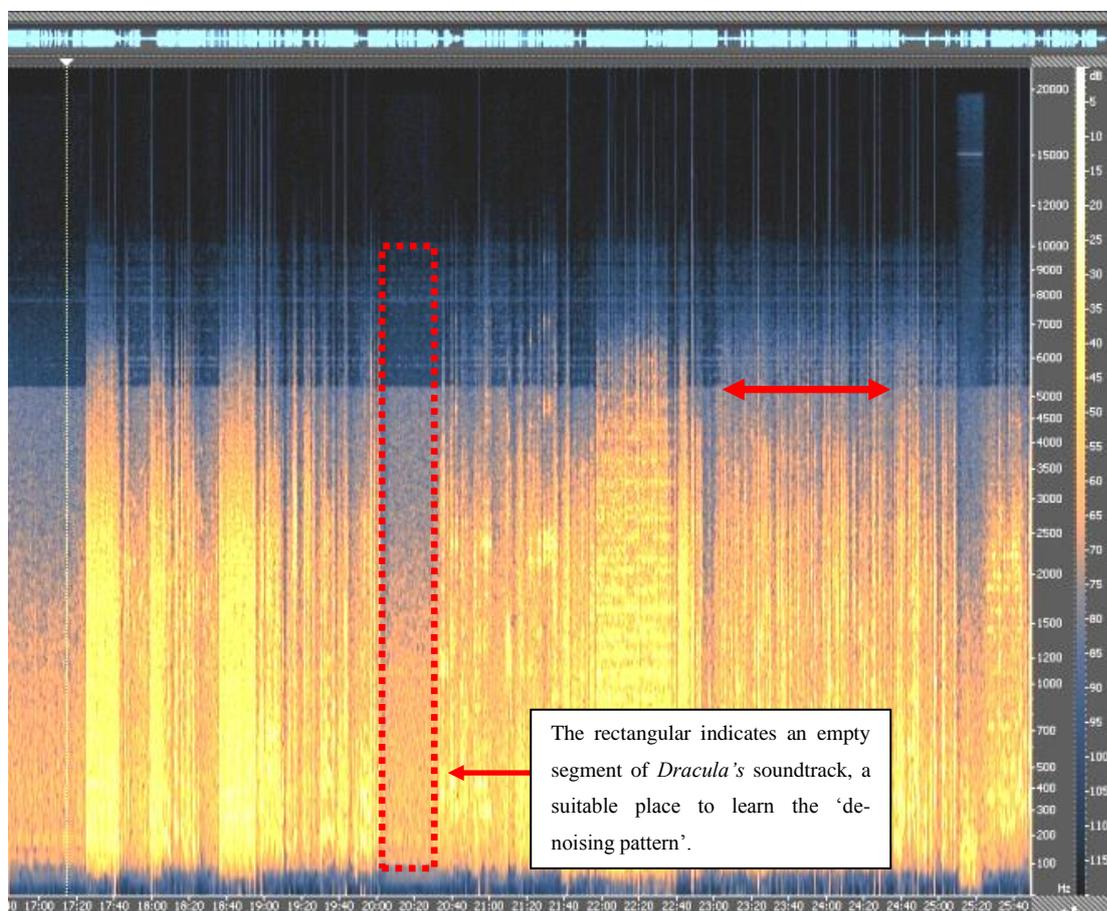


Figure 8. *iZotope RX* working window, where the soundtrack's frequency and volume parameters can be examined in detail.

iZotope RX allows the user to control the parameters of the restoration (threshold, reduction, type of noise). The audio restoration is reminiscent forensic science in this regard; that the

process takes phases and preparation is accomplished gradually in layers. Initially, it was important to clean the overall soundtrack without particular focus on the main audio signal (dialogue). Further on, tonal and broadband parameters (threshold and noise reduction) were applied gradually. For instance, in some loud scenes higher noise reduction ratio brought better results, while in quiet passages it was critical to set a proper threshold rate (the maximum level in the program is 6 dB). There were three gradual instances of restoration per film scene on average. Each time, the amount of noise reduction, threshold levels, were adjusted to clean and save the most of the original soundtrack. The parameters varied for tonal threshold from -6dB to +6dB (usually it was fixed around 0dB), and noise reduction around 3-6dB. The broadband threshold varied from -6dB to 0dB (in most instances close to 0dB), and usually received higher reduction values (over 20dB, maximum 40dB). Tonal noise that is usually caused by hum, buzz or interference was not particularly present in this project, and the main focus was to reduce the white noise (hiss) coming from the optical track. In addition, the psychoacoustic suppression and harmonic enhancement in some instances helped to clean audio with large reverberation (like Dracula's castle, Carfax Abbey, etc.), or multiple sound sources, such as the audience murmuring in the concert hall. The *Musical noise artifact* (MNS) algorithm in its advanced setting increased the possibility of a deep de-noising process, because it successfully suppressed the appearance of harmonic artefacts, in the post-production industry called 'metal squawks'. Lastly, two dominating frequencies for the human voice were adjusted (low presence around 400 Hz and high frequencies above 1.4kHz) by applying additional de-noising, or using spectral repair tool (attenuation), a feature that allows restoring the selected audio segment by compensating EQ band from the nearby frequencies. The speech fundamentals are in the range 125-250Hz, the vowels carry their power in the range of 350Hz- 2kHz, and the control over consonants and their presence is in the range of 1,5– 4,0 KHz. The illustration below demonstrates a snapshot from *iZotope RX* de-noiser's working window. The blue graph horizontally refers to the frequency range from 0 (on the left) to 20 kHz (on the right); vertical axis shows the volume of the signal from 120dB at the bottom to 0dB at the top, according to dBFS.



Figure 9. *iZotope RX* property window reveals the de-noising parameters that can be adjusted according to the spectrograph.

Step 3. Detailed noise removal was applied to individual dialogue segments (up to the threshold that would cause an artificial ‘telephonic’ effect). This required a consistent and creative restoration process (removing clicks, restoring distorted dialogue, emphasizing the consonants in less transparent segments, etc.)

Step 4. *iZotope RX* was also applied at the end of the chain to remove any hiss between the audio segments (phrases of dialogue) and to clean artificially created ‘squawks’.

The entire process of the soundtrack preparation was monitored using an equalizer to ensure that the audio signal would not experience extreme peaks, or no critical audio information was lost. For example, de-noising could cause the disappearance of lower (below 500 Hz) and mid (1,500 – 2,000 Hz) frequencies and result in so called ‘telephonic’ effect.



Figure 10. Frequency analyser ensures the quality control of the audio output.

Automation vs manual settings

In order to achieve the best soundtrack preparation results, I used a manual control for the de-noising settings. Initially the manual process brought good results. With the help of the software, the volume curve of the audio signal was converted to the MIDI automation controller. The advantage of the manual control is that sound restoration software *iZotope RX* could be applied gradually. The loudest audio segments required less de-noising compared to the quiet parts of the film. Subsequently, this would allow less intervention in the soundtrack. Unfortunately, this method was not practical, because the audio signals had inconstant attack and decay rates within scenes, as the actors were moving on set and this caused different acoustic parameters for their dialogue. Therefore manual control of the cleaning plug-in resulted in an unsteady performance. It was necessary to calculate each part of the audio signal mathematically. Although several calculations were applied, the over-all practice did not give a significantly better result compared to the far more automated version of the

iZotope RX plug-in that allows the user to achieve similar results using the software's graphic interface⁴⁸.

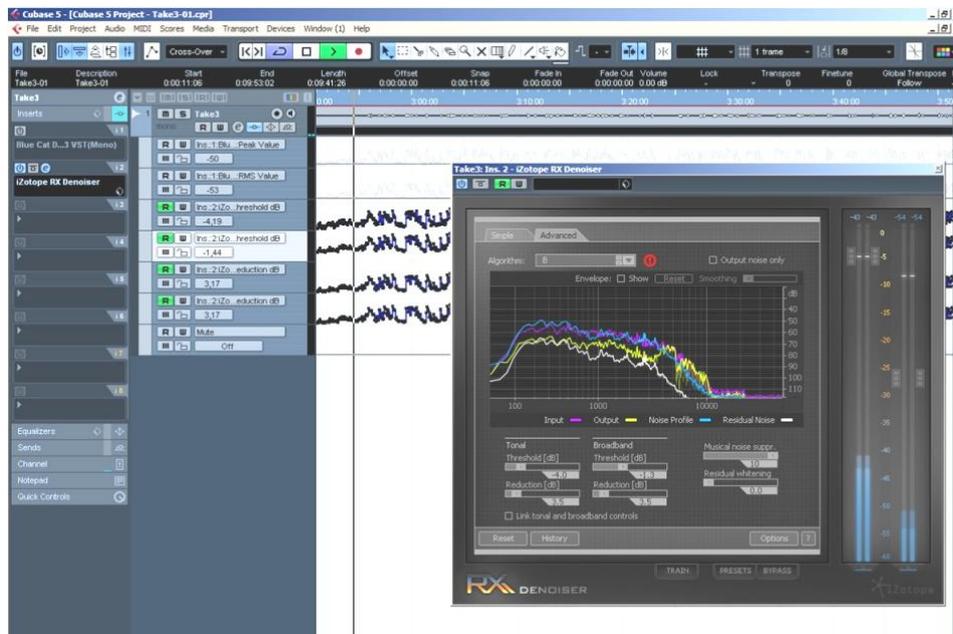


Figure 11. The audio spectrum (volume curve) of the soundtrack that was converted to an automation track by the sequencer.

⁴⁸ Cubase version 5 and further editions have a built-in feature to transfer audio volume curve into MIDI automation line. This was unavailable at the time the soundtrack preparation took place, therefore a third-party plug in *Blue Cat* was used instead.

C. Soundtrack comparison: the original and prepared versions

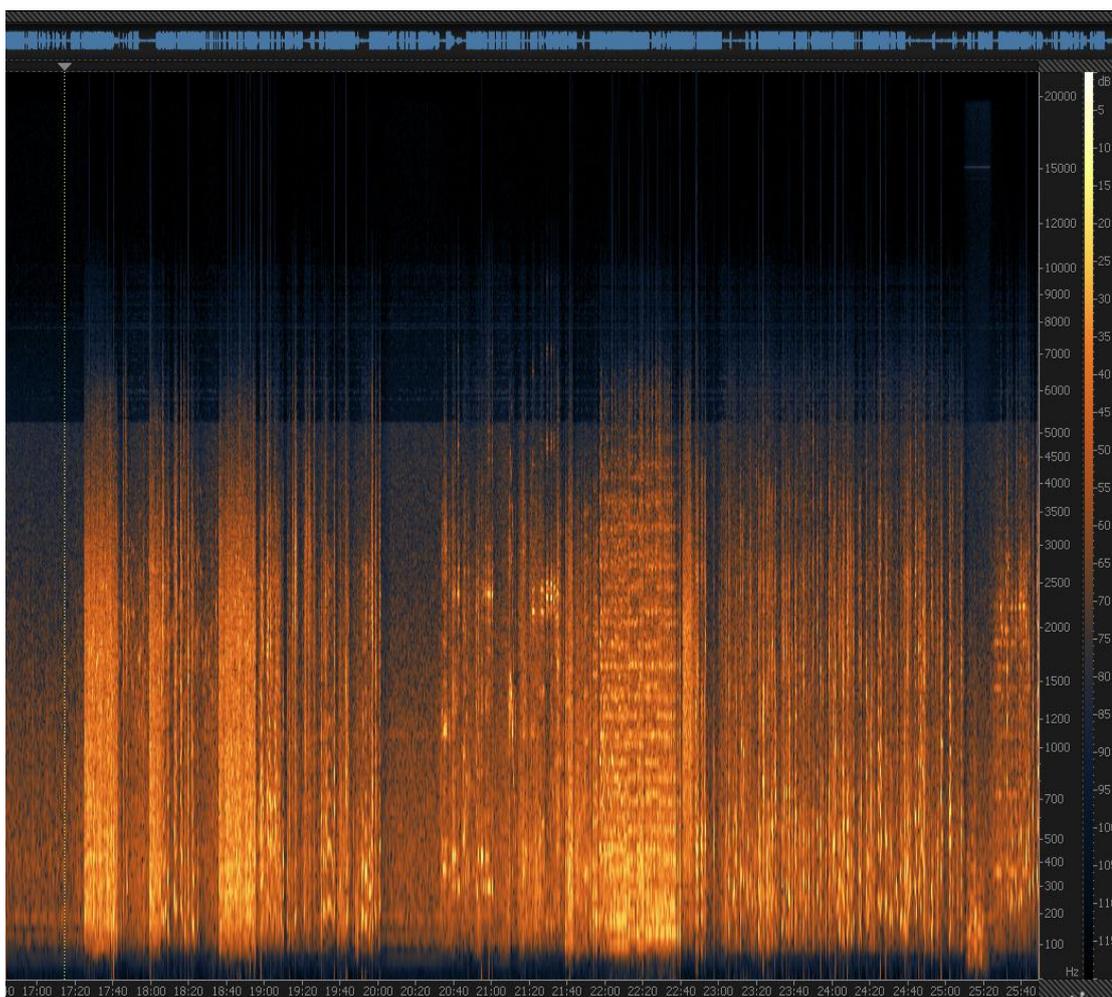


Figure 12. *Dracula's* soundtrack before the de-noising (image: *iZotope RX* software).

The picture above illustrates a snapshot from the *iZotope RX* software. The horizontal axis is the timeline of the soundtrack, (a segment of approx. from 17 min through 25 min 40 sec of the film). The vertical axis refers to the frequency range and dynamic intensity (the brighter the colour, the louder signal: white colour corresponds to the maximum peak level of 0dB (dBFS) before digital distorting).

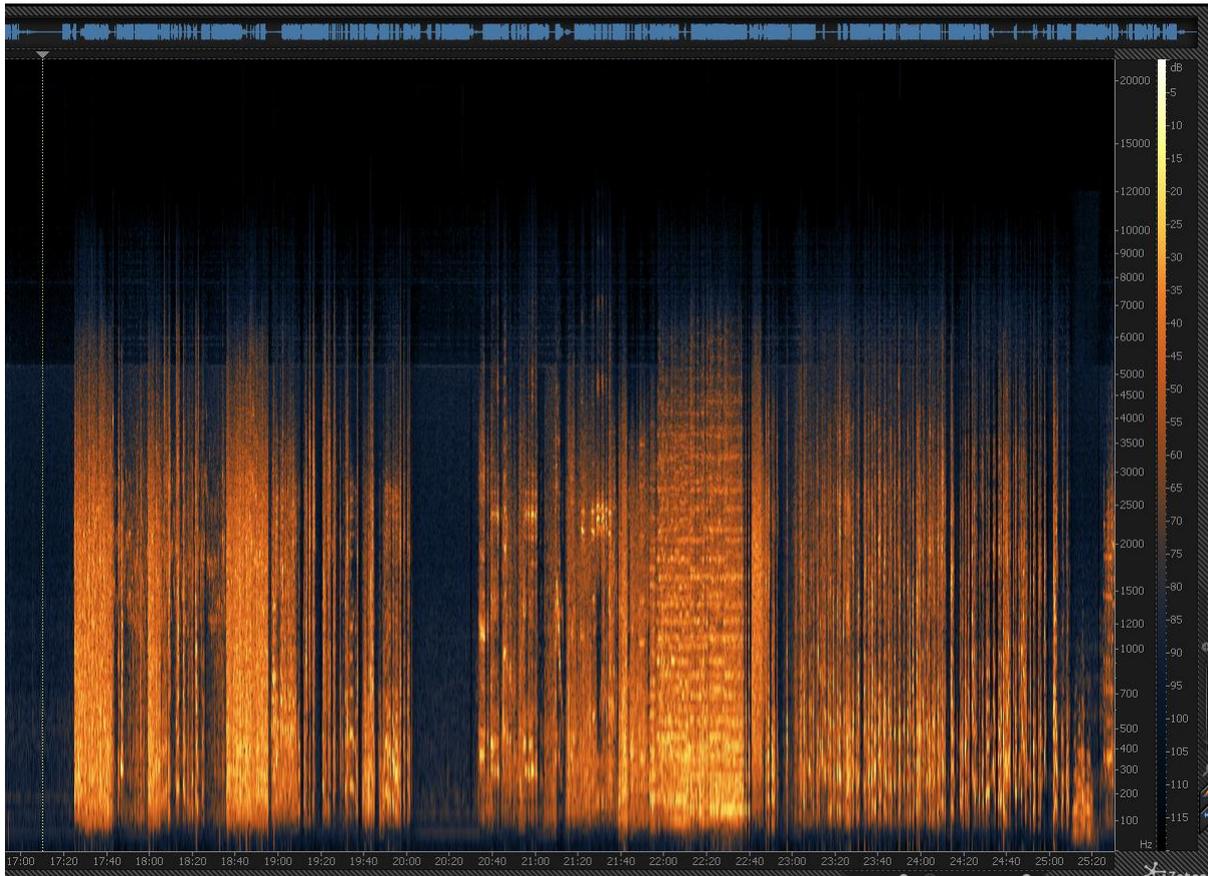


Figure 13. The same episode of the soundtrack after the de-noising (image: *iZotope RX* software).

Note how the granulated dark background texture comparing to the previous illustration is reduced. The light objects gain more detail, respectively the soundtrack obtains more sonic clarity.

iZotope RX software allows both manual and automatic restoration modes. The software program learns the pattern of noise which can then be used to filter out its presence in the rest of the soundtrack. Each scene, sometimes individual shots, needed manual adjustments. It was necessary to estimate how much cleaning should be applied in order to achieve the best result – cleaning the hiss without damaging the required signal (causing the so called ‘squawk’ effect).

D. The revoiced soundtrack in mono – creating cohesion between music and sound effects

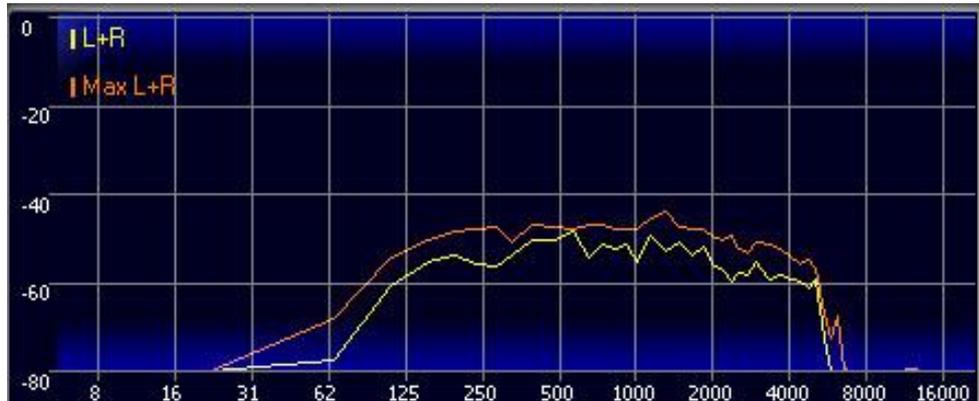


Figure 14. Typical audio level and frequency curve of the original soundtrack.

A typical audio frequency range for *Dracula's* dialogue was from 125Hz to 4kHz for male characters and slightly higher for female characters (250Hz - 5kHz). It is seen in the picture above, the horizontal line refers to the frequency range in Hz; the vertical – the volume level of the audio signal. L+R graph indicates the level of the signal at the particular moment (the picture is a real-time snapshot), and Max L+R in orange refers to the maximum level in the observation duration.

The frequency range between 250Hz to approx. 3kHz is critical for comprehending the dialogue, therefore adding any substantial music or sound effect material within this range would compromise the audience's attention. The test on an equalizer showed that the essential audible frequency range of syllables and consonants was from 1 to 4.5 kHz. The result was achieved using an inverted band of an equalizer (EQ). The audio signal is filtered with the EQ band to the extent that further filtering would limit comprehension of the words. This practice helps to identify the fundamental frequency range of the dialogue source, so any reduction of the volume or obscuring of the original dialogue within this range would cause problems with the clarity of consonants. Later in the project, this frequency range became the defining factor for the choice of the music palette.

Classical instrumentation, which is an established scoring setting in Hollywood (strings, woodwinds and brass), was selected. A frequency analysis of symphony orchestra instruments helped to estimate their dominant ranges, therefore the individual timbres would

combine well with the rest of the film soundtrack. Although it is possible drastically to alter the quality of any instrument sound using equalizers and compressors, it is better to plan the arrangement in advance, so the instruments sound natural in their registers. Some solo instruments are difficult to use in film scores under dialogue. Cellos, trumpets and clarinets are either dominant at the same frequency range of a human voice, or their inherent high volume stands out in the mix. On the other hand, melodic brass arrangements give emotional power to the images in those parts of the film, when the music can drive the narrative and does not interfere with the dialogue (at 5 min of the film when Renfield's journey to Dracula's castle; solo cello as a substitute for a singing voice (respectively at 11 min 23 sec of the film)).

Strings dominate the revoiced soundtrack. Intensely dramatic places in the film (Renfield's arrival at Dracula's castle, facing Dracula in the house, chasing him in the abbey) are supported by the entire orchestra (brass and wind sections). Various techniques used by the string orchestra (from *pizzicato*, *marcato*, *con sordino*) give versatility and attractive frequency qualities to put music under the dialogue where needed (at 46 min of the film the purpose of strings is to lift the dramatic tension)⁴⁹.

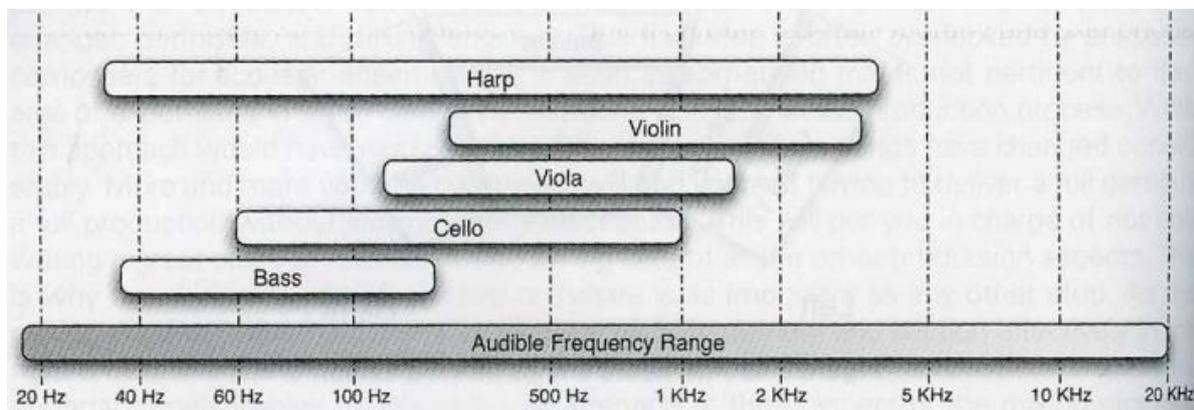


Figure 15. The dominant frequency range of string orchestra instruments (Courtesy Pejrolo and DeRosa, 2007, p.148).

⁴⁹ There are other considerable aspects when scoring under dialogue - rhythm, melodic and harmonic intensity also impact on the comprehension of human voices. Generally, using music under dialogue is a big consideration for a film composer. However, in terms of selecting the music palette, a string orchestra is a good choice because of its versatile register and dynamics.

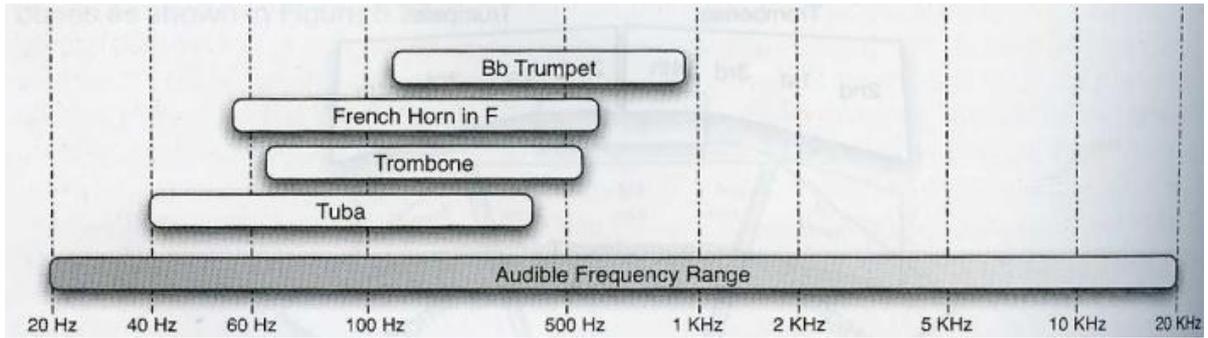


Figure 16. The dominant frequency range of brass instruments (Courtesy Pejrolo and DeRosa, 2007, p.244).

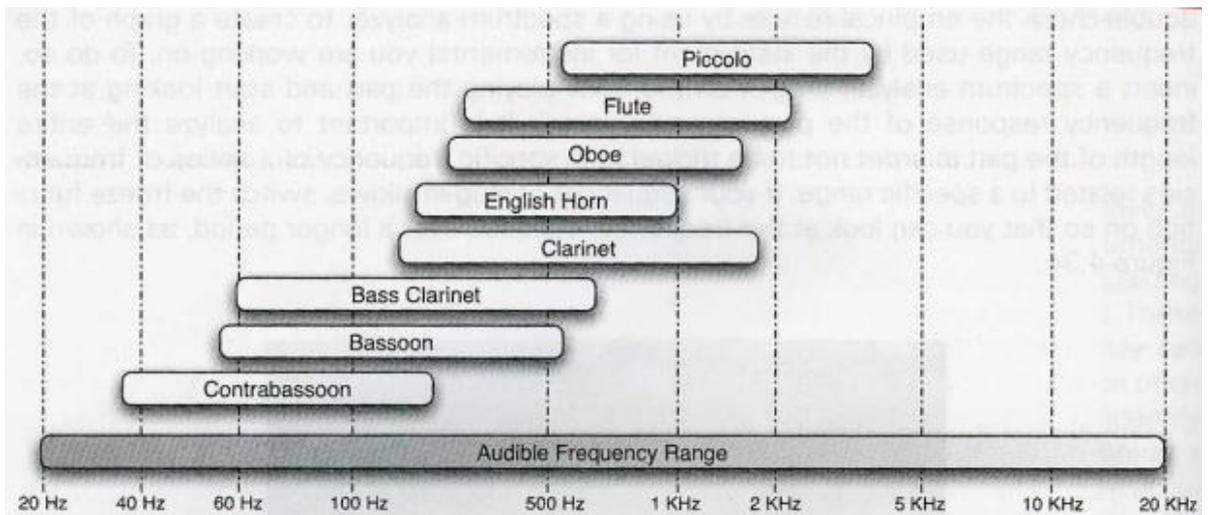


Figure 17. The dominant frequency range of the woodwind family instruments (Courtesy Pejrolo and DeRosa, 2007, p.198).

E. Tonality and its implication to perception

Scale tone	Common descriptors	Sample responses
tonic	stable, pleasure, home, contentment	stable, extremely satisfying, centered, foundational, solid, resolved, strong
raised tonic	strong, upward, bold	edgy, unstable, uncertain, upwardly mobile, mildly precarious
lowered supertonic	surprise, abruptness, pause	somewhat dark, a sense of almost inevitable further descent, murky, unexpected richness, mild surprise
supertonic	solid, movement, resolve	hanging, dangling, transitory, moderate expectancy of more to come, part of a flow
raised supertonic	longing, unstable	needling, moderately harsh, jarring, unstable, off-balance
mediant	bright, love, warmth, beauty	light, lifted, bright, point of many possible departures, yet also strongly restful, peaceful and calm
subdominant	descending	awkward, tentative, strong sense of being unfinished, "Now what?" no clear expectation of future, hanging feeling, would be happy to fall by half step
raised subdominant	intentional, motivated	moderately anxious, interrupted flow to dominant, somewhat curious about possibilities, fluidity, transitory
dominant	strong, muscular, balance, possibility, pleasant	strong, towering, height, sense of looking down from a tall building and being comfortable, but knowing you'll eventually take the elevator back to the street level
raised dominant	leading, aspiring	leading to something, sense of implication, unfinished, leaning, mildly uncomfortable
submediant	balance, open, lightness	airy and open, temporary suspendedness, neutral, evokes mild curiosity in regard to direction
subtonic	falling, lightness drifting downward, shifting	heavy, like walking with a limp, unexpected, open new possibilities, sheds a new light on things
leading tone	unstable, pointing, restless	sense of inevitability, highly unstable, uncomfortable, squirmy, itching, restless

Figure 18. Statistical finding of the tonality perception. Courtesy David Huron (2006, p.145).

F. The audio pitch manipulation techniques in the multi-channel composition

32V_Pitch correction_interval.mp4 compares the original Dracula dialogue with its modified result. When Dracula is exposed as a vampire, his voice was pitched down 12 semitones and the result was mixed in the multi-channel setting together with the original. Such an effect implies that Dracula speaks from all the speakers. Certain faster parts of the dialogue had a gradual curve in pitch change as illustrated in the image below. In this way the effect helped to achieve a more coherent sound with the original from the centre speaker. The usual pitch range for such effects was 5 semitones. When wider pitch ranges were needed for extreme effects, the transformation process was achieved using several pitch applications sequentially. In this way, the plug-in delivered better results comparing to what could be achieved from extreme straight transposition (12 and more semitone change). Cubase built-in MPEX 4 algorithm (Minimum Perceived Loss Time Compression/Expansion) was selected for the pitch transformation procedures.

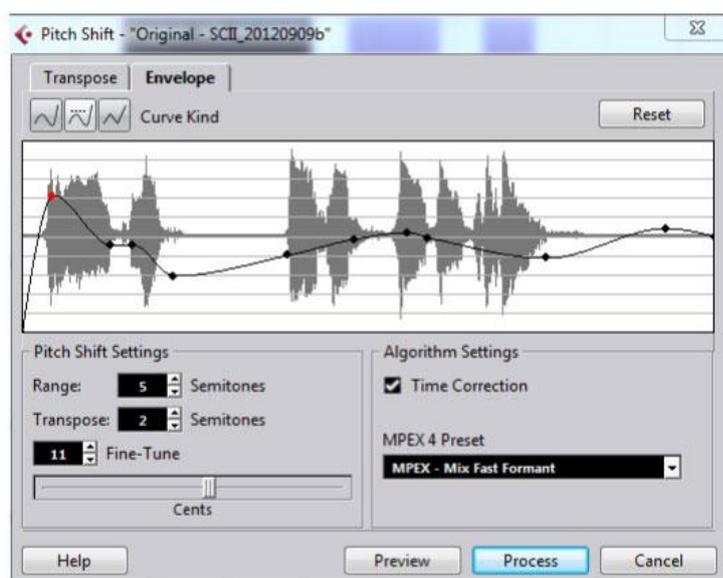


Figure 19. Gradual pitch change of the audio fragment in Cubase.

33V_Pitch correction_Original Mina.mp4 and 34V_Pitch correction_Transformed Mina.mp4 demonstrate how the dialogue was divided into audio segments that received individual treatment for pitch. This tool is usually used to correct the intonation of singing vocals, however it was successfully used to alter the emotional context of the dialogue in the composition.



Figure 20. Still picture from the music sequencer illustrates the parameters of the modified audio file.

G. The liturgical text of the *Dies Irae*

1 Dies iræ! Dies illa Solvat sæclum in favilla: Teste David cum Sibylla!	The day of wrath, that day Will dissolve the world in ashes As foretold by David and the sibyl!
2 Quantus tremor est futurus, Quando iudex est venturus, Cuncta stricte discussurus!	How much tremor there will be, when the judge will come, investigating everything strictly!
3 Tuba mirum spargens sonum Per sepulchra regionum, Coget omnes ante thronum.	The trumpet, scattering a wondrous sound through the sepulchres of the regions, will summon all before the throne.
4 Mors stupebit, et natura, Cum resurget creatura, Iudicanti responsura.	Death and nature will marvel, when the creature arises, to respond to the Judge.
5 Liber scriptus proferetur, In quo totum continetur, Unde mundus iudicetur.	The written book will be brought forth, in which all is contained, from which the world shall be judged.
6 Iudex ergo cum sedebit, Quidquid latet, apparebit: Nil inultum remanebit.	When therefore the judge will sit, whatever hides will appear: nothing will remain unpunished.
7 Quid sum miser tunc dicturus? Quem patronum rogaturus, Cum vix iustus sit securus?	What am I, miserable, then to say? Which patron to ask, when [even] the just may [only] hardly be sure?
8 Rex tremendæ maiestatis, Qui salvandos salvas gratis, Salva me, fons pietatis.	King of tremendous majesty, who freely savest those that have to be saved, save me, source of mercy.
9 Recordare, Iesu pie, Quod sum causa tuæ viæ: Ne me perdas illa die.	Remember, merciful Jesus, That I am the cause of thy way: Lest thou lose me in that day.
10 Quærens me, sedisti lassus: Redemisti Crucem passus: Tantus labor non sit cassus.	Seeking me, thou sat tired: thou redeemed [me] having suffered the Cross: let not so much hardship be lost.
11 Iuste iudex ultionis, Donum fac remissionis Ante diem rationis.	Just judge of revenge, give the gift of remission before the day of reckoning.
12 Ingemisco, tamquam reus:	I sigh, like the guilty one:

<p>Culpa rubet vultus meus: Supplicanti parce, Deus.</p> <p>13 Qui Mariam absolvisti, Et latronem exaudisti, Mihi quoque spem dedisti.</p> <p>14 Preces meæ non sunt dignæ: Sed tu bonus fac benigne, Ne perenni cremer igne.</p> <p>15 Inter oves locum præsta, Et ab hædis me sequestra, Statuens in parte dextra.</p> <p>16 Confutatis maledictis, Flammis acribus addictis: Voca me cum benedictis.</p> <p>17 Oro supplex et acclinis, Cor contritum quasi cinis: Gere curam mei finis.</p> <p>18 Lacrimosa dies illa, qua resurget ex favilla Iudicandus homo reus. Huic ergo parce, Deus:</p> <p>19 Pie Iesu Domine, dona eis requiem. Amen.</p>	<p>my face reddens in guilt: Spare the supplicating one, God.</p> <p>Thou who absolved Mary, and heardest the robber, gavest hope to me, too.</p> <p>My prayers are not worthy: however, thou, Good [Lord], do good, lest I am burned up by eternal fire.</p> <p>Grant me a place among the sheep, and take me out from among the goats, setting me on the right side.</p> <p>Once the cursed have been rebuked, sentenced to acrid flames: Call thou me with the blessed.</p> <p>I meekly and humbly pray, [my] heart is as crushed as the ashes: perform the healing of mine end.</p> <p>Tearful will be that day, on which from the ash arises the guilty man who is to be judged. Spare him therefore, God.</p> <p>Merciful Lord Jesus, grant them rest. Amen.</p>
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The liturgical text is accessed from http://en.wikipedia.org/wiki/Dies_Irae [accessed 2012 July 09].

H. The 'Map of Dracula' (1931)

Time Code	Film/story Details	On-Screen	Off-Screen	Non-Diegetic	Contextual Multi-channel Composition depiction and expression through 5.1 system
00:00:00 ⁵⁰	Black screen				The <i>Interlude</i> establishes the philosophical concept of the composition. The composition starts from a low frequency drone that is supplemented by another high frequency whistling sound. The composition implies emptiness and vastness through non patterned music rhythms and random melodic elements created by synthetic wind sounds. The steady drone of the rumbling wind intensifies and reaches a climax et the end of the segment. Sonically, the steady drone of the rumbling wind intensifies and reaches a climax in synchronicity with the white-out flash. The <i>Interlude</i> establishes the horror-mystic genre of the entire audiovisual composition.
00:01:49	Black screen				The impending brutality (from the 1930s perspective) embodied in Hitler's and Stalin's totalitarian regimes deride the prayers for peace. The <i>Requiem</i> commences with the <i>Kyrie</i> . In Latin: <i>Kyrie eleison;</i> <i>Christe eleison;</i> <i>Kyrie eleison.</i> In English (translation) : <i>Lord have mercy;</i> <i>Christ have mercy;</i> <i>Lord have mercy.</i> The liturgical text of the <i>Kyrie</i> is sung by a female singer. The voice is accompanied by its modified electronic transformations coming from the opposite speakers. This arrangement suggests the duality of human nature that is inherited from the eternal conflict between life and death.
00:02:44	 <p>Introduction to the Film - Opening titles</p> <p>Act II of "Swan Lake" by Tchaikovsky play originally.</p>	Horse cart sound fades in at the end of the titles	Synthesized galloping transforms to natural horse cart sound	<i>Destiny</i> theme establishes the horror genre of the film. The music blends with film sound at the end of the titles.	There is no contextual soundtrack composition here, because the opening titles establish the revoiced film soundtrack and its own sonic palette.

⁵⁰ Time code refers to the multi-channel composition.

Time Code	Film/story Details	On-Screen	Off-Screen	Non-Diegetic	Contextual Multi-channel Composition depiction and expression through 5.1 system
00:03:50	 <p>Carriage to Borgo</p> <p>Renfield disbelieves in superstitions. He takes it as an adventurous trip.</p> <p>The characters hurry before the sunset, they talk about <i>Nosferatu</i>. Stoker indicates the sound of dog howling in his book. Besides, it is Jonathan Harker not Renfield who is travelling in Stoker's book. His voyage takes time in spring.</p>	<p>Due to intensive original sound of horse cart, little can be done to filter the dialogue. Upper and lower frequencies with library horse cart effect are added to achieve the consistency of audio spectrum.</p>	<p>Additional layer of horse cart sound is added, which connects to the next scene. The village sound world contains of geese, dogs, crickets and frogs gradually overwhelmed by the arrival of horse cart. These sounds are valid for Transylvania in May.</p>	<p><i>Destiny</i> theme continues till arrival to the village. Music joins the scenes.</p>	<p>There is no significant contextual soundtrack in this part of the film because Dracula's real menace is introduced only upon Renfield's arrival in the village.</p> <p>The word <i>Nosferatu</i> fractionally echoes in the back speakers once it is mentioned by a traveller. It is a reminder that evil (Dracula) has been near the passengers at all times.</p>
00:04:30	 <p>Hungarian Inn</p> <p>Although Renfield doubts for a moment, he decides to leave for Borgo Pass. The villagers try to stop Renfield from going to Borgo Pass and meeting Dracula. Renfield ignores their superstition. Stoker indicates there was a Serbian/Slovak village rather than Hungarian. Feeling for adventure transforms to awe when the castle is seen.</p>	<p>Village sounds including domestic animals, frogs, birds (typical for May) will signify the last point of safety before Renfield's fatal decision to go to meet Dracula.</p>	<p>Village sounds disappear and the wolves howl takes over on the way to the castle. The elements of horror sound are subtly introduced in the scene when the Inn Keeper describes what Dracula is about.</p>	<p><i>Destiny</i> Music with variation to convey anxiety plays when Renfield's carriage leaves. The music leads to the castle.</p>	<p>The village stands for the pre-industrial era of civilisation. The villagers preserve strong family bonds and conservative traditions that have proved to be essential for their survival in the hostile wild nature. Although this community has a superstitious belief about the world and Dracula, such cautious behaviour makes it possible to live near the vampire's castle. Dracula is strong only in weak communities that break family hierarchy and create alienation among people (typical for an industrial society). The villagers' methods are similar to what Van Helsing is using against Dracula. Although Renfield is warned about the coming danger, he is unable to hear it.</p> <p>The contextual soundtrack is present sporadically in the front three speakers. Renfield, the main character of the scene, still does not believe in the superstition of Dracula (allegorically, the danger of totalitarianism). The side and back speakers play the woman's lament that is transformed using a granular synthesizer. This original sound sample is taken from the film scene (approx. 7 min 30sec of the multi-channel composition) when the villagers bid farewell to Renfield.</p> <p>The villagers cannot explain Dracula's nature; however they are aware of his real danger. The signification of the reality is heightened through the original recordings of the sounds of nature in Transylvania.</p>

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					Stoker discusses the main protagonist's journey in Transylvania in early May. The field recordings were taken during the same time of year in a geographical area close to current day Romania. The purpose was to capture wild-nature sounds supposedly heard by the protagonist of the book. The sounds of insects, bees, birds and sheep bells were heard during the day. Horses were still used frequently in Romania for transportation and farm work. During the late evening, the croaking of frogs took over from the rest of the sounds because it was the mating season. Borgo Pass is essentially a mountainous area with springs heard on a calm day, and winds rumbling during stormy weather.
00:07:49	 <p>Introduction of Count Dracula and his horrible environment</p> <p>Coldness, fear, feeling of facing the death. The surroundings of the castle are spooky, the dead awake, Dracula walks into the frame.</p>	Sounds of coffin lid, spider, mouse and Dracula's strangeness. Camera's tracking into the shot indicates some liquid leaking over the stairs. The sound of it is irregular and as such contrasts to the continuous sound of coldness.	The sound of high pitch gas, violin harmonics.	<i>Dracula Wives</i> introduced in the scene. The scene is slower and emptier comparing to the previous one. Besides sound design has rhythmical and unalleviated texture ⁵¹ .	<p>Dracula is a devil that seduces his victims by exploiting their weakness. Dracula stands for everything that is negative about the duality of Western philosophy: underlying coldness, lust, greed, and murder. The multi-channel soundtrack contextualises the historical era of the 1930s when evil is expressed through the rise of Hitler's totalitarian power in Europe and the cruelty of the Soviet collectivisation system.</p> <p>Dracula's callous state is suggested through a single continuous note that implies stillness and solitude. His danger is connoted through an uneasy atmosphere implied by the drones created from the original audio recordings in Transylvania. The darkness is expressed through muffled sounds, and the audience is gradually introduced through the 5.1 sound elements that reveal the true danger of totalitarianism. Hitler's speech about Arian expansion connects to a similar conspiracy: Dracula's plan to conquer England. As Hitler's political power increases, so Dracula rises from his grave and ascends the stairs to begin his plot.</p>
00:08:55	 <p>Renfield meets his fate – crosses the line and meets Dracula at Borgo Pass</p> <p>Tension rises as Renfield has to decide to mount Dracula's</p>	Horse cart, wind on the peak of the mountain	Little breeze (fog) merges with the other sounds (wolves), flute FX which attempts to hold the same rhythmical pulsation as the flying clouds over the mountain.	First signal of <i>Count Dracula</i> theme played by harpsichord.	This segment suggests the notion of cause and effect. Renfield's sin results in his perdition. It is an established perception in the morality of Western philosophy and storytelling (Booker, 2004) that if greed takes over dignity it will have a fatal end. Europe faces Hitler's rising dark power. The villagers' warning voices fade out and are replaced by the marching sounds of the Nazi hordes. Renfield, witnesses a mirage – the unreal becomes real: there is no coach driver, yet the horses run fast and bring him to a fatal end. So it was for the Europeans in the 1930s, the impossible became possible: the Nazis coming to the power and their implausible political ideas became reality.

⁵¹ The text in grey implies that this part of the soundtrack is heard only in mono version of the film (revoiced film soundtrack), and it is not interwoven in the multi-channel composition. For the comparison purposes, 01V_PreTransfer_Original_Soundtrack.mp4, 38V_Transfer_Soundtrack no dialogue.mp4 and 39V_Transfer_Soundtrack.mp4 demonstrate the same film part with different layers of the film soundtrack (from the original to the complete revoicing in mono).

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	cart or not. Eventually, Renfield leaves for Dracula's castle.				
00:10:05	 <p>Trip to the castle</p> <p>Road to hell and condemnation with no possibility for return. It is a pity Renfield has not realized the threat of Dracula, yet we anticipate what happens to him next. Renfield discovers bizarre things while on his way to the castle: no driver, wild nature sounds (the howling of wolves). Stoker indicates that Jonathan (Renfield in film) feels aloneness on this trip. When Renfield arrives to the castle of Dracula, he experiences high tension and suspense.</p>	<p>The horse cart rolls down the road with no option to return – there is no driver, the carriage runs at steep of the mountain. Renfield realizes his dangerous situation but has no control.</p>	<p>Wolves, bats and ghost illuminated in blue lights (in Stoker's book). The sound of bats and wolves are expressed with intensive reverb effect.</p>	<p>Music conveys Renfield's trip to Hell, which is step by step going down and turns to complete silence when he arrives to the castle.</p>	<p>The implication of upcoming hell on earth (fumes, fires, destruction, and pain). Europe is about to witness another insane war. Chaos takes over from order and sanity. The samples from the original soundtrack - Hungarian moaning from the village scene (7 min 30sec) and a flower girl screaming at Dracula's landing in London (24min 48 sec of the multi-channel composition) are transformed and composed to create anxiety. This uneasiness builds up to the point when everything is replaced by stillness. Deadly silence returns, and Renfield realises the horror – the leader (in the voice of Hitler) is a phantom that leads the entire world to destruction.</p>
00:11:31	 <p>Dracula and Renfield meet. Renfield is concerned to be in a strange place, but recovers when he meets Dracula. Renfield hopes things will become normal</p> <p>Awkward silence and strange room acoustics gradually build up tension. The threat for Renfield has not disappeared although Dracula treats him cordially.</p> <p>The two characters move towards the dining room.</p>	<p>Renfield's footsteps echo into silence, he is the only live soul in this place. The ghosts and vampires (Dracula) make no literal sound.</p>	<p>The wings of bats flap, the wolves howl (just fill the space). The reversed ambient sound conveys otherness, strangeness. Things are wrong even though they look normal.</p>	<p>Harp sound transforms into harpsichord playing Dracula's theme to depict an ancient aristocrat. Additionally, a synth chord conveys Dracula's emotionless state. The room has a 'harmonic chord atmosphere'</p>	<p>The world of the dead and lost souls. This is the realm of demons, whose king is Dracula himself. Renfield witnesses this hell before he dies and becomes a part of it. The world of evil is as quiet as death. Yet, the sounds that appear in this world are odd, something that the living have never heard before. A relatively loud Dracula's voice signifies the stillness of the surroundings.</p> <p>Dracula is assigned to the specific sound of hypnotic rattling metal that implies the mystery of the vampire. Dracula's voice was transformed using audio effects (lower pitch and adjusted intonation) to make it more threatening.</p> <p>The <i>Blood is life</i> is the leitmotif of the scene to reveal Dracula's true nature. Blood is significant for all humankind. The phrase 'blood is life' was translated into several languages (Arabian, Latin, Spanish, Chinese, Hindi, Greek, Russian, French and English)</p>

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	Dracula appears as a bizarre person, but his manners and politeness reduces Renfield's suspicion towards the count.				using the Google translate audio tool and interwoven into the composition. The source for an artistic inspiration to reveal the relationship between the living and dead comes from <i>Blade Runner</i> (Scott, 1982). This film shows the robots (replicants) who want to become human beings by obtaining feelings. Dracula also desires to become a forever living creature. The composition reaches the culmination with the phrase delivered in English. The recording disintegrates in small segments with synthesised effects to suggest the artificiality of the vampire's nature.
00:15:27	 <p>Dracula as an evil character is established - Meeting in the dining room. Stoker indicates in his book that Jonathan Harker was treated as an amiable guest under compulsion</p> <p>Flirt between Dracula and Renfield. Scene takes warmer moments, but the threat is always underneath. Dracula signs property documents regarding the acquiring Carfax Abbey in England. When Renfield cuts his finger, the audience is signified that Dracula is affected by blood. The dramatic tension is when he decides to kill Renfield.</p>	Dracula plays with Renfield like cat with a mouse. Renfield cannot escape, yet he still treats Dracula politely, he does realize the threat.	The ambience of room changes from a nice place (comparing to the strange meeting experience in the castle hall of the previous scene) to a sorrowful reality expressed in facing the dead emotionless face of Dracula.	<p>Dramatic elements of the scene: will Renfield survive, will Dracula attack him once more after seeing the cross.</p> <p><i>Blood</i> theme builds up when Renfield cuts his finger and finishes the scene of seduction. Piano notes join the next scene (also indicating the coming of Renfield's madness).</p>	<p>The surroundings are deceptive, reality is lost, the social order and norms that used to prevail disappear. Renfield is trapped as the Europeans were trapped between two totalitarian ideologies (Nazism and Bolshevism) that portray the world through the distorted mirrors. Renfield is called from the back to 'join us', by the temptation of the female vampires. Allegorically they invite him to join the ideologies. As we later see, he is forced to become a part of it, either willingly or not.</p> <p>Seeing Dracula's affection for blood when Renfield cuts his finger conveys Dracula's secret – his immortality and condemnation to be forever blood-thirsty. He is after the blood of the living, and for this purpose he can seduce, adjust, hypnotise and kill. Stoker also gives him the features of an amoral, primitive merciless killer. Various supplementary sounds like whispers, other fragments of the soundtrack – Lugosi's word '<i>secret</i>', the passenger's word '<i>Nosferatu</i>' and transformed recordings from Romania are heard coming from the side channels and back. <i>Secret</i> is a segment of the composition based on Lugosi's original phrase arranged in a suggestive seductive manner, accompanied by the theme played on the trumpet.</p>
00:18:40	 <p>Dracula's wives. Browning provides with an illustration of what will happen to the film protagonists (Lucy and Mina) if they fall under</p>	n/a	The scene fades into the storm of the next scene.	<i>Dracula Wives</i> theme transforms to the music used in the next scene (storm). The music builds to crescendo. Despite homosexual content of the scene, it rather suggests Dracula's hunger for	The rising peak of the <i>Blood is Life</i> composition takes place as all the vampires gather for the feast. After the culmination, the multi-channel composition fades out as if the vampires have never appeared or been real.

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	<p>Dracula's control</p> <p>Dracula's slaves, his seduced women who are hungry and eager to contaminate others at any cost to quench their hunger. Dracula rebukes his wives and approaches Renfield's throat (converts him to a vampire). Stoker indicates that this is the time when Renfield (in the book Jonathan Harker) realizes he is dealing with supernatural and dangerous things. However it is too late for a safe return. Stoker also reveals significant portion of eroticism of Dracula's wives (vampires dependent on him).</p>			blood.	
00:20:06	The film fades to black				<p>The <i>Tract</i> from the <i>Requiem</i> employs whispering. The increasing volume and dynamics of the granulated phrase 'lux atamae' mix with the diegetic sound of the sea storm.</p> <p>In Latin:</p> <p><i>Absolve, Domine, animas omnium fidelium defunctorum ab omni vinculo delictorum et gratia tua illis succurrente mereantur evadere iudicium ultionis,</i></p> <p><i>et lucis aeternae beatitudine perfrui.</i></p> <p>In English (translation):</p> <p><i>Forgive, O Lord, the souls of all the faithful departed from all the chains of their sins and by the aid to them of your grace may they deserve to avoid the judgment of revenge, and enjoy the blessedness of everlasting light.</i></p>
00:21:14	 <p>Dracula on the ship in the stormy sea</p> <p>Audience faces the first consequences of Dracula's</p>	Storm has devastated the ship, allegorically Dracula has vanished the crew.	Rough sea at storm, creaking ship while shown interiorly.	The storm is predominant in the scene, therefore music FX of drums and brass blend with squeaking sound of the ship wood. Irregular rhythm supports the feeling of disaster.	There is no contextual soundtrack in this part because the loud sea storm is highly prominent in the film soundtrack.

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	<p>menace – Renfield has changed completely and becomes maniacally desperate for blood.</p> <p>Renfield releases Dracula from the coffin and pledges loyalty to him.</p>				
00:22:46	 <p>Vesta arrives to England</p> <p>In contrast to the previous scene at the sea, harbour appears sunny and calm, yet this peaceful setting brings no peace. The ship arrives to England with only Renfield and Dracula on-board. The English discuss what has happened to the crew. Stoker describes masterfully the horror of the strange ship seen during the storm in the vicinity of Whitby.</p>	<p>The evil arrives in England, the local people fail to realize what they are dealing with. Most of the dialogue which explains what has happened is delivered off-screen. The mysterious events which took place on board of Vesta are described.</p>	<p>Sunny, peaceful day with sounds of harbour, lighthouse and splashing waves contrasts to crazy laugh of Renfield.</p>	<p>Renfield's theme of madness (irregular piano notes) with soft attack fill the space.</p>	<p>The triumph of evil as it successfully spread out into the world. The contextual composition reflects the orgy of sinister jackals that victoriously take over the new lands and wipe out everything in their path. The civilisation that turns hard-work and patriotism into vanity is susceptible to its own destruction, because Dracula's infection destroys society from inside. The dark riders of hell, the jackals, are feasting on the bodies of the dead sailors. Historically the vandals invaded Rome and destroyed its culture in 410 AD, Dracula's horde is preparing to destroy England. The psychosis is expressed through the transformed word <i>Nosferatu</i> from the original soundtrack, and its arrangement at the lower end of the frequency range. The mating sounds of the diver-birds (artistically suggest jackals) mix in a higher frequency range and unite with the Renfield's maniacal laugh.</p>
00:23:51	 <p>Dracula in London - Newspapers headlines</p> <p>Mystery of Vesta and the tragic fate of its crew. Dreadful Dracula's landing in England is reflected with strangeness and surprise rather horror. The newspapers fill the back-story of what happened in the sea. In Stoker's book, newspapers and personal journals of the characters are the main source of information and story development.</p>	n/a	<p>The sounds of the city, horns, people.</p>	<p>England faces mysterious occurrences and unexplained events. They are signified with anxious melodic music covering the entire scene.</p>	<p>The cities of concrete buildings break communities and create an impersonal humanity that has no connection to each other. People slave for their basic physical needs and by living a busy life they fail to realise the danger coming from Dracula.</p> <p>The original film sound of the city (horns, whistles, high heel shoes) is transformed using granular synthesis. It is mixed with drones (made of bells) and the rhythmic sounds of the steam train to suggest the 1930s.</p> <p>The sound of Jack the Ripper stabbing his victims and then fleeing away implies the dark nature of Stoker's London at that time. The bells in the distance signal danger, while Dracula is able to remain unnoticed on the streets of London (similar to Jack the Ripper, who has never been caught).</p>

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00:24:28	 <p>Dracula in London</p> <p>Dracula confidently walks in the city, kills a girl in the street, enters the opera house. The count stands out in the crowd by his posh appearance. Dracula has no trouble adapting to the new environment (evil spreads quickly). The public is unaware of the upcoming threat. Dracula becomes a serial killer in the film. In Stoker's book, count Dracula symbolizes everything what English Victorian society was afraid of – immigrants, foreign influence, non-Christian virtues and lack of morality. Yet his foreign aristocracy and richness was appealing.</p>	The whistles of policemen, voices of people in the street suggest confusion of English society	The noises of the city make it an uneasy and uncomfortable place to live. London is busy, noisy and unsympathetic to someone's problems or disasters. Rats are associated with Dracula's ability to spread in the environment.	Dracula's theme in harpsichord. When Dracula comes to the theatre, diegetic concert hall music is heard in distance (The author's original composition for brass orchestra, recorded live).	The menace of Dracula landing on English soil is a symbol of the Nazis attacking Britain in the early 1940s. Air raid sirens, bombs and other sounds of the war signal the upcoming disaster. Churchill's speech on defending Britain is heard as the call for defence. The sound of ringing bells signifies the traditional sound of news or danger in the context of the European culture. This sound transforms into the modern warning sound of air-raid sirens. The original policemen's whistles are taken from the film and mixed with the menacing sounds of falling bombs.
00:25:27	 <p>Opera house</p> <p>Schubert's <i>Unfinished Symphony</i> and the Prelude de Wagner's <i>Die Meistersinger</i> originally play in the film. Dracula meets Mina, Lucy, Dr. Seward and Jonathan Harker. Dracula shows his hypnotic power on a theatre's clerk. Dracula's targets are intellectuals and aristocrats rather than ordinary people from lower social classes. In Stoker's novel the elite class was more corrupted and vulnerable because of the immoral way of living.</p>	The people are murmuring at the concert hall.	Concert music plays the author's <i>The Legend of Dracula</i> theme (performed by live orchestra in Lithuania). This is a diegetic sound in the scene	n/a	Dracula's threat is also suggested through the birth of the consumer society in the 1930s after the Great Depression. The question is whether it is Dracula who brought alienation to English society, or the consumer society that is an attractive medium for the spread of the vampire's power. Dracula's introduction is grand and noble as most totalitarian regimes pay attention to the surface and image (parades, uniforms and rituals). Later in this compositional segment the robotic electronic sounds of moving crates in factories is mixed with the monotonous work of an oil rig to suggest the sonic illustrations of the consumer society. The fascist march and cheering crowd closes this segment, whilst Dracula is passionately looking at his new victim. The recording of the Nuremberg Nazi Rally ⁵² is mixed with marching drums that triumphantly advance Dracula's plot.

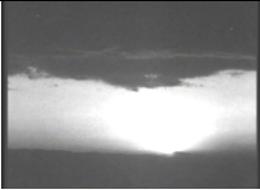
⁵² The library recording of the Nazi rally used in the composition does not provide an identified year.

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00:29:15	 <p>Dracula kills Lucy- The bedroom of Lucy</p> <p>Two girls talk in the room. Music box interferes with the dialogue; Lucy imitates how funny Dracula sounds for English people. Also, it is clear from the conversation that Lucy and Mina romantically project their lives in successful and devoted marriages. However Stoker's characters in the book portray Mina as New Woman – modern educated and independent personality.</p>	The girls dream for happy life. The scene reflects romantic aspects about the future	Nightingale sings outside, dogs occasionally bark. The outer world changes when Lucy opens the window and mysterious Dracula appears in the room.	Diegetic music box. String chords reinforce the joyful dreams for happy life of the girls. Music also helps to drive the scene forward.	Dracula has the power to create a veil over his real intentions. The Soviet and Nazi propaganda machine succeeded in looking like an attractive social economic system in the eyes of many democratic countries that had struggled through the Great Depression in the early 1930s. Similarly Dracula's penetration into English homes was initially successful. A Transylvanian cold, killing atmosphere is transferred to England. The low frequency sound of the wind comes as if from the underground and interchanges with silence.
00:30:21	 <p>Dracula kills Lucy in her bedroom</p> <p>Dracula walks near Lucy's bedroom, flies into the room transformed into a bat and approaches her bed. The dramatic irony creates tension, because the audience sees and knows about Dracula's evil intentions, yet there is nobody who can stop him from killing Lucy.</p>	n/a	Silent bedroom in the night, Lucy is left alone to meet her deadly destiny. Dracula manages to sneak into the room unnoticed while Lucy is hypnotized.	Dracula appears in the room, music strengthens the helplessness of Lucy, Dracula's thirst for blood.	The contextual soundtrack conveys Dracula's control over others. The Count fuses his blood with the living and turns them into vampires. Allegorically both Hitler and Stalin forced everyone to obey their totalitarian regimes without other options. Mina's voice is taken from the further scene (approx. 46 min. of the multi-channel composition when she describes her dream) and is transformed to increase its dramatic quality with sorrowful intonation. It directly connects to Lucy because they share the same fate, becoming vampires. Mina's confession is occasionally interrupted with an altered scream, taken from the original soundtrack (maid's scream when she finds Mina laying dead (58min, 35 sec of the multi-channel composition).
00:31:45	 <p>The doctors are investigating Lucy's cause of death</p>	The sound of the dialogue is adjusted to have three levels of distance. First – far away introduction of the scene, closer shot and medium shot with the loudest and clearest point. This helps to discover the space	The sound of lab, hospital, "sanitized" environment. The presence of dozens of people (other doctors) who can be seen in the background.	Objective truth – no emotional underscore is needed.	The composition emphasis the diegetic sound of the film, therefore there is no contextual soundtrack in this part.

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	Rational science stands to fight the mysterious event, but it finds no explanation. The meeting at the morgue. Doctors are trying to identify why Lucy lost so much blood and what was the cause of her death. Stoker gives a significant portion in his story about the long and frustrating fighting for Lucy's life. The film does not explore that.	of the scene			
00:32:30	 <p>Renfield is identified as a vampire - Seward's Sanatorium</p> <p>Renfield eats spiders, which makes him a bizarre character to the doctors of the asylum.</p>	On-screen asylum sounds require the treatment of EQ and putting in space. Originally they are flat and presented too close.	The outside birds heard in the beginning of the scene change to reverse mode. The reversed ambience conveys uneasiness and repulsion.	Renfield music has irregular rhythm, notes, register played in piano	<p>There are several layers that aim to illustrate the Harker/Renfield character's insanity coming from the novel and film time-period. First, Stoker's character Harker faces insurmountable atrocities from Dracula while being kept prisoner at his castle. An excerpt from Harker's diary has been artistically recorded and placed on the back of the multi-channel composition.</p> <p>'These might be the last words I ever write in this diary. I slept till just before the dawn, and when I woke threw myself on my knees, for I determined that if Death came he should find me ready. At last I felt that subtle change in the air and knew that the morning had come. Then came the welcome cockcrow, and I felt that I was safe. With a glad heart, I opened my door and ran down to the hall. I had seen that the door was unlocked and now escape was before me. With hands that trembled with eagerness, I unhooked the chains and drew back the massive bolts' (Stoker 2003, p.74)</p> <p>Second, the composition contextualises the two major wars of the 20th century that destroyed the physical and mental lives of many millions of people. Renfield is an allegorical example of a soldier or civilian who experienced unbearable events for a human soul during the military actions. The soundtrack reveals the war-like sounds of guns, explosions and tanks. Like Harker in the novel, a soldier prays he will see another day and survive the horrors at the front. The sounds of guns, armoured machines and flames suggest an enormous lifeless process that takes human lives without mercy. There are no shouts or moans, so the killing becomes even more impersonal and cruel.</p> <p>The original reading in Latin⁵³ (taken from the next scene, approx 38 min 30 sec of the multi-channel composition) is altered through various audio effects. It is heard coming as if from a remote distance to signify the</p>

53 Deinde cum extractum vesiculionis sanguine mixtum est, sanguis puniceo color amisso lacteus fit.

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					indoctrination of a political authority.
00:33:45	 <p>Introducing doctor Van Helsing as the main protagonist</p> <p>Van Helsing identifies that he is dealing with the undead, vampire. Van Helsing is mysterious because he possesses a broad range of medical skills, few of them are recognised by science.</p>	Van Helsing's methods of using superstition are as unbelievable in the context of Western tradition as Dracula's threat. Yet his English followers show no choice and accept to believe in him.	The sound of ticking clock is a rhythmical symbol of Van Helsing's sonic world	Mysterious music of Van Helsing and superstition to disclose that Dracula is the vampire.	Both the film and book show Van Helsing's superior power and his inclination to control the others by using superstitious knowledge. Like Dracula, Van Helsing adopts rituals that may hypnotise other people and uses the menace of Dracula to his own advantage. His entire action traumatizes a human soul no less than the Count himself (Castle, Foster <i>In: Riquelme</i> , 2002). It questions the morality of the protagonists: is the true evil coming from Dracula, or is there a dracula living inside each of us? Similar to Stalin, Van Helsing consolidates power to fight his enemies from outside. 'We thought her dying whilst she slept and sleeping when she died' (Stoker 2003, p. 223) mixes with the previous words of Harker's diary, while the entire ritual is put in a rhythmic pattern of cutting blade sounds (connection to Dracula's character). Both the leaders – Van Helsing and Dracula establish their power and predominate in their own way. Van Helsing is performing the ritual of a 'blood test' to identify who rightly belongs to the community, and who is the <i>other</i> .
00:35:20	 <p>Van Helsing's meeting with doctor Seward and Renfield</p> <p>Renfield gives himself away that he is a vampire. Van Helsing's knowledge about the subject makes him capable to deal with Dracula in the eyes of the audience</p>	The scene has two dramatic units – Renfield's reaction to the inspection of his arm, and Renfield's attempt to warn the protagonists about the coming threat	The action moves to interior setting for the rest of the film, which makes it static. Ambient sounds of room, nature's sounds in evening expands the space of the action.	The scene carries the mystery of Renfield's madness. Swinging flute chords and irregular piano melody fills the gaps between the dialogue lines.	Dracula is <i>everywhere</i> . To build this uneasy tension of someone present, the multi-channel composition helps to convey the sounds coming from the surroundings. It suggests the totalitarian conspiracy when people are following and suspecting each other (their neighbours, friends, and relatives), and society is locked in total fear Like Jack the Ripper who is unnoticed on the streets of London and nobody knows when he will strike next, so is the fear of Dracula present outside every house. The feeling that something dangerous is in close proximity to them it implied to the audience, yet they are unable to see it. One sample of the original dialogue ' <i>bad dream</i> ' (41 min 34 sec of the multi-channel composition) is transformed and sounds like a curse from Renfield's lips. This creates tension because nobody is aware who is going to be the next victim of the totalitarian regime. This segment suggests that as much as Dracula is an omni-powerful creature, the pain and torture he put his victims through (Renfield) is unbearable and unearthly too. Therefore Renfield's cry is heard coming from all the speakers. Renfield's insanity reveals his miserable situation; The pain is superimposed by his loud scream in the multi-speaker system. The reaction to the wolf-bane echoes via electronic drones that are earlier established as having an association with Dracula. The intention is to create a shared link between the infected characters and their master Dracula.

Time Code	Film/story Details	On-Screen	Off-Screen	Non-Diegetic	Contextual Multi-channel Composition depiction and expression through 5.1 system
00:36:51	 <p>Dracula in the abbey</p> <p>The scene inter-cuts with Dracula's wake-up after the sunset. Dracula has an ability to hear and see everything what the protagonists do, because by nature the evil (Dracula) is everywhere.</p>	There is no significant on-screen sound in the cut. The tilting from the coffin to window and back is justified by adding the echo of Renfield's line from the previous shot	The wolf howl attracts the attention of the characters. The same sound joins the cut-a-way. Dracula's realm (Carfax Abbey) has the sound of dripping water (parallel signification to Van Helsing's sonic world with the clock)	The cut-a-way moment reinforces Dracula's menace and wilderness using emotive but atonal sounds	<p>The archaic prejudice of vampirism in Eastern Europe and its connection to Van Helsing's methods in England. The film gives a similar shot of the sunset in London to the one Renfield saw in the Transylvanian village. Through this visual repetition, the composition suggests that the principle way to fight evil has common historical grounds in all Christian societies.</p> <p>Wolf bane is a talismanic symbol of the fight against evil in the archaic Eastern European tradition. It is signified through a male choir that suggests the Orthodox monks' prayer.</p>
00:38:50	 <p>Dracula infects Mina - Renfield at his warden</p> <p>Dracula orders Renfield to help him to approach Mina. Renfield is too weak to resist Dracula's will.</p>	Renfield's inability to resist to Dracula is suggested by altering his cry using FX	Nobody is around in an awkward silence room. Mina faces Dracula's treacherous intentions alone.	Music builds up to the next scene when Dracula comes to Mina's room.	Dracula communicates with his victims telepathically. Stoker gives examples of how Van Helsing uses hypnotised Mina to reveal Dracula's plans. The words taken from the novel are used to give an artistic expression of such a tele-connection. 'All is dark. I hear the water swirling by, level with my ears, and the creaking of wood on wood. Cattle low far off. There is another sound, a queer one like...' (Stoker 2003, p. 473)
00:39:45	 <p>Dracula approaches Mina and infects her</p> <p>Dracula flies into the room as a bat and approaches Mina's bed with particular expression of disgusting wickedness. A moment of complete desperation, because Dracula manages to sneak and touch the most precious what protagonists have - Mina</p>	The scene contains the biggest close-up of the film. Dracula leans towards the camera, insane and irregular breath suggest the disgust of the act.	The action supported by on-screen sound and music requires little or no off-screen sound in the scene	A moment of devastation and utmost repulsion about Dracula and his behaviour.	The soundtrack elements from the <i>Interlude</i> re-establish the link with Dracula's killings. The rumbling synthetic wind sounds suggest the emptiness and vastness of the cold and dead Dracula's under-world.

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00:40:25	 <p>Van Helsing identifies Dracula is the vampire - Van Helsing identifies that Mina is infected, meets with Dracula</p> <p>Mina, Jonathan, Seward and Van Helsing talk in the living room. When Dracula comes, Van Helsing finds out he has no reflection in the mirror (a vampire's feature). Van Helsing is equally powerful to fight Dracula. The Scene reveals both characters are well aware of each other.</p>	<p>The scene has several dramatic units. First, Mina is revealed to be hiding her relationship to Dracula. Second, two main characters meet for the first time. Finally, Dracula is revealed to be the vampire, who has ultimate power over Mina's behaviour</p>	<p>Although Van Helsing echoes Dracula in his posture in the way he examines Mina (he insists to examine her and comes to her with similar position of his hand as Dracula does to his victims), he is the only one powerful enough to stop the count.</p>	<p>The initial clash of the titans of the film. Dracula leaves, but we anticipate that he will confront Van Helsing again; music does not superimpose the action on screen, but balances the dramatic tension between the three dramatic units in the scene.</p>	<p>The transformed Dracula's wives choir theme is heard in the rear channels. The sound of transformed crows and wolf howling suggests the madness that Mina is going through. Dracula's granulated voice adds to the anxiety of the composition. When Dracula enters the room the Nazi 'Heil Hitler' greeting allegorically connects him with the Nazi leader. The tension rises to the moment Dracula smashes the mirror. Then his dialogue is heard echoing from all the speakers, because he is revealed as a vampire.</p>
00:48:08	<p>The film fades to black</p>				<p>The <i>Sequence (Dies Irae)</i> from the <i>Requiem</i>: a composition for symphonic orchestra and vocals using Thomas of Celano's hymn⁵⁴ and known sequence (ca 13th century). Similarly for the same purpose, to contextualise Stoker's <i>Dracula</i> and Browning's film production period, the <i>Dies Irae</i> finds a special place in the multi-channel composition. The sounds that link to the dark moments of 20th century history are those that represent 'modern hell': the sounds of war (falling and exploding bombs, people's screams, air raid sirens, and enormous fires in burning cities), two most dreadful dictators, Hitler and Stalin, who created the societies where human life was considered meaningless and caused the Holocaust and Gulag with millions killed. In the 1930s when the film was made those times were about to start. Like Dracula, these two dictators were cunning, cruel, powerful, yet appeared deceitfully cordial. Some may argue the World War II was a nightmare one could not wake up from. The people were participating in disastrous events, yet like Mina, they could do nothing to prevent or resist their fatal destiny. The composition of the <i>Dies Irae</i> suggests death, wrath, and prayer for salvation. Allegorically Lucy represents the destruction of France in World War II, while Mina (like Britain) has been attacked in her sleep and remains in danger of being killed next. Therefore Winston Churchill's speech "we will fight" coming earlier in the composition is like a manifesto of the main protagonists to defend humanity against the impending slaughter at any cost. As Van Helsing, Seward and Harker see how Mina is falling under Dracula's spell, their failure to protect her would lead to their destruction</p>

⁵⁴ The complete liturgical text of the Dies Irae can be found in appendix G of this document.

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					<p>too, because Mina symbolises freedom and liberty of human rights - opposite to the evil coming from Dracula (Eltis <i>in</i>: Riquelme, 2002). This part of the film clearly identifies the source of evil. Van Helsing discovers that Dracula is the vampire they have been searching for. Van Helsing has to mobilise his inner strength and knowledge to withstand Dracula's power in the duel and find a way to destroy him.</p> <p>The <i>Dies Irae</i> has the same outline as the entire composition. It starts and grows steadily to the first culmination (near the golden divide). Afterwards, the second part of it suggests madness through re-positioning and re-arranging previous material which leads the entire piece to the second, final peak at the end. The <i>Dies Irae</i> hymn says, those who have a pure conscious will go to heaven. Mina in the film asks to be saved in the afterlife if the protagonists fail and she becomes a vampire.</p>
00:55:51	 <p>The discussion about Dracula and how to fight him - Mina meets Dracula in secret, Van Helsing continues meeting with Dr.Seward and Jonathan Harker in the living room</p> <p>Jonathan Harker is the last one who accepts superstition. Van Helsing gains ultimate power to use his superstitions against the evil. Van Helsing explains how Dracula survives, Renfield obscurely speaks about his master, a maid finds Mina outside in the garden, everybody goes to rescue her. Renfield hypnotizes the maid, sneaks closer to her helplessly lying on floor. By attacking the maid, Renfield fails to remain being an ambiguous character of the film- he joins the realm of evil</p>	On-screen sound requires basic de-noising.	The bubbling hypnotic sounds reinforce maid's POV with disgust towards Renfield.	The <i>Blood</i> theme plays when Renfield crawls towards the maid. It shows that Renfield is like Dracula, dependent on blood. Part of the music composed for film is present because the main emphasis is put on the contextual soundtrack.	<p>The insanity is revealed through the eyes of Renfield. His mental state is of being torn between the worlds of the dead and living. This dualistic segment (to the point when Renfield approaches the Maid who is lying down) was inspired by Salvador Dali's painting <i>Soft Construction with Boiled Beans (Premonition of Civil War)</i> (1936) that is related to the Spanish Civil War and the destruction of a nation by two internal forces.</p> <p>Whispering words are echoing from all directions as Renfield walks into the scene. They either connote or object to what Renfield is saying in the scene. Extracts of his dialogue from various parts of the film are taken and transformed so when they are played in sequence they create a conflict in semantic meaning. Sometimes he pleads for forgiveness, sometimes he declares his loyalty to the Master, sometimes he acknowledges his fate. All this creates a portrait of a fractured, distorted and wounded mind.</p>

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00:58:37	 <p>Mina is found, Jonathan Harker and the rest bring her back</p> <p>Mina is in danger to face the same fate as Lucy.</p>	The characters move from one position to another, which required an adjusted treatment of dialogue's volume and EQ.	Dracula is everywhere, he hears and sees everything that is happening, while the protagonists are unaware of that. Visually this is revealed when Dracula is shown hiding by the tree and listening to what the protagonists say	Music appears to join this scene with the next one in the cemetery	The introduction of the Soviet totalitarianism. A revolutionary theme is played on the trumpet, and the music is backed up with the sound of marching drums.
00:59:01	 <p>Dracula's influence on Lucy and Mina; his superiority - Lucy attacks small children</p> <p>Lucy has been reintroduced to show the horror of becoming a vampire (coldness, solitude). Allegorically she reminds one of the Transylvanian wives. It serves to compare what happens if the protagonists lose Mina</p>	Lucy is portrayed as indifferent; a dead person making no sound or expression	Whispers in the night. The vampire moves through the dark in total silence. The policeman checks the report about attacked children, but the only sound can be heard is his bicycle.	Music theme of Dracula's wives, pity is mixed with a danger.	<p>The Soviet propaganda speech claiming the lives of the traitors (transl. from the Russian by T.P.): "They were attempting to take away from the working class of the entire world the most precious, the dearest, our beloved, inherent Comrade Stalin! No mercy to the enemies! Shoot each one like rabid dogs! Death to the traitors of the homeland! This phrase appears on the back left of the composition and is intercut with the other Russian phrase on the back right.</p> <p>The Russian military parade commanded by an army general (transl. from the Russian by T.P.): "standing straight, looking forward to the celebrating parade!" The sound of the soldiers of honour marching across the Red Square in Moscow suggests that the society has to obey the militaristic order of the Soviet Union. Allegorically, this social vampirism is implied by Lucy who, hypnotized, is passing through a cemetery in her white dress.</p>
00:59:20	 <p>Seward's Sanatorium</p>	This scene explains the action of the previous scene in the cemetery. Dramatically it slows down the narrative because the two scenes are essentially the	Echos of Asylum sounds (madmen laughs, trolley sounds in the corridor). The laughs are taken from the Asylum scene at 28min 38sec of the film	Music is not added because there are intensive dialogue lines	The Soviet propaganda segment continues to the hospital scene where the main news is delivered by newspapers, radio and cinema (the main channels of information and propaganda at the time). Van Helsing's altered dialogue, explaining why Dracula smashed the mirror, interacts with Stalin's speech. The entire sequence is supplemented by an ascending music melody in the background that gains an unnatural and disturbing quality for human cognition

Time Code	Film/story Details	On-Screen	Off-Screen	Non-Diegetic	Contextual Multi-channel Composition depiction and expression through 5.1 system
	<p>The staff at the asylum is reading in newspaper about continuing attacks on small children. This scene shows that general public is vaguely aware of what is happening. Yet it makes clear how valuable Van Helsing with his knowledge is and how important it is that he wins against Dracula.</p>	same.			<p>(according to the Huron's (2006) statistical findings). It suggests the cruel, antihuman Soviet social system that is unpredictable in terms of whose lives it will take next, while the entire segment connects Van Helsing with Stalin's character.</p> <p>Van Helsing: <i>Dracula is our vampire.</i></p> <p>Stalin (translated from Russian by T.P.): <i>Comrades!</i></p> <p>Van Helsing: <i>The vampire cast no reflection in the glass. That is why Dracula smashed the mirror.</i></p> <p>Stalin: <i>Twenty four years have passed since the victory of the Great October Revolution.</i></p> <p>Van Helsing: <i>Yes, and that is what your English doctors would say. Your police!</i></p> <p>Stalin: <i>The Soviet state has been established in our country.</i></p> <p>Van Helsing: <i>The strength of the vampire is that people would not believe in him.</i></p>
00:59:50	 <p>Mina admits she is on the vampire side</p> <p>Mina realizes she is losing her real world. Very static film scene has to be animated by adding the feeling of desperation. Van Helsing is questioning Mina. Jonathan still does not believe vampires exist. Mina asks Van Helsing to explain everything to Jonathan.</p>	The scene has no cutting or reaction shots, therefore music has to compensate the emotional change between the characters	Evening birds and idyllic atmosphere is replaced with crow's calls which have a strong association with death.	A moment of the sad truth, that Jonathan and Mina may not be together any more. Dracula is in between them. Emotional music (<i>Love</i> theme) drives the scene	<p>Mina confesses that she confronted vampire Lucy downstairs on the terrace. Biedermann (1992) predates the archaic symbolism of the dead as portrayed from below (underground) while the heaven is in the sky. Therefore Mina's description of meeting the Lucy from below is connected to the traditional perception of the dead. The composition also conveys an allegorical meaning of the brutal Soviet interrogations. There were thousands of cases where people, for political reasons, were shot in the basement of the Soviet secret police NKVD during 'custodies'. The sound composition of a death sentence in the basement cell illustrates the horror of many people, among them intellectuals, artists and scientists who have faced the custodies of the Soviet Union. The footsteps of an army officer's boots are heard in the background; he loads his pistol, aims, and shoots his victim. A lifeless body smashes onto the floor. Moments later they pick up the body and drop it into a bag. The officer leaves the cell for a smoke before he comes back and shoots another prisoner.</p> <p>During Van Helsing's interrogation, Mina describes the soulless 'wolf like' face of Lucy. The sequence is ends with Mina's line '<i>But this horror. He wills it.</i>', that is transformed with various audio effects and connects to the previous illustration of massacre and murder.</p>

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01:03:03	 <p>Van Helsing is preparing the house to defend from Dracula</p> <p>Van Helsing orders the maid to protect the room from Dracula by layering wolfbane around the windows and near Mina's bed. Van Helsing shows he ultimately controls the situation, everyone else has to subordinate him.</p>	The plot is driven by dialogues and little action at this point which slows down the narrative	The interior of the house is relatively a safe place while the exterior environment towards the evening becomes wild and controlled by Dracula. The sound creates a contrast between the two places	Since dialogue is abundant, it is difficult to make music trajectory in the scene, better to relay on sound.	<p>Van Helsing's fight against Dracula is superimposed by sci-fi electronic sounds. The sheep bell recording in Transylvania is transformed by granular synthesis, and it suggests the healing power of wolf bane from the Eastern Europe. Van Helsing is at the height of his use of superstitious remedies to heal Mina. However the allegorical meaning of such treatment suggests the Soviet purges and sovietisation. The Soviet propaganda speech on fighting the enemies of the state and socialism is heard in the background. The music passage (drones that develop harmonically) is designed to add to the anxiety and complexity of the historic situation. The Soviet society is destroying itself by killing each other and building a 'new social order' on the bones of their brothers and sisters. The sound of a squeaking pig before its death conveys the last scream for life.</p> <p>Renfield's arrival in the scene confirms his state as one of Dracula's horde. He describes the underground – thousands, even millions of rats were promised to him by the Count if he obeys. Parts of Renfield's dialogue 'rats', 'thousands', 'obey me' are altered to connect to his madness.</p>
01:07:36	 <p>Dracula vs. Van Helsing - Van Helsing faces Dracula</p> <p>The tension rises if Van Helsing is strong enough to resist the power of Dracula</p>	The duel between Dracula and Van Helsing is strong. There is a good rhythmic composition to use the elements of sound design.	The main focus of the scene is on the duel between the protagonist and antagonist. No or little off-screen sound is needed. When Dracula flees away, the off-screen sound takes the role to show his direction of retreat.	There are four dramatic units in the scene (three counter arguments to Dracula) and repelling Dracula by cross. Music supports tension in between the units.	<p>The Transylvanian night ambience is heard at the beginning of the scene which suggests that Dracula successfully carries on with his plot to infect England. Dracula has an altered voice that comes from all the speakers, which makes him supernaturally powerful in contrast to the quiet ambience.</p> <p>The rumbling wind and high pitched whistling sound shows that Van Helsing is being dragged to the alien world of Dracula. The multi-channel composition is approaching its final culmination. The alien world of Dracula has the same sound palette as the <i>Interlude</i> that comes at the very beginning of the composition.</p>
01:09:56	 <p>Mina becomes a vampire - Jonathan at Mina's bedroom</p> <p>Mina is no longer a faithful fiancé of Jonathan. She</p>	There are three characters in the scene – Mina, Jonathan and Dracula (transformed into bat). Jonathan is unaware of Dracula, therefore it creates dramatic irony	Mina's attempt to attack Jonathan is shown off-screen therefore the music supports the imaginative action which is rather strong.	The theme of <i>Dracula's wives</i> , transformed <i>Love</i> theme. The climax of music reaches when Mina attempts to bite Jonathan (off-screen).	When Harker comes to visit Mina, the composition of the <i>Dies Irae</i> is inversed vertically (i.e. played in reverse) to suggest the evil advance of Dracula's plot. Instrumental parts of the composition are taken and mixed with reversed, altered or effected parts of the dialogue.

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	almost crosses the line and becomes a vampire. Mina tries to seduce Jonathan, while he still does not understand the real danger of Dracula embodied in the bat.				
01:15:20	The film fades to black				<p>The <i>Requiem</i>, The <i>Offertory</i>:</p> <p>This part of the <i>Requiem</i> is performed in an expressive style to imply Hitler delivering his speech in the 1930s. The other speakers have a rumbling sound that was created using granular synthesis of Hitler's actual speech.</p> <p>In Latin:</p> <p><i>Domine Iesu Christe, Rex gloriae, libera animas omnium fidelium defunctorum de paenis inferni et de profundo lacu. Libera eas de ore leonis, ne absorbeat eas tartarus, ne cadant in obscurum; sed signifer sanctus Michael</i></p> <p><i>repraesentet eas in lucem sanctam, quam olim Abrahae promisisti et semini eius. Hostias et preces tibi, Domine, laudis offerimus; tu suscipe pro animabus illis, quarum hodie memoriam facimus. Fac eas, Domine, de morte transire ad vitam. Quam olim Abrahae promisisti et semini eius.</i></p> <p>In English (translation) :</p> <p><i>Lord Jesus Christ, King of glory, free the souls of all the faithful departed from infernal punishment and the deep pit. Free them from the mouth of the lion; do not let Tartarus swallow them, nor let them fall into darkness; but may the standard-bearer Saint Michael, lead them into the holy light which you once promised to Abraham and his seed. O Lord, we offer You sacrifices and prayers of praise; accept them on behalf of those souls whom we remember today. Let them, O Lord, pass over from death to life, as you once promised to Abraham and his seed.</i></p>

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01:16:50	 <p>Dracula takes Mina to the Carfax Abbey</p> <p>Mina is a special victim for Dracula since he wants not only to kill but take her to his realm. Briggs (maid) opens the window for Dracula (she is hypnotized) and allows him to take Mina away.</p>	The characters are silent and in action, therefore the scene drives on itself	Calm and peaceful night ambience works well to contrast the dirty Dracula's job	The scene starts with synthesized drone (Dracula's sound) and gradually transforms to the <i>Destiny</i> theme with its culmination – Mina's total obedience to Dracula	Granulated parts of President Truman's speech to Congress to condemn the war criminals on 16 th of April, 1945: "The laws of God and of man have been violated and the guilty must not go unpunished". The recording is heard from the back (similar audio adjustment and effects to that of Winston Churchill's address earlier in the composition). The sound of the Nuremberg trial is mixed with white noise that suggests emotional emptiness and vacuity.
01:18:22	 <p>Dracula kills Renfield and takes Mina to the cellar - Scene at the Carfax Abbey</p> <p>Van Helsing and Jonathan follow Renfield to the abbey. Dracula kills Renfield in the main hall and escapes to the cellar. Tension and anticipation rises whether Van Helsing and Jonathan are in time to save Mina.</p>	Renfield receives what he deserves for his sins – death by the hands of his master. The crazy laugh of Renfield echoes in the large hall.	There is no significant ambient or off-screen action taking place since the music and literal sounds have the dominant role in the scene.	Van Helsing and Jonathan are following Renfield then start chasing for Dracula, the music drives the action with appropriate points of culminations	The <i>Requiem</i> part the <i>Pie Jesu</i> leads to the culmination of the multi-channel composition. A string quartet and double bass perform an atonal piece that accompanies the soprano singer. This movement suggests the horror that the survivors witnessed after the War (burning cities, mental and physical injuries, famine, lost families and fear for survival). The film visuals are juxtaposed with the meaning of the music, as if Harker and Van Helsing were saving the concentration camp survivors, not Mina. The <i>Pie Jesu</i> gains the notion of tragedy and despair about existence in this context.
01:20:44	 <p>The cellar of the abbey.</p> <p>Van Helsing kills Dracula, driving a wooden stake through the vampire's heart. Dramatic tension reaches the climax if Mina is dead or</p>	Everything what Van Helsing and Jonathan do are relatively loud in contrast with the dead and cold place of Carfax Abbey	The water drops with high reverb in the cellar signify Dracula's nest. This blends with Jonathan's footsteps while he is searching for Mina.	Music resembles the Castle of Dracula from the beginning of the film. This is to suggest that Dracula attempts to create the same horrible place in England as he did in Transylvania	The sounds from the Nuremberg Trial are interwoven into the composition to make a point about justice being brought against the Nazis. Through rather ambiguous visuals, the audience must assume that Dracula is destroyed by Van Helsing. The ambiguity also transfers to the allegorical meaning of the composition. Nuremberg shows an equivocal justice, because the Soviet Union continues the massacre against innocent people while simultaneously taking the judicial bench against very similar crimes in the trial. Thousands are detained, shot or exiled on trains to Siberia to meet their death. The lament of a woman implies the loss of everything: either the life on the train to Siberian concentration camps, rape by the liberating Soviet army, the loss of children

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	alive. Jonathan rescues Mina, because after Dracula's death she is no longer infected.				and family in the War, or a combination of everything.
01:23:12	 <p>The Morning.</p> <p>Emotional relief to find out Mina is safe and can come back to Jonathan. The dramatic tension is over and the protagonists win over Dracula. Jonathan and Mina walk upstairs in the hall of the abbey. The morning sunshine is seen through the windows, order and harmony is re-established.</p>	Van Helsing stays in the cellar to finish his business. Van Helsing is shown rather ambiguously when Jonathan and Mina find each other. He expresses little or no surprise or joy to find Mina alive	The coldness and darkness of Carfax Abbey gradually disappears as the threat of Dracula is over.	Happy emotional music (<i>Love</i> theme) starts when Jonathan and Mina meet together. The ending of the film is very tight. The music leads to the end of the film signifying the victory of the protagonists.	The death of Dracula is allegorically described by the death sentences of the Nazi leaders that are delivered in several languages. The emotional emptiness is emphasised further via the wind rumbling and white noise. The <i>Dies Irae</i> melody, played on a violin in the far distance, gives an eclectic relationship to the rest of the soundtrack elements, therefore implying the chaos Europe was plunged into after the War. The death sentences and their translation into French and German are heard in the back speakers.
01:24:19	 <p>End titles</p> <p>End titles with no music</p>			Jonathan and Mina climb the stairs, which visually suggests their wedding setting. Joyful bells blend in the texture of emotionally uplifting <i>Love</i> theme	The multi-channel composition builds up and reaches the peak which is expressed through the sound of an exploding nuclear bomb, suggesting the ultimate destructing power created by humanity during the Second World War. Then the composition diminishes and fades out to white noise.
01:25:23					<p>The <i>Postlude</i>. Rumbling winds suggest that Dracula is destroyed this time; however civilisation has been reduced to ashes and needs to be rebuilt. The film dialogue is played in reverse from the end to the beginning at fast speed to suggest the eternal fight between life and death.</p> <p>The last appearance of the <i>Requiem</i> part the <i>Libera Me</i>.</p> <p><i>Libera me, Domine, de morte aeterna, in die</i></p>

Time Code	Film/story Details	On-Screen	Off-Screen	Non-Diegetic	Contextual Multi-channel Composition depiction and expression through 5.1 system
					<p><i>illa tremenda: Quando cæli movendi sunt et terra. Dum veneris iudicare sæculum per ignem. Tremens factus sum ego, et timeo, <...></i></p> <p>In English (translation):</p> <p><i>Deliver me, O Lord, from death eternal on that fearful day, when the heavens and the earth shall be moved, when thou shalt come to judge the world by fire. I am made to tremble, and I fear, <...></i></p> <p>This segment is sung by a children's choir, which implies there is hope for the future. However the composition is cut in the middle of the liturgical text with the words <i>et timeo</i> (transl. from Latin <i>I am afraid</i>) and repeated three times, because the children of the war are afraid of a similar massacre to happen again. Peace is vulnerable and needs to be protected as a living flower in the mid of winter.</p> <p>The same sound palette from the <i>Interlude</i> is used in the <i>Postlude</i>; hence it closes the circular structure of the entire multi-channel composition.</p>
01:29:26	The end of the composition				

I. The digital audio workstation and software settings used in the project

The project commenced with the initial hardware setting equipped with Asus P5 Intel Core2 Quad Q6600 2.4 GHz. 3GB RAM in 2007 (PC Windows system). The digital audio workstation (DAW) system was changed from 32-bit to 64-bit system in 2010. The computer system was gradually upgraded once the technology became available, and the project was finished with IntelCore i5 64 bit Windows operating system with 8 GB RAM for the main computer, and Intel Core Core 2 for the slave computer running Vienna Special Edition Plus Library via VST link Vienna Ensemble Pro.

The software had subsequent upgrades from Cubase 4 in 2007 to Cubase 6.5 in 2012, which also included Padshop PRO plug-in. It is a granular synthesizer that can import audio

samples, and this function was widely used in the multi-channel composition to manipulate and create new effects from the original *Dracula's* dialogue.

iZotope RX was used as the main tool for the optic hiss removal from the original soundtrack. In addition, third party plug-ins like Blue Cat FreqAnalyst were used for particular audio control functions such as extended equalisers, analyzers, and filters.

The MIDI composition was delivered using Vienna Special Edition Plus, East West Choirs, Symphonic Orchestra Gold, Quantum Leap Pianos, Virus TI, Outer Limits, and other.

The sound design was created from the author's original recordings using Zoom H4n (Microphones: AKG 4000c, Sennheiser ME 66), and audio sample libraries (Art of Foley, Universal, BBC Vinyl Horror, General Effects Library, and others)

The audio mixing was produced using Blue Sky MediaDesk MKII 5.1 audio surround system which has a built-in bass control.