

**ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF ARTS AND
SOCIAL SCIENCES**

**ANALYZING THE CORRELATION
BETWEEN THE USE OF MUSIC AND COLOR IN CINEMA**



M.A. THESIS

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Department of Music

Music M.A. Programme

DECEMBER 2018

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İSTANBUL TEKNİK ÜNİVERSİTESİ ★ SOSYAL BİLİMLER ENSTİTÜSÜ

**SİNEMADA MÜZİK VE RENK
KULLANIMI ARASINDAKİ İLİŞKİNİN İNCELENMESİ**

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To my family,



FOREWORD

My interest in cinema has its roots in my love for film music. Film music opened the doors of cinema for me and I could not help but learn more about this art. I read on the subject, watched additional content on how they are made, I took courses on the relation of cinema and music in my undergraduate and graduate years. I had in mind for a long time that I would do my thesis on film music, but I did not have something specific in my mind. Until last year, when I started to learn more about the use of color in cinema and then it occurred to me that they could be in correlation, so my subject was decided. This study is a result of my unending interest for film music and cinema. I hope that it can prepare a basis for future work, for it has not been subject for research in this sense, and be of interest to artists as well as beneficial for them while creating.

I would like to thank all the MİAM family for everything I have learned in my past two and a half years, for the opportunities that have been provided and for their help when I was running around in panic about various subjects. I would like to thank my thesis advisor Asst. Prof. Dr. Eray Altınbüken for his help and support in writing my thesis.

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November 2018

Ayşegül Begüm KUNTMAN



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SYMBOLS

i	: The minor tonic chord of a scale
ii	: The minor chord on the second degree of a scale
III	: The major chord on the third degree of a scale
IV	: The major subdominant chord of a scale
iv	: The minor chord on the fourth degree of a scale
V	: The major chord on the fifth degree of a scale
v	: The minor chord on the fifth degree of a scale
VI	: The major chord built on the sixth degree of a scale
vi	: The minor chord on the sixth degree of a scale
vi°	: The diminished chord on the sixth degree of a scale
VII	: The major chord on the subtonic of a scale
vii°	: The diminished chord on the leading tone of a scale



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ANALYZING THE CORRELATION BETWEEN THE USE OF MUSIC AND COLOR IN CINEMA

SUMMARY

Cinema is an audio-visual medium in which music and color are benefited abundantly. Filmmakers use music and color for similar purposes, like symbolic representation or narrative construction. However, the existence of a correlation between their use in films remained unknown. This thesis aims to present methods for comparing their use in cinema and reveal any possible correlation between them over the analysis of two example films.

First, a literature review is provided, which includes common associations and attributions for musical features and colors, color/music symbolism, their physical effects on humans, the use of color combinations in films and the previous studies on the relation between music and color. Based on the research, the possible correlations are determined and speculated.

Following this information, the analyses have been presented. Two examples by auteur directors and with original soundtrack have been chosen; Tom Ford's "*Nocturnal Animals*" and Nicolas Winding Refn's "*The Neon Demon*". The scenes that contain music have been determined to be used in the analyses. The themes have been transcribed. Then the scenes have been grouped according to the musical themes, to be able to compare the changes of theme and color in a broader point of view. Use of music and color have been analyzed based on the information obtained in the literature review. The possible narrative implications, associations and physical effects of music and colors have been listed. Then they have been compared with each other to find out if there are correlations. After the analyses of individual scenes, the scenes that have the same theme have been compared and their music-color correlations are put forth.

In conclusions section, the overall results on the correlations are given. Rather than the relation between musical elements and individual hues; a relation to the temperature, saturation and combinations of colors are found. Additionally, recommendations are given on how music and color can be used together in order to enhance an effect in a film or other art forms. Also, suggestions on how to benefit from this study is presented together with the information on how this study can be taken further.



SİNEMADA MÜZİK VE RENK KULLANIMI İLİŞKİSİNİN İNCELENMESİ

ÖZET

Sinema görsel işitsel bir sanattır ve bu sanatta müzikten ve renkten çokça faydalanılmaktadır. Filmlerin yapım sürecinde müzik ve renkler belirli kavramları ifade edecek şekilde kullanılabilmektedir ve buna göre tasarlanmaktadır. Yani bu iki materyalden aynı amaçlar için faydalanılmaktadır. Fakat müzik ve rengin sinemada kullanımı arasında bir ilişki olup olmadığı üzerine bir çalışma bulunmamaktadır. Bu tezin amacı da örnekler aracılığıyla böyle bir ilişkinin var olup olmadığını açığa çıkarmak, bunu yapabilmek için bir yöntem ortaya koymak ve analizler sonucunda bulunan ilişkiler dışında nasıl bağlar kurulabileceğini ortaya koymaktır.

Önce bir literatür taraması sunulmuştur. Bu literatür taramasında, renklere ve belirli müziksel elemanlara atfedilen ve onlarla ilişkilendirilen kavramlar, renk ve müzik sembolizmleri, renk ve müziğin insanlar üzerindeki fiziksel etkileri, renk kombinasyonlarının filmlerde kullanılış şekli ve renk ve müzik arasındaki ilişki üzerine geçmiş araştırmalardan edinilmiş bilgiler ortaya konulmuştur. Bu araştırmaya dayanarak filmlerde renk ve müzik arasında olabilecek muhtemel ilişkiler belirlenmiştir.

Bu araştırmaların sonrasında, analizler sunulmuştur. Analiz edilmek üzere auteur yönetmenlere ait iki örnek film seçilmiştir. Auteur yönetmen tercihinin sebebi, bu tarz yönetmenlerin filmlerinde daha detaycı olmaları ve müzik ve renk elemanlarını pragmatik yöntemlerden ziyade hikaye anlatımı için kullanmakta olmalarıdır. Seçilen filmler için bir diğer kriter de filmlerin orijinal müziğe sahip olmasıdır, çünkü müziğin direkt film için bestelenmiş olması daha sağlıklı bir sonuç verecektir.

Sonuç olarak seçilen filmler Tom Ford'un "*Gece Hayvanları*" isimli filmi ve Nicolas Winding Refn'in "*Neon Şeytan*" isimli filmi olmuştur. Filmlerin seçilmesinin ardından, analiz edilmek üzere müzik eşliği olan sahneler belirlenmiştir ve müzikleri deşifre edilmiştir. Daha sonra, aynı müziksel temaya sahip olan sahneler, sahneler arası müzik ve renk karşılaştırması yapabilmek ve daha geniş bir açıdan bakabilmek adına gruplanmıştır.

Filmlerin analizlerinden önce, hikayelerle ilgili bilgi sahibi olmak adına sinopsisleri sunulmuştur, çünkü müzik ve renk kullanımının hikaye anlatımı açısından fonksiyonlarını incelemek hikayelere hakim olunması gerekmektedir. Bunun hemen arkasından, filmlerdeki sembolizmleri, referansları, yönetmen, besteci ve diğer film yapımcılarının düşüncelerini içeren röportajlardan alıntılar sunulmuştur. Bu bilgilerle filmlerin analizini yapmak için daha detaylı bir kavrayışa sahip olmak hedeflenmektedir.

Sonrasında, sahne sahne yapılan analizlere geçilmiştir. Her analizin başında sahne detaylı bir şekilde anlatılmıştır ve her biri için müzik ve renk kullanımı analizi yapılmıştır. Müzik analizi armonik, melodik, tınısal, enstrümantal açıdan incelemeleri içermektedir. Renk analizi ise bireysel renkler ve onların anlamlarına ek olarak renk kombinasyonlarının kullanılış şeklinin incelenmesi ile ortaya

konulmuştur. Analizler sırasında literatür taramasında ve filmlere dair araştırmalarda elde edilen bilgilerden faydalanılmıştır. İfade edilmiş olabilecek hikayeler, ilişkilendirmeler ve fiziksel efektler müzik ve renk için ayrı ayrı listelenmiştir. Daha sonra bu iki liste karşılaştırılmış ve aralarında bir ilişki olup olmadığı kontrol edilmiştir. Sahneler ayrı ayrı analiz edildikten sonra aynı temalara sahip sahnelere grup olarak da analiz edilmiş, ve buradaki renk-müzik ilişkisi de ortaya konulmuştur.

Sonuç kısmında, müzik ve renk ilişkisi üzerine genel sonuçlar verilmiştir. Analizlere göre bir ilişkiden söz etmek mümkündür. Bu ilişki, müziksel elemanların işaret ettikleri kavramlar açısından bireysel renklerle eşleşmesinden ziyade renklerin sıcaklık-soğukluk, aydınlık-koyuluk, renk kombinasyonları gibi özellikleriyle eşleşmesidir. İki film analiz edildiği için bir genelleme yapmak mümkün değildir ama böyle bir ilişkinin genel olarak var olma ihtimali de bu çalışma ile ortaya çıkarılmıştır. Ayrıca, müzik ve rengin hikaye anlatım sürecine eşliklerinin paralelliği de ortaya konmuştur. Buna ek olarak, filmlerde yahut herhangi bir sanat formunda müzik ve rengin bir etkiyi güçlendirmek için nasıl kullanılabileceğine dair öneriler verilmiştir. Ayrıca bu çalışmadan nasıl faydalanılabileceği ve çalışmanın nasıl daha ileriye götürülebileceğine dair bilgi verilmiştir.

1. INTRODUCTION

Sound and color are two physical phenomena that affect humans in various ways. Both of these phenomena are constantly used by people during the creation of art, for instance music and visual arts. Cinema is a field in which many art forms, including the ones mentioned above, come together to build up a story. Music and color are two tools that are effectively used in cinema. Bleicher (2012) mentions common features of music and color as such; “They both have rhythm and harmony and are used to add emphasis and feeling. They can play directly on our senses and emotions and bypass our conscious minds, or they can be used for purely intellectual pursuits.” (p.xv, introduction section). With these attributes of them, they can have numerous functions in films. Consequently, being curious about the possible relation between them in films was inevitable. In today’s cinema, everything that is seen and heard is filtered through sets of decisions. They are consciously chosen by the filmmakers. The word filmmaker in here comprise all the people who have contributed to the production of a film, such as the director, production team, composer etc. Film music has evolved to be such an entity that certain use of a musical feature or its change over the course of a film, can have a specific meaning attributed to it. Same goes for individual colors and color combinations. As both of them are physical phenomena, they have a physical impact on humans as well. Since there are so many common features like this between music and color and cinema is an art form in which these two come together often, it is worth attention if they have been used in the same way in films.

1.1 Purpose of Thesis

The interrelation of arts has been a subject of research for a long time. For instance, relations between color and music, color and cinema, cinema and music have been studied frequently. Yet the relationship of color and music in cinema remained overlooked. Both music and color have symbolic meanings, concepts attributed to them, physical impacts etc. Due to these features, they have an expressive capacity

and thus they are used in cinema to contribute to the narrative, or for other purposes. Music and color can have their own story in a film, thus these two can be pivotal parameters in cinema. They might have been used in similar ways. Films are not steady like a painting or a sculpture, but rather they present a continuous narrative. Music and color are two tools in cinema that flow synchronously with that narrative and they are designed to accompany it. Thus, if they have the same narrative qualities, even if the film's scenario was taken out of the picture, there could still be a connection in the use of music and color. Since little attention has been paid to their relation in cinema, it is not known if there is a connection. Therefore, this thesis aims to explore the possible relation between these two parameters in films and reveal it if there is any. Whether the relation is established deliberately or not is not the topic of this thesis. The reason for this is that; if such relation was consciously established by the filmmakers, the thesis would be revealing such feature; if not, the study would show that the story caused them to be unconsciously related by the filmmakers. In short, the purpose is to show if there is a relation.

In addition to what is mentioned above, this thesis presents methods for analyzing, comparing and connecting the two materials, which will be shown over the analysis of two example films; *Nocturnal Animals* by Tom Ford and *The Neon Demon* by Nicolas Winding Refn. Another purpose is to develop thoughts on new ways to relate music and color in films, or in other art forms. Although this thesis is about the use of music and color in cinema, it is beneficial for all the art forms that bring music and color together. Furthermore, this study aims to encourage further studies on the relation between the two phenomena and their use in cinema. Another purpose of the study is to prompt experimentation with music and color during their use in any art form.

Music and visual media are constantly changing and they are becoming more and more related as time passes. This is a two-way process. Not only music is composed for films, games, artworks and all kinds of visual media, but also visual material is generated for music. Color is an essential part of visual media. This thesis can provide artists, who are using music and color in any way, a basis to make a more effective use of them. Music and color can be used to have a combined and magnified effect on the spectator when properly used in the audiovisual material, an effect that they would not be able to create separately.

It also aims to draw attention to the subject, since sometimes when something is not mentioned outloud it gets overlooked, while it can be subject of many studies. This subject seems to be one of those. Even if there is no such relation between music and colors, this study can lead to its establishment.

Additionally, exploring how music can be related to any other art may open the way of the relation between many others. It brings a fresh way of looking at the subjects that are already known. The approach can be copied to be used in other studies regarding the relation of art forms.

1.2 Literature Review

For this study, literature research on three main subjects was required, music, color and film. The literature on music/color theory, semiotics, semantics, symbolism, psychology and associations were surveyed, in order to know the meanings attributed to them, what they are associated with and how they affect humans. The information on these topics were obtained from various sources. Regarding film studies, research on the use of color in film and film music are reviewed. Additionally, information on the examples (e.g. interviews) is gathered to obtain a better insight on them.

1.3 Methodology

Firstly, the example films are determined. The chosen examples are films by directors who have been referred as auteur directors, for they have more specific and special use of color and music. Also, films with original soundtrack were chosen, because if the music is composed specifically for that film, the results would be more reliable. Then in the films, the scenes that contain music are determined. All the music that is presented are transcriptions and sometimes reductions (indicated at occurrence). After this, the scenes that have common themes are grouped in order to reveal any common changes in musical elements and use of color in them. Then the individual scenes are analyzed in terms of music and color separately. Later, these two analyses are compared to see correlations. Lastly, analyses are made for scene groups. In the beginning of each analysis, a general information on the scene is given to have a better insight on the context. Additionally, example films' synopses are given before the analyses of the scenes.

The music analyses include harmonic, melodic, timbral and instrumentation analyses. Based on the research, their possible meanings, narratives, physical effects are determined. Namely, their functions are presented. The color analysis is done in a similar manner. The color symbolism, color palette and physical effects are explained and their functions are determined. For each of the scenes, an example shot is given. Occasionally a color palette is presented as well. Color palette is extracted via the use of “<https://color.adobe.com/tr/create/image/>”. It is a website that can be used to find the color palette of a picture and the arrangement of the colors in it on the color wheel. The shots and color palettes given are representatives of the general color use of the scenes, however sometimes the color palette of scene changes. Therefore, in all of the scenes, all color palettes are mentioned in detail even if not presented as an image. For both of the analyses, some of the scene-specific functions presented may be interpretations, as the meaning of a musical element or a color can change depending on the context. This study aims to find out about the similarity of what is expressed by music and color and these qualities depend on the context, which changes from one scene or one film to another. Therefore, the determination of the functions require interpretation, as there are no absolute rules for the use of music or color in cinema but there are possibilities, which are presented in the literature review. So based on the research and the additional material on the example films such as interviews with filmmakers, the narratives and functions are shown. Finally, the findings on them are compared to each other and the relations are exhibited.

2. MUSIC AND COLOR: MEANINGS, ASSOCIATIONS, INFLUENCE

In the literature review, information taken from various sources is presented. These sources include works like experiments on music and color cognition, research on music and color semiotics and symbolism, analyses of the films or music and color use in general to deduce common attributions or clichés, theory books on the subjects and many others. Before the information is presented, a few notices should be given. The results obtained from experiments depend on the subjective experience of the participants. So the results are mostly generalizations based on the ratio of the choices made by subjects. There is no definitive scientific formula for the results. As for the information on common attributions, symbolism and semiotics in films, music and color use; they are based on numerous analyses of these art forms. The researchers make deductions based on the number of use of a musical element or a color together with a concept. Again, the ratio becomes important; the times that an element is used with a concept should be more than the times they are not used together. The researchers make decisions based on the number of the times they are used together and presents a correlation depending on that number. Additionally, the researchers occasionally make assumptions about the concepts that the elements in the art forms represent, based on the features of that element. Therefore, it should be noted that the information presented in the literature review can be partly subjective. However, it is based on meaningful numbers or objective information. Thus, the literature review prepares a good basis for the analysis in two ways; it presents the common practice, associations and influences to be utilized and also ways to interpret the elements in the films based on the other researchers' interpretation methods.

2.1 Music

Music has been used in films in numerous ways due to its expressive capability. As Wingstedt (2008) has noted, “much of what we (think we) see is determined by what we hear.” (p.2). A dramatic example of music's effect on a film's success is “The

Lost Weekend”. When it was first in the theaters, there were no music used in the film. The reaction of the audience was not as expected, for instance they laughed in the scenes which were supposed to be dramatic. Therefore, the film was withdrawn from the theaters. Later it was back in the market with Miklos Rosza’s score and it was a huge success, winning the best actor, best picture and best director awards and no award for the music, although it was the only addition in the new version (Davis, 1999, p.28).

In many films, music contributes to the story and to the way the audience perceives or interprets it. Most of the time, this contribution is done by the use of themes. A theme can be a melodic line, an ostinato figure, a specific progression of chords, even a single note with changing timbre. Themes are expressive tools that are usually composed for specifically when they occur. Regardless of the theme aspect, music can be used as a tool for many functions.

Some of the functions of music can be listed as following:

1. Music can parallel the story, which means it can reflect what is happening in the story while it is happening on the screen (Gorbman, 1980; Chion, 1994).
2. It can contradict the story, i.e. the visuals and music do not match. For example, a cheerful music for a murder scene, which may be indicating the character’s deviant feelings or may be it is put there just to make the audience feel uncomfortable. Ultimately, it has a function of changing the way the audience interprets the scene or adding a narrative layer (Gorbman, 1980, p.189).
3. Music can also stay indifferent to the story to create an intensifying effect (Chion, 1994, p.8).
4. It can be used for foreshadowing or to hold out tension. Namely it might contain hints or obvious indicators about what is going to happen. A long silence before the music enters can be used to hold the tension in the air (Bezdek et al, 2007, p.135). Music causes people to expect something from the visuals. According to a study, the participators search for the emotions that were present in the music heard before a scene on the characters’ faces. When there were no expressions on the characters’ faces, participators attributed them those emotions (Bezdek et al, 2007, p.146).

5. Music can set the atmosphere in terms of location, time period etc. (Green, 2010, p.85; Tarasti, 2012, p.303) and characterize the film genre by using instruments or musical styles associated with that time, place or genre (e.g. acoustic guitar for a Western film) (Brownrigg, 2003, p.243).
6. Music can affect the spatio-temporal perception of the spectators. For example, a continuum between two discontinuous shots can be created by a continuous music. An effect of getting nearer to or further from somewhere can be produced by turning music soft to loud or the other way around (Gorbman, 1980, p.201).
7. It can be used as an associative agent (leitmotif). When a musical theme keeps recurring in a film, it is probably a leitmotif, which is a theme that represents a feeling, concept, character etc. For instance, if the theme is associated with a character and it is heard in a scene, it would mean that character is about to show up. If a leitmotif transforms, (i.e. it comes back with different orchestration, harmonization, modified intervals in the melody, etc.), it represents a change in the entity it is associated with. Leitmotif itself can have various functions (Green, 2010, pp.86-88).
8. Music can be used to present a hidden side to a story, or to add another layer to the narrative. Rosar (1983) mentions that music of old horror films are reminiscent of not only eeriness but also “beauty and pathos”, adding sympathetic layer (p.418).

These are some of the functions of music in films, not necessarily all of them. As a summary, it can be said that music has describing, accompanying, emotional, storytelling, informative, temporal, spatial and associative functions (Wingstedt, 2008, p.22).

Various parameters of music will be taken into account for the scope of this study. To understand how music functions in films, information is needed on how these parameters work, but before presenting the functions of music, it is important to know how music is perceived. According to Almén et al (2006, p.79), making sense of the music is a five-step process.

1. Recognizing familiar elements.
2. Recalling other music or schema that make use of those elements.

3. Perceiving the associations that follow from the primary associations.
4. Noticing what is new and how familiar elements are changed.
5. Interpreting what all this means.

With this information, it can be concluded that previous associations are significant factors in what listeners understand of music. Throughout the history of music, composers have withdrawn ideas from each other's work, e.g. harmonic progressions, motives, rhythmic patterns etc. That is why common associations for music listeners in general as well as the film audience, can be mentioned.

Many tools in music (e.g. intervals, harmonic progressions, cadences, textures, styles, scales, timbre) can express different feelings, concepts or affect the listener in a specific manner. Below, some of these associations and effects are listed, in order to be used later in the analyses.

2.1.1 Intervals

An obvious example to start with would be the consonance and dissonance. These are the terms that are used to describe intervals. "In musical harmony the critical determinant of consonance and dissonance is expectation of movement." (Brown, 1994, p.7). Dissonant intervals evoke feeling of tension and consequently a need for resolution, whereas consonant ones sound pleasing and complete (Brown, 1994). Sevenths, seconds, tritone are considered dissonances in tonal music tradition.

Dissonance and consonance can be used in films to give a hint about the nature of a character, that is to say that music can be used to indicate if someone is good or bad. Protagonists would be associated with the consonances, since they sound nicer and do not make the listener uncomfortable; and antagonists with dissonances, because they create a feeling of unsettlement, just like an enemy would do (Elferen, 2013, p.6).

So consonance and dissonance can be used to govern the feelings of the audience towards a character, or generally, by making them feel like everything is in its right place or something is going wrong.

However, there are no ultimate meanings. As an example for the changing meaning of music in different contexts, an interpretation of Wagner's work can be viewed.

According to this article, dissonance changes meaning within the piece, a tone waiting for a resolution takes on also a “sweet, tempting role” (Tarasti, 2012, p.195).

Tritone is an interval which is very commonly associated with the devil. Nevertheless, it can have other meanings too. As it is mentioned in Scoggin’s review of *The Music of Fantasy Cinema* edited by Janet K. Halfyard (2013), in *Final Fantasy*’s score, the tritones have obtained the role of animus, a spirit. Another feature of the tritone is that it is the furthest distance from the tonic in a conventional scale, thus it creates a perception of distance (Murphy, 2006).

Roeder (1993), in the Schumann analysis, claims that the largest interval between the outer voices in each piece is related to the amount of characters, the dynamics depend on the actions and harmony elaborates with the social status of the characters. It can be said that the intervals may be interpreted as largeness in number as well.

Brown (1994) also has remarks on the span of intervals. Perception of spatial largeness can be obtained by the open chords with large intervals, whereas cluster chords with small spacing would create a claustrophobic feeling (p.162).

As it is shown, there are different effects and associations and interpretations of intervals.

2.1.2 Cadences

Cadences can play vital roles in the expression of the music. They can serve for purposes like expressing fulfillment or the lack of it. A cadence brings closure to a piece of music. The return to tonic is expected, because listeners’ ears have become used to hear it, and when it is avoided, it leads to “frustration, delay or desire” (Burkholder, 2006, p.77).

They can also be used to emphasize a point in the story. According to how and where they are positioned in a music (and a film scene), they can influence the emotional layout (Lehman, 2013).

According to Lehman (2013), what he calls “subtonic half cadence” (*bVII-V*), which is claimed to be abundant in Western films (and Star Wars), is associated with heroism. Another point in the same paper is the “chromatically modulating cadential resolution (CMCR)”. This indicates the start of a chord progression for a “diatonic cadence”, ending with the dominant chord “resolving” to the tonic chord of key in

chromatic relation to the original one. He mentions that even though the cadences were not put there on purpose, they contribute to the desire-fulfilment emotions, or they can link irrelevant images together. He puts cadences in two categories; determinate, which means that the music tonally resolves at the expected moment which harmony, melody and rhythm has indicated; and indeterminate, which means a tonal resolution is reached, however not with an obvious progression but through a vaguer process, like a pedal or dissonant build up as he puts forth. The latter can create or contribute to feelings of astonishment or thrill, or also fear in some sense, they happen in cases when an unexpected event occurs.

Avoidance of the leading tone and using the subtonic instead, can create a feeling of resolution being unachievable. Similar feeling can be reached by adding dissonances, like seconds, which occur during the return to the home key, ruining the resolution (Brown, 1994, pp.121-122). In an analysis in the same book, the lack of cadences in a theme is linked to the structure of the film. This is because the end of the film was such that the film could be a loop just like the theme, which could also be a loop due to its open structure (p.191).

2.1.3 Scales

Modes have influence on people's perception. The most frequently encountered modes are major and minor modes. Major modes are often attributed jovial, more pleasant characteristics and minor modes are more sorrowful, sad sounding. According to Brown (1994), minor mode is ambiguous and less stable than the major mode (p.6) and thus can also be used to express states like confusion and indecisiveness.

A turn from a major mode to its relative minor is defined as "unsettling" and "sinister" by Larson (2012).

There are much more than major and minor modes for sure, like the other Greek modes. In film music, modal colors may be used to build an atmosphere of ancientness, because they are associated with ancient music.

A research on the associations of Greek modes and emotions found out that major modes (Ionian, Lydian, Mixolydian), were attributed more positive meaning than the minor modes. The result of the experiment suggested that modes are in the following order from the clearest to the darkest: Ionian, Lydian, Mixolydian, Dorian, Aeolian,

Phrygian and Locrian. Therefore, it can be seen that only one interval change in a scale can cause different associations. Furthermore, faster the tempo, happier is the major modes and angrier the minor ones. It is mentioned in the paper that according to Wisnik, the feeling of vagueness or clarity that modes cause depend on the relation between the tonic and the other tones. Locrian is the most obscure mode, because of the diminished fifth interval above the tonic instead of a perfect fifth. The results revealed that when the tempo is increased gradually, sadness turned into calmness in minor modes but fear in cases of Phrygian and Locrian, and calmness turns to happiness in major modes (Bigand et al, 2011).

Brown (1994) remarks that the whole tone scale is not dependent on the diatonic tonal resolution principles. Brown gives the example of a film in which the musical themes for humans were in diatonic context, whereas the theme for a monkey, a non-human being outside of their norms, was represented by a scale of same quality, the whole tone scale (p.8). So the features of a scale can be linked to features of a character in film music composition.

The change of key within a theme is correlated with the change in the life of a character by Brown (1994, pp.193-194). For example, Brown resembles the short spanned major mode in a theme with the short happy and hopeful moments in the life of an ill-fated character (p.191).

2.1.4 Harmonic progression

As hereinbefore mentioned, harmony's meaning can be dependent on the context. To exemplify, Samuels (1995) describes a change in harmony as such: "the possibility of a renewed harmony to heal the wounds inflicted by mankind's alienation from nature" (p.149). So harmony is open to interpretation; which depends on the context. It can have specific meanings for a particular piece.

Augmented triads (and the whole-tone scale) are associated with the supernatural according to Rosar (1983, p.418). Rosar notes that this association is an old theater tradition and gives examples of the times they are used in the same manner in films, for instance in a theme for a werewolf.

Rosar also mentions the abundance of chromaticism in the horror movies and describes dissonant and chromatic chords as creepy (Rosar, 1983, p.418).

The chromatic mediant relationship is a harmonic feature that is benefited a lot. It is the relationship between chords, roots of which are a third apart and have one or no common tones. The chords that have this kind of relationship are linked together with “the benevolent aspects of magic, mystery, and otherworldliness” in Bribitzer and Stull (as cited in Heine, 2018). In opera they were used to indicate “a dramatic shift, one in which the character experiences a significant change in emotion.” (Heine, 2018, p.107), which has taken place also in cinema.

The tritone progression, which is moving between two chords, roots of which are a tritone apart, is another popular harmonic convention. The progression can be between two major, two minor chords, a major and a minor chord, quartal chords, etc. Each would have slightly different feelings. This progression can be associated with the devil or the underworld because of the tritone. Tritone progression between two major triads was used in many space and science-fiction films. Since these uses of the progression correspond to a time period later than the usage in Holst’s *The Planets*, where they have been referring to “celestial objects”; it would make sense to assume that there exists an association between this progression and outer space, extraterrestrial beings, technological advance, outlandishness, uncertainty and distance. Tritone progression can also be attributed to unfortunate characters who have traumatic backgrounds (Murphy, 2006).

It has been claimed by Sanchez (2014) that in many films, the *i-IV* (minor tonic-major subdominant) progression is used to accompany a “marvelous revelation”. This expression refers to something extraordinary being introduced in the picture, either to the audience or the characters within the film.

In the essay on the use of harmony in Hollywood, Scott Murphy (2014) reveals relations between concepts and harmonic progressions, by analyzing numerous films. Murphy introduces the “tonal-triadic progression classes” or shortly TTPCs. These are progressions from one triad to another with one of them being predominant (by tonicization, accentuation etc.) (p.485). The major triads are indicated with capital “M” and minor ones with “m”. The number between the triads is the distance between their root given in semitones. So M1M would be two major triads with root one semitone apart. The letter that comes first is the triad, that is predominant (p.485). Below, the relations found by Murphy are listed.

A shift between a major and a minor key a minor second apart from each other can indicate confused feelings, or an oscillation between two conditions (p.484).

Progression between a major and a minor triad, roots of which are four semitones apart (M4m) (e.g. C major and E minor, C major predominant) is used to express sadness, grief, a loss of an acquaintance. However, although m8M (e.g. C minor and Ab major, C minor tonicized) is its tonal inverse and minor prevalent, it was not associated with the same concepts as much as M4m (p.487).

M5m (e.g. C major and F minor) is related to Middle east and also “romantic heterosexual encounters” of a young male with the female character (p.487).

Two minor triad TTPCs, m6m (e.g. C minor and Gb minor) and m8m (e.g. C minor and Ab minor), both of which are out of diatonic context, are used to depict antagonism, lethality, hazardous events. It can be found in science fiction, fantasy, horror films referring to conjuring, evil extraterrestrial beings, paranormal activity, anything unsettling (p.487). It can be suggested that a progression from the minor tonic to minor chord built on minor sixth degree can be an indicator of evilness or wickedness.

M7m (e.g. C major and G minor) and m5M (e.g. C minor and F major) are related to concepts like astonishment, positive approach, achievement (p.488).

The TTPC m2M (e.g. C minor and D major) is used for tension and an enigmatic feeling, or dark humor (p.488).

M2M (e.g. C major and D major) is popular for expressing positive concepts like protagonism, joy, possibly because it is indicative of the Lydian mode and “the fantastical” due to the chromaticism (p.488).

However, as Murphy (2014) says, these are not absolute rules, these are just a review of the repertoire and common associations that are present in them. The chords can be used in absolutely different contexts. However, it is for sure that composers and audiences would have these associations due to their frequent use (p.488).

2.1.5 Melody

A melody can be attributed some characteristics due to its relation to human speech. Peter Kivy, in a 1980 dated article, claims that the contour and the movement of the melodic line can be associated with the way humans move or speak under certain

emotional status. Therefore, a melody with a fast rhythmic structure can be heard as angry and a tranquil, descending melody as gloomy (as cited in Burkholder, 2006, p.99).

Cox (2013) writes about the three musical forces of Larson, which are the transmission of music into physical space in the human perception. For instance, a descending line in physical space can be perceived as if it is falling in to a gravitational field, like a person being pulled down by negative emotions. The relation to the actual space might be a tool to explain music's meaning to people. A similar example would be as the tempo gets slower, the motion is slower, as if the burden on one's shoulders is heavier and it is harder to move.

Larson (2012), defines "musical magnetism" as "the tendency of an unstable note to move to the closest stable pitch, a tendency that grows stronger as we get closer to the goal". The most obvious example of this is the leading tone, as soon as it is heard, it is expected to resolve to the tonic. The third force he mentions is the musical inertia, which means basically the tendency of a musical pattern to repeat (Larson, 2012), hence it can be assumed that there would be an expectation for it.

Approaching the first degree by the 6th rather than 7th is a feature of pentatonicism used in old Western films (Lehman, 2013), thus a movement like that in the melody can be linked to heroism as well.

An upward motion in music can create an impression of broadening, enlarging and creates more tension (Lehman, 2013).

2.1.6 Textures, techniques and styles

The general texture, style of the music, or the techniques used in it can have different references. For instance, minimalism in film music is frequently associated with scholars, science, rationality according to Doran Eaton (2014). According to Doran Eaton, the reason for this is that minimalism brought back an "audible process and repetition, tonal center and steady beat" (p.20). The claim is supported by the examples of films in which minimalism is used to represent "the hyper-rational" and the "intellectual elite" (p.20).

Music is capable of adding motility to the picture, whether it's a still one or a moving one. A smooth sound would not add so much of a movement feeling compared to a

trembling one, like a string *tremolo*. The latter would have higher degree of attracting notice of the spectators and creating tension. An unexpected progress of sound would add more movement than a steady beat, because it keeps the audience's ear alert. Higher frequencies also cause alertness, so music with higher frequencies have a bigger impact on how the image's animateness is perceived (Chion, 1994, p.14).

Waltz rhythm can indicate a romance situation (Brown, 1994, p.10).

Change in textures can reflect meanings as well. A calm chorale that comes after the storm part in Beethoven's Pastoral Symphony was interpreted as thankfulness of the survivors in Tarasti's (2012, p.292) analysis.

When Brown (1994), is mentioning Nino Rota's use of descending chromatic scale together with a children's chorus, he writes that Rota meant to evoke an unsettling feeling with the mixture of purity and being oppressed (p.221).

Atonality can create a feeling of ambiguity according to Chion, because of its vagueness (1994, p.210).

Bitonality in a filmscore was read by Brown (1994) as the hostility of a character towards another one in a specific context, in which the two have conflicts (p.191). In another example, bitonality was claimed to indicate and reinforce madness, because of the irrelevance to the tonality of the rest of the film's score (p.36).

Sudden changes between low and high dynamics or an accented short movement in music are used to emphasize something in the picture (Neumeyer, 1993).

Use of instruments can affect the perception. A deviation from regular orchestration might create an unsettling feeling for example, like the use of organ in Waxman's score for *The Bride of Frankenstein* (Rosar, 1983, p.418).

After 1950's, the texture of the music for Western films became brass dominated, off-beat rhythms with open fifth harmonies (Lehman, 2013).

Ponticello and *tremolo* are referred as "sinister" in Neumeyer's (1993) article.

2.1.7 Timbre

In many sources, timbre is defined as a feature that makes two sounds with the same pitch, loudness and duration distinguishable. For instance, on Oxford Music Online website, timbre is defined as follows:

“A term describing the tonal quality of a sound; a clarinet and an oboe sounding the same note at the same loudness are said to produce different timbres.”

The factors that affect timbre are mentioned as well, e.g. the frequency spectrum or how the partials behave when a sound is produced.

As it can be seen, it is not a clear definition. The definition is more about what timbre does than what it is. In the Giordano and McAdams (2008) article, timbre is mentioned as such; “Timbre is a misleadingly simple and vague word encompassing a very complex set of auditory attributes, as well as a plethora of psychological and musical issues” (p.72). It is also mentioned that timbre is a feature that comprises many parameters. Some of these parameters are changing continuously (e.g. the harmonic spectrum) and others are “discrete or categorical” (e.g. a string pluck sound). All of these contribute to the identification and classification of a sound within the human perception.

So timbre is a combination of many parameters, some of which will be part of the analyses in this study; like the frequency spectrum and the quality of attacks and sustaining sounds. For orchestral works, the word timbre is used to describe the general color of the orchestra, in other words the instruments that are used together and the techniques that are used to play them.

The frequencies affect people’s perception of sounds. Chion (1994) mentions in the book *AudioVision*, that high frequency bands have an important role on an elaborate and detailed sound, creating a “greater presence and realism” (p.98). Higher frequencies are claimed to trigger “a more alert mode of listening” (p.99).

The perception of depth is also a question of timbral qualities. The sound source is perceived farther when the “harmonic spectrum is reduced”, the attacks are softer and reverberation is present (Chion, 1994, p.71).

The frequency spectrum can affect people’s perception in terms of distance, size and velocity. For instance, lower frequencies cause the objects on the screen to seem closer, larger, slower, while higher frequencies cause them to look smaller and faster (Özdemir, 2015, p.43). Music with a wider spectrum creates a perception of largeness in size (Friberg and Lindborg, 2015, p.21).

Another dimension that frequencies can add to a picture is the direction. High frequencies travel more directly whereas low frequencies can go around objects.

Therefore, the presence of higher frequencies may make the listener feel like the source is facing them and the lack of them can create the feeling as if the source is facing the other way (Chion, 1994, p.92).

Reverberation, delay or similar effects can be used for making music sound like the events are taking place in a large space; because the larger the space, the more reverberant it is. It can also be used to separate the ambiance of two sounds from each other, if, for instance, the two sounds in question have different reverberation times (Özdemir, 2015, p.94). This can also occur within a cue to indicate a change in the context. Another effect of reverb is diluting and softening the sound (Chion, 1994, p.210).

Timbral qualities can contribute to tension and release. The musical tension rises when the partials of a sound are in different frequencies than they naturally are, when beating is heard, when noisy quality increases (Farbood and Price, 2014, pp.21-26).

Attacks play a role in human perception too. When they are more abrupt and hard, they make music sound sharper and more precise, while softer attacks give music a softer, blurry quality (Chion, 1994, p.210).

In conclusion, the expressive and influential aspects of music are covered to some degree in this literature review. It must be remembered that music is always open to interpretation when it comes to commenting on what it expresses. It can obtain different meanings in the hands of different people. General associations do exist, as it is shown, and they are revealed by various surveys and experiments. Yet still, the meaning that was meant to be conveyed via the music remains partly as a subjective evaluation.

2.2 Color

The second aspect of films that will be analyzed in this study is color. On the importance of color and the reasons to study it, Bleicher (2012) notes, “Color may be the most underrated of all of the fundamental elements of design and (...) may be the most important and powerful. A single patch of color can communicate more than words themselves (...) single hue can represent joy or sadness” (p.1). As it can be understood, color has a great expressive capacity, thus it is used in cinema for storytelling.

Before knowing how color is used, it would be useful to know its definition. Color is the perception generated in human eye by light being emitted or reflected by the surface of objects (Url-1, 2018). Different wavelengths are perceived as different colors; shortest ones perceived being violet (approx. 380 nanometers) and longest being red (approx. 700 nanometers) (Url-2, 2018).

Color has three parameters; hue, saturation and value. Hue is what is referred as color in daily life. For example, blue is the hue of the sky. For the scope of this study, hue will usually be referred as color, as it is the common use, but saturation and value will be a part of the analyses as well. Grey, black and white are called achromatic hues and the other hues (like green, yellow, blue etc.) are called chromatic hues. Saturation is the intensity of the color. It determines how dull or vibrant a color is. The more grey spots there are in a color, the less saturated it is. Value is a term to describe the darkness or lightness of the color. Every hue has a value between zero lightness (black) and maximum lightness (white) (Grondin, 2016, p.70).

There are primary colors (i.e. blue, red and yellow) and secondary colors (violet, green and orange) which are mixtures of the primary hues in equal amounts. Tertiary hues can be obtained by mixing the previous two (e.g. red-orange, blue-green etc.). Colors are grouped into two groups by their “temperature”. Red, orange and yellow are usually referred as the warm hues whereas blue, green and violet as cold (Bleicher, 2012, p.66).

There are a few concepts to be taken into consideration when dealing with color; color psychology (or color associations), color symbolism, physical effects of color on humans, and lastly color schemes used in films.

2.2.1 Colors and emotion associations

There have been numerous studies on how colors are associated with certain moods or characteristics under different circumstances. According to the research by Chang et al (2004), the concepts associated with the three primary and three secondary colors, black and white are as follows:

Black: Hatred, Mourning, Sorrow, Indefinite

White: Mourning, Grief, Depression

Red: Love, Hatred, Life, Noble

Orange: Jovial, Happy

Yellow: Happy, Luminous, Jovial

Green: Tranquility, Peace, Life

Blue: Peace, Tranquility, Noble

Purple: Love, Noble, Authoritative

In another article by Ball (1965), it is seen that black is referred as troubling, hopeless, bold; red as thrilling, jovial, bold and powerful; yellow as jovial, purple as noble; and additionally brown as protective but not as jovial, but in this article orange was not associated with anything (p.446).

The similarities in both of these can easily be detected. The depressive feelings of black, liveliness in red, happiness of yellow, nobility of purple. Even more similarities in associations and symbolisms will be seen in the continuation.

Effects of color on people can also be found in works on therapy, or on how to decorate people's living spaces, so that a better impact on humans can be created.

Bleicher (2012) and Clifton (2006) mention Dr. Max Luscher's works on color perception and effect on human "psyche". It is called "The Luscher Color Test" and through these tests, deductions about a person's characteristics can be made (p.41). In the test, people choose from eight patches of colors and put them in order according to their preference. The color in the first place is claimed to represent what that person desires and the one in the last place indicates what that person wants to stay away. The color associations and the meanings when they are preferred according to the test are given below.

Dark blue: Tranquility, accordance, relaxation. The people who chose this are claimed to be seeking "comfort, fulfillment, emotional stability, rest, recharge" (p.42).

Blue-green: Steadiness (because of the tree association). People who chose this are claimed to be "assertive, demanding, selfish, in need for money and wealth" (p.42).

Red-orange: "Desire, appetite, hunger, active, sports, physicality". People who chose this are claimed to want to live life fully and have a sexual desire (pp.42-43).

Bright yellow: Sun, bright, jovial. It represents the wish for happiness or a good outcome to a bad situation, waiting for the future. Since golden is also a yellow shade, the preference of this patch in the first position can also imply religiousness (golden haloes in religious depictions) (p.43).

Violet: Magic, eroticism (mixture of red and blue, therefore contains features of both colors). The person who choose this color in the first position are claimed to be sensitive and “unrealistic in their desires and goals” (p.43).

Brown: Because it is an orange shade, it represents bodily functions and because it is earthy, it represents “importance of home and belonging, feelings of unease and desire to remedy a problem or a situation” according to the book (p.43).

Black: “Darkest, no hue in it, anarchy, protest, desire to rebel”. The people who chose this color is claimed not to quit easily. Also, according to the test, their life does not go in a way they wanted it to go (p.43).

Gray: Not a hue, it does not create stimulus. People who chose are claimed to be in a wish for isolating themselves and not being a part of daily life (p.43).

In addition to the Luscher test explanation, Bleicher (2012) also mentions intuitive responses. For example, the combination of yellow and black indicates poisonousness or danger, possibly because of bees. Bleicher gives the examples of the tapes used by police to seal a district and warning signs on the roads from daily life. It is mentioned that these responses are universal (p.40).

2.2.2 Color symbolism

Color symbolism is the way the colors are used to represent concepts, feelings, etc. in films or other media. There would naturally be a correlation between the symbolism of colors and their associations presented above, and it might be something that works both ways. For instance, if a color has been used in films to indicate an emotion too many times, that emotion may be associated with that color by people, or it can be used in a film for that emotion because the color is already associated with it. This is what Bleicher (2012) calls “Learned Color Responses” (p.40) when explaining that people’s response to color is not solely unconscious. So there might be some symbolisms that does not seem parallel to the associations. These symbolisms probably occur due to the common practice, like it does in music. The

symbolisms can change across cultures for sure, but many of them remain the same, considering the globalization of everything.

When color symbolism in films is in question, the filmmaker's perspective is important while analyzing. The aspect that is tried to be understood is what the filmmaker meant to express by using those colors. Therefore, previous and common use of those colors, i.e. the common practice is consulted on. A number of lists on color symbolism, taken from various sources, are presented below.

StudioBinder (2016), an online platform for filmmakers made a summary of the common color symbolism in films in their book on how color is used in films.

Red: love, passion, violence, danger, anger, power

Orange: warmth, sociability, friendly, happiness, exotic, youth

Yellow: madness, sickness, insecurity, obsessive, idyllic, naïve

Green: nature, immaturity, corruption, ominous, darkness, danger

Blue: cold, isolation, cerebral, melancholy, passivity, calm

Purple: fantasy, ethereal, eroticism, illusory, mystical, ominous

Pink: innocence, sweetness, femininity, playful, empathy, beauty

Here is another list of symbolic meanings of colors in films taken from Bellantoni's (2005) book;

Red: powerful, lusty, defiant, anxious, angry, romantic

Orange: warm, naïve, romantic, exotic, toxic, natural

Yellow: exuberant, obsessive, daring, innocent, cautionary, idyllic

Green: healthy, ambivalent, vital, poisonous, ominous, corrupt

Blue: powerless, cerebral, warm, melancholic, cold, passive

Purple: asexual, illusory, fantastic, mystical, ominous, ethereal

Kırık (2013) made a literature survey on the use of color symbolism in cinema, which agreed on the previous symbolisms with some additional information.

Brown: ambition, earth, fertility, order, fast movement

Grey: sadness and depression, space&technology

Below, a comprehensive chart is given to compare the attributed features in different sources (Table 2.1). The chart contains both the color symbolisms used in films and the emotion attributions that are obtained by experiments.

Table 2.1 : Comparison of concepts and emotions attributed to colors and color symbolisms in different sources.

	Chang et al (2004)	Bleicher (Luscher)(2012)	StudioBinder (2016)	Bellantoni (2005)	Kırık (2013)
Red	love, hatred, life, noble	desire, appetite, hunger, active, sports, physicality sexual desire	love, passion, violence, danger, anger, power	powerful, lusty, defiant, anxious, angry, romantic	willpower, ambition, egoism, blood, death, fire, possessiveness, sexuality, hate, anger
Orange	jovial, happy		warmth, sociability, friendly, happiness, exotic, youth	warm, naïve, romantic, exotic, toxic, natural	courage, surprise, sociability, joy, dynamism; darker hues: anger, aggressiveness; lighter hues: calmness
Yellow	happy, luminous, jovial	sun, bright, jovial, religious	madness, sickness, insecurity, obsessive, idyllic, naïve	exuberant, obsessive, daring, innocent, cautionary, idyllic	joy, optimism, mercy, youth, satisfaction, cowardice, prejudice, betrayal; gold hue: perfection
Green	tranquility, peace, life	steadiness , selfish, money, wealth	nature, immaturity, corruption, ominous, darkness, danger	healthy, ambivalent, vital, poisonous, ominous, corrupt	spring, calm, jealousy, laziness, generosity, rebirth, satisfaction, heaven(islam)
Blue	peace, tranquility, noble	tranquility, accordance, relaxation	cold, isolation, cerebral, calm, melancholy, passivity	powerless, cerebral, warm, melancholic, cold, passive	calmness, silence, productiveness, freedom, serious, loyalty, reality
Purple	love, noble, authoritative	magic, unrealistic, eroticism, sensitive	fantasy, ethereal, eroticism, illusory, mystical, ominous	asexual, illusory, fantastic, mystical, ominous, ethereal	royal, dignity, respect, vanity, introversy, gloom, impatience, indecisiveness, good deed, illness, decayedness, calm
Black	hatred, mourning, sorrow, indefinite	dark, anarchy, protest			power, passion, formal, nobility, authority, mourning, death, grudge, sinister, pessimism, mystery, evil, fear, stress, disorder, violence; happiness, enthusiasm and rejoice (eastern cultures)
White	mourning, grief, depression				pure, clean, innocence, objectivity, righteousness, good deed, secureness, death&mourning(eastern cultures), principles,honesty, nobility, grace, calmness, belief, holiness
Grey		isolation			depression, fear, selfishness, silence, melancholy, space& technology
Pink			innocence, sweetness, femininity, playful, empathy, beauty		accordance, joy, cuteness, love, happiness &healthiness (turkish culture), youth
Brown		bodily functions, home, belonging, unease			fertile, earth, authority, confidence, order, ambition, introversy, fast movement, comfort, simple, unstable

It can be seen that different sources mostly agree on the symbolic meanings of colors. This is an important fact, because these attributions will be useful for analyzing the colors of the films.

2.2.3 The Influence of color on human perception

According to the various studies, the color that surrounds humans in daily life has a profound effect on their mood and behavior (Kingsley Osueke and Kurt, 2014). Bleicher mentions that colors are design tools which cause unconscious respond in the brains of humans who see them (p.2). They can affect people so deeply, because they result in different hormone releases in their bodies, which leads to physical or psychological responses. Thus they can influence the way humans feel, think or act (Clifton, 2006). Color is light and light has energy. The energy is transferred from objects to humans' eyes. The physical process of seeing colors includes hypothalamus, the controller of the endocrine system and hormones. Many traits of the human body rely on this bit (Kingsley Osueke and Kurt, 2014, p.4), so it is understandable why colors have so much effect on humans.

Colors can change people's mood, the way they comprehend, their self-esteem according to Aves and Aves, and they can even make people remember better according to Cernin (as cited in Kingsley Osueke and Kurt, 2014).

For example, it is proven that red raises the blood pressure (Clifton, 2006). Thus seeing red makes people feel agitated. Another possible effect of color red on people is triggering the "fight or flight" instinct. Red also makes objects appear closer and is noticed more immediately (Kingsley Osueke and Kurt, 2014).

Yellow can affect people's mood in a positive way according to Çağan (as cited in Kırık, 2013).

Green is considered relaxing. It is claimed that this effect may be due to the association with nature. Green can also help people accommodate themselves in new spaces (Kingsley Osueke and Kurt, 2014).

Blue, on the contrary to red, causes the blood pressure to drop. Thus it can reduce people's stress level and make them calmer. (Kırık, 2013; Kingsley Osueke and Kurt, 2014). Moreover, it can yield better reasoning and enhance mental activeness and concentration (Kingsley Osueke and Kurt, 2014, p.4).

It can be said that warm colors are more arousing and cold colors have a calming effect.

Brown can make people move faster according to Kırık's (2013) literature review. The same paper suggests that black can enhance concentration and white can make spaces seem larger.

Mehrabian and Valdez (1994) mention in their article another research by Frank and Gilovich, which revealed black clothing can cause a perception of aggression for the people who see it, and also aggressive behavior.

Different hues initiate different perception of weight. In the article by Ball (1965), hues are put in order from heavy to light as following; Red, White, Orange, Violet, Green, Purple, Blue, and Yellow (p.446).

A perception of temperature can be created with colors as well. As it can be guessed, the red-orange side of the spectrum creates an impression of warmth and the other end (e.g. purple, blue, green) cold (Ball, 1965).

A color with a longer wavelength would be perceived to be closer than a color with shorter one (Ball, 1965). The wavelength gets shorter from red to purple.

In the article by Kingsley Osueke and Kurt (2014), it is mentioned that according to Wright, these reactions to color might not depend on culture or other differences as much as it is considered to be.

As it is seen, besides affecting people's mood and behavior, colors can manipulate the perception of distance, weight and temperature.

2.2.4 Influence of saturation and value on human perception

The effects of hues were presented until now, but as mentioned before, color has two other parameters which also affect human perception. Some of the impacts of these two parameters are given below.

Bleicher (2012) mentions that warm, light and saturated colored items appear bigger and nearer and induce happier feelings whereas the cold, dark, low-saturated colored items seem to move away. The latter kind of colors result in sad feelings like depressiveness, desire or deprivation (p.54).

A research by Mehrabian and Valdez (1994) presents that there are strong correlations between pleasure, arousal, dominance feelings; and saturation and brightness. According to the research, colors seem more pleasing when they are brighter and more saturated. Also, when a color is more saturated, it becomes more agitating, while being brighter does the opposite. It is also mentioned that a color becomes more dominating when it is more saturated. Darker colors tend to arise emotions like wrath, aggression and hostility, because of displeasing, high provocative and dominating features. The reason for these effects might be the receptors in the human eye. Higher saturation and darkness may result in higher stimulus of the photoreceptors and thus result in feelings of higher dominance and provocation (Mehrabian and Valdez, 1994, p.406).

Brighter colors have a softer feeling whereas darker colors have a harder one (Kingsley Osueke and Kurt, 2014).

Bright colors carry more energy and when used with less saturated ones, emphasis is put on the bright one (Holifield, 2016).

An object of lighter color, looks larger than a darker one in the same size. Also it is suggested that lighter colors look lighter in weight too (Ball, 1965, p.446).

Brightness can also have symbolic meaning. For a long time, both the words and the concepts of light and dark have been used to indicate the good and the bad guys respectively (Holifield, 2016, p.10).

According to a research by Damhorst and Reed, people wearing darker colored clothing were thought more capable in general compared to people with lighter colored ones (as cited in Mehrabian and Valdez, 1994).

Duller colors, i.e. less saturated colors, look softer (Holifield, 2016, p.9), these are pastel colors and they have a soothing feeling (Kavak, 2015, p.50). Colors with higher saturation are more lively and energetic. (Kingsley Osueke and Kurt, 2014, p.2).

Changes in saturation can be used to indicate a change in story line or time line. For example, if there are two timelines or two stories in a film, a change from one to the other may be indicated with the saturation of colors (Misek, 2010, p.177).

Desaturated colors resemble colors of old photography (Misek, 2010, p.163), thus can create an atmosphere of old times. They can also be used to indicate more specific incidents, like fading memory of something, because there is a reference to old pictures with fading colors.

Type of saturation can also be genre-specific too. Misek mentions that recent war and science-fiction films are typically desaturated (2010, p.178), therefore the use of desaturation might be reminiscent of the concepts associated with them.

Saturation and value of the color can affect the hue's meaning as well. Pink, which is like light red, may seem soft, but a meaning attributed to darker red is wrath (Holifield, 2016, p.10).

So colors are associated with some of the emotions and concepts because they make the observers feel those emotions. However, it must be noted that the context is important too when it comes to color. Although a color is found to be pleasing as a color, when it comes in a context in which the color does not naturally fit, it might induce opposite reactions (Mehrabian and Valdez, 1994).

2.2.5 Color schemes in films and their usage

So far, information has been presented on how emotions and concepts are attributed to colors, and how color affects people in various ways. To be able to interpret the color use in films, some additional knowledge is needed on how colors are used together. There are many terms to indicate color combinations, e.g. color harmonies, color schemes, color palettes etc., all of which indicate to the same thing. Different color combinations can have their own meanings. To be able to think about color combinations in a more concrete way, color wheel is used. Color wheel is the arrangement of colors in a circular manner, and it helps a better understanding of color relations. That is to say that instead of a linear spectrum, the violet and red edges of the spectrum are brought together to obtain the color wheel (Figure 2.1). It is constituted with at least six hues that cover equally slices in the wheel. The colors that must be present in the color wheel are the primary and the secondary hues. The number of hues can be increased in the same manner that secondary hues are obtained by the primaries, i.e. by mixing hues that are next to each other in equal amounts. Using this wheel, color schemes are constructed and utilized to transmit meanings or obtain the image wanted.

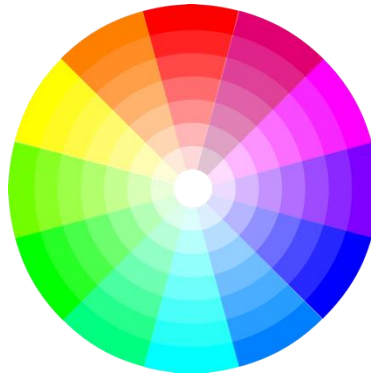


Figure 2.1 : [The 12-color color wheel] (2018). Retrieved from <http://www.oijax.com/2018-office-color-year/>

Like music, use of color has many functions in films, and some of them are similar for the two. Colors can be used to create a feeling of harmoniousness or stress (Studiobinder, 2016). The functions of color are as follows according to the Studiobinder book (2016, p.1):

1. Constitute a general atmosphere for the film
2. Direct the attention to something
3. Indicate characteristics
4. State a change in the story
5. Affects the spectators psychologically

There are different types of color schemes used in films to create certain atmospheres, effects or to build an extra narrative layer. Brief information on the main types of color schemes used in films are given below. Something to remark in here is that types of color harmonies exist in other color theory books like Bleicher's (2012, pp. 69-77), however they do not include as much information regarding their use in cinema as the StudioBinder book does. Therefore, the latter is taken as a reference, while Bleicher's comments on the schemes are also given occasionally.

2.2.5.1 Balanced color schemes

In balanced color schemes, the colors that are used are either very close tones or they are picked from the color wheel in such a manner that they are equally spaced from each other. These colors would be in a consonant relation; they would balance each other. These kind of schemes build a more complete, unified look (Studiobinder, 2016, p.7).

Monochromatic color scheme

Monochromatic color scheme is a color palette which consists of different tones of only one hue in the color wheel. This type of scheme makes the image look like everything is in tune, tranquilizing, solacing (Studiobinder, 2016, p.8).

Analogous color scheme

This type of scheme consists of hues next to each other in the color wheel, like blue and violet, or orange and red. Like the monochromatic scheme, analogous scheme also creates a harmonious and soothing feeling because of the consistence of colors. When this scheme is used, usually one color is abundant, one color is supportive and one other is emphasized (Studiobinder, 2016, p.13; Bleicher, 2012).

According to Bleicher (2012), in analogous and monochromatic schemes, the boundaries between two hues seem to disappear (p.71), hence the blended looks.

Complementary color scheme

Complementary scheme contains two colors opposing each other on the color wheel. Always one warm and one cool color is used in this scheme, considering they are on the opposite sides. This creates a tension and contrast in the picture. Complementary scheme can also be used to indicate a conflict within a character or with an external entity. For example, if a character is wearing green clothes in a red dominated space, this might be referring the the internal conflict of the character with the outer world, which is the case in *Le Fabuleux Destin d'Amélie Poulin* (Studiobinder, 2016, p.11).

Bleicher (2012) also mentions that colors of this scheme have “the highest form of contrast”. It is also mentioned that in case they have the same saturation and values, they will seem lighter, more saturated and as if they are trembling (p.72).

When two complementary colors are mixed with each other, the color obtained is called a neutral, which is almost gray (Bleicher, 2012, p.74)

Triadic color scheme

Three hues with equal distance to each other on the color wheel are used in this palette. In this scheme, usually one color is used abundantly and the other two attract notice. It is not very commonly used, but when it is, this scheme makes the scene vibrant and colorful (Studiobinder, 2016, p.15).

Bleicher (2012) additionally mentions a scheme called “Tetrad”. As it would be expected, it consists of four equidistant colors on color wheel. According to the

book, “the tetrad offers the artist the greatest range of hues and contrast to work with” (p.77). It can be assumed that this scheme could create a similar effect as the triadic scheme due to its colorfulness, as well as more conflict due to the combination of two complementary color couples it contains.

2.2.5.2 Discordant color scheme

Sometimes, there are some colors used, that are not consistent with the rest of the film’s color scheme, or within a scene, a color which is outside the balanced color scheme might be used. These kind of colors are called “discordant” colors. Using a discordant color, a director can attract the audience’s attention and draw focus to something, make a scene in the film more striking and thus more memorable (Studiobinder, 2016, p.17).

2.2.5.3 Associative color

Use of one palette can be spread to an entire film to set a tone, but it can also be used in certain scenes for a specific purpose. This can be use of an individual color as well. A color or a color palette can be picked by the director to represent or to be associated with something or someone. For instance, if a character is wearing the same color throughout the entire film, that color would be associated with the character (Studiobinder, 2016, p.20).

2.2.5.4 Transitional color

Sometimes to indicate changes, the whole color palette is transformed. The transformation can be in hues or other parameters (Studiobinder, 2016, p.25). For example, to indicate a character’s change from good to bad, the palette can shift from lighter tones to darker ones, or his dress can. In the TV-series called *Westworld*, one of the main characters (William), who was a protagonist in the beginning of the show, has a change of heart throughout the first season and becomes one of the “bad guys”. Paralleling that change, he picks a white hat when entering the park in the beginning of the show, but after he becomes this darker character, he starts wearing a black hat. Transitional colors are used in this manner.

In any case, it must be remembered that although there are some effects of colors that are compromised, the meaning in their use can change by directors, contexts etc.

2.3 Relation Between Music and Color

There has been a lot of research on how people associate certain musical characteristics and colors. Campen (2007) writes that for many ages, it was both exciting and disappointing for many artists and scientists to try finding a reasonable system to show the relation of music and color (p.46).

First thing to mention is that there are direct pitch-color couplings. Some of these couplings are made by famous figures with synesthesia; a condition which causes the merging of senses (in this case seeing and hearing). This means that they are entirely subjective, therefore they cannot be used as a basis for the analyses. Other couplings that have been made are based on the physical features of pitches and colors, e.g. frequencies. For example, Isaac Newton tried to link the color spectrum to the tones in a scale, thus dividing the spectrum into seven hues (Campen, 2007, p.46).

There are also direct conversions of sound to color and vice-versa. In an article (Kim, 2012) a way of converting sound to color images has been sought. Kim uses human voice in the experiments. In this method, the fundamental frequencies and the energy of the sound input is found. Then, based on the fundamental frequency, the musical scale (equal tempered chromatic scale is used in this method) and the octave is determined. Energy, scale and the octave is mapped onto the three features of color; saturation, hue and value respectively. Based on the mappings, an image, which consists of colors strips, is generated. The mapping is realized via formulas and equations based on the resemblance between the color spectrum and the spectrum of audible frequencies; visible light waves oscillate between 390THz and 750THz and sound waves between approximately 20 Hz and 20Khz. Other methods resembling this one exist in the literature, as well as the literature for converting colors to sounds.

As it can be seen, pitch and color couplings or mappings were a subject of research for many ages. The similarity of the physical features of sound and light was used while doing this. For example, a hue in the visible light spectrum and a pitch with proportionate frequencies could be matched (e.g. a hue with 390 THz frequency and a pitch with 390 Hz frequency).

The approaches mentioned above are the proof of the curiosity of humans about music and color connections. However, in these approaches, connections between

pitches and colors are established and not music and colors. Pitches certainly are elements of music, but as it is seen in the previous section on music; the associations or physical influences are based on elements like intervals, timbre, harmonic progressions etc. rather than individual pitches (e.g. there were no correlations found between the pitch C and a concept). Moreover, no literature on the direct coupling of pitches and color in films were found, so it would not be reasonable to look for a relation like that in the analyses. Surely, such couplings can be found in films too, yet this thesis is not in the search for a direct relation of pitch and color, but rather for the relation between the narratives and influences of music and color. The direct matching of pitches and colors presented here are based on mathematical models and no narrative or expressional means of use were mentioned in the articles. Their connections are not mentioned to include semantic aspects. Additionally, these are absolute matchings, but the meaning of a color or a musical feature can change throughout a film or even a scene. So for the analyses, more flexibility is required. Due to the reasons mentioned above, the direct pitch-color matchings are not included in the analyses.

That is to say, rather than matching of individual pitches and colors, matching of musical features and colors can be more useful for this study, which are presented below.

A general information on the history of relation between the music and colors is given in Poast's (2000) article. According to the article, Aristotle suggested to think colors and sounds in music as parallels; in early notations colored lines were used to indicate fixed notes and differentiate the quality of the sound. Many examples are given on compositions including color somehow; Mozart used different colors to notate the solo instrument and the orchestra in a concerto, there was an instrument called color organ which lighted a screen with different colors while playing, Schönberg has compositions with specific color projection cues, Kandinsky has compositions that combine music and light; Penderecki, Ligeti and Cage have colored notations etc. Hence it can be said that there has been a relation between music and color since antiquity until now.

Poast (2000) suggests a notation system called Color Music, in which Poast's compositions are expressed in a "visually fixed form" as he puts forth. Poast's compositions are like colored shapes on musical manuscript paper. It is mentioned in

the article that musicians act similar while playing the Color Music. For example, light yellow was interpreted as high pitched, piercing and loud; light colors are interpreted as upward motion and high pitch; cadmium red was paired with mid register, dense sound and with a steady beat. The reasons for these interpretations are linked to their effects on the body and their spectral qualities, e.g. the reason for musicians playing a steady beat when seeing red on the score, can be the increased heartbeat rate. Dark blue results in long, low notes, slow beat. Darkness can result in downward motion.

In an experiment by Stevens, it has been found that lightness is associated with loudness and darkness with quietness (as cited in Friberg and Lindborg, 2015). A group of researchers came up with the result that for jovial music, red, yellow, green and blue were favored; whereas for sorrowful music grey was chosen (as cited in Friberg and Lindborg, 2015, p.3), however this one was referred as an insufficient experiment in the paper. In a more recent experiment, in which participants were changing the color on a screen according to the music, the obtained results are as follows; faster the tempo of a music, the more saturated, brighter and warmer the chosen colors are. So colder, darker and lower saturated colors are chosen for slower tempo and minor mode (as cited in Friberg and Lindborg, 2015, p.4).

Major mode is associated with lightness more compared to the minor mode (Friberg and Lindborg, 2015, p.20).

As music becomes vaguer, e.g. if timbre, key or mode is constantly changing, it is associated with darkness more and vice versa (Friberg and Lindborg, 2015, p.14).

In the article by Bezdek et al. (2007) it is mentioned that a director claims that the music can change the way the audience sees the scene, e.g. a recording with a brass prominent orchestration evoked a more vivid perception of the blue of the ocean view in the scene, whereas another recording, in which strings were prominent, made it look dull (p.148).

In an experiment on timbre and color associations, the result turned out to be mostly dependent on pitch. Higher pitches were associated with light colors and lower pitches with dark ones. The most preferred colors were brown (for low notes), orange and yellow (for high notes). Blue, grey and black were chosen too for low registers of many instruments. Furthermore, some associations between colors and specific

instruments were mentioned. For instance, the correlations between trumpet with red and yellow; low flute notes with blue; high flute, clarinet and violin notes with yellow and white (Czedik-Eysenberg et al, 2018).

Chion (1994) makes comparisons between the visual and the sound of films too. For instance, a scene with many contrasts, cuts, sharp borders, was mentioned to have music with hard attacks and less reverb. Another scene containing blurry images had music with soft attacks, extreme reverberation and harmonic vagueness caused by atonality (p.210). Although these remarks are not about the use of color, they can still be applied to them.

Another artist in search of a relation between color and music, presents a way of adapting musical concepts of consonance and dissonance to color. In this article, Lubar (2004) considers the colors on the wheel as 12 slices, each a semitone apart, i.e. red and red-orange would be a semitone apart because they are next to each other. It is possible to go either way while counting semitones, because of the circular arrangement. In cases that the brightness of two colors are close to each other, Lubar claims that the perceived interval would be the smallest distance on the wheel. For example, the interval between red and blue is major 3rd counted from one side and minor 6th counted from the other side of the wheel, thus it is expressed as major 3rd, since it is the smaller distance. The intervals are perceived larger if there is a gap in the value, i.e. the colors are close in the color wheel but one is very dark and one is light. Lubar compares the color intervals with the musical intervals in terms of consonance and dissonance. As an example, an octave is a consonant interval and in the color realm, it can correspond to navy blue and light blue used together, which is also harmonious. One of the intervals worth mentioning is the tritone. Lubar remarks that tritone is the most dissonant interval whereas complementary colors are considered the most consonant. However, looking from another angle, both the tritone and complementary colors are the most striking. Both have a contrasting and alerting effect. Lubar notes that the combinations gradually become more harmonious as the interval approaches tritone. Additionally, triads are mentioned, but it was a little problematic because of the smallest distance rule; a perfect fifth might be perceived as a perfect fourth. Darkest color might be perceived as the “bass note” and brightest as the highest. However, they can also be ordered in the order of wavelength, which makes red the lowest (bass) and violet the highest ends. So there

are different approaches to the arrangement of chords, Lubar prefers the wavelength. This article was eye-opening, which was one of Lubar's objectives. However, some parts are arguable. For example, red and red-orange make a minor second and thus are dissonant according to this article, but in other sources analogous schemes are referred as harmonious. It can make more sense when it is thought in terms of stability, because the human eye would want one of the colors to go to another color to be able to distinguish them better. So the minor second in color wheel can be referred as unstable instead of dissonant. Lubar's article was making the comparison mostly in the context of paintings, yet still it can be applied to color schemes in films.

In another article by Wells (1980), who is a musician and a painter like Lubar, a similar relation has been explained. One day Wells was struck by the fact that there was a similarity between the color complementarity and tritone in the music. Lubar has tried to apply musical consonance ideas to the colors, while Wells tries to do the opposite in a way. Firstly, many composers, who have used the complementarity of the tritone are mentioned, like Debussy, Stravinsky, Rimsky-Korsakoff, Moussorgsky and Scriabin. Wells tells that after doing a harmonic analysis for Scriabin's *Prometheus*, he found out that not only the tritone harmony but also the minor third progressions, that divide the tritone in a half, were used; and with further analysis concluded that equal divisions of octave were favored instead of unequally dividing diatonic harmonies. Wells believes that Scriabin correlated the color wheel with circle of fifths instead of 12-tone in chromatic order. However, in both of the arrangements, the tritone represents complementary harmonies. Yet according to Wells, the chromatic order is more sensible, since it is more similar to the succession of color frequencies in the color wheel, compared to the succession of circle of fifths. Wells also mentions five historical figures (painters, scientists) who have made color-note mappings and notes that three painters matched triadic colors with augmented triads (as it would be in an equally divided scale), while the other two matched them with a major triad. The augmented triad is referred as "colorful sounding". Wells believes that there can be a strong correlation between the two whole tone scales, which constitute the 12-tone scale, and the color wheel consisting of twelve colors. One whole tone scale would be linked to the primary and secondary colors and the other to the intermediate colors. According to Wells, this work can

open a door for linking these two grounds. Another point mentioned is the near-complements, which are the two nearest colors on each side of a color's complementary. In this scheme, there still is a noticeable contrast, yet it is softer compared to the complementary. In Wells' arrangement of the 12-tone, the near-complements of a note correspond to the dominant and the subdominant. In the article, their closeness to the tritone was considered to be the reason for their domination until the end of the 19th century. Another point worth mentioning is the comment on the change rate of harmonies, inspired by colors. Wells points out that a peg-top with complementary colors on two sides would be perceived grey when it is rotating fast. As it slows down, the colors would be more distinguishable and flashy. Based on this, Wells mentions his thoughts on the same flashy quality of the alternating chords a tritone apart in Scriabin's work. Wells remarks that one should not think in terms of tones but of tonality or chords. However, the roots should be considered the base for the chord's color, resembling overtones that are not perceived separately but blend and strengthen the fundamental.

Poast (2000) quotes Kandinsky's words in the article. The painter has remarked that something can be expressed by different arts at the same time, and each of the arts would add something idiosyncratic, thus adding more meaning and enriching it in a way that they would not be able to do it alone.

2.4 Reflections on the Literature Research

Based on all the information presented above, there are a number of expectations about what to find in the analyses.

It is expected that the features of music and color that are associated with the same concepts should occur together. Likewise, the features that result in similar physical reaction may be observed together. Some examples of the expected relations can be found below Table 2.2. It must be noted that these are not all the relations there are. Also, the features of music and color given below may not be the only features that are associated with the given concepts, and the given concepts may not be the only associated concepts with the given musical features. The table below is presented to exhibit how music and color can be related using the data in the literature review and make the process more concrete and understandable.

Table 2.2 : Examples of music and color features that are matched with the same concepts or have the same physical effect.

Concepts/Effects	Musical Feature	Color
Largeness, Spaciousness	Wide intervals	Brightness
Trapped, Narrow	Clusters	Darkness
Happiness	Major modes	Warm, bright
Sadness, Anger, Fear	Minor modes	Cold, dark
Sinister	Ponticello, tremolo	Black
Change in Life	Change of key	Change of color scheme
Distance	Reverb, attacks, frequencies	Red: closer, blue: distant
Alert	High frequencies	Red
Emphasis	Cadence, change in dynamics	Discordant, complementary, analogous schemes
Fantasy	Augmented triads	Purple
Rationality	Minimalism	Blue
Madness	Bitonality	Yellow
Romance	Waltz rhythm	Red, Pink

Also, the matchings between music and color that are mentioned in the previous section on the relation of music and color, can be anticipated to be found together in the analyses. Examples of them are given below in Table 2.3. Same explanations as Table 2.2 are valid for this one.

Table 2.3 : Features of color and music that are directly matched.

Color	Music
Light yellow	High Pitch, Piercing, Loud
Cadmium red	Mid-range, steady beat
Dark blue	Low range, slow, long
Light	Upward motion, loud, hard attack
Dark	Downward motion, quiet

In addition to these, thoughts on different ways to use music in accordance with the color schemes in films will be given below. This is merely the result of a thought process on how music and color can match otherwise than individual notes and colors.

First, monochromatic scheme will be taken into consideration. In this scheme, colors are in harmony, it has a lulling feeling. There is most likely nothing that is emphasized in the picture. There are many ways music can reflect these features, a repeating motive instead of a long melodic line, a slow harmonic rhythm or looping harmony, constant texture, blending timbre, simple instrumentation etc.

The analogous color scheme has similar effects, but there is differentiation in the colors, they have different roles; dominant, supportive, emphasized. These roles can be applied to musical features as well. Keys that are in close relation to each other can be used in case of modulation, there could be an instrument that is prominent, yet still harmonious with the rest of the ensemble, there could be motives that are derived from each other, etc.

Complementary color scheme is the most striking scheme. It can create conflict, yet it is still one of the balanced schemes. The musical equivalent could be two musical themes in conflict, or as Wells (1980) emphasizes, the use of a tritone progression can match, or an instrument with an unusual timbre etc.

Triadic scheme is balanced and colorful. A lively and playful melody, a combination of many different timbres and interesting harmonization could be the parallels in music.

Discordant color is a deviation from a balanced scheme, so it is striking just like the complementary scheme, it is more memorable. This can be expressed in music with a deviation from the key of other themes in the film (if such a key exists), or a deviation in instrumentation. Use of a cadence can support emphasizing the moment. For the associative color, the most appropriate parallel in the music would be the leitmotif. A recurring melody, harmonic progression, a specific timbre etc. which is associated with something is what can be in accordance with the associative color.

Transitional color would be similar to a thematic transformation, which can be done by a change in the key, harmonization or timbre.

That is to say that colors can be linked to musical features in more ways than the common concepts they are associated with.

An additional remark on the method of analysis is that it depends partially on interpretation. As Larson (2012), remarks about expressive meaning of music “One way to help us better understand the expressive meaning of a passage of music is to compare that passage to other things”. Therefore, as the literature review has shown, the meanings in films, colors and music can be extracted with the right arguments based on the previous work. Also, to obtain more insight on an art, any study that would put it under the microscope can be helpful. A study with a narrower scope can lead to others with larger. Roeder (1993) puts it this way; “(...) music theorists must play an imperative and active role as music semioticians. Theorists create and codify systems by which music can be represented and analyzed, that is, by which music

can be understood to have significance”. Roeder also mentions that there might be times that the meaning of the music is misinterpreted and presented in a wrong way, particularly when there are no other fixed rules or previous study. However, Roeder insists that theorists should keep working on their methods and try to fit them in an analytical plane which is consistent with the common practice. Roeder was talking about the research within the limits of music, while this study is about the relation of music to other art forms. Yet still, his words are valid for this study too. To present a new analysis method, new correlations or new theories, one must work on them even if there is the possibility of misrepresentations, because eventually, a method within logical reasons will be reached. Following the research and the reflections, the analyses will be presented.



3. ANALYSES

The analyses are carried out based on the information obtained in the literature review and additional material on the example films, which is given within the analyses when need. Interpretation is needed since the meanings can change in different contexts and according to the filmmakers, who are expressing themselves subjectively. So some interpretations below try to reveal what the filmmakers wanted to express with the use of music and color, on the basis of the research and the filmmakers' own ideas found in interviews. A last notice before the analyses is that sometimes the word "we" is used, which is a word representing the audience watching the films.

3.1 Analysis of "*Nocturnal Animals*"

Nocturnal Animals (2016) is a film by Tom Ford, based on the novel "Tony and Susan" by Austin Wright and the soundtrack was composed by Abel Korzeniowski. In the film, there are two main characters, Susan and Edward, a divorced couple. As they were young, Susan wanted to be an artist and Edward a writer. Susan married him despite her mother's wish, who did not see Edward as Susan's equal. During the time they were married, Edward keeps writing but Susan does not think his work is very powerful. She does not do much in terms of art, because she thinks her work is not good and it is an unrealistic wish. Eventually, Susan is not satisfied with her life with Edward and leaves him. A while later, we learn together with Edward that she has an affair with someone else. Also, she was pregnant and had an abortion. This devastates Edward. Years later, he publishes a book named "*Nocturnal Animals*" and sends it to Susan, who now has a seemingly garish life. In fact, she and her husband Hutton, with whom she had an affair, have economic problems. Therefore, Susan is still not satisfied with her life and her marriage, and she is surrounded by cold, insincere people. Plus, there is an indication that Hutton cheats on her. She reads Edward's book. While reading the book, Susan is influenced from the story a lot, because she relates the events in the book to the events in their relationship. She

understands how brutally she left Edward and starts to think that leaving him might have been a mistake. In the end of the film, they make an appointment with each other to meet for dinner. Susan meticulously gets ready for the dinner and goes to the restaurant, waits in there for hours for Edward to come, but no one comes, she is left all alone in the end.

The story in the book is about a man (Tony) whose wife and child is kidnapped by rascals while they were on the road to somewhere. He goes to the police and together with a detective, they search for them and find out that they were killed. The detective does not let it go and tries to get Tony get his revenge. He traces the rascals, brings Tony to them and gives him a gun, but they easily escape taking the gun from him. Then Tony finds one of them (Ray) again and shoots him, but gets shot as well and dies at the end. The story in the book is a metaphor for Edward's relationship with Susan. Edward was seen "weak" according to Susan and he lost his wife and child because of it.

Before the analysis is carried out information on the film's production process and the filmmakers' ideas will be presented to have more insight.

In an interview (Url-3, 2018), the film's director Tom Ford says that the film is about loyalty, about "finding people whom you love and holding on to them". Ford agrees with the host when he says that Susan, the character from the film played by Amy Adams, starts to question her life. Ford says that now we are living in a "throw-away culture", we throw everything away, even people and the story in the film shows what can happen when you "throw someone away". In the interview, it is mentioned that Edward, Jake Gyllenhaal's character from the film, is betrayed by Susan in a brutal way. Ford remarks that the book written by Edward is how Edward tells Susan what she did to him, how she made him feel like, that she destroyed his life. Ford adds that Susan reviews their relationship and falls in love with him again.

In another video on the production of the film (Url-4, 2018), Ford opens up the characters more. According to Ford, the cop in the book represents the little voice in Edward that tells him to get revenge; write a book, send it to Susan and show her that he managed. Ray is mentioned to represent the hardships in Edward's life. About Susan, Ford notes that she seems to achieve everything she wanted, but she is dead inside and Edward's book releases what she already felt.

In the same video (Url-4, 2018), the cinematographer Seamus McGarvey and Tom Ford mentions the color design of the film. McGarvey tells that different color designs are used to distinguish and represent the nature of the storylines in the film. The film consists of three different storylines; Susan's life in present time, the past when Susan and Edward was together and the story in the book. It is mentioned that Susan's world is cold and her life is desaturated (thus colorless); therefore, cool, blue and grey colors are used and a photographic symmetry is created in the shots. Very vivid colors are avoided according to McGarvey. Ford says that when there is color, its garish. For the past, they say that warmer colors like yellow are used, because back then Susan had more emotion. Lastly, for the scenes of the story in the book, saturated, grainy colors are used, they are usually brown and dark. The costume designer Arriane Phillips says that costumes can build a character and also give subtle hints about a character, like their emotional state. Phillips also says that Tom Ford is "extremely detail oriented". Ford mentions putting a lot of hints that relate the inner novel to the real life in the film. Ford also remarks that reading this book was painful and transformative for Susan.

In another video on the making of the film (Url-5, 2018), the composer Abel Korzeniowski says that this film is actually one story as a whole; one time shown in a normal way and one time as a metaphor. Like Ford, Korzeniowski also says that there are "puzzles with references, reflections". Both the composer and the editor Joan Sobel mention that in the film, everything is seen through Susan's eyes.

In an interview (Url-6, 2018), Korzeniowski says that the music should indicate that something is about to happen. The composer adds one more time; "The film isn't an objective story, but it's filtered through Susan's imagination and emotions".

The analyses of the scenes are carried out using the information presented above and the literature review. Most of the interpretations are based on the filmmakers' words.

3.1.1 First theme

The first theme of the film is based on an ascending motive, that consists of a semitone step and a leap. The interval of the leap changes. When this theme is used, it usually starts on *iv* (the subdominant chord), which confuses the listener as if it is *i* (the tonic chord), until the real *i* chord is heard, which happens when a descending line in the melody finally occurs (see Figure 3.2 for the transcription).

This theme is used together with other themes in the introduction scene, but that scene is excluded in the analysis of the scenes within the film, for it is more like an opening credits and it has a closed structure. This theme is used in three scenes in the film as a whole and a small part occurs at the end of another scene.

The first scene this theme is used is when Susan heads back home from an exhibition opening in her gallery. The track for this scene was named “Restless”. Dark and dull colors are dominant in the house. For the most part, there is no vivid coloring and mostly greyish blue is used. Interior of the house has slightly warmer coloring, although they are very dark. The scenery is very ordered, there is symmetry as if it is a photograph (Figure 3.1). It was a feature mentioned by the cinematographer earlier. It may be representing Susan’s ordered world, which has clear borders and absolute rules.



Figure 3.1 : Susan’s dark colored house.

The color schemes of this scene are either monochromatic or analogous, in which the dominating color is grey and there is no emphasized color. These palettes represent the cold and monotonous nature of Susan’s life. There is nothing that stands out, everything blends to each other and they are dark, which is implying there is no sparkle in her life. As mentioned before, grey and blue are used as the dominant color in Susan’s storyline, especially during the scenes when she is home. It stands for her depression and melancholy. It also represents selfishness according to the literature review, which is also consistent considering how Susan abandons the people in her life for her own good without any concern about them. Blue represents the cold nature of her life, she does not have a happy married life, or any close friends. There is no emotion in her life. Some symbolic meanings attributed to brown are order, ambition and authority, which are Susan’s characteristics and they are reflected in the color scheme of her house. The dark greens we see outside are

gloomy and enervating, as the production team says (Url-5), even the environment is controlled in her life.

In this scene, the music is in the same key as the introduction scene, F# minor (Figure 3.2). This is before almost anything has happened. Susan does not have the book yet. The theme is played with strings and chords are all *tremolos*. There is only the addition of dissonant brass notes fading in and out for a few seconds (measure 8) and in the last two measures. There are repetitions of the motive on B minor and then a short resolution in F# minor. So there is not much harmonic or motivic change, except at the very end, where before going to *i*, the music hangs on the *vii*^{o7} (diminished seventh chord) for a while.



Figure 3.2 : First theme in the first scene, repeated “question motive”.

Comparing the ascending motive to human speech, it can be suggested that this theme is like a question, because when humans ask questions the pitch rises. Thus it is as if there is a repeated questioning. It can be resembled to Susan’s mind, which is always unsatisfied and always questions her life. This motive will be referred as the question motive.

The monotony of the monochrome palette can also be seen in the repeating motives and mostly stable harmony of the music. There is nothing prominent except the dreadful diminished chord just before the morning scene, which informs the audience that a new monotonous day has come. It can be suggested that this represents the depressed state of Susan, because it implies that a new day is not something to be happy about. The bass notes are louder towards the end of the music, which creates a

perception of heaviness or slowness, as if a new day is a heavy burden for Susan to carry and the time passes slower for this. Colors might not be able to indicate that questioning that keeps running in Susan's mind, but their monotony, dullness and darkness shows that Susan is in an overwhelming and repetitive state, which can be read as parallel to the constant questioning in music.

The *tremolos*, which have been defined as sinister earlier, are used together with the dark colors which have the same quality. As the shots with monochromatic blue palette is shown on the screen, the bass notes get louder, which is compatible with the information in the literature research about the association of low and long sounds with blue.

Table 3.1, given below, summarizes part of the analysis. It is not in detail and contains both interpretations and direct relations. The detailed explanations are only given in the analysis, but the chart provides a general and simpler look.

Table 3.1 : The features of music and color that are connected to same concepts or the same affects in the first scene of *Nocturnal Animals*.

Music	Concepts	Color
Repetitive motive, almost only strings	Monotony	Monochromatic
Slow harmonic rhythm and slow tempo	Direct relation	Cold colors
Starts on iv, tremolos	Confusion, Sinister	Darkness
First inversion <i>i</i> and <i>vii</i> ^{o7} – <i>i</i> progression	Unfulfilled	Desaturated

The second scene that this theme has been used comes after Susan starts reading the book and Tony's wife and daughter is kidnapped in the inner novel. Like the previous scene, the color scheme contains dark colors. This time, we see two parallel storylines from the inner novel and Susan's present. The inner novel has a different palette with more saturated colors and brown dominance. There are parallel shots in this scene, both Susan and Tony (in the book) are taking a bath and then lying in bed. In both story lines, the palettes are monochromatic like the previous scene. In both of the storylines, there is one color and one emotion that dominates. The monochromatic schemes reflect both the loneliness of the characters and the sad

emotions that they are drowning in. The brown and dark yellow colors (Figure 3.3) of the inner novel shot can be representing the insecurity and madness of Tony (Studiobinder, 2016), for he was not able protect his family. The dark and grey colors of Susan are the same as before.

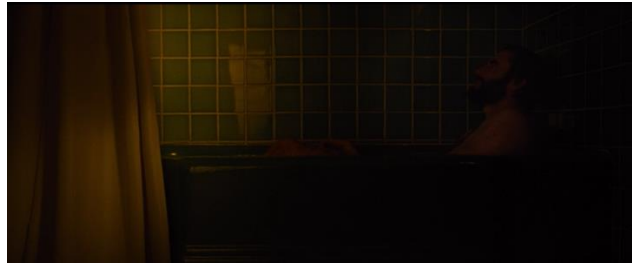


Figure 3.3 : Tony in the bath, brown and dark yellow color scheme.

The track for this scene was named “City Lights”. This time the theme starts in D minor key (Figure 3.4) and with *iv* as earlier.



Figure 3.4 : First theme in the second scene.

The melody starts from F#, which was the tonic of original theme. It can be suggested that this is a reference to the parallel between the novel and the real life. In the film, there is a story within a story which is related to the reality, and the music goes to a deeper level, but still contains some relation to the original key. Like before, the harmony is mostly of stable character, there is not much change, the motives likewise. However, this time the music modulates to Bb minor and starts on *i*. Then it proceeds to *vi*, which is not a diatonic chord and it is associated with wickedness (Murphy, 2014). Gb minor is the enharmonic of F# minor, which is the original key, so the relation continues. Right after this progression, the phone in the inner novel rings, it is a call from the police and it will eventually lead to a horrible fact. The wickedness can be seen as a feature attributed to Susan. The reason for this

is that the tonic chord of the previous scene (in which only Susan appeared) has a disturbing relation to the tonic chord of the theme in this scene. In addition to this, it comes right before the bad news, which is actually a metaphor for Edward and Susan's relation in real life.

The melody remains unresolved and does not go back to the tonic, thus the music is suspended and there is uncertainty. This may be a reference to Susan's changing mind. She starts to question herself and her life more and her reality is changing, which will be seen in the colors later.

The parallel story lines have the same type of color scheme (monochromatic), possibly as a reference to the relation between them, while music has harmonic and melodic indications in that sense. A comparison of the spectrograms of "Restless" (Figure 3.5) and "City Lights" (Figure 3.6) shows that bass frequencies are used more in the former and high frequencies slightly more in the latter. SonicVisualiser software is used to obtain the spectrograms.

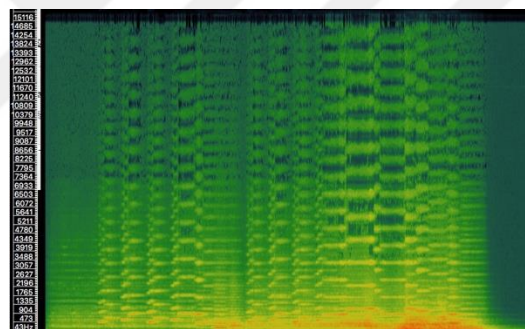


Figure 3.5 : Spectrogram of "Restless", bass frequencies increase towards the end.

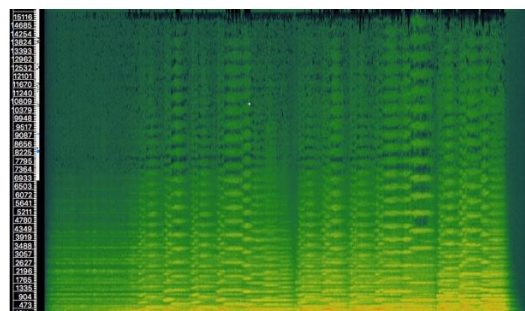


Figure 3.6 : Spectrogram of "City Lights", high frequencies are fuller.

The change in the frequencies can be related to the use of color. In the first scene, mostly cold colors were used, in the second scene, warm colors are more present and hence the fullness of higher frequencies.

In the third scene, Susan comes home from a meeting, where she started to question and realize things around her that she did not before. She also makes the following comment “Maybe it’s not a good idea to change things quite so much”.

She is alone at her home again. The palettes that are used in this scene are almost the same as the first one, except they are darker. Therefore, it can be said that she is getting worse and unhappier.

Same goes for music, “City Lights” is used in this scene one more time, but now the *vi* proceeds to *i* (Figure 3.7). However, the melody ends by descending on the leading tone which hinders the feeling of a resolution even though there is tonic harmony under it. This movement in the music can be interpreted as follows; Susan’s unending questioning seems like it comes to an end, because tonic is reached, but there is no closure, she cannot answer her questions, or the answer is not satisfying, thus Susan is more and more unhappy.



Figure 3.7 : Ending of “City Lights” in the third scene.

When all three of the scenes are considered, it can be seen that the use of monochromatic palette is the common ground (in addition to the music). Some shots in the house have different scheme, but they consist of very dark colors and thus preserve the meaning, and the monochromatic schemes are used in more striking shots, so it can be said that they dominate. These are also the scenes where Susan is alone at home. The monochromatic color palette indicates the monotony and coldness of Susan’s life, which is also reflected in the repeating motives and long, sustaining chords in music. The colors turn darker after she read the book, because she starts to think about how brutal she was with Edward and feels bad about it, and also because she thinks she made a mistake leaving him. The change in music can be read in the same sense. When the theme is heard for the first time, before Susan read the book, it was in F# minor. The theme is heard in D minor while she is reading the book in the second scene and after she is alone at home again, it is in the same key as the second scene. This can be interpreted as this; after reading the book, what she

deduces from the book about Edward's experiences in their relationship, becomes Susan's reality as well as Edward's. Additionally, it modulates even further to Bb minor. Like the colors growing darker, the keys go lower, all are indicators of Susan's feelings changing in a bad way.

3.1.2 Second theme

The second most used theme contains a motive which is an inversion of the first motive, as the composer says in an interview (Url-7, 2018). The motive in this theme is a descending line consisting of a step and a leap. Since it is descending, like a statement or an answer in human speech, this motive will be referred as the "answer motive".

The first time the motive is heard (excluding the introduction scene) is in the first scene, when Susan is in the gallery opening. In this scene we see a crowd in the gallery, they are in dark colors. Some grey colored shots of traffic cut in between. The artwork in the gallery is naked women lying on white pedestals, which have lighter colors, they seem like they are in dim spotlights. Then Susan is shown with a black dress in front of a grey background. The color of her skin and dress make her stand out in the image (Figure 3.8). She looks somewhat emotionless, but the colors that surround her are the colors of mourning, sadness and depression. There is occasional whiteness which makes the colors breathe for a little while. However, overall, the colors are very dull and have an overwhelming, depressing effect.

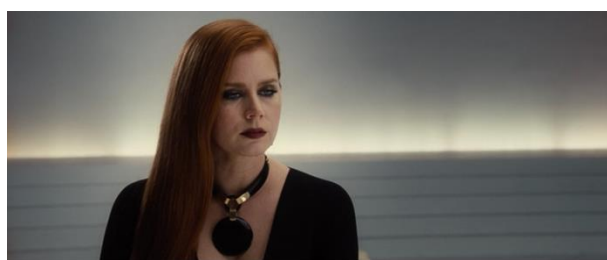


Figure 3.8 : Susan's figure comes to the forefront because of the colors.

The title of the track is "Exhibition" (Figure 3.9) This music in here is not very melodic. The answer motive is present at the very end (shown with diamond head notes in measures 9-11). In this scene, the music consists of long dissonant chords and a prominent bass line. The motive of the theme is heard only one time and very distant, together with a cadential progression in the chords. Like Susan who stood out in the shot, the motive shines out, because it has a different timbral character.

Although all chords are very dissonant and create feelings of confusion and indecisiveness, since there is a cadential progression and the motive ends on B, the tonal center; there is a feeling of fulfillment. This is because Susan has not read the book yet, thus she is not questioning that much, she is only confused. Her life still has a certain structure.

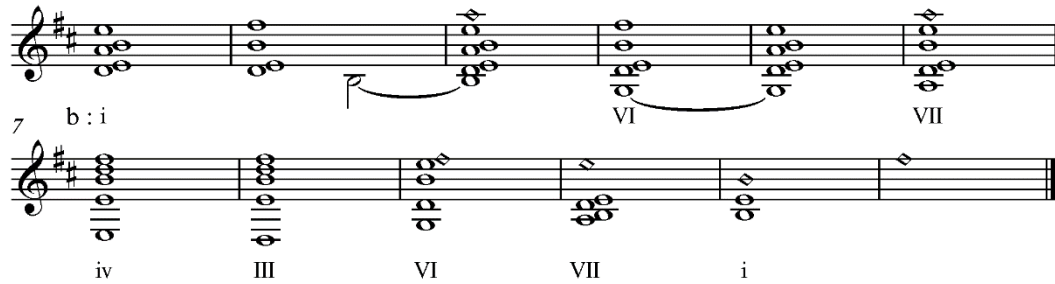


Figure 3.9 : “Exhibition”, diamond heads show the “answer motive”.

The ominousness of the chords played *sul ponticello* and *tremolo*, the ambiguousness due to the dissonances and bass notes which are prominent here, are correlated with darkness, which fits the colors of this scene. Although the motive is in a higher octave, it is a descending motive, thus it has a sad feeling to it. While there are mostly cluster chords, there are occasional expansions due to the high pitches that come in and out. This movement is similar to the occasional occurrence of white color in the scene. Both of these create a perception of largeness and provide a space to breathe.

The second scene with this theme is when Tony finds out about the death of his family in the inner novel. In this scene, like it was with the first theme, two storylines are shown together. Susan is shown in a grey setting with her pinkish grey skin color. In the inner novel scenery, an image of the desert is shown, it is like a painting and has a complementary color scheme. The blue sky seems beautiful and relieving whereas brown ground looks overwhelming. The two contradict each other. In the colors, an expectation of some kind is present, as if the plot could go either way; towards serene blue or dusty brown. Then in the next shots, it is seen that the way was the ground colors and the suffocating feeling of them. Tony is looking at the dead bodies of his family. There are green trees in the back, green is the color of hope. Then he kneels because of the view in front of his eyes and only ground can be seen, which might be an indication of loss of hope. The bodies of the women are on a

red velvet couch, in a brown colored scene, thus they stand out (Figure 3.10). In an interview (Url-5, 2018), while the production team is mentioning this scene, they say that they wanted to make it striking, violent and outstanding. They say that the bodies seem “angelic” in the middle of the brown background. This color scheme is used to draw the attention directly to the bodies and appreciate their beauty and create a shocking effect. This is a devastating moment for Tony, which relates to a memory of Edward, in which Susan lies in a red couch and tells him that his work is not so great. That is how Edward is telling Susan that she hurt him so bad that day and it was engraved in his memory as a devastating memory.



Figure 3.10 : Bodies on the red couch in a brown dominant scheme.

Then there is a return to the real life and Susan is so influenced by the novel, she calls her daughter to make sure she is okay. It is like the same shot is seen once again, because her daughter is in bed in front of a red cover (Figure 3.11). The difference is that the colors are duller and darker, because that is how Susan’s world is.

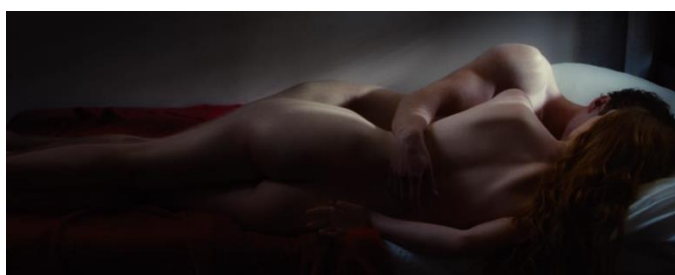


Figure 3.11 : Susan’s daughter in a similar shot to the body shot, in darker colors.

The track in this scene is named “The Field” (Figure 3.12). The theme starts in the same key that was hinted in the previous scene; B minor. It starts on *VIM7* (major seventh chord on the sixth degree), a major chord with a broken feeling because of the 7th. Then continues with *vii°* and *i*. The harmonic rhythm is fast and there is use of many different chords unlike the harmonization of the first theme. In this one, 7th

chords are used a lot (not indicated on the score), which create mixed feelings. They can be interpreted both ways, sad or hopeful. Likewise, there is an oscillation between minor and major chords. They could go in both directions, but they end up on minor. Additionally, the theme keeps going down in octaves. Descending music is reminiscent of a depressive mental state, which is exactly what is going on for both Susan and Tony. Music is accompanying their devastation. The motive is also like an answer to the questions in Tony's head, but it is not a good one; his family is dead.

The figure displays a musical score for a piece titled "The Field". The score is written in F# major (three sharps: F#, C#, G#) and 2/4 time. It consists of five systems of music, each with a treble and bass staff. The harmonic rhythm is fast, with chords changing frequently. The chords are labeled with Roman numerals and figured bass notation (e.g., b: VI, iv, VI, ii³, vii⁶, i, VII, i, III⁶, iv⁶, VII, iv⁶, v). The score includes measure numbers 7, 14, and 20. The key signature changes from F# major to B minor (two sharps: F#, C#) at measure 20. The music ends with a final chord in B minor.

Figure 3.12 : “The Field”, fast harmonic rhythm, ambiguous chords.

At the end of the scene, there is a reference to the first theme. It starts exactly as it did in the first scene it is heard. So it sounds like the music is in F# minor again, but it is on iv, i.e. B minor, which is the key of the second theme in here. So Susan's reality is connected to the book's and implicitly to Edward's reality again, but the indication is subtler in here. The question motive in the music corresponds to the part of the scene in which Susan is alone at home again, after she checks on her daughter. Thus it looks like she is back in her reality again, knowing that her daughter is alive and well, with the connection to F# minor. Yet it remains unresolved to the tonic, so it ends on the B minor chord, so there is no certain return to the F# minor and the

motive suspends, implying that Susan's mind is changing and she is having doubts about her decisions, she has no closure.

In this scene, the strings are played *ordinario* with *vibrato*. So this time there is no sinister *tremolos*, the music is more sympathetic. There is motility both in the motives and the harmony. The music starts in high octaves. The colors support these facts. Yellow, brown and red in the novel scenes are linked with faster tempo and higher pitch. Plus, both red and high frequencies trigger alertness and together they amplify the shocking effect of seeing the bodies. High frequencies indicate directness and red objects seem larger, so the use of them together taunts the terrible truth to audiences' faces. Another similarity is that both the color scheme and music indicated two possible ways to go, one hopeful and one sorrowful, both ended up in the latter. As the music goes to the lower octaves, the inner novel shots are cut by Susan shots more, then those shots become the main line. So as the cold colored shots dominate, the music gets lower, which is consistent with the literature research. In the end it connects to the question motive with the *tremolos*, which were already used in the scenes which had the type of color scheme used in this scene.

The third scene that uses this theme is at the very end, when Susan and Edward texted each other to have a dinner. Susan gets ready in front of a mirror, goes to the restaurant, sits and waits. Eventually, she is stood up by Edward.

In this scene, Susan is dressed in a more vivid color for the first time. She is wearing green, the color of hope. The hope of seeing Edward again and that this might change something in her life. She is in front of a black background, standing out again. This shot resembles the one in the first scene, which was like the opposite of this. The entrance of the restaurant is in yellow hues, like hues that are used for the storyline of Susan's past. It is because she expects that warmth, coming in from that door together with Edward. Then she goes to their table and sits. In the restaurant, an analogous color scheme is used (Figure 3.13). It consists of green, the color of hope and rebirth, and orange and yellow, colors of change, warmth, youth. These colors stand for Susan's expectations, she wants to change, to feel alive again, to feel the warmth of love. The restaurant shot has a harmonious feeling with darker framing. Susan, with her green dress is in harmony with the exterior. She orders herself a drink and waits there. Eventually she ends up waiting for hours, until everybody around her in the restaurant is gone and she understands that Edward is not coming.



Figure 3.13 : Susan waits in the restaurant colored in green, yellow and orange hues.

In the last shots, Susan's eyes are shown, with a darker color scheme and actually a similar shot was used in the beginning of the film. She is back to square one, there was no change, she is unsatisfied and unhappy once again. She cannot obtain what she has been expecting to obtain, because the mistake she made was too big to be taken back. Her unhappy face in front of a grey background is seen as the last image. The green of hope is gone and she is alone and depressed again.

The track is named "Table for Two" (Figure 3.14). The theme in this scene starts in Bb minor. It is the key which the first theme modulated at the end, because now Susan is inside this new reality in her mind, which is created by Edward, and she is waiting for Edward. This time, the theme is quite different, almost more hopeful according to the composer, who also remarks that Susan expects a positive change in her life in this scene (Url-5, 2018). The rhythmic structure is different; it is in compound rhythm. Although it is not exactly the Waltz rhythm, it is reminiscent of it, which can be linked to the expectation of a "romantic encounter", as mentioned in the literature review. The theme is played with the piano and there are strings accompanying. The chords in the left hand are played somewhat like Alberti bass. The harmonic change rate is slower in here, as well as the melodic line. In the melody, there is an overall descent, but then it goes way back to the higher octave. It is like an excited person, getting calm and excited again, like Susan would be. Both major and minor harmonies sustain for long time, this too can be linked to Susan's expectations. It is like she is so happy and excited about seeing Edward, but she is trying to calm herself. Then this theme is cut in half on *III* harmony and is linked to another theme, which is a new one. It starts when Susan sits at the table and starts waiting for Edward. This theme is based on a motive, which is like a combination of the question and answer motives. It consists of a descending leap, ascending step and another descending leap, then it is fragmented and only a large descending leap is

used. The harmonic change rate is faster in here and the rhythmic structure goes back to simple rhythm.

The image displays a musical score for the piano accompaniment of the piece "Table for Two". The score is written in 3/4 time and features a key signature of three flats (B-flat, E-flat, and A-flat). The notation is spread across six systems, each consisting of a treble and bass staff. Harmonic analysis is provided below the bass staff of each system, using Roman numerals and lowercase letters to denote chords. The analysis includes:

- System 1: Chords labeled $bb : iv$, i , and VI .
- System 2: Chords labeled III^6 , iv , v , and iv .
- System 3: Chords labeled i , iv , III^6 , i , and III^6 .
- System 4: Chords labeled IV^6 , iv^6 , i , v^6 , iv^6 , v^6 , and i .
- System 5: Chords labeled III^6 , IV^6 , iv^6 , i , III^6 , and iv^6 .
- System 6: Chords labeled v^6 , IV^6 , iv^6 , and i .

The score also includes measure numbers (9, 18, 27, 34, 40) and dynamic markings such as 8^{va} and $1.2.$.

Figure 3.14 : “Table for Two”.

Measures between 33 and 40 are repeated three times, each time with additions, like string arpeggios and other instruments. Each time it becomes more dissonant, wider in range, louder and tense. Then in the last two measures, only piano remains.

While this theme is heard, Susan waits in the restaurant for hours, eventually understanding that Edward is not coming. The mixture of question and answer motive may be foreshadowing that Susan is about to get an answer to her questioning. The descent in the fragmentation prevails, so does the descent in Susan’s life. The dominating minor harmonies support this claim. Especially the IV - iv progression is indicating the loss of hope. Furthermore, in almost all of the other

themes, either the tonic was not reached or there were dissonant notes in the chord, which hindered the feeling of a closure. However, in this one, in the very end of the film, finally there is closure and it is a lonely note played by the piano alone. So Susan gets an answer to her questions. She is alone and there is no more hope for a happier life, which is also noted by the composer in the interview (Url-5, 2018).

The colors and music indicated loss of hope. As Susan is shown with the grey background, the last notes on the piano are heard. Dark colors matched bass notes, which are also slowing down, whereas in the earlier shots there were more motility and higher notes, which correlate with the warmer and lighter colors. The light to dark change also goes together with the wide span of the music going to a single line played by the piano.

In all these three scenes, the “answer motive” is used because the characters are getting an answer. In the first scene, first Susan is heavily breathing as if she is not okay with what is going on, then she drives back home after her opening, where she has a structured life. It is as if the theme is saying “Yes, this is your life now”. In the second scene, Tony and also Susan as the reader, get an answer to the question “What happened to the kidnapped women?”. In the third one, Susan gets an answer from Edward, “I actually do not care for you anymore”. Also there are expectations in all three. Expectations that are not fulfilled. Color-wise, in all three scenes, there are figures that stand out in at least one plan; in the first and last one Susan and in the second one the bodies. In all the scenes, these figures are the people who are in question. Therefore, music and color are like reverse correlates in this sense. Color emphasizes the characters in question and the music answers. Other than this, the change in the musical characteristics of the theme in three different scenes are resembling the changes in colors. Darker scene has lower, slower and *tremolo* version. Higher frequencies and faster change are present in the other two with lighter color schemes.

3.1.3 Third theme

In the invitation scene, Susan and her husband Hutton is invited to their friend’s home. Susan talks to her friend about their problems. She tells that what she and Hutton want is different, which is similar to what she told Edward when they were breaking up. She is not happy. Then Hutton leaves because of his work.

The theme in this scene is called “A Solitary Woman” (Figure 3.15). This is the only scene that this theme has been used. The theme is in A minor and it starts with a descending motive. It consists of four notes and almost all stepwise, it is repeated three times, then another motive is introduced, which first descends and then ascends. This one is repeated too. The whole piece goes like this and then in the end of the scene, it ends with five only-descending motive repetitions in a row. In the beginning of the theme, the harmonies alternate between *i* and any other chord. Then it turns into a repeated progression and it ends on *v*. Yet there is no resolution, it is not like a cadence.

The descending motive represents the descent in Susan’s psychological condition. She is not happy or satisfied with her life, there are moments that she feels better (the ascending notes), but the worse moments are prominent. At first, she says she is fine, but then she says that she is not actually happy but she feels embarrassed to say so, as the recurring harmony starts. Then at the moment when her friend asks Susan if she still loves him, the descending lines in a row enter in higher octave. She does not answer and goes to say goodbye to Hutton. Outside the house, Hutton leaves and the harmony stands on *v*. When she is alone with Hutton, only the descending part of the motive is heard, which may imply that she thinks what is bringing her down is her husband. The motives are played by piano and the harmonies by strings. So the melody stands out, it is not blended with the strings.

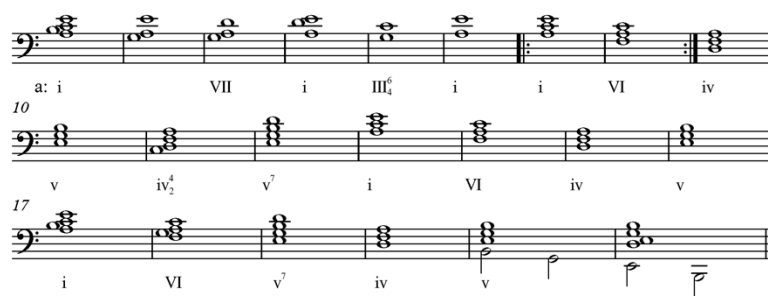


Figure 3.15 : “A Solitary Woman” harmonies.

In the scene, the exterior of the house is in black or grey colors and the interior has warm colors. The dominant colors are yellow and brown. Susan is wearing a dark blue shirt, the hosts are wearing violet and turquoise (Figure 3.16). All these colors are complementary colors to the background colors. So they come slightly to the forefront in the scene but all of them are in different frequencies, so they all are

separated from each other and their environment. The colors are dark in general, so even though they separate from the surroundings, it is not so obvious.



Figure 3.16 : Warm colors inside the house and vibrant clothing.

When Susan's husband is talking on the phone and he is about to leave the place, we see the dominant yellow, a lighter one, which will be interpreted as the color of separation in this film together with other examples later. Hutton leaves the place, they say goodbye to each other outside the house, where everything is grey again (Figure 3.17). So being with other people creates a warmth in their lives, but when it is just the two of them, they are cold and distant.



Figure 3.17 : Dark and grey color scheme outside the house.

In this scene, both in the music and the color, there is a discordance. The cold colored clothing of people on warmer interior colors and the motive played by piano over long string chords act together. They may be referring to people who cannot fit in their environment. While the music has descending and ascending motives when they are inside the house where warm colors dominate, it continues with only the descending motive when Susan and Hutton are outside the house, where grey and dark colors are dominant. Thus both the music and colors reflect a slight ascent in Susan's mood when she is with other people and a descent when she is alone with Hutton.

3.1.4 Fourth theme

Another theme in the film is the theme called "Mothers" (Figure 3.18). This theme is used in three scenes. It is a tense one. The melody consists of two ascending lines

and then two descending lines, but the second ends with an upward movement. The expectation is that it should be a downward motion considering Larson's (2012) musical inertia. An ascent at the end of a phrase results in tension combined with the unexpectedness. This way, the theme creates an expectation that something is going to happen. The theme is in A minor and *i*, *iv* and *VI* harmonies are used. The tonic harmony is used a lot in here. *VI* has two common tones with the tonic and *iv* has one, so it is like the harmonies go one or maximum two step further from the tonic, but keeps coming to it. It is as if someone is insisting on something, sometimes tries to let it go, but cannot and starts obsessing about it again.

It is played by detached strings and rather fast. The chords are played as arpeggios, but later some bass notes are played longer. As it is indicated before, minor modes get angrier as their tempo increases. Therefore, it can be said that this theme includes aggression as well. The theme begins and ends with open fifth chords, which are neutral, rather emotionless.

The figure displays a musical score for the 'Mothers' theme, consisting of four systems of music. Each system features a treble and bass staff. The bass staff includes harmonic labels below the notes, indicating the chords used. The first system starts with a treble staff containing a melodic line and a bass staff with chords labeled 'a: i', 'VI₄⁶', 'i', and 'VI₄⁶'. The second system begins at measure 6 and has labels 'iv₄⁶', 'i', 'I₄⁶', 'VI₄⁶', and 'i'. The third system starts at measure 11 and includes labels 'VI', 'i', 'VI₄⁶', 'iv₄⁶', and 'i'. The fourth system begins at measure 17 and has labels 'VI₄⁶' and 'i'. The score concludes with a double bar line and a final chord.

Figure 3.18 : “Mothers”.

This theme remains the same in all of the scenes, first of them is the scene when Tony and his family are going on the roads in the novel. They pack things up, get in the car and leave. While they are packing the daughter complains about how old the

car is. On the road they complain about how there is no reception anywhere. Tony is happy with it anyway; he likes being unreachable sometimes. The road seems long to his wife and daughter. After this scene, they will be harassed by the rascals.

In this scene, before they go on the roads, the colors are grey dominant, except the daughter, who is wearing a yellow shirt and a red T-shirt (Figure 3.19). The color stands out in the scene. While they are on the road, everything is very dark.

The tense and aggressive music correlates with the dark colors.



Figure 3.19 : Grey scheme and Tony’s daughter’s yellow and red clothing.

In the second scene, Susan is talking to her mother in a restaurant about leaving New York, moving to Texas and getting married to Edward. However, her mother opposes and says that he is not her equal and he is weak. She gets very angry with her but her mother insists that as Susan grows older, she will be searching for the things she belittles and calls “bourgeois” right now.

The restaurant’s colors are dominantly light brown, golden and orange (Figure 3.20). These are the warmer colors of Susan’s past, as mentioned earlier. The scene is mostly monochromatic. Susan comes from a wealthy family and the golden color represents the wealth. Susan is wearing dark clothes and she is aggressive towards her mother, which is a feature attribute to dark clothing and a feature consistent with the character of the music.



Figure 3.20 : Susan and her mother in the golden colored restaurant.

The last scene is the break-up scene. We see Susan and Edward in the past, walking down a street while Susan tries to break up with him, telling him she is unhappy. Edward tries to talk her out of it but she cannot be convinced. She tells him he is romantic and sensitive. Edward interprets this as Susan thinking of him as a weak person. He asks her if she loves him, she tries not to answer. He tells her that if one loves someone, one tries to make it work, but Susan cuts it short and leaves.

During this scene, Susan's side of the street is mostly yellow (Figure 3.21). In single shots, Susan is shown with yellow lights in the background whereas darker colors are shown behind Edward. When he asks her if she loves him while they are walking, Edward's background color changes to red. The goldish yellows in this scene can be read as the influence of her mother on Susan. Edward's change from black background to red represents his mournful mental state turning into an angry one. The anger and darkness reflected by colors correlate with the music.



Figure 3.21 : Break up scene, yellow color behind Susan, dark color behind Edward.

All of the three scenes included separation and they all are moments that lead to bad incidents in the future. In the first one, they leave their house and go on the roads, during which Tony's daughter and wife will be kidnapped. Second one is Susan's mother, talking her into breaking up with Edward, although she opposes at the time, and Susan is talking about leaving New York. The last one is Susan breaking up with Edward, leaving him devastated. The color yellow is repeated in all of these scenes, thus it might be an associative color representing separations.

Another element that binds the scenes is the insistence on something. Tony insists on using an old car for a long trip, Susan's mother insists that Susan should break up with Edward while Susan insists on marrying him and finally, Susan insists on breaking up and Edward insists on not. Tony and Susan are the ones whose decisions are realized and also who suffer because of them. Another meaning of yellow is

obsessiveness, which can be linked to these insistences, and also the harmonic insistence in the music.

Since the music is called “Mothers”, it is important to establish the relation between the characters. The chronology in the film is shifted. When put in the right order, first Susan’s mother influences her to separate with Edward, then Susan breaks up with him and then comes the daughter in the inner novel, which represents the child Susan got aborted in real life. They all are connected by the color yellow. So actually the music and the colors show a storyline.

Thinking in chronological order, the colors grow darker from the restaurant scene to inner novel scene, because the events grow darker, however the music remains the same.

A solitary woman was also a yellow dominant scene, which also had A minor as the key. Like in the break up scene, Susan was telling that they do not want the same things with Hutton. Susan sounds like she does not want to be with Hutton anymore. So there is a subtle mention of separation and yellow is the prominent color in the scene, like in these scenes. However, the theme is different, because while these three events are in relation, Susan and Hutton have another storyline. So in the music, the key, A minor, is relating the scenes like the color but not the theme.

Lastly, it is not shown in the score but sometimes the theme is doubled in the higher octave. Thus the fast tempo and the high pitches can be related to the color yellow.

3.1.5 Fifth theme

The next theme is called “Revenge” (Figure 3.22). This one is used only in one scene. It is a rather slow piece.

In this scene, Susan is walking into her gallery and looking at everything like she is seeing them for the first time. Production team mentions (Url-5, 2018) that she is having this awakening and starts questioning herself and others in this scene. She looks at a piece of art on the wall, a painting which is basically the word “Revenge” written in white letters on black background. She does not remember it but a colleague says that she bought it. Then they walk into a meeting room which has a futuristic design, the production team mentions (Url-5, 2018) that even the environment seems controlled. They talk in the room about firing someone. One of

the people says that they should keep that person and Susan agrees with her, although then she is reminded that she was the one to bring this subject up last week. Then she says that she has changed her mind and maybe “it is not such a good idea to change things quite so much”. So she is questioning everything around her and having a new look at them.

The theme in here consists mainly of arpeggios. All the measures are repeated four times; the score is a reduced version. Triads with the addition of the sixth degree are covered in the arpeggios. This is a typical movement for mysterious scenes. Most of the successive chords are in chromatic relation, which was defined as “creepy”. There are long notes held by woodwinds above the arpeggios in the second repetition, they are mostly dissonant. The theme keeps modulating and this depicts ambiguousness. Almost all chords are minor. The theme is rather slow and calm. The arpeggios are played *detaché* by the strings and woodwinds come in and come to the forefront because of their high pitch and dissonances.



Figure 3.22 : “Revenge”.

The music depicts an ambiguous and disquieting scene. This can be seen as a reference to Susan being not so sure about the decisions she made in her life anymore. She is having flashbacks and thinking about her past a lot. She is questioning the things around her too, it is as if she is alienated to her environment, hence the creepy and ambiguous music. Considering what she says about changing things so much shows that she is approaching her past decisions with doubt, which is reflected in the music.

The colors in this scene are dominantly white. This emphasizes everything that is not white, for example the artwork in Figure 3.23. It looks like a discordant color

scheme. The blue color draws attention to the artwork. There are other shots like this in this scene. Those things suddenly seem so different from the surroundings, thus contribute to the alienation feeling. Everything looks so sterile and sharply bordered (Figure 3.24).



Figure 3.23 : The discordant color scheme in the gallery.

In the music, the timbre of the woodwinds is clearly separated from that of the strings, which is the same as the effect created by discordant colors. In addition to this separation, the detached strings and sharp borders between the colors can be likened. Also, both of them bring forward questions by creating ambiguity or alienation.



Figure 3.24 : Sharply bordered colors in the meeting room.

3.1.6 Sixth theme

The next theme is called “Off the Road” (Figure 3.25). It is used in two scenes, in the inner novel when the rascals harass them and when Tony finds one of them later.

In the first scene, they are on the road but blocked by a car. Tony honks so that they would move. Then they move but after Tony passes, his daughter gives them the finger. Then they come after and overtake them. They brake and make Tony’s car crash their car, but Tony keeps going. They keep coming after them, tell him to pull over and eventually crash them, pushing them from the side to force them to pull over.

This theme is not melodic, it basically consists of a D minor chord, played by strings with *tremolo*. The *tremolo* chord is present the whole time. There is an ostinato

figure which comes and goes between D and F. Later, another ostinato figure is added, which is D, Bb and A. Meanwhile, a movement between D and C# is heard in the bass occasionally. Sometimes higher octaves are added and subtracted. Towards the end, there is another ostinato figure, which can be seen in the bass of the last two measures. Then C in the higher octaves enter too. All figures enter and exit occasionally. In the end, only the *tremolos*, the bass motive and the F-D ostinato figure remains. This theme has a very thick texture. It becomes thicker in the middle and then it is reduced a bit.

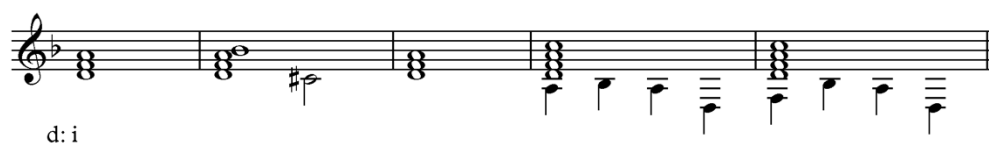


Figure 3.25 : Reduction of “Off the Road”.

This is a dark music; the sinister *ponticello-tremolos* are back again. The music is very tense because it only stays on one harmony, but there are a lot of dissonant notes coming in and out. It does not go to very high octaves, but mostly expands downwards. It is a very repetitive theme, so it can be said that the music depicts a situation, which is hard to get out of.

The events in this scene are happening in a very dark setting. So all the colors are dark. Therefore, mostly only the headlights of the cars can be seen. The characters’ faces can be seen in close-ups. There is no change of color. This color scheme is used to create an overwhelming, unsettling feeling for the audience.

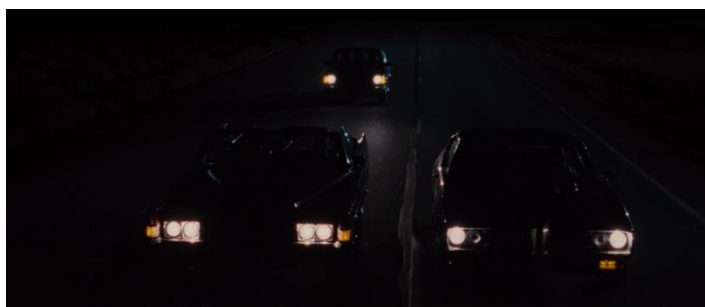


Figure 3.26 : The dark colors of the scene.

The colors and the texture create an unsettling atmosphere together. Darkness makes the space look narrower, so do the clusters created by the dissonant notes. The

ostinato figures which indicate a repetitive situation, as Tony and his family is stuck in this situation and do not know how to get out. The chromaticity creates ambiguousness, which is one of the concepts black represents. Also the accents are present in the ostinatos, which sounds aggressive. Black is attributed aggressiveness too. The expansion to bass notes rather than high notes and the slow tempo are features that are consistent with the dark coloring. So there are many levels where music and colors match.

The second scene is when Tony finds Ray. They talk to each other, Ray tries to provoke him by saying words about his wife and says that he is “too weak”, which is a word heard in the previous scenes. Then Tony finally gathers strength and shoots him, but Ray hits him with a crowbar and partially blinds him.

This scene also starts with dark colors, mostly blue and grey. After Tony enters where Ray is staying, the colors are less dark. The room is mostly in brown colors, except the red curtain and Ray’s green boots. They are references to previous shots in the film. When Edward and Susan was breaking up, Edward was left next to a green car with red light on the wall. It is the scene when Edward thought that Susan thought of him as a weak person. These two colors and the word “weak” are most probably references to that scene.



Figure 3.27 : The place Ray is found, brown colors, red curtain.

In this scene, the ostinato figures do not exist, only the long *tremolo* D minor chord is heard. When the ostinatos are absent, the dissonances are absent as well. So in this scene, there is only tension, but not a tangled situation. There is no ambiguity, Tony has found the man who killed his family and now wants revenge. However, there is still tension because Ray escaped from him once and he still can. That is why the *tremolo* strings are present, they create tension and represent the evilness of Ray. The colors are lighter and it is possible to see everything clearer, so the feeling of being

trapped is gone in this scene, which is consistent with the absence of ostinatos in music.

3.1.7 Seventh theme

The last theme is called “Crossroads”.

It is used in the scene after Tony’s family is kidnapped and one of the rascals makes him drive their car, pretending to take him to his wife and daughter. However, later he makes him get out of the car in the middle of nowhere.

The theme in this scene consists of very long *tremolo* chords with many dissonant sounds (like G major and A minor together). The dissonance depicts the intangible situation Tony is in.

Like the scenes in the previous section, this scene has very dark colors, even darker than the “Off the Roads” scenes (Figure 3.28).



Figure 3.28 : The dark color scheme of the scene.

The same concepts as the “Off the Roads” scenes apply to this scene. The ambiguousness, the overwhelming atmosphere, the feeling of being trapped, evilness, all are present both in colors and the music even more than the previous scenes.

3.2 Analysis of “*The Neon Demon*”

The Neon Demon (2016) is a thriller film by Nicolas Winding Refn. The soundtrack is composed by Cliff Martinez. The film is about a teenage girl named Jesse, who wants to become a model. Her parents are not in the picture; she stays alone at a motel. The film begins with a photoshoot scene; Jesse is getting an amateur photographer (Dean) take her pictures for handing them out to a modeling agency. After the photoshoot, she meets Ruby, who is a makeup artist. Ruby invites her to a party, where she meets other models (Sarah and Gigi). Later we realize that Jesse is

so beautiful that no matter where she goes or who is around her, she always gets the attention. Hence, she is accepted to the modeling agency and finds a job easily. On her first walk on the runway, the designer (Sarno) makes her close the show; that is when changes start to occur. Before this scene, Jesse is a sweet and silent girl who is nice to everyone, however after this scene, the narcissist inside her takes control. She becomes self-absorbed and starts to look down on people. At the end, she gets murdered by Ruby and her model friends. Moreover, they bath in her blood and eat her. In the last scene, the two models are in a photoshoot. One of them cannot handle the burden of eating someone, throws out Jesse's eye and cuts herself. Then the other model takes the eye and eats it, which makes her the only survivor among the models we got to know over the course of the film.

Jesse's beauty is a feature that makes her either loved or hated by the people around her. Throughout the film, we constantly see people either attack her or assault her, or even if they do not attack her, there is an impression as if they were going to. The people who attacks her includes Ruby, Sarah, Gigi and possibly the motel manager (he is not shown in the scene but there are implications).

The film is also about the hardships of this "industry" and how it drives everyone crazy. In the film, there are models talking about getting numerous aesthetic surgeries and people constantly ignored. In the end, the only survivor is the one who ate the others.

In an interview on the film (Url-8, 2018), Refn, the director, says that the digital revolution is opening a whole new world, but it is artificial. Refn defines this industry as a world of opportunities and illusions. The director mentions that beauty is rising as an asset, it has become an object of desire, an obsession. Refn mentions having a curiosity about being beautiful and says that the film is about the insanity of beauty.

In another interview (Url-9, 2018), Refn says that the film is about narcissism as a celebration, as a virtue and that beauty creates a class system.

Refn also mentions that it is questionable if Jesse's naïve, she looks naïve at the beginning but Refn mentions some indications about the opposite (Url-10, 2018).

Again, using the information on the film presented above together with the research, analyses are carried out. Interpretations are mostly based on filmmakers' comments.

The music for this film is not orchestral, mostly synthesizer is used. There are a lot of references to each other in the musical themes, therefore while grouping, the most obvious references are taken into account. When a theme is completely different, but it includes only a subtle reference to another theme, the two are not analyzed under the same scene-group.

3.2.1 First theme

The theme that is used in the first scene has the title theme “The Neon Demon”. The first time it has been used is the opening scene, including the opening credits. The credits are typed in neon colors, as an obvious reference to the title. They are on a shiny, glittery background. Both the background and words are constantly changing color, then the title of the film is shown and real glitter powder is sprinkled in the background. Then suddenly another image comes in sight; a young girl in a pretty dress, with her slit neck covered in blood. Her picture is being taken by someone in the room. The girl is Jesse and she is not actually dead, as it is found out a few seconds later.

The music starts with the very first moment of the credits. All the progressions can be seen below in Figure 3.29. The music generally consists of a progression between two chords. Occasionally a second motive is added on top of it (shown in cross note heads), in a high octave. It is an echoing broken chord with a somewhat disturbing sound because of the high frequencies. This motive will be referred to as the “echoing motive”.

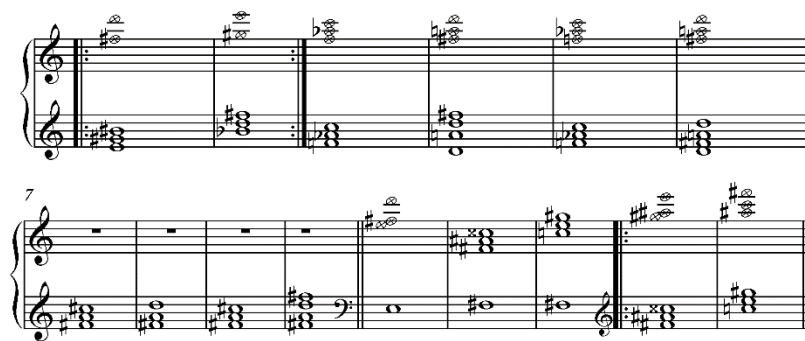


Figure 3.29 : “The Neon Demon” chord progressions, reduced score, in half time.

It should be noted that the first two chords are on the whole-tone scale and also that the tonal center is E in the beginning, considering the first chord (built on E) and the

introduced, alternating with D major. Bass note is F#. The tonal center has shifted to F# minor; it creates a sadder atmosphere. It is as if the composer wanted the audience to feel bad for this beautiful girl who seems to have died at a young age. This happens while Jesse's dead-looking eyes are shown. For a moment, the impression of other-worldliness is gone and real world takes over with change to the rational diatonic harmonies, similar to Brown's (1994) example on the comparison of diatonic human theme and whole-tone scale monkey theme. While the music returns to E with a fast bass motive (Figure 3.31), the photographer (Dean) is shown with the dark expression. The attacks of the synth used for this bassline are very harsh, thus with low dynamics, it sounds only like a beat. Then Jesse is seen again together with a zoom out; it is revealed that they are in a photo-shooting set. At the same time the augmented triads return, but this time they start on F#. The key that was used as an indicator of sadness and reality, has obtained the role of otherworldliness now. As if that F# minor section in between was actually a joke and we have been fooled. The out-of-this-world atmosphere of the opening credits, indicated by the E centered augmented triads, was interrupted by that small section to invite the audience to the real, rational world of diatonic triads in F# minor; but then the real world acquired the characteristics of the other world with the F# centered augmented triads. In other words, those characteristics have the power to change our reality, like Jesse's beauty changing the reality of everybody around her.



Figure 3.31 : Faster bassline.

The first color seen on the screen is red. It is the glittery background mentioned before. It is a fuzzy, noisy image like shattered glass, disturbed water or a whole bunch of glitter powder, constantly changing colors, all of which are shiny. The credits usually pop out from the background, even if they are written in a close color. Everything seems so vibrant, radiant and out of this world, because they are all shiny, neon, somewhat artificial. When the title is in sight, triadic color scheme is present (Figure 3.32).



Figure 3.32 : “The Neon Demon” title shot.

The title is written in neon pink on navy dominant background, with a splash of golden glitter. It is as if we are invited to a party or celebration.

As the first shot of the film is seen, the color scheme remains almost the same, only less vibrant and darker versions of colors. Jesse is lying on the greyish green sofa with a shiny navy dress, which makes her stand out, but also the use of navy and pink on the walls gives a pleasing balanced look (Figure 3.33). Then there is a close-up to Jesse’s face.

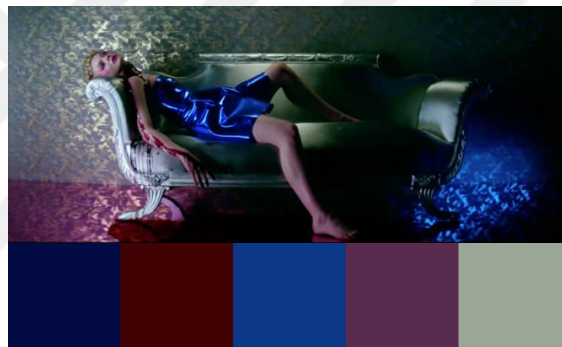


Figure 3.33 : Jesse lying on a sofa, covered in blood, darker color scheme.

Then Dean is shown. He is in front of a pitch-black background and he is dressed in dark colors. Then it goes back to Jesse, during the zoom out and the revelation of the shooting set with neon red lights in the background. Dean is shown again. Lastly, we see the empty sofa, the blue light is missing, but there is a dominant neon red light.

The cue started with the red color and then kept on changing lively colors. The colors promise a vibrant, unfamiliar world. Then they open to a scene of a dead girl lying on the couch on less strong colors and a colorless man. However, as the camera zooms out, we see that it was a photo-shoot set and we have been fooled; because the neon red light representing the world that was promised, is actually behind the set all along, it was just hidden for a while. An interview of the film’s cinematographer Natasha Braier also verifies this story. Braier says that this scene is an “Is this a murder scene? Is this reality?” game and that this was important for the director to

determine a general atmosphere for the film which is put forth as such; “don’t expect the expected; you’re sitting watching one thing but actually you’re watching something else” (Url-11, 2018).

The parallelism between the music and colors can easily be seen. Both of them suggest a fascinating, unfamiliar realm in the opening with unaccustomed chords and neon colors. Then both of them settle down for a while as Jesse is shown, who looks dead. Colors become less bright and the key becomes a diatonic minor. The shot with Dean dressed in dark clothes on a black background, which makes him unnoticeable and boring, coincides with the part when only basslines on E are heard. With the return to Jesse’s shot, the red neon lights in this reality started to show up. This way, this realm has become the realm suggested in the beginning of the film, together with the shift to F# and the re-introduction of augmented chords in F# this time.

The duality between the very dark scheme and the triadic scheme is present in the music as well. Sometimes only a bass note or a bass line alone was present, which coincide with the darker schemes too, whereas the other times there are unfamiliar, colorful progressions and chords, coinciding with the colorful schemes.

As in the analysis of *Nocturnal Animals*, an example table (Table 3.2) is given below. Like in the one before, part of the analysis is summarized and an overall and simple look to the analysis is provided.

Table 3.2 : The features of music and color that are connected to same concepts or the same affects in the first scene of *The Neon Demon*.

Music	Concepts	Color
Augmented triads	Other worldly, magic	Vibrant, neon (artificial) colors
Tritone	Evil	Red
Chromatic mediant	Dramatic shift	Shift to triadic scheme
Diatonic minor	Reality, sadness	Less neon colors and darker
Wide Range	Direct relation	Dark framing, bright lights
Number of instruments	Direct relation	Number of colors
Return to augmented	Return to the magical world	Return back to neon colors

The second scene this theme was used is mixed with another theme. The title track is “Something’s in My Room”. This is the scene when Jesse goes to her room after she hangs out with Dean and sees that the door has been forced. She immediately runs to the hotel manager and they go to her room together to check it out. It turns out there was a tiger in her room.

The music starts when the hotel manager decides to help Jesse after a moment of not caring. The augmented triads on E and then B $\flat$ from the first scene are heard at that moment. As they are walking, a high, long and pulsating C is heard above the chords. Then the other theme starts. Basically, it consists of a chromatic ostinato figure, given below (Figure 3.34). The pitches in the ostinato figure are slightly flat (i.e. out-of-tune, not shown in score). The bass note is C. Above the ostinato, echoing motive is heard occasionally. As they are climbing the stairs, the music modulates down a semitone. When they arrive at the door of the room, only the bass remains and the harmony moves back to C. Later, it moves to B again. Some ambient sounds are heard while they are forcing the door open. Then the room, where everything is scattered around, is shown and the augmented chords are heard. As the tiger, strolling the room, is revealed, the music modulates to F minor D major axis, like the first scene.



Figure 3.34 : Ostinato figure.

The augmented triads in the beginning serve for the same purpose as before, as a reference to the unfamiliar. There is something unknown in the room. The transition from the augmented triad on B $\flat$ (B $\flat$, D, F $\sharp$) to the ostinato is mediated by the pulsating C note, which makes a tritone with the highest note of the triad. Namely dissonances are heard successively; first the mysterious augmented chords, then the tritones and the off-tune chromatic ostinato. All of these are materials are used to depict sinister, unholy, devilish entities. They create an unsettling atmosphere. The

bass line, which is a repeating C, is like an indicator of a hidden danger, lurking under the repetitive ostinato figure. The flat pitches in the ostinato might cause the listeners to feel that something is off, considering the tension created by slightly changed frequencies (Farbood and Price, 2014). The ostinato is disturbing also because there is no tonal center. The modulation makes it even more confusing; because now it is a semitone below, but notes remains the same due the the structure of the melody and the sense of a tonal center is lost even more. The upward motion of the ostinato keeps creating tension (Lehman, 2013). When the bass line is left alone and goes between C and B, the music is on hold for a moment. When they open the door to see that it is a mess and augmented chords enter, the tension is relatively released, because there seems to be no one in the room, but the situation is still mysterious because Jesse saw someone earlier. Then, the tiger is revealed, together with F minor-D major progression, which are in chromatic mediant relation and represent the unexpected event in the story.

The colors of the scene are dominantly cold. While Jesse is speaking to the manager, blue and green are dominant and the setting is dark. When they start walking, the sinister neon red of the “MOTEL” signboard appears (Figure 3.35), contrasting with the rest of the scene. While they are walking up the stairs, its cold and dark colors again. When they arrive at the door, there is that red in the background again, while the corridor where they walked was of cold colored. Inside the room, there is a more colorful setting like red curtains with green leaf patterns on them, a purple dress on the bed, yet they are very dark as well.



Figure 3.35 : Motel, cold colors and red neon sign.

The general setting of the colors tells that there is a dark, uncanny occurrence. The discordant red of the “MOTEL” sign, possibly as a reference to the red neon lights from the first scene, tells the audience that something unpredictable is about to

happen, something that is not expected in that cold and dark setting. The color schemes alternate between the dark and cold color setting and the same colors plus red. It is as if the dark, cold and more harmonious color palette tells the audience to remain in the reasonable side of their thoughts, considering the color blue's effect on reasoning and calmness. In the meantime, red comes back and forth, so that in the corner of their minds, the audience might think that something they cannot guess is about to happen, something of that colorful, unfamiliar world and it causes alertness, which is the opposite of what blue scheme does. Eventually, the implication comes true when the door is opened and the more colorful scheme is shown.

The use of color and music resembles in many ways. Firstly, the general atmosphere that is created by the mysterious and unsettling music and the dark colors of the unknown are similar. The transition with C is heard when the neon "MOTEL" sign is shown, thus the devilish tritone and the alerting red sign of the same quality appears together. The introduction of the complementary color scheme and the largest distance in music in semitones, the tritone, come together to create the most striking effect. Both of them are indicators of something wicked coming this way. Also the alternation between the red-blue and only blue color palettes, the flat-pitched ostinato and the bass alternation between C and B create the same confusing feeling; like there is something that cannot be figured out. Then the colorful but dark interior of the room coincides with the augmented triads; both of them still mysterious (dark colors), but with a hint of something unfamiliar (colorful), like something from the vibrant world of the opening scene. As they find out about the tiger and colors are slightly brighter thanks to the flashlight, the chords shift to F minor-D major, both of which are representing a dramatic shift, yet still the effect is much subtle in the colors. However, the high frequencies in the chords are reduced in this scene, thus there is still a correlation, both colors and sounds are duller compared to the previous scene.

The third scene is when Jesse goes to her room after her first runway experience. She falls asleep and has a nightmare, in which she is assaulted by the hotel manager. Then she wakes up to see that her door is being forced and she immediately locks it. Terrified, she hears the girl next door being attacked and calls Ruby to ask for help. She invites Jesse to her place and Jesse goes there.

The theme in here is called “Thank God You’re Awake”, it is slightly altered in the film. In the beginning, there is only a mysterious ambient sound, then a bassline doing the E-B $\flat$ movement. After this, the echoing motive enters. So the beginning of this theme goes pretty similar to the first scene. The motive repeats two times while Jesse’s silhouette is seen on the old wallpaper of the motel room (Figure 3.36).

The colors accompanying the music are dark and brown. Jesse’s silhouette from beyond the wall seems as if there is a dim spotlight on it. The rest of the image is black. The camera is zooming out from the spot and black space grows.



Figure 3.36 : Jesse’s silhouette on the motel wallpaper, dark brown colors.

The tritone reference in the bass, the noisy ambient sound and the disturbing echoing motive above combined with the dark colors create a scary atmosphere. The correlation between darkness and lower frequencies is confirmed once more.

When Jesse arrives at Ruby’s place, the motive shown in Figure 3.37 (measures 1-4) is heard. It sounds like the whole tone scale, which creates an uncanny atmosphere, especially because the fourth degree is prolonged, which is a tritone away from the first degree. There are still references to evil, because Ruby has evil intentions with Jesse. The general disturbing atmosphere created by the music implies subtly that there is still danger for Jesse. Then Jesse is shown, taking a shower and Ruby doing makeup in front of the mirror, while chords (measure 5-8) start to fade in.



Figure 3.37 : The motive resembling the whole tone scale and chords.

This part is in F# minor. The progression is *i-VI-i*. It is a simple progression and a soft synth sound is used for the chords. It is the same progression from “The Neon

Demon” track’s F# minor, yet the chords are simplified. They are not full, thus they sound incomplete, cold and distant, they lack feeling. The ascending movement in the top line creates tension as well, like it is taking the music somewhere, but it does not go any further. In the first scene, the part in F# minor was followed by E. So there is an unfulfillment. F# minor, the key that is linked to reality, enters when Ruby is shown. The reason for this may be that she is one of the ordinary people, she is not like Jesse. Also the chords with omitted degrees may be indicating Ruby’s lacking. She is inferior to Jesse. In addition, she will be rejected by Jesse later, so her wishes will be unfulfilled, the ascending ending may be signaling this.

The imagery in this scene has very dark colors. The overall color is blue. The only discordance is Ruby’s red dress, but since the setting is very dark, it does not stand out much. It can be interpreted as Ruby’s discordance with the calm looking environment, as she has bad intentions with Jesse. It is a subtle indication since all the colors are dark and not so distinguishable.



Figure 3.38 : Ruby doing makeup, dark and cold colors.

In this scene, music is slow, harmonic change occurs a few times, but it is mostly stable, also lower notes dominate. All of these are perfectly consistent with the cold and dark colors. Also music is mostly in a short range, so there was not an impression of wideness in it. Same goes for the dark colors. There is only one instrument used after they are in Ruby’s place and the colors are monochromatic in general, which are resembling features. Additionally, implications on Ruby’s malicious intentions are present in both of them, so there is a resemblance in the narratives as well.

The fourth time this theme is used is after Ruby and the models have killed Jesse and Ruby is at home at night, lying on the floor and urinating blood.

The track is named “Ruby’s Close Up”. There is a short transition from the previous scene to this one with a curious ambient sound. The first shot is the view of the moon through a window. At that moment the echoing motive is heard, the ambient sound is present and a wavy synth fades in (shown in Figure 3.39, upper staff), with a lot of reverberation, thus the notes played by this synth overlap with the next ones. The notes shown in the lower staff are not actually held long but they are repeating notes that go between E and Bb, which was in the bass in the earlier themes. Then the F minor-D major progression enters while the wavy synth plays a melody above it. It is an overall ascending melody, modulating according to the chords. When it reaches F# in the high octave, the scene ends.

The wavy synth sounds like an alien-sound, it may be a reference to Ruby’s weird state of mind or the oddity of the situation. She killed someone she seemed to love and she bathed in her blood. Ruby seems pretty satisfied with the situation. The scene is quite absurd as well, so the use of the “alien synth” indicates how strange everything about this situation is. There is also confusion because the notes are overlapping and creating dissonances and there is no tonal center, which is confusing. Just before she urinates, the F minor-D major progression starts. The order of the motives can be read like this; first the echoing motive is heard (related to Jesse), which is less dominant than the chord motive (F major-D minor), together with the alien synth (related to Ruby), because now Jesse’s blood streams in Ruby’s veins. Then the chord motive, which is a more obvious reference to Jesse, enters just before the blood coming out of Ruby, so now partly Jesse’s blood is apparent. Just like the “juxtaposition” of Jesse and Ruby, the themes are juxtaposed.



Figure 3.39 : “Ruby’s Close Up”.

As the melody of the synth ascends to its climax, Ruby's happy face is shown. She is happy because although she was pushed away and rejected by Jesse, one way or another, she found a way to get her. In the previous scene, the top line ended with an ascent to F# but remained unfulfilled, whereas now, it ends with an ascent to F# again and this time it sounds fulfilled. This represents the change in Ruby's state.

The colors in this scene are very dark, almost pitch black except the moon. After the window image is shown, a shot of Ruby is seen, facing away, standing in front of the window. Her body looks greyish white and subtly discrete from the rest of the room. The moon looks more golden-white than grey. When she is lying on the ground and urinating, although the scene is pretty dark, the dark red color of the blood is still visible. Then we see Ruby's face with the red lipstick on.

The dark setting can be read as the representative of the darkness in Ruby's mind. She was enlightened by the moon, but its colors became colder as they are reflected on her. This parallels the story in the film too; there was the shining beauty of Jesse and now it is reflected on Ruby, but in a colder way, or a worse way. Then the blood appears, the most colorful item so far in the scene, but it also blends with the scene because of its darkness. Then there is a close up to Ruby's face, where the same red on her lips is seen, because now Jesse is a part of her.

Both the music and the colors refer to Ruby's dark and strange mind. It can be said that both colors and music first give a subtle hint about the integration of Ruby and Jesse's bodies, then it is more openly put. The light color of Ruby's body first gives a hint about the integration, then the color red on her (and coming out of her) is seen. The music first has the high pitch motive, a subtle hint, and then the chords, an assured juxtaposition. The general expansion of the music does not have a corresponding feature in the colors. However, the disintegration of Ruby's colors from the room and the alien synth in the music are similar.

This is the last scene, both for this theme and the film. Sarah and Gigi are on the road for a photoshoot. Gigi is one of the two models in the photoshoot, Sarah is not. Jack McArthur, a famous photographer who shot Jesse in earlier scenes, is doing the photoshoot. He is not pleased with the other model, he sees Sarah from far away and fires the other model to work with Sarah. Then we see Sarah being prepared. During the photoshoot, Gigi seems very uncomfortable. There is a pool in front of the

models and Gigi looks like she is about to throw up. She suddenly leaves the photoshoot and goes inside the building next to the set. Then she is shown inside, taking her dress off, crying and gagging. Sarah goes inside to check on her. When she is inside, she sees Gigi throwing out Jesse's eye. Gigi says "I need to get her out of me", takes the scissors on the ground and stabs herself and dies. Sarah watches all of this in awe. Then she takes the eye from the floor and eats it. Lastly, we see her walking away.

The track for this theme is named "Get Her Out of Me". The music starts when Sarah is shown getting ready. As always, first there is the ambient sound, the echoing motive and bass note, which moves between E and Bb. When we see Sarah and Gigi standing next to each other for the photoshoot, the augmented triads are heard. As Gigi is looking at the pool and gagging, a motive enters (Figure 3.40, measure 5), which was used in the scene when Jesse arrived at Ruby's place. This time, it goes higher until D, covering the whole tone scale.



Figure 3.40 : "Get Her Out of Me", reduced score.

When Gigi is in focus and shown as if she is about to throw up, a pulsating sound enters. As she leaves the set, the music is suddenly cut.

When she is shown in a room, crying, a repeating B note is heard in a high octave, but it is on and off tune. Jack and Sarah are shown waiting outside when the F minor-D major progression begins and the B sound slowly fades. Then Gigi is shown again as the chords fade out and only the on-and-off tuned sound remains, now it moves between F# and A, on a harsh F# bass.

When Sarah comes in, the music stops for a while. After she eats and gets out of the room, the F minor-D major progression is heard again.

So the beauty of Jesse is now transferred to the models, that is why this theme is used in here. However, there is something wrong with one of them.

The repeating B note that is heard when Gigi is crying is a dissonant note both in F minor and D major. It cannot fit in; it cannot even stay in tune. It sounds like an

alarm. It might be representing Gigi's body, which cannot accept Jesse's blood. Gigi mentions in the earlier scenes that she had numerous plastic surgeries. The reason she is not capable of owning Jesse's blood might be the incompatibility of her artificial body to take in a natural beauty. The whole-tone scale motive in the beginning also indicated a discordance and that something bad was about to happen.

Sarah's body takes it in and she can live with, she has a natural beauty, thus her body does not have the same problem. She is the strongest among the characters that are seen. So she becomes the new demon, hence the chords in the end.

The colors in the building, where Sarah gets ready, are generally blue, but Sarah is dressed in red. On the set, there are lively colors, mostly white, blue and green. Only the models are wearing red and there are small red lights. Inside, when Gigi takes her red clothes off, she remains with blue underwear (Figure 3.41). In the end, Sarah walks in her red clothes in a blue corridor (Figure 3.42).

Red might be the color for the demonic beauty in here, considering red is the color of danger and also femininity sometimes. It is a color that raises the blood pressure, so like Jesse's beauty, it has an agitating quality. It is not a color like blue that surrounds them which is calming, reasonable and cold. Among all the dominant blue, red shines out. Both Sarah and Gigi wear it, but Gigi cannot own it. She still has the color blue inside (her underwear). Namely, although she ate Jesse, because her body could not accept her blood, she cannot obtain that natural beauty. This is shown by the blue underwear, she is still blending with the environment, she cannot stand out like Sarah does or Jesse did. So she has to get Jesse out of her.

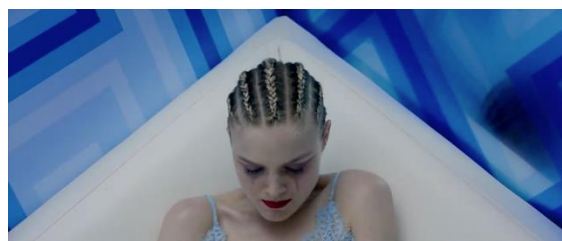


Figure 3.41 : Gigi in the building, blue colors.

In chronological order, first, blue is seen together with the ambient sound and E-Bb movement in the bass, then the chords are heard when the photo-shoot set is shown, where there is a rather colorful scheme with the red, blue and green. So calm and cold blue is used together with the low bass note, then the colorful scheme is used

together with the augmented triads, which is quite consistent with the previous uses of them. When Gigi is inside the blue surroundings, the unfitting B is heard and the triads are gone. This shot is interrupted by a shot of the colorful set, where the augmented triads enter back in. So the augmented triads are in accordance with the vibrant colors of the set, both of them showing the magicalness of the world of modeling and beauty. Gigi is shown again, the chords fade and only a very deep drum-like sound and the beating sound remains.

Regarding Gigi's story, both the music and colors are expressed that she could not fit in. As for Sarah, she could own up the red, the beauty, so she has no problems wearing it, thus she remains distinguishable from the blue surroundings with the red dress on her like Jesse did and she is the new representative of the musical theme.

The presence of blue and red together are similar to the mutual presence of soft and long chords with the beating B sound in the music. The former ones are calm, the latter ones are alerting. Additionally, red was attributed a steady beat as mentioned in Poast's (2000) article, which is the case in this scene, the beating B with the red color. The colors are bright while the range of music is wide, which is a correlation seen before.

One last remark on this theme is that, as the film begins and ends with the same theme, it begins and ends with not the same but a similar color scheme (3.42).



Figure 3.42 : Last scene, color scheme very similar to that of the opening scene.

The changes in the theme's structure from scene to scene is coherent with the changes in colors; especially the correlations between darkness, coldness of the colors and lower music with slower tempo and the opposite for warm colors. The discordant colors match with the presence of an instrument with a different timbre. The narratives of music and color are in accordance more than the other aspects.

3.2.2 Second theme

This is the scene after Jesse has met Ruby and they go to a party together. Jesse meets Sarah and Gigi for the first time. They hang out in the party, Jesse sees a guy staring at him, later we find out that he is Jack McArthur. Then the scene is cut to a ladies' room scene, where the models intimidate Jesse.

The use of music in this scene is different, it is not a theme, it is a rock song. It is "Mine" by Sweet Tempest. Since this music is not originally composed for this film, it will not be analyzed deeply. There are repeated chords played on distorted electric guitar and a muffled vocal above it. When they are in the bathroom, the volume is decreased, thus it can be assumed that the song was playing in the place they are. The music disagrees with Jesse's seemingly timid nature. When the volume is down and they are in the ladies' room, Ruby and her model friends first seem to chit chat, but actually there is a tension. Especially when Jesse comes out of the bathroom, the attention is on her. So the absence of music focuses the attention on the speech even more and the speech becomes mostly about Jesse. The colors of the party hall are blue (Fig. 3.43). They are cold and shiny.



Figure 3.43 : Cold colors in the party.

But in the bathroom, they become dominantly pink and red with a little purple and blue (Fig. 3.44). In the party hall, it is more comfortable and calm for Jesse, but in the bathroom, the colors become more intimidating and alarming.



Figure 3.44 : Intimidating colors in the bathroom.

Both the music and colors together create a transition of moods and tension.

3.2.3 Third theme

This scene is right after the talk in the bathroom. Jesse is left alone, she looks at herself in the mirror, seems a bit unhappy. Ruby is outside, she waits for a second and she calls Jesse. Then Jesse is shown again, she smiles after she hears Ruby and leaves. Then together, they go to watch a show in the party.

The theme in this scene is called “Gold Paint Shoot” (Figure 3.45). It is in F# minor, has the progression *III-v-i* for two times and then stands on the *iv* chord with added fourth degree and omitted third degree. It is a suspension chord but it does not resolve.



Figure 3.45 : “Gold Paint Shoot”.

In the bathroom they talk about Jesse’s parents, who have passed away, and she does not know anyone in town. In each of the first three chords, there is one degree omitted, 5th, 3rd and 5th in order. It might be a reference to the things that are missing in Jesse’s life, i.e. her parents, someone to take care of her. Especially the open fifth chords sound cold, emotionless. The tonic chord is in the first inversion, so it is not a cadence, but the music pauses there anyway. The music enters when they start to leave the bathroom one by one. Then we see Ruby outside, standing for a moment and calls for Jesse while the music takes off from the second *III*. This time no degrees in the chords are omitted. It sounds fuller and more hopeful. The *i* chord is still in first inversion. It can be said that the structure of the chords changes like this, due to the fact that Jesse has someone new in her life now, Ruby, someone that can be her friend and fill that empty space in her life. The second half of the theme sounds a bit more hopeful and emotional. The suspension chord at the end of the scene, can be read as a reference to the fact that Jesse does not know what is yet to come. An expectation of a resolution is created with the suspensions and even after there is a resolution, there will still be a need of cadence, because the last chord is the *iv*. So actually the music remains in an ambiguous state.

The colors in the bathroom are pink, purple and blue, pink is dominant. When Ruby is seen outside, there is a monochromatic use of blue color first, then it turns to pink

just before Ruby calls for Jesse. Then Jesse leaves the pink bathroom and we see them both walking in a very dark corridor, illuminated by a dim, green-grey light.

The pink color in the bathroom was about femininity, maybe also the naïve nature of Jesse, and the red colors are for the intimidation by the models. In the end of the scene, Ruby seems to leave Jesse alone at first and when she is outside, she is in this cold blue color, like she is indifferent, but then the colors change to pink, a sweeter, warmer one, and she calls Jesse (Figure 3.46).



Figure 3.46 : The change in colors when Ruby calls for Jesse.

Then when they are in the corridor, just before they go into the hall where a show will take place, they are in this very irrelevant, lifeless color setting (Figure 3.47). It is very dark so it is hard to orientate. This scheme creates an ambiguous atmosphere.

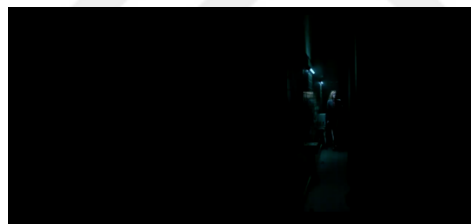


Figure 3.47 : The dark corridor.

The most obvious parallel between the color and music was the color change in Ruby's shot because right at that moment the second repetition of *III-v-i* progression begins, which is more emotional and sympathetic. In other words, color and music changed in the same manner at the same time. In the corridor part, there is a dark and ambiguous color scheme and a chord with the same state due to the dissonances and the absence of a tonic chord.

The second scene with this theme is Jesse's photoshoot with the famous photographer Jack McArthur. In this scene, the photographer sends everybody working in the set home after seeing Jesse in makeup. Ruby is there too, she is the one who did Jesse's makeup. She tries to stay but Jack insists that she goes, so she leaves. After everybody is out, Jack tells Jesse to take her clothes off, including her

underwear. Then he walks in the room and turns all the lights off, then turns one golden spotlight on. Then he is seen walking towards Jesse in a beam of light in the pitch black studio. He stands in the back of her, moving her hair from her shoulders and then paints her with a golden dye. Until this moment the scene is very tense because there is an impression as if Jack is going to harass Jesse. Then he takes pictures of her.

The theme in this scene fades in when the photographer is shown walking in the dark studio. It starts in F minor and modulates to Ab major (in measure 8 in Figure 3.48). So the theme modulates to its relative major, which can be interpreted as a positive change in the character's life. This is what is happening to Jesse right now. She is working with someone very famous in the beginning of her career. Also there is the relief in the story that connects to the positive change in the music; that Jack's real intention is just to take her pictures. The music starts as a single descending line, then it gradually becomes more elaborate. Overall, the intervals between the lowest and the highest note increase, which creates a feeling of largeness or expansion. The reference in here may be the growth in Jesse's career or confidence. In the beginning, some degrees are omitted in the chords (like before), but they are followed by full chords, sometimes with an addition of another degree. So there are also dissonant intervals, which result in a more elaborate harmony and more tension. It can be interpreted as the lacking things in her life being filled and actually even more is added. Her life starts to become more complicated. Nevertheless, the modulation to the relative major confirms the events as good, so complexity does not hurt, things are complex in a good way.

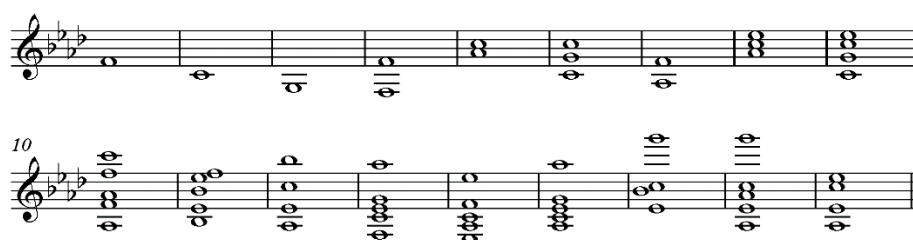


Figure 3.48 : “Gold Paint Shoot” starting in F minor.

The change of colors in this scene is gradual. First, the photographer is seen, walking in a small spot of light, which looks grey-brown, in a dark room. Then Jesse is seen standing and waiting. Her body is not painted yet, so there are light orange-skin color

hues on the screen (Figure 3.49). Then Jack paints her to golden, a color of wealth, glory. Thus the colors change from dull to natural and then to glorious. This can also be seen as the change in Jesse's feelings and life. First she is timid, because she does not know what is going to happen. After she has been dyed, she looks more confident. She starts to realise the power of her beauty.



Figure 3.49 : Jesse painted to golden.

The colors in the cue start dull and dark, while the music starts unison. As Jack is painting her body, colors start to change from natural to shiny colors and music becomes more elaborate. As he finishes painting and thus golden is the dominant color in the scene, the music modulates to the relative major and chords become even more elaborate and the intervals expand. The stretched chords create a majestic feeling, the same feeling created by the royal golden color.

In both of the scenes, monochromatic color schemes are used. It resembles the theme in the way that only one instrument is used and the sounds are very soft and blending. So the harmonious and one-type character of the monochrome palettes are reflected in the music with blending chords and simple instrumentation. In the previous scene, the theme was in F# minor and the music ended in a suspended chord. In this scene it starts a semitone below, goes further, modulates and ends in a major chord. The colors in the ending of the previous scene were cold while in this one they are warm. Hence it is seen that the change in the character of the music and the colors are quite parallel.

3.2.4 Fourth theme

This is the scene after the bathroom scene discussed before, which ended when they were going somewhere to watch the show. In this scene, we see the show and Ruby, Gigi and Sarah staring at Jesse during the show. Jesse is aware of them and looks

back, she is also kind of uncomfortable by the looks of the two models, but she and Ruby smile at each other. She also enjoys the show.

The music in this scene is again not a theme, but an electronic piece by Julian Winding, named “The Demon Dance”. It is basically a melody that goes back and forth between D Phrygian and Locrian above a bass D note. Then a second high pitched synth plays another melody above this one, in which the leading tone is emphasized. It is a dance music with a beat.

As it was mentioned in Bigand et al (2011), the two modes mentioned above are the modes that are associated with fear and anger in faster beats, which is the case in here. Jesse was intimidated by the models and now she is being harassed by their staring.

The colors of this scene starts with red (Figure 3.50) and then it turns to white and very bright colors (Figure 3.51), both of which are inside pitch black settings.

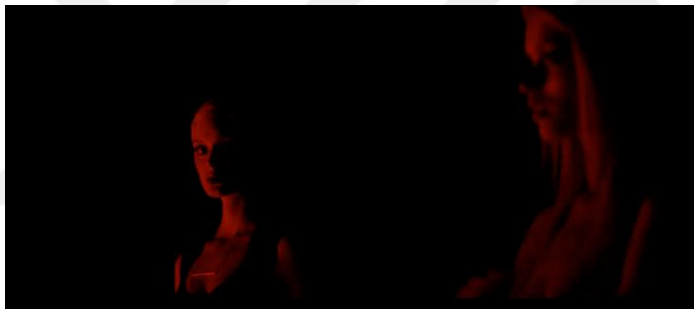


Figure 3.50 : Red colors in the scene.

Red is an intimidating color and it represents emotions like love, anger and violence, which subtly foreshadows what is going to happen in the film. Ruby is in love with her, the models hate her and they are jealous. As mentioned earlier, red triggers the fight or flight instinct. White scheme creates a softer atmosphere.

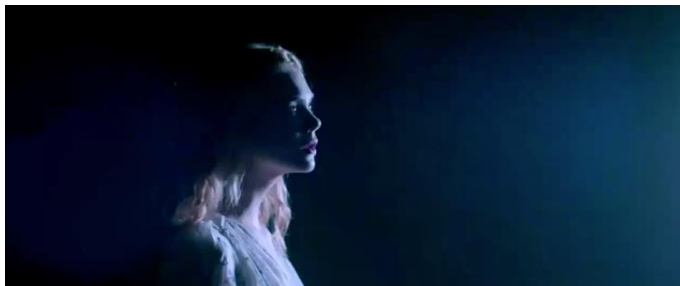


Figure 3.51 : Bright colors in the scene.

In this scene, the images are flashing according to the beat. Between the images of the characters and the show, a pitch black screen is shown. Not being able to see continuously has an unsettling effect as well as the colors.

Both the music and the red color have a disturbing, frightening effect. The transition to the second part of the music, where the higher pitched motive is introduced, coincides with the change of colors from red to white. While the colors are red, the motive is in mid-range and there is a beat, which are completely in accordance with the findings in the literature research. Same goes for the brighter colors, because high pitches are introduced together with them. However, in terms of the atmosphere they create, they are slightly contradicting, because the leading tone in the motive creates even more tension, while the brighter colors are more lulling.

3.2.5 Fifth theme

In this scene, Jesse is in a modeling agency, talking to a woman in charge of choosing people. She tells Jesse that she is going to be great and she is going to arrange a photoshoot with the famous photographer Jack McArthur. Jesse is very happy about this. She needs to sign some papers. Since she is not of age yet, the lady goes to get a parental consent form and lets some girl in the line go in the meantime. Then brings the paper to Jesse and tells her to lie about her age.

The name of the track is “I Would Never Say You’re Fat”. The theme (Figure 3.52) consists of two parts. The first part has a sweet sound, because the synth used in this part sounds like chimes. The chords in this part (mm. 1-11) are played in descending arpeggios.



Figure 3.52 : “I Would Never Say You’re Fat”.

The chord progression of the arpeggios are as follows: A major seventh, F major, A major seventh, Bb major, F major, D minor seventh, A major seventh, Bb major, F major, G major, F major, A major seventh. According to Murphy’s findings (2014), the M2M progression which is present here, is usually related to protagonism and

“the fantastical”. Almost all of them are major chords. Only one of them is a minor seventh chord and its duration is shorter than the others. It is more like a transition chord. This theme is like a messenger of the good things to come. It starts right after the lady from the agency says “You are going to be great.” And then she talks about her bright future, about the top designers she will work with, etc. It is magical and uplifting for Jesse and the chords are representing this. There is not a strong sense of tonal center, but the chords keep coming back to A major seventh chord and they also start and end on it. As mentioned in the analysis of *Nocturnal Animals*’ second theme, the occasionally heard leading tone in the arpeggio adds a broken feeling, because of the minor chord it builds with C# and E within the chord. In short, there is mostly hope, but a subtle indication that things may go wrong (and eventually it does). The character of the synth can be read as the representative of the naïve character of Jesse, the chime sounds are so soft, they almost sound like baby wind chimes, or a lullaby.

The second part of this theme (mm.12-18) is quite different. Overall, the harmonies are quartal. It is a soft synth sound, but it is vibrating. This part sounds slightly more tense. The music changes when they start talking about her age and that she must lie about it. It would not be the only lie she is telling though, because Jesse does tell the lady that her parents passed away when she brings the parental consent form. The second part of the music is less loud, it does not come to the forefront as much as the first part. The loudness of the music imitates the story as such; everything seems dreamy at first sight (1st part of the music), but then there is a small complication, her age, which can cause a complication and thus is an element of tension (second part), but it is overlooked because they are going to lie about it. The tenser part of the music has a lower volume because they want to ignore it. The bassline of the second part is stable until the end and in the end it goes down a minor third. It ends with a descent, leaving the audience with a feeling that this might not end so good. The quartal character of the chords are also adding an ambiguity, a pending feeling.

The colors in this scene are dominantly in a light brown-yellow-green triangle (Figure 3.53). Green is a color symbolizing new beginnings, like Jesse’s new job. Yellow is a color that has double meanings. In here, it can be standing for the seemingly naïve, innocent nature of Jesse and her happiness about the new beginning in her life. It has meanings like madness, sickness as well, which can be representing

the nature of the industry. Anyhow, overall the colors are brighter than most of the other scenes and they are creating a more pleasing, secure atmosphere. Although the colors used for this scene are mostly analogous, there are items like the red cushion behind Jesse, or the purple jacket worn by the lady, which are complementary colors of green and yellow. They might be used as indicators of danger or a disturbance in the overall atmosphere of the scene.



Figure 3.53 : Green, yellow, brown colors of the scene and the complementary red.

Both the music and the colors create a sweet, happy atmosphere in general. Also, both give hints of the danger that might be expecting Jesse. However, the latter is done by a change in the music while the colors have been the same throughout the whole scene. Lastly, high pitches and bright colors are combined once again.

The second scene is the one in which Jesse goes to the photoshoot with Jack McArthur. She enters the studio. Ruby, who is the makeup artist, is there too. They smile when they see each other and say hi. Then Ruby takes Jesse to the makeup studio and does her hair and makeup.

In this scene, the second part of the theme is omitted and some chords are repeated (Figure 3.54). Namely only the sweet part is present this time. Towards the end, there is a fade out in the arpeggio chimes, only the long sustained chords below them remain, but they sound more like the chimes echo. In the last A major chord, there is no audible leading tone like there was in the beginning. So it can be said that there is sort of a cadence, or at least a closure.



Figure 3.54 : “I Would Never Say You’re Fat” in the second scene.

Like in the previous scene, Jesse looks very happy in this scene. The same meanings go for this scene. The new magical world that Jesse is entering to, represented by the harmonic relations of the chords, her happiness represented by all chords being major, the naïve nature of Jesse, implied by the chime sound and soft chords. Seen from Ruby's perspective, Jesse is this magical, innocent creature which makes her happy. This time there is no tension like there was in the previous scene. Also the soft but clear ending shows the extinction of the doubts and also Ruby's satisfaction with her finished work.

The colors in this scene are even brighter than the previous scene (Figure 3.55). They are in a room covered in white, there are some black spots as well but white is prominent. There are occasional flashes because of the photoshoot, which makes the scene even brighter. In the makeup studio, there are black and white curtains in the back, but the lamps around the mirror are so bright that the light beams that come out of them illuminate the whole image. So the blacks in the scene look rather light grey than black. In short, the colors in this scene look bright overall, due to the reflecting lights.



Figure 3.55 : Bright colors of the makeup scene.

Like the previous scene, bright colors create a safe, soft, comforting, pleasing atmosphere. The image is harmonious and blending.

The music and colors are “bright”, implying a bright future. Both the major chords and bright colors suggest a pleasing environment. Comparing this one to the previous scene; the omitted tense part of the theme and the closure due to lack of the seventh in the A major chord at the end coincides with the lack of any complementary colors and the increase in the brightness of the themes, together they imply an improvement in a positive direction.

In the third scene, before the music enters, Jesse, Gigi, Dean and the designer Sarno are sitting in a restaurant after the runway and talking about beauty. Dean and Sarno

have a conflict, so he wants to leave. Jesse says “Then go”. He is offended by this and leaves. Then the theme starts and Jesse is shown going back to the motel. She finds Dean waiting for her. He is angry at her and asks her if she wants to be like them (the people back in the restaurant). Jesse replies “I don’t. They want to be me”. Then she leaves him there and goes to her room.

The theme is exactly the same with the one in the second scene. It still represents the bright future of Jesse’s career, because she just had her first runway experience and she was chosen to close the show. Also, her natural beauty was praised by Sarno in the restaurant and now she knows that she is superior to people around her in terms of beauty, everything is so positive.

This scene starts with only blue colors and after Jesse is in her room they are in a brown-red spectrum. Like the lamps before, there is a fluorescent light which shines so bright that the light beams that come out lighten up the colors of the scene (Figure 3.56). Then in the end of the scene, the hotel manager is shown in a dark color scheme like in the beginning. In this scene, a distinction between Jesse’s own space and the space where there are other people, is present. It is noticeable that in most of the scenes where Dean is present (some of which will be explained in the next sections), the colors are dark or cold. The reason for this may be that Dean is not a person that shines out, for instance his work was defined as amateur by the woman in the agency. So his scenes remain in the cold colors. In contrast, when Jesse is in her room, which is a space for her alone, there is brightness and warmer colors, representing her characteristics and life. In any case, both schemes are harmonious and pleasing, there are no discordant colors present.



Figure 3.56 : Bright light in Jesse’s room.

As for the relation between colors and music, the change in colors was not present in the music. Yet still, compared to the previous scene, the harmonious colors are a common feature, as well as the bright lights.

3.2.6 Sixth theme

This is a short cue. Jesse is shown sitting on her bed in the motel, signing the parental consent papers from the modeling agency.

Then looks at herself in the mirror, fixes her hair and smiles. Then confidently walks out of the room to meet Dean.

The name of the track is “Who Wants Sour Milk”. The theme (Figure 3.57) in this scene is in G# minor. There is a G# drone in the bass and the line above it goes back and forth between A# and B. Thus there is an oscillation between the minor mode feeling and a dissonance. It creates a setting of uncanny, confusing feelings. The bass synth is soft, so is the one above, but the latter has a different feeling to it. It has a more reverberant sound, so sounds distant and also results in dissonances.



Figure 3.57 : “Who Wants Sour Milk”.

There are also some ornaments, the echoing motive is heard in quartal chords this time, i.e. G#-C#-F# on A in the higher sound and D#-G# on B. There is also a subtle reference to the beginning via this motive. That theme was about the “demon” that Jesse is and the chords in that theme had dissonances in them. In this one, the sound is more neutral due to the quartal harmony, because she has not become that demon yet. A different melody starts while she looks at herself in the mirror, fixes her hair and smiles. The sound of the instrument is like a vibraphone (measures 4-8). The melody first goes to the 6th degree of the minor scale, but in the second repetition, it goes to major 6th degree. It brightens up the mood of the music. While it is played, sounds keep echoing and it becomes a cluster of notes at the end of the cue. The last note (D#) is an octave higher than the expected note, but the ending still feels definitive because it is the fifth degree, thus it can be said that there is closure. Yet a door is left open with that high octave.

First, the music accompanies Jesse's confused emotions about lying and the questionable righteousness of her actions with the minor-quartal-dissonant shifts. However, these are more distant feelings, as the reverberance made them sound so. The more present feelings that start to occur with the vibraphone-like sound, are hope, that is indicated via sharp 6th degree, together with satisfaction and closure, that was emphasized by the ending. Jesse is satisfied with her decisions.

In this scene, there is a colorful setting (Figure 3.58). It is a darker scene, only the lamp in the shot is lighter, but not as bright as it was in the scenes analyzed before. Almost half of the shot is pink/red and the other half is green/blue, which are complementary colors and then there is Jesse in purple, dissociating with the room in terms of color. The colors of the room are in conflict, one is warm, one is cold, also there is dark and light. Many possibilities and feelings are present together. The purple dress worn by Jesse, is right in the middle of the other colors in the color wheel. There is a decision she is making and she is standing in between two opposite directions and it is perfectly indicated in the colors. The color of the dress also separates her from her environment visibly, like she always is in her life.



Figure 3.58 : The colorful setting of the signing scene.

There is confusion both in music and colors. There are indications of different possible ways in life and a stage of decision. In the music, there is a reference to the motive in the first theme, to “the demon self” of Jesse, which makes her shine among other people, which is also what is seen in the colors, because of her dress. The music is rather slow and the pitches are not so high, which are correlating features with darkness.

In the second scene, Ruby and her model friends are at lunch. Ruby tells them about Jack taking pictures of Jesse. They are surprised because she is quite new. Sarah implies that she can take their place at this rate, but Gigi seems quite confident about herself. Sarah says “Who wants sour milk when they can get fresh meat?”, then it cuts to an audition scene and Sarah and Jesse are waiting for their turn.

There are slight modifications in the theme, which can be seen in Figure 3.59. For instance, the fourth degree is added (measure 5) to the oscillation between the major second and minor third interval. The cross noteheads indicate repeating notes that fade out. Due to the dissonant intervals and the drone, this theme causes a stressed atmosphere, as the models start to become jealous of Jesse and not confident about their future. When the scene is cut to the audition scene, the other melody begins (measure 7). This melody is played in octaves, but in the previous scene the higher octave was predominant while in this scene the lower octave is. The change in the sixth degree from minor to major is present again and it creates a brighter atmosphere, so there is still a change in the positive direction, like the rise of Jesse's career. However, unlike the ending of the previous scene, the melody does not end on the fifth but it ends on the third degree. The ending does not sound cadential and it rather sounds unfulfilled, probably due to the tritone descent in the end of the melody. Thus the theme remains open ended, which is an element of curiosity for the audience. Additionally, the tritone may be a very subtle reference to Jesse again, because she is about to get her first job and she is gradually becoming that narcissist creature that we know she will be.



Figure 3.59 : “Who Wants Sour Milk” modified version.

The colors in the restaurant are mostly dark and brown (Figure 3.60). It was previously mentioned that brown can symbolize ambition (Kırık, 2013), which is a suitable concept in this scene. The models become ambitious because they are threatened by Jesse. However, the change in brightness seems to carry more importance than the color symbolism here. The colors in the restaurant are dark and overwhelming. There is light coming in from the windows, but it comes from behind the characters and thus they seem dark anyways. The colors are dull and thus not

very pleasing. Like the previous scene, the images in the scene are cut in to two (this time horizontally) by brightness and darkness. There are two different options, like being good and being bad, considering the light and dark associations, or they are trying to decide if Jesse is a threat or not, so there is doubt in their hearts about themselves, but they need to wait and see.



Figure 3.60 : A shot in the scene, separated into two parts by colors.

The colors of the audition scene are pretty bright, they are mostly in beige hues (Figure 3.61). Brighter colors are more pleasing, create a softer ambience and a feeling of a larger space.



Figure 3.61 : Beige colors of the audition scene.

Both music and colors represented a state of decision or doubt again. In the audition part, both the colors and the harmonies are more pleasing and softer. Also the intervals are larger compared to the beginning and the bright colors create an impression of a larger space. However, brighter colors are also associated with high notes, but in this scene they are not present.

In the third scene, Jesse is entering the restaurant she goes after the runway experience. The designer Sarno sits together with Gigi and another model. Jesse has brought Dean with her. They talk about beauty. The designer wants Dean to make a comment about Gigi's looks, he tells that she is "fine". The designer agrees and starts to praise Jesse's natural beauty and says that without her true beauty she would be nothing. Gigi looks at him with a hidden anger. Dean tells the designer that he is

wrong and inner beauty matters more. The designer replies “if she was not beautiful, you would not have stopped and looked” and he continues “Beauty isn’t everything, it’s the only thing”.

The theme here is exactly the same as the previous one. The plot is similar to the previous scene as well. There is an element of jealousy (Gigi’s artificial beauty is compared to Jesse’s natural beauty). The general atmosphere is tense because of the argument between Dean and Sarno. Therefore, it can be said that this theme is used for the scenes in which there is a sneaky tension.

The colors are different from the previous scene, but similar to the first one. The common feature is that they are dark and the shots are split to two again. This time, complementary colors are used. In the first scene, green and red were used like in this scene, but they were much lighter than the hues in this scene (Figure 3.62).



Figure 3.62 : Complementary colors in the scene, dividing the picture in halves.

In the scene, the tension is created by both the complementary colors and the music.

When all three scenes are compared, the tension element, colors splitting the image in halves and dark colors are common. The way the colors are arranged creates an indecisiveness by cutting the images into exact halves with opposite features. So does the oscillating melody in the theme and the change between minor and major sixth degree.

3.2.7 Seventh theme

In this scene, Jesse meets Dean and he drives them to somewhere on a hill, where they can see a view of the city. Jesse is shown walking on a wall while Dean is watching her. During their conversation music stops for a while. Jesse tells about her childhood and then she says she does not have many skills, but she is pretty and she can make money out of it. The photographer tells her that she is probably good at many things, but Jesse says that he could not know that because they have just met.

Then she tells about how the agency wants her to lie about her age. He asks about her age and she says that she is sixteen. That is when the music fades back in. He is stunned for a second and wants to leave but she stops him. Then he tells her to do what she should do, what she thinks is right and brings her back to the motel.

The theme (Figure 3.63) is called “Don’t Forget Me When You’re Famous” and it mostly consists of parallel thirds. It is D Aeolian mode, thus a little depressing. This theme has a sad but harmonious quality to its sound. It has a soothing effect because of the soft organ-like sound and the consonant thirds. After a more piercing sound enters (mm.13) together with a high pitched bell-like synth, the chords are mostly full chords and there are more dissonant notes. However, the overall soft character is preserved. In the end there is a *VII-i* cadence, but the minor 6th degree is added to the tonic chord, which results in an unresolved feeling.



Figure 3.63 : “Don’t Forget Me When You’re Famous”.

This theme is named after the words Dean says, thus it can be suggested that we see through his eyes, also considering he is watching Jesse in this scene. He is this photographer who has not been recognized yet, he seems interested in Jesse and although he acts like it is a joke, he knows that Jesse is going to be great and does not want to lose her. Before the music begins, he asks her if the agency said anything about his pictures and Jesse says that it did not come up, but actually the lady in the agency mentioned them as “amateur”. Apparently he is not doing great at his photography job, thus one way to interpret the music is that it reflects his depressed feelings about his life and his anxious feelings about Jesse’s place in his life. First, the chords move in a calm and ordinary manner, then there is that prominent melody. The melody possibly represents Jesse bringing fullness in Dean’s life, as the melody fills in the spaces of omitted degrees in the chords. However it ends in an indefinite place, in the tonic chord with dissonance, so Dean is left in a worse condition than

before. That is what happens to him when Jesse enters his life as it is seen in the film later.

After they talk for a while, the music starts again when Dean learns her actual age and tries to leave. The thirds enter again (Figure 3.64). So the fullness is gone and the last chord is dissonant again, because he feels uncomfortable about her age now, also because of what is mentioned previously about Dean in general.



Figure 3.64 : Rest of “Don’t Forget Me When You’re Famous”.

This scene starts at sunset. Namely there are mostly dark shots. First, in the twilight time the colors are cold, i.e. blue and purple. While the first section of the music ends, the colors become darker. They are shown sitting in the darkness and the red city lights are in the back. The colors are reflecting a depressive mind-set, that can be associated with Dean as previously mentioned. They are cold and dark, calm and melancholic (Figure 3.65). In the shot Jesse is seen, it is as if she is walking on the city, as if she has got everything at her feet. Her shots are more colorful because of the city lights, they are like sparkles, whereas Dean’s shots are lonely and empty. Then the colors become even darker.



Figure 3.65 : The cold colors of the scene.

Both the colors and music depict an overall depressive state. The dissonance in the ending of the theme and the darker colors in the ending of the scene are representing the same concept; a change in a negative direction. Also dissonances and clusters and darkness are used once again together, they create a narrower feeling, like Dean is trapped in a situation he cannot get out of. He cannot stand out; he is someone who is always going to be overlooked. The lonely shots of Dean are like the lacking chords

in his theme. Jesse's more colorful shots filled with the city lights are filling in between his lonely shots as the piercing synth sound fills the chords. Also the high pitched bell-like sounds over the depressive low music resemble the small sparkly red city lights on the dark scenery. In short, there are many similarities between the colors and music in here.

3.2.8 Eighth theme

This is the end of the audition scene. Sarah cannot take the job and she is even ignored, whereas Jesse takes the job. They take Jesse's measurements. Then we see Sarah walking in a corridor, she goes in to the toilet and in there, she throws a trash bin into her reflection in the mirror.

The theme in here is named "Take Her to Measurements" (Figure 3.66). It consists of one figure, wandering through many keys. The motive remains within a fifth interval, there are a lot of steps and mostly small leaps.



Figure 3.66 : "Take Her to Measurements".

The keys are in the following order: E major, C major, E major, D minor, F minor. The first two major triad is in chromatic mediant relationship, which has been very abundantly used in this film. It is about the magic of this event for Jesse, or the world she is entering, same as before, and also the dramatic shift in her life. Now she has a job and she is starting to be recognized. Then there is a shift from major to minor, a m2M progression in Murphy's (2014) terms. According to Murphy, it is a progression that is used for tension and an enigmatic feeling. It is heard when Sarah is seen walking out in the corridor. She almost cried while Jesse was accepted and

she was not, she is also angry. Therefore the change in the music, which creates tension, fits her situation. She is angry and is being replaced by a new girl, she is losing attention and she might lose her job, so her future is in question now, hence the enigmatic feeling created by the progression. Then the theme modulates to another minor key, which is again in a chromatic mediant relationship with the previous key. This may be implying the dramatic shift in Sarah's life, which is not in a good way like Jesse's was.

The colors in this scene are as told before, in beige hues. They are bright and in the warmer side of the color wheel. As Sarah is walking in the corridor, she is in a black coat, which is the color of aggression, and the setting is slightly darker. Then in the toilet, the hues are at the opposite side of the color wheel; cold, blue hues are used in the back.

Both the change in Sarah's surroundings from warm to cold and the dramatic shift in the chords represent the negative change in Sarah's life and probably in her mind. The tension created by the m2M progression and her black clothing representing aggression work together to indicate her anger. The first major progressions are heard in a brighter setting, where mostly Jesse is seen, because she is the one with positive changes in her life.

3.2.9 Ninth theme

In this scene Ruby is at the morgue, where she is doing makeup on the deceased for funeral ceremonies.

This theme is called "Ruby at the Morgue" (Figure 3.67). It is a slow theme, with a lot of reverb, so all the sounds overlap with each other. The range is very wide. Together with the reverb, they create the feeling of a large space. The scale is A Mixolydian with a flat sixth degree. It is a symmetric scale, i.e. it consists of two symmetric tetrachords. It has both bright and dark feelings, because of the major third and minor sixth degrees and seventh degrees, which are the factors that determine the character of the music. In the middle, there is a section with modulation to C (mm. 9-10) but then it returns to A. The harmonic progression is basically *I-iv-I* for both parts.

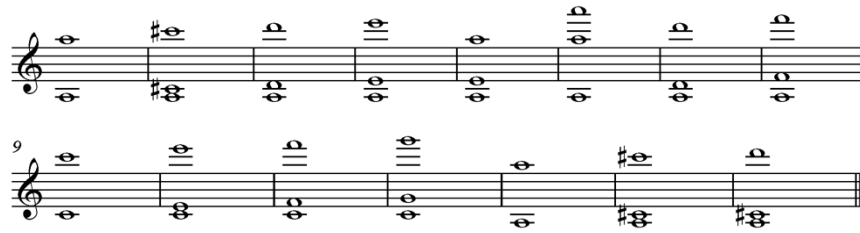


Figure 3.67 : “Ruby at the Morgue”.

The progression in this theme is M5m (e.g. A major and D minor), a progression associated with Middle East (Murphy, 2014). Considering it is the Western point of view, it can be generalized as exoticism or some far away unknown world. Namely both the harmonies and the timbre are indicating something distant.

The color scheme in this scene is monochromatic, blue hues are used (Figure 3.68). It is cold and harmonious. They represent the coldness of the morgue and loneliness of Ruby in there.



Figure 3.68 : Monochromatic blue color scheme of the morgue.

In this scene, both music and colors are very harmonious. Both the instruments and the colors are blending. Cold colors are normally associated with lower frequencies; however, this is not the case here. Yet still, there are correlations like the slow tempo of music and the calmness of blue and the distant feeling in music and coldness of blue.

In the second scene, Jesse is seen hiding at the entrance of the motel. She is trying to avoid the manager. This scene comes after the audition scene, where Sarah has broken a mirror and Jesse was wounded by it. When the manager goes to his room, Jesse makes her move and runs to her room. She checks from the window if he has seen her. Then she goes to the bathroom and pours some medical liquid on her wounded hand. She screams with pain. Then someone knocks on the door, she answers it. Dean is at the door. She sees him and faints.

The track is named “Jesse Sneaks into Her Room”. The theme is modified in this scene (Figure 3.69). It is faster and more repetitive, both the individual notes and the phrases are repeated many times. In this scene, the bass is more motile compared to the previous one. After this theme, the chime arpeggios from “I Would Never Say You’re Fat” (measure 17) enter at the end of the scene. This change coincides with Jesse fainting. This section is shorter than the ones before. It only goes until Bb major chord and stays there, the ending feels unresolved since A is the tonal center here.



Figure 3.69 : “Jesse Sneaks into Her Room”.

In the beginning of the scene, blue and green colors are dominant, but it is not like the previous scene because there are other colors as well, e.g. brown. When Jesse is in her room, the color scheme is the opposite, the red-browns are dominant and there is a little green (leaves on the curtain). In the bathroom, the scheme changes one more time, greens are dominant and there is a little red (Jesse’s bleeding hand). It continues like this, the colors of shots generally oscillate between green dominant and red dominant schemes. When Jesse faints, she falls on the dark red carpet on the floor. We see her image lying on the floor interrupted by other images like neon blue triangles on a black background and then a red one, then the wallpaper of the hotel room being forced from the other side. Then Jesse wakes up.

The constant oscillation between the two complementary colors’ dominance and the major-minor duality of the scale used in the theme resemble each other. The warm color (red) takes over the scene at the end and so does the major chord. Then the

chimes enter when dreamy images start flashing. So the chimes are linked to the dreamy state. The colors do so as well, there is a different color scheme in every image. However, the use of the theme of “I Would Never Say You’re Fat” in here is not in harmony with the previous uses in terms of color.

In the third scene, Ruby is in the morgue again, she is doing a makeup. Then she assaults the body. Images are shifting back and forth between the shots of morgue and Jesse, as Ruby imagines her. Later, we see Jesse at home, doing a glittery makeup and then finding a blue dress on a bed, wearing it and looking in the mirror in awe.

The track in this scene is named “Kinky” (Figure 3.70). The theme in this scene is almost the same as the previous one. The only difference is that the first part of the theme normally resolved to A major, but it remains on D minor with a *ritardando* on the repeating F. On measure 20, chime arpeggios enter. It is slightly different from the previous scene again. It is longer and there is an addition of G major seventh chord (measure 24), but it ends on A major.



Figure 3.70 : “Kinky”.

The morgue scenes are completely blue as before, but the image of Jesse is red (Figure 3.71), which is a color with the opposite influence. There is a shift between the warm and cold, which was the case in the previous scene. Then we see Jesse at home, in a red room with the red robe. Then she walks into a yellow room and wears a blue dress. Overall, it can be said that the colors are very vibrant and diverse when only Jesse is seen and they are monochromatic when shots of Jesse and Ruby are alternating.



Figure 3.71 : Jesse in red color scheme.

The second and third scenes are similar in terms of the dual colors and the version of theme. The first scene has monochromatic scheme but also a different instrumentation and texture. In the first scene, the theme has a slower tempo and it has a homophonic structure, while in the other two a melodic line with a faster tempo is present. Hence it can be said that the change in the use of colors resembles the change in the themes. The addition of red in the scenes and the faster tempo are consistent facts. As red is a color that stands out, the theme in the latter scenes had a melodic line that stands out. These are also consistent.

In the first scene of this section, there was only one color scheme and one musical theme. However, in the second and third scenes, chime arpeggio theme comes after the other theme. The second theme coincided with more vibrant color schemes, representing Jesse's magical world together with the chimes. It can be said that the use of chime arpeggios does not fit the uses in previous scenes, but their use presented in this chapter is consistent.

3.2.10 Tenth theme

In this scene, Dean is talking to the hotel manager about the money Jesse owes to him. The manager has a very offensive style. The photographer pays for Jesse's debts. The hotel manager keeps talking about the girls staying at the motel, as if he is marketing them. It is a very disturbing scene because of the manager's behavior and words.

The theme in this scene has the name "Real Lolita Rides Again" (Figure 3.72). The music in this scene is quite subtle, it is not very loud and develops slowly. First a repeating bass note (A) is heard (it is not shown in the transcription). Then there is a small motive in A Phrygian, which consists of mostly large leaps and repetitions of the lowest note. The second repetition of the motive is one note short, which leaves the tritone interval at the end as the last interval heard. The motive is disturbing

because of the presence of dissonant intervals, e.g. minor 2nd, minor 7th and the tritone. Then the theme modulates to C Phrygian. It can be said that this theme creates expectation with its quietness and the long rests. It is so subtle that one pricks up the ears to hear better and also waits for the next motive during the long rests. The dissonant intervals in the melody and the scale itself result in a disturbing feeling. The theme ends on a repeating bass C (not shown in the transcription). It is like a danger lurking in the darkness, not showing itself yet.



Figure 3.72 : “Real Lolita Rides Again”.

Then there is an ambient sound, connecting this theme to the chime arpeggios (mm. 11-13). However this time, unlike the previous versions, the chime arpeggios are minor chords. They move from F minor to C minor. It can be interpreted as the descent in Jesse’s life. Her dreams are destroyed for a while.

The colors in the dialogue scene are dominantly yellow-green with occasional red-browns, but they are quite dull. The dirty looking yellow-greens might be indicating madness, sickness and ominous thoughts. These concepts are similar to the manager’s behavior and sick thoughts. Desaturated colors of the scene create a displeasing feeling. When they are in the room, the colors are very dark and they are creating a disquieting atmosphere.

Both the music and colors are creating a disturbing scenery. The evil thoughts and behavior of the manager is indicated in music by the unusual scales and dissonant intervals in the motive, as well as by the desaturated yellow-green colors. The shots in the room have much darker colors, which is consistent with the unusual use of minor mode in chime arpeggios.

Both in this theme and the ninth theme, there is a modulation from A to C. These scenes with these modulations are related by the people who have bad intentions with Jesse, however the colors are not connected.

3.2.11 Eleventh theme

In this scene, Jesse is about to go on the runway for the first time. She is waiting in the backstage for makeup. One of Ruby's model friends (Gigi) sees her and starts talking to her. She cannot believe that Jesse is in the show and intimidates her a little bit. She also mentions the many aesthetic operations she had. Then Jesse is called by the designer and she is told that she is going to close the show. She seems pleased about that, although she barely reacts. Then we see them waiting in the runway backstage.

Name of the track is "Messenger Walks Among Us" (Figure 3.73). The music in this scene is like an electronic dance piece. The theme is in C minor, but because of the structure and the harmonization, it does not have a sad character. There is a repeating bass motive and a beat. Then a motive in a higher octave enters. Both of the motives are minimal, repetitive motives. The overall structure is quite minimalist and repetitive, there are only occasional modifications in the motives. The vertical harmonies are rather neutral because they are quartal. The first and fifth degrees are emphasized the most. The harmonic progression is *i-iv-i* at first (measures 1-3) and it is repeated for a while. Then there is *i-V-iv-i* (measures 5-6), which is only like a passage that leads back to the previous harmonization. All of these attributes depict a rather structured, ordered system. It sounds like a running machine. The motives that are reduced to chords can be seen below in Figure 3.73.

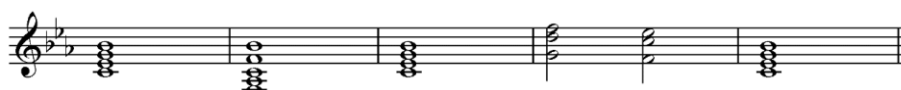


Figure 3.73 : "Messenger Walks Among Us", reduced to chords.

When Jesse is called by the messenger sent by Sarno, only the beat remains. Then music "drops" (which means the rest of the musical elements return) with the introduction of a new motive. When Jesse is told that she is going to close the show, the short melody shown below in Figure 3.74 is heard. It is in C minor and the synth used has a piercing sound.



Figure 3.74 : The motive in C minor with the piercing sound.

When Jesse is dressed and she is being examined by the designer, the chords below in Figure 3.75 are heard as descending arpeggios. Their sound is like a vibraphone.



Figure 3.75 : The chords with vibraphone sound.

It is actually a *i-v-iv* progression in C minor. The chords have a mysterious feeling. Overall the music creates the impression of an ordered system and there is only one motive that sticks out in the whole cue.

The colors in this scene are mostly white and black (Figure 3.76). Some parts of the shots are really bright while some parts are very dark. Black and white highly contrast each other.

The minimalistic music and the simple choice of colors are similar. There is a keen order in both the music and the shapes. Also the presence of high and low frequencies at the same time is similar to the use of dark and bright colors together. However, there is no change in the color scheme when there are different musical elements like the short melody.



Figure 3.76 : White and black colors of backstage scene.

3.2.12 Twelfth theme

In this scene, Jesse is walking the runway. She sees mirrors and then kisses her reflection in them and walks back. This is a metaphorical scene, there is a reference to the story of Narcissus according to film's cinematographer Braier (Url-11). Braier points out that the mirrors represent the lake Narcissus looked himself in. Jesse is falling in love with herself just like Narcissus did and her beauty will be the end of her.

The theme in here is named “Runway” (Figure 3.77). In the beginning of the music, there are fast arpeggios together with long sustaining chords. The arpeggios sound plucked, yet still the attacks are soft. The chord progression is as such: F major 7th, Db major, F major 7th, Gb major, Db major, F major 7th.



Figure 3.77 : “Runway”, soft, plucked arpeggio chords.

The progression is the same as the chime arpeggios from before (the fifth theme). The differences are the synth used, the pattern and tempo of the arpeggios and the tonal center, which was A in the previous scenes and F in this one. The progression here suggests an element of wonderment, a magical occurring as before, because it is Jesse’s first time on the runway and she is closing the show. Now she is in this wonderful world. Another reason for the wonderment reference is that she sees the mysterious triangle shaped lights ahead of her. There is a surprised and excited expression on her face. The lights start to flash softly, as if they are winking stars. They also make the audience wonder what they are.

Then Jesse starts to walk and the music changes. The progression from the very first scene are heard; F minor-D major, and the arpeggios fade out. This progression can be interpreted as a messenger that hints what is about to happen. Jesse is becoming that demon now. This progression is played by a wavy synth, together with a repetitive, plucked-sounding bass motive. Then another sharper synth takes over the chords and the arpeggio synth enters once again. As it is revealed that those triangles were in fact mirrors, there is a transition from D major to D minor.

As she is watching herself in the mirror, F minor-D minor progression is heard a few times. Jesse’s reflection in the mirror, turns to the mirror next to it and leans towards it to kiss it. Just before she does, the screen goes dark and when it is illuminated again, a pulsating quartal chord is heard (Figure 3.78, measure 1). It keeps fading in and out while another melody enters. The synth used for this melody is the same as the one heard when Jesse was told that she was going to close the show. This time the melody is in D Dorian mode. This mode has not been used by now, it is unique in the film. The sound of the synth has a piercing quality. The melody goes stepwise down and up within a sixth interval, starting from different notes in repetitions

(measures 3-16). Although there are no chords but just one melodic line, considering the predominant notes, the harmonic progression can be listed as such: *i-IV-i*, *vi °-ii-vi °*, *i-v-ii*, *VII-IV-I*.

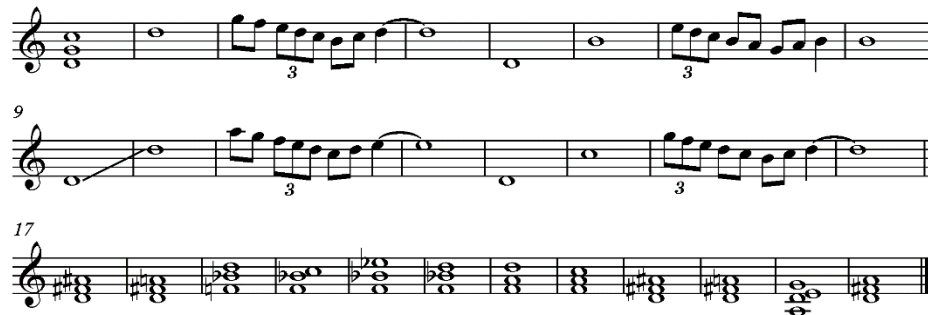


Figure 3.78 : “Runway”, the part after Jesse sees herself in the mirrors.

As mentioned in Murphy (2014, p.488) m5M (which is the *i-IV-i* progression in here) is linked to concepts like “wonderment, optimism, success, or transcendence”. Murphy considers triads while discussing the progressions. There are no triads in here, but the progression can still be perceived due to the long notes and the advancement to the tonal center. Since m5M is the opening and closing progression in this theme, it can be assumed as an important progression. All of the attributed characteristics are very much suitable for the event that is witnessed. Jesse is falling in love with herself and starts to see herself as superior to the others. She is obviously successful and most probably thinks she has a bright future ahead. The timbral quality suggests the same. The piercing synth surpasses everything. Also the unique mode and the presence of only one melodic line (instead of arpeggios or chords with notes blending with each other) indicate that Jesse has become very self-absorbed. Everything suddenly becomes all about one entity both in the music and in Jesse’s mind. She starts to see herself unique and above everything. Even the surprised, naïve look on her face changes; she looks more evil and much more confident. Jesse kisses herself in the mirrors many times during this melody.

As she is walking away from the mirrors, the melody ends and softer chords enter (m. 17). She goes back to where she came from. During her walk, there are a lot of suspension and release in the chords. The music ends on D major. The progression is as following: D+6(augmented triad on D), D major, B major, F#sus4(F-Bb-C), F#sus2(F-G-C), B major, D minor, F major, D+6, D major, A7sus4(A-D-E-G), D major.

As a summary, first there is F major as the tonal center. Then it changes to F minor-D major axis. After this, D minor takes over. Until now, all the major chords that are heard turn into minor ones respectively. Then, there is the melody in Dorian. Dorian is a minor mode, but due to the sharp sixth degree, it also has a dual character. The chords that come after the Dorian melody are D major centered. There is an overall transition from major to minor and then to major again. In the beginning, Jesse was a naïve girl, represented by the major arpeggios, then there is a transition with the major-minor progression. Then the minor arpeggios enter while she is looking at herself in the mirror in awe. It is as if the music is implying that it is bad to be so self-absorbed, this might as well be her inner voice. Then suddenly it is interrupted by the pulsating quartal chord and the Dorian melody. Jesse does not want to hear that voice; she wants to love herself. When she is walking back, she is happy with her decision and she silences that voice, which is indicated by the return to major in the music. The suspensions in the chords might be seen as the struggle of the “inner voice”, which is defeated when the music ends on D major.

In most of the shots in this scene, a colored figure on a black background is seen. Only in the mirror shots, the whole image is colored. The colors at the beginning of the scene are monochromatic and blue. After Jesse sees herself in the mirror and starts to kiss herself, the colors turn red and remain so until the end of the scene (Figure 3.79). The color blue in the beginning of the scene creates a calmer atmosphere and also represents Jesse’s naïve character. Then there is an abrupt turn to red. The color of passion, love and danger. The first two are Jesse’s feelings towards herself and the third is a feature of hers (in another scene later, she mentions her mother referring to her as “dangerous”). This transition is also remarked by the cinematographer (Url-11, 2018); Braier says that Jesse turns in to an “empowered beauty queen” in this scene. In this scene, an example of transitional color is present. The colors are used to show the change in Jesse’s feelings and character.



Figure 3.79 : The change of colors in the runway scene.

There are abrupt changes both in music and color at the same time. The softer and calmer atmosphere created by the music and colors, suddenly turn into the opposite. Later, the music changes once again while the colors remain the same. However, the narratives are still the same. Jesse has fallen in love with herself and she is not that nice child anymore. Red is a color that makes everything seem larger, so it is like Jesse is a higher and superior being in her own eyes. The same effect is created by the piercing synth; it dominates the musical area.

At the end of the scene, the screen becomes completely red like a curtain fall in a theater. It was also the first color seen on the screen. It can be suggested that red screen has a framing function, that it is a signifier of the beginning and the end of a chapter. Now Jesse has transformed, the old Jesse is gone now, an era has finished. The movements in the music can be read in a similar way; the successive suspensions and resolutions finally conclude on one harmony; they end a chapter.

3.2.13 Thirteenth theme

This is the scene after Ruby assaults Jesse and Jesse pushes her away. With an angry expression on her face, Ruby draws shapes on a mirror with a lipstick. Jesse lying in a bed. She wakes up and sees a robe, which is left for her by Ruby. Then we see images of the empty house. Jesse sees Ruby's weird drawing on the mirror and keeps walking in the house.

This theme is named "Lipstick Drawing" (Figure 3.80). It is quite disturbing. There are lots of silences and a constant C drone, which is slightly off-tune sometimes. While Ruby is drawing on the mirror with a hateful expression on her face, a rhythmic pattern on a bass C is heard, with percussion accompanying it. It is not indicated in the score, but the pattern echoes until it fades out. So actually that rhythmic motive overlaps on the drone. The semitone movement in the bass creates a dissonant with the drone and hence an unsettling atmosphere. When Jesse is shown, the bass note and the drone slowly fades out and the echoing motive from the first scene enters (shown with quarter note chords starting from m.12), since the echoing motive is one of the elements associated with Jesse. The C drone is subtly present until the end of the cue. There are dissonances in the echoing motive as well (e.g. major 2nd), but not the most disturbing ones like the tritone or the semitone. This dissonance is more like an indicator of curiousness. As shots of the house is being

shown, dissonant chords start to fade in (m.15). The juxtaposition of the echoing motive and the dissonant chords are indicators of Jesse's curiosity about what is going on and the horrible truth that awaits her. Now it is obvious that something is wrong and the chords create a terrifying ambience. The echoing motive in the end contains a semitone in it, because Jesse is very confused and maybe even scared.



Figure 3.80 : “Lipstick Drawing”.

At the beginning of the scene there are cold colors like purple, blue and also grey. While Ruby is drawing, the background color turns to red (Figure 3.81). Which is the indicator of the hate growing inside her and she is losing her temper. Then, we see Jesse waking up in a yellow-orange and turquoise colored room. These two are balanced colors, one warm and one cold, setting a dual atmosphere. The dominating color changes in different shots, so there is a confusion in the emotions that they create. Yet they are not disturbing but soft colors.



Figure 3.81 : The change of colors in the Lipstick Drawing scene.

Then the image of the red robe on a couch changes the scheme to triadic. There is colorful scheme, but the hues are rather pastel. The emphasis is on the red robe (Figure 3.82). It is the robe that Ruby has left there. Since it was left by another person, it can be interpreted as the way others see Jesse; a dangerous, feminine, beautiful being. She wears the robe because she owns up those attributes. She outshines the rest of the people, shown with the robe with the dissociating color,

which was also the case for Sarah in the last scene. Another way to see it is that she is in danger now.



Figure 3.82 : Red robe left by Ruby, triadic scheme.

As Jesse is walking in the house, there is a shift to blue. In these shots, Jesse is not seen until the lipstick drawing is shown. Then the camera turns to her and we see her in the red robe, standing out in the shot. From this point on, the shots become blue and grey.

The dissonance in the bass motive coincides with the change of color in Ruby's background. Both of them are implying danger and anger together. Representation of Jesse is present in both music and the colors; the red robe and the echoing motive. The subtle dissonance in the echoing motive and the duality of colors create confusion and curiosity. As the colors shift to the colder and darker side of the spectrum, more dissonant chords are heard, representing the lurking danger that awaits Jesse, and creating the impression of being trapped. Together, they foreshadow Jesse's end.

3.2.14 Fourteenth theme

Before the music enters, Jesse is talking to Ruby outside the house. She tells that her mother called her dangerous and that everybody would kill to become a second rate version of her. Then she leaves and goes inside the house, where she encounters Sarah and Gigi. Then Jesse is attacked by the models in the house and music starts. She runs away from them, takes a knife in her hand, but gets injured by one of them. She limps outside, but there she is cornered by the models and Ruby at the edge of the empty swimming pool. Ruby pushes her into the pool. We see her bleeding and shivering at the bottom of the pool. In the next shot, Ruby is shown covered in blood, lying in a bathtub. The two models are also covered in blood and having a shower.

Then Ruby is seen sitting in a couch and after that the scene is cut to the morning. Ruby is watering the flowers in the garden and then the pool.

The theme in this scene is called “Are We Having a Party” (Figure 3.83). The transcription shows the music very basically the following description contains detailed information. At first, only a beating bass F is heard, but the frequency spectrum is continuously altered. This goes on for a long time. Then it moves to A for a shorter amount of time. Occasionally, there are other ornamental sounds. Later, an electronic guitar enters playing chords, mainly F major and A major. When Jesse is on the floor dying, an arpeggio motive above the bass in F minor is heard. Then the beating F returns and stays for a long time, while Ruby and the models are shown bathing in blood. In this part of the scene, the guitar plays some motives on the beating bass, uses the tritone abundantly. After that the pulsating bass slowly fades out and only the soft synth chords remain (starting from m.6). These are the same chords as the ones heard at the end of the runway scene. In the previous scene, there was a V-I cadence in D major, but in this scene D major moves further to C major chords with suspensions.



Figure 3.83 : “Are We Having a Party”.

The change in the music is sort of similar to the Runway scene. There is an oscillation between major and minor chords but eventually major prevails. Also, themes at the end of the scenes are the same, except the additional two C major chords. The soft synth chords are closing another chapter for Jesse on D major, because she is dead now. However, they continue to C because while it is the end for Jesse, it is the beginning for the models and Ruby. D is present in the last two chords, like part of Jesse’s body is present in the people who ate her.

When Jesse is in the house running from the models, the color scheme of the shots is always monochromatic. First, blue hues are used, then red and then blue again. When they are outside and then in the bathing room, the colors are purple (Figure 3.84). When Ruby is shown alone on the couch, there is a mixture of blue and purple. In the morning shot, green and yellow hues with a little addition of pink can be seen.

The colors change from red to blue and end up in the mixture of them, purple. Red schemes coincide with the higher frequency bands in the music and blue scenes with lower ones, which is an expected correlation (cold color- low frequency, warm color- high frequency). Another matching features are the monochromatic color scheme and the structure of the music, which is basically a solo bass note with changing spectrum. There are additional instruments in some parts, but they do not dominate. Another correlation is that red and blue are combined to make purple, like C major contains a D in music, but they do not occur simultaneously. Yet still, both of them represents a unification of two entities. The entities in here are the outshining beauty of Jesse and the ignored existence of the models and Ruby.



Figure 3.84 : Jesse bleeding, monochromatic color scheme in purple.



4. CONCLUSIONS AND RECOMMENDATIONS

In this thesis, a study on the relation between the use of music and color in cinema was presented. These are two elements that are used actively in cinema. To reveal the possible correlations between them, information was gathered on their symbolic meanings, their effects on humans, common emotional attributes, their functions in films, their relation with each other and their common practice in films or other art forms. This information was provided in the literature review where both solid facts and interpretations by researchers were presented. In other words, the subject was partly open to interpretation. Consequently, it was evident that some part of the analysis would have to be subjective. Yet still, the interpretations were based on reasonable arguments and the other researchers' interpretation methods have been adopted. After the research, considerations on the possible relation of these two elements in films were presented. For example, it was expected that the musical features and colors which are associated with the same/similar concept would occur simultaneously. Same expectation existed for those which have the same physical influence on humans. Another correlation to expect was that the colors and music should have the same narrative, i.e. they should be telling the same story somehow when designed to form a flow in time. To reveal any possible relations of these elements in the films, analysis was needed. Two films were chosen for the analyses. The criteria upon the decision was auteurship (since auteurship requires higher control on every detail), original soundtrack and a special use of color. The films chosen were "*Nocturnal Animals*" by Tom Ford and "*The Neon Demon*" by Nicolas Winding Refn. In addition to general knowledge on music and color, information on both the plots and some views by the filmmakers of these two films were included to have a better understanding of the films, so that a healthier analysis can be presented. Hereafter, the analyses were carried out. To start with, in both of the films, the scenes that contain music were determined. Then the scenes were grouped according to the musical themes to see the changes that occur in colors and music together. Before the analyses, films' synopses were presented in order to obtain a better understanding of

the story. Each scene was shortly introduced before the analyses. Musical analysis included harmonic, melodic, textural and timbral aspects. Based on the literature review, the possible functions of music in individual scenes are deduced. Following this, a color analysis was presented and its functions were put forth for each scene. Thereafter, the scene groups were taken into consideration and the use of music and color in them as a whole was examined in order to see if and how they were consistent and if there were synchronized changes in them.

To discuss in detail, a deeper look should be taken at the analyses, starting with *Nocturnal Animals*. In the analysis of the first theme, it was shown that both the narratives and the physical influences of music and color were consistent within the individual scenes and in the group of scenes as a whole. The results were the same for every theme except the fourth theme. The scenes for that theme were still connected by color, namely yellow, but while the color schemes' brightness changed, the music theme remained the same. However, this practice was interpreted as an associative color, i.e. both music and color were linked to the concepts in those scenes. Therefore, rather than the narrative, the functions of music and color were the same.

When a general look at the results is taken, it is possible to see some common relations. The *tremolos* and *ponticellos* were used together with dark, dull and/or cold colors. The more dissonant intervals were present, the darker were the color schemes. In most scenes with cold or dark color schemes, the harmonic rhythm was slow, also the presence of bass notes was high. In the scenes with lighter and warmer color schemes it was the opposite. When there was a change in the color scheme towards darkness, lower frequencies were increased. In the scenes with a monochromatic color scheme, harmonic change was slow and there was a lot of repetition. The more colors there were in a scene, the more instrument colors there were in the music. In addition to this, sometimes a correlation existed between the playing technique of the instruments and the arrangement of colors, e.g. detached strings with sharp bordered colors. These relations were not present in all of the analyses, but in a notable number of them.

In conclusion, it can be said that a number of the expectations in doing this research were met in the analysis and there appears to be certain correlations between the use of music and colors in this film. Although a general relation between music and

warm and cold hues are mentioned, it is hard to claim any relation with individual hues, because they can be used in different meanings in different scenes. Those have already been mentioned in the analyses in detail.

In the analysis of *The Neon Demon*, a similar result was obtained. The narratives of colors and music were generally consistent. Likewise, the general atmosphere created by them was similar. There was correlation between dark and cold colors with ambiguity in music, increase in bass notes and slow tempo. The opposite happened for brightness and warmer colors. Furthermore, the harmony of the colors was related to elements such as instrumentation and harmony in music. Namely, monochromatic or analogous schemes were accompanied by simpler harmony or instrumentation; triadic scheme by more unconventional harmonies and more diverse instrumentation; complementary or discordant schemes by segregating instruments and striking harmonies.

For both of the analyses, it is hard to mention a specific relation for musical features and individual colors. Nevertheless, it can be claimed that there was a relation between musical features and the value, the warmth-coldness of the colors and the color schemes. The relation of music and physical effects were limited. The correlation was strongest in the narratives. The narratives of music and colors were mostly the same, even when they were very specific. In short, it can be said that there is a relation between the use of music and color in these films. This cannot be generalized for all films since only two examples were analyzed. Nevertheless, in both films, many expectations were met about the correlation between music and color use. This indicates that such correlation might exist in other films as well.

This study opens a door about the utilization of music and color collaboratively in films, maybe even in other art forms that bring these two elements together. In other words, the study has shown that there can be many different types of correlation between music and color use in films.

As seen in this work, a relation is already present, whether it is done consciously or unconsciously. In case the relation was not consciously established, the study confirms that certain features in music and color are unconsciously associated with certain concepts and they have been used in films in correlation. In case it was a conscious choice, the study reveals it.

On the other hand, this study can provide a basis to make decisions in filmmaking about music and color more consciously. It can be beneficial for filmmakers to choose a more effective music design or coloring, or to communicate with a composer better. Moreover, the study can be taken further with the analyses of more films to make broader generalizations. In this study, the individual scenes were under focus, however a broader approach can be displayed as well. For instance, the global change of the musical features and colors throughout the flow of the films can be analyzed. Additionally, this thesis can be beneficial to musicians alone, or to artists using color as a tool, since it provides a deeper insight into many aspects.

This study also presents ways of interpretation and methods for analyzing film scenes, which can be useful for other academic work. Taken into account individually, music and color analyses show how they can narrate a story, which can be useful for artists using these two elements, who want to use them in such way. The relations presented here are not absolute, but they can be guideways.

Based on the research and analyses, some other ways to relate music and color can be suggested. To start with, when using music or sound and color in any art form, the common attributions presented in the literature review can be taken into consideration. There are much more hue-specific attributions to use, compared to the general warm-cold axis seen in the analyses. These attributions can be combined with the musical elements that have the same attributions.

In the literature review on the relation between music and color, Lubar's and Wells' works were presented. Those are two scholars who tried to connect the color wheel with the 12-tone scale. Apparently, if a musician thinks of the color wheel, relating it to a scale is inevitable. Both of them used the 12-tone scale in chromatic arrangement. However, it seems more reasonable to coincide the color wheel with the circle of fifths, as Wells (1980) mentioned that Scriabin did. When it is thought in terms of harmonies, it makes more sense that closely related keys are side by side. They have more chords in common, they differ by only one accidental. In other words, C major and G major are more like red and red-orange than C major and C# major. This approach can be adopted in films, or other art forms. This a relation for the color combinations rather than individual colors. Color schemes and harmonies in the music can be arranged together based on the circle of fifths-color wheel combination, wherever they are being used. To explain this in detail, consider a film

scene with analogous color scheme with three colors, e.g. yellow, orange and red. There are many ways to arrange the harmony of the music. The theme for this scene can be a theme that modulates to the major keys of dominant or the subdominant or their relative minors (considering the circle of fifths). Another way would be to combine the two harmonies into a bitonal piece. The key of harmonies would be next to the key of the melody in the circle of fifths. Many other ways to use those harmonies can be figured out. Relations like these can be thought for all the other color schemes and harmonies. It does not matter which key coincides with which color, because as long as they are in the suggested order, their relation will be similar to each other. Similar arrangement can be done with modal scales. It is interesting as a thought experiment and it would be even more interesting to see it in practice and see how or if it works. This approach can be applied to anything that combines music and color.

Likewise, saturation and value can be related to texture and timbre. As colors get more saturated, the texture of a music can become thicker. The character of a hue increases as it becomes more saturated, because it goes from being grey to, for instance blue. The character of the music can change parallel to that; e.g. from vaguer to more definite chords, for example open fifths to full chords. A movement from one instrumental color to multiple ones can create a similar effect. Value is the brightness and clearness, which is an effect created by high frequencies in the music. The frequency densities can be arranged according to the colors' value, or vice versa in any use.

Another approach would be linking individual colors to specific features of music in a film or another area, like a demonstration of synesthesia for the audience. For example, colors may be assigned to a key in the music and whenever that key is heard, the color shows up too, or vice versa. This is pretty much like an associative color or a leitmotif. Except that they are connected to some other concept when they are used as an associative agent, while here it is suggested to link them together without any intermediary entity. It can be very interesting to build a film upon this approach. All the colors used in the film would be associated with a musical feature and they would always occur together somehow. Besides, different colors can appear together, thus the corresponding musical aspects would be used together at the same time. The audience's reaction to a film like this would be worth investigating as well.

In conclusion, this study provides methods for analyzing the relation between the use of color and music in cinema and exhibits the relations that are present in two examples. It is shown that there was a relation to some extent, especially in the way they are used as narratives. In addition to this, possible ways to take the study further are remarked. Based on the insight obtained from the research and the analyses, recommendations are given on other relations that can be established between music and color. This thesis can be beneficial for studies on color, music, cinema and their relation, as well as the artists, musicians and filmmakers in their work. Hopefully, this study would trigger more studies and thoughts of individuals, on the interrelatedness of different art forms and open a door for revelation of many more aspects to relate them.



REFERENCES

- Ball, V. K.** (1965). The Aesthetics of Color: A Review of Fifty Years of Experimentation. *The Journal of Aesthetics and Art Criticism*, 23 (4), 441-452.
- Bellantoni, P.** (2005). *If It's Purple, Someone's Gonna Die: The Power of Color in Visual Storytelling*. Oxford: Focal Press (Elsevier).
- Bezdek, M. A., Spackman, M. P., & Tan, S.** (2007). Viewers' Interpretations of Film Characters' Emotions: Effects of Presenting Film Music Before or After a Character is Shown. *Music Perception: An Interdisciplinary Journal*, 25 (2), 135-152.
- Bigand, E., Bueno J.L.O., & Ramos, D.** (2011). Manipulating Greek musical modes and tempo affects perceived musical emotion in musicians and nonmusicians. *Brazilian Journal of Medical and Biological Research*, 44 (2), 165-172.
- Bleicher, S.** (2012). *Contemporary Color: Theory and Use* (2nd ed.). Delmar: Cengage Learning.
- Brown R. S.** (1994). *Overtones and Undertones: Reading Film Music*. Berkeley, CA: University of California Press.
- Brownrigg, M.** (2003). *Film Music and Film Genre* (PhD. Thesis), University of Stirling, STIRLING, UK.
- Burkholder, J.P.** (2006). A Simple Model for Associative Musical Meaning. In B. Almén; E. Pearsall (Eds.), *Approaches to Meaning in Music* (pp. 76-106). Bloomington and Indianapolis: Indiana University Press.
- Campen, C. v.** (2007). *The Hidden Sense: Synesthesia in Art and Science*. Cambridge, MA: The MIT Press.
- Chang, S., Dimitrova, N., & Wei, C.** (2004). Color-Mood Analysis of Films Based on Syntactic and Psychological Models, *2004 IEEE International Conference on Multimedia and Expo (ICME)*, Taipei, Taiwan, June 27-30.
- Chion, M.** (1994). *Audio-Vision*. New York: Columbia University Press.
- Clifton, D.** (2006). Basic Needs in a New Light - A Colorful Diagnosis. *International Journal of Reality Therapy*, 26 (1), 18-19.

- Cox, A.** (2013). Review of Steve Larson, *Musical Forces: Motion, Metaphor, and Meaning in Music*. *Music Theory Online*, 19 (1).
- Czedik-Eysenberg, I., Jewanski, J., Kruchten, S., Oehler, M., Reuter, C., Saitis, C., Siddiq, S.** (2018). Colors and Timbres Consistency and Tendencies of Color-Timbre Mappings in non-synesthetic Individuals. *Annual Conference 2018*, Giessen University, Giessen, Germany, September 7-9.
- Davis, R.** (1999). *Complete Guide to Filmmaking: The Art and Business of Writing Music for Movies and TV*. Boston: Berklee Press.
- Doran Eaton, R. M.** (2014). Marking Minimalism: Minimal Music as a Sign of Machines and Mathematics in Multimedia. *Music and the Moving Image*, 7 (1), 3-23.
- Elferen, I. v.** (2013). Fantasy Music: Epic Soundtracks, Magical Instruments, Musical Metaphysics. *Journal of the Fantastic in the Arts*, 24 (1), 4-24.
- Farbood, M. M. & Price, K.** (2014). Timbral features contributing to perceived auditory and musical tension. In M. K. Song (Ed.). *Proceedings of the 13th International Conference for Music Perception and Cognition*, (pp. 21–26). Seoul, Korea.
- Ford, T. (Director).** (2016). *Nocturnal Animals* [Motion Picture]. USA.
- Friberg, A. K. & Lindborg, P. M.** (2015). Colour Association with Music Is Mediated by Emotion: Evidence from an Experiment Using a CIE Lab Interface and Interviews. *PLoS ONE*, 10(12): e0144013. doi:10.1371/journal.pone.0144013.
- Giordano, B. L. & McAdams, S.** (2008). The perception of musical timbre. DOI: 10.1093/oxfordhb/9780199298457.013.0007.
- Gorbman C.** (1980). Narrative Film Music. In *Yale French Studies No: 60 Cinema/Sound* (pp. 183-203). New Haven, CT: Yale University Press.
- Green, J.** (2010). Understanding the Score: Film Music Communicating to and Influencing the Audience. *The Journal of Aesthetic Education*, 44 (4), 81-94.
- Grondin, S.** (2016). *Psychology of Perception*. Basel: Springer International Publishing Switzerland.
- Heine, E.** (2018). Chromatic Mediants and Narrative Context In Film, *Music Analysis*, 37 (1), 103-132.

- Holifield, K. B.** (2016). *Graphic Design and the Cinema: An Application of Graphic Design to the Art of Filmmaking*. (Honors Thesis). The Honors College of The University of Southern Mississippi, Fine Arts of Graphic Design in the Department of Art and Design, Hattiesburg, MS.
- Kavak, S.** (2015). Temel Sanat Eğitiminde Resim ve Sinema Bağlamında Renk Bilgisi Uygulamaları. (M.A. Thesis). T.C. Marmara Üniversitesi Eğitim Bilimleri Enstitüsü Güzel Sanatlar Eğitimi Anabilim Dalı Resim-İş Öğretmenliği Bilim Dalı, İSTANBUL.
- Kırık, A. M.** (2013). Sinemada Renk Öğesinin Kullanımı: Renk ve Anlatım İlişkisi. *21. Yüzyılda Eğitim ve Toplum*, 2 (6), 71-83.
- Kim, S.** (2012). A Basic Study on the Conversion of Sound into Color Image using both Pitch and Energy. *International Journal of Fuzzy Logic and Intelligent Systems*, 12 (2), 101-107
<http://dx.doi.org/10.5391/IJFIS.2012.12.2.101>
- Kingsley Osueke K. & Kurt, S.** (2014). The Effects of Color on the Moods of College Students, *SAGE Open*, 1-12.
- Larson, S.** (2012). Expressive Meaning and Musical Structure, Chapter 1 of Schenkerian Analysis: Pattern, Form, and Expressive Meaning. *Music Theory Online*, 18 (3).
- Lehman, F.** (2013). Hollywood Cadences: Music and the Structure of Cinematic Expectation. *Music Theory Online*, 19 (4).
- Lubar, K.** (2004). Color Intervals: Applying Concepts of Musical Consonance and Dissonance to Color. *Leonardo*, 37 (2), 127-132.
- Misek, R.** (2010). *Chromatic Cinema*. West Sussex, UK: John Wiley & Sons Ltd.
- Murphy, S.** (2006). The Major Tritone Progression in Recent Hollywood Science Fiction Films. *Music Theory Online*, 12 (2).
- Murphy, S.** (2014). Transformational Theory and the Analysis of Film Music. In D. P. Neumeyer (Ed.), *The Oxford Handbook of Film Music Studies* (pp. 471-499). New York: Oxford University Press.
- Neumeyer, D. P.** (1993). Schoenberg at the Movies: Dodecaphony and Film. *Music Theory Online*, 0 (1).
- Özdemir, T.** (2015). *The Role of Sound Design in Filmic Narration: Case Studies From Cinema of Turkey After 2000*. (PhD. Thesis). İstanbul Technical University, Institute of Social Sciences, İSTANBUL.
- Poast, M.** (2000). Color Music: Visual Color Notation for Musical Expression. *Leonardo*, 33(3). 215-221.

- Roeder, J.** (1993). Toward a Semiotic Evaluation of Music Analyses. *Music Theory Online*, 0 (5).
- Rosar, W.** (1983). Music for the Monsters: Universal Pictures' Horror Film Scores of the Thirties. *The Quarterly Journal of the Library of Congress*, 40 (4), 390-421.
- Samuels, R.** (1995). *Mahler's Sixth Symphony*. Cambridge: Cambridge University Press.
- Sanchez, I. M.** (2014). Around the Marvelous: Film Music Formulas from an Ethnomusicological Perspective. *Music and the Moving Image*, 7 (2), 34-75.
- Scoggin, L.** (2013). The Music of Fantasy Cinema. *Music Library Association. Notes*, 70 (1), 111-113. Retrieved from <http://160.75.22.2/docview/1433806267?accountid=11638>
- Studiobinder.** (2016). How to Use Color in Film: 50+ Examples of Movie Color Palettes. StudioBinder Inc.
- Tarasti, E.** (2012). *Semiotics of Classical Music*. Göttingen: Hubert & Co. GmbH & Co. KG.
- Timbre.** (2001). In Oxford Music Online. Retrieved October 20, 2018, from www.oxfordmusiconline.com
- Mehrabian, A. & Valdez, P.** (1994). Effects of Color on Emotions. *Journal of Experimental Psychology*, 123 (4), 394-409.
- Url-1**<<https://en.oxforddictionaries.com/definition/colour>>, date retrieved 9.11.2018.
- Url-2**<https://science.nasa.gov/ems/09_visiblelight>, date retrieved 10.11.2018.
- Url-3**<https://www.youtube.com/watch?v=2sc_O50-6nA>, date retrieved 3.9.2018.
- Url-4**<<https://www.youtube.com/watch?v=WXhWv-oljWQ>>, date retrieved 3.9.2018.
- Url-5**<<https://www.youtube.com/watch?v=LHvkZhH66cc>>, date retrieved, 3.9.2018.
- Url-6**<<https://deadline.com/2016/12/nocturnal-animals-tom-ford-abel-korzeniowski-composer-oscars-interview-1201866408/>>, date retrieved 1.9.2018.
- Url-7**<<http://magazine.scoreit.org/interview-abel-korzeniowski-nocturnal-animals/>>, date retrieved 2.9.2018.
- Url-8**<<https://www.youtube.com/watch?v=VytX-WPyshc>>, date retrieved 21.9.2018.

Url-9<<https://www.youtube.com/watch?v=OjFMqGI34Gk>>, date retrieved 21.9.2018.

Url-10<<https://www.independent.co.uk/arts-entertainment/films/features/nicolas-winding-refn-interview-the-neon-demon-a7405246.html>>, date retrieved 21.9.2018.

Url-11<<https://www.theguardian.com/global/2016/jul/04/inside-the-weird-world-of-the-neon-demon>>, date retrieved 21.9.2018.

Wells, A. (1980). Music and Visual Color: A Proposed Correlation. *Leonardo*, 13(2), 101-107.

Winding Refn, N. (Director). (2016). *The Neon Demon* [Motion Picture]. Denmark & USA.

Wingstedt, J. (2008). Making Music Mean: On Functions of, and Knowledge about, Narrative Music in Multimedia. (PhD. Thesis). Luleå University of Technology Department of Music and Media, Luleå, Sweden.



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