

PAPER DETAILS

TITLE: The Use of Baroque Music in Films and De Wit`s "The Monk and The Fish"

AUTHORS: Ersin ERTAN

PAGES: 86-96

ORIGINAL PDF URL: <https://dergipark.org.tr/tr/download/article-file/1441325>

THE USE OF BAROQUE MUSIC IN FILMS AND DE WIT'S "THE MONK AND THE FISH"

Ersin ERTAN*

Received: 10.12.2020- Accepted: 01.04.2021

Ertan, E. (2021). "The use of Baroque music in films and de Wit's "The Monk and the Fish".
Etkileşim, 7, 86-96. doi: 10.32739/etkilesim.2021.7.119

This study complies with research and publication ethics.

Abstract

This paper investigates the purpose of using Baroque music in movies and its relationship with the visuals in films. After briefly defining the term Baroque in the context of art, the use of Baroque music in artistic movies by referring to previous academic research will be mentioned. In this way, a gap in the field will be filled as the scholars usually do research on music or classical music in films. Moreover, Baroque music usually serves as a background element or accompaniment for the visuals in the films rather than complete synchronization. Before reaching a general conclusion, Michel Dudok de Wit's awarded animated film *The Monk and the Fish* (1994) will be the main focus here. Because in this film, a Baroque music piece, a modified version of Arcangelo Corelli's *La Follia* is mostly synchronized with the visuals.

Keywords: animation, music, visualization, Baroque, film.

* Scholar/PhD, Department of Visual Arts, Tomas Bata University in Zlin,
ertanpost@gmail.com, ORCID: 0000-0002-0348-9089

BAROK MÜZİĞİN FİMLERDE KULLANIMI VE DE WIT'İN "KEŞİŞ VE BALIK" FİLMİ

Ersin ERTAN*

Gönderim Tarihi: 10.12.2020- Kabul Tarihi: 01.04.2021

Ertan, E. (2021). "The use of Baroque music in films and de Wit's "The Monk and the Fish".
Etkileşim, 7, 86-96. doi: 10.32739/etkilesim.2021.7.119

Bu çalışma araştırma ve yayın etiğine uygun olarak gerçekleştirilmiştir.

Öz

Bu makale Barok müziğin filmlerde kullanım amacını ve filmlerde görsellerle ilişkisini araştırmaktadır. Sanat bağlamında Barok terimini kısaca tanımladıktan sonra, önceki akademik araştırmalara atıfta bulunarak Barok müziğin sanatsal filmlerde kullanılmasından bahsedilecektir. Bu şekilde, akademisyenlerin genellikle filmlerde müzik veya klasik müzik üzerine yaptıkları alandaki bir boşluk doldurulacaktır. Dahası, Barok müzik genellikle filmlerde tam senkronizasyondan ziyade görseller için bir arka plan öğesidir. Genel bir sonuca varmadan önce, Michel Dudok de Wit'in ödüllü animasyon filmi *The Monk and the Fish* (*Keşiş ve Balık*, 1994) burada ana odak noktası olacaktır. Çünkü bu filmde Barok bir müzik parçası olan Arcangelo Corelli'nin *La Follia*'sının yorumlanmış bir versiyonu çoğunlukla görsellerle senkronizedir.

Anahtar Kelimeler: animasyon, müzik, görselleştirme, Barok, film.

* Araştırmacı Doktor, Görsel Sanatlar Bölümü, Zlin Tomas Bata Üniversitesi,
ertanpost@gmail.com, ORCID: 0000-0002-0348-9089

Introduction

Extending from approximately 1600 to around 1750, Baroque is sometimes regarded as the visible 'decomposition' and 'decay' of the classical style of the Renaissance (Lambert, 2004: 18). It can be said that the rise of Western music, which gained full force in the Baroque period, had its foundations and beginnings during the Renaissance. As Vaubel (2005) also notes that contrast (counterpoint) and imitation are not only typical characteristics of Baroque music and its fugues, but also, they are typical of Baroque art in general (Vaubel, 2005: 291). Moreover, the music also was designed in a way that could function in different ways without losing its essential qualities (Hillier, 1997: 202). The musical application of rhetorical concepts such as *Figurenlehre*, a kind of composer's dictionary of music emotions (Vickhoff 2008: 16), was the elemental method to music composition until the end of the Baroque era (Chattah, 2006: 97). Taylor (1989) indicates that organ and harpsichord are characteristic instruments of the Baroque period as they construct a harmonic accompaniment for the other instruments based on the bass line indicated on the score (Taylor, 1989).

Baroque's influence can be observed in romantic composers and modern music. Some of its qualities such as grandeur, sensuous richness, drama, vitality, movement, tension, emotional exuberance, encouraged Richard Wagner's later concept of the *Gesamtkunstwerk*, an artwork that combines many art forms such as in opera (Nelson, 2015: 8). Today, jazz music shares many elements with Baroque music, such as the use of counterpoint as exemplified by Bach, in addition to both having their own version of figured bass (Mollaghan, 2011: 172).

In visual arts, many modern painters, such as Paul Klee, tried to visualize Bach's music. His painting, named "In Bach Style" sketches reminiscent of the musical score, is employed as a free linear framework, on which abstract symbols of stars, plants, and buildings are arranged (Düchting, 1997: 28-29). However, assigning distinct visual narratives to Baroque music can have difficulties, while this may not be true for Romantic music. Because many romantic music works possess strong original narrative elements such as Orff's *Carmina Burana* or Wagner's *Ring*. It can be said that, for this reason, Baroque music in movies serves mostly as background music rather than synchronization. This issue will be discussed in the following chapters of the research.

Methods

In this analysis and comparisons, firstly, the academic literature and movies will be reviewed. Afterward, the use of music visualization theories for the analysis of *The Monk and the Fish*, regarding Leitmotif, Synaesthesia, montage, harmony, experimentality, and synchronization (as many scholars such

as Claudia Gorbman, Nicholas Cook, and Wassily Kandinsky already reshaped these terms) will take place.

Here, *Synaesthesia* can be explained as an involuntary joining in which the real information of one sense is accompanied by a perception in another sense (Dann, 1998: 5). For instance, as for Kandinsky, as orange is red brought closer to humanity, so removing red through blue creates Violet, which has the tendency to move away from humanity (Kandinsky, 1946: 71). Another important term, the *Leitmotif* in its simplest terms, can be described as a recurring compositional and artistic motif in an opera, movie, or any art form which represents a specific person, idea, object, or emotion. For instance, when the most important element, "ring" in the movie of *Lord of the Rings* (2001), is seen, a specific melody with its variations is heard.

In general terms, the methods are comparative due to comparisons and also qualitative regarding the artistic approach for the reviews.

Baroque Music in Films

If we are looking for complete synchronization of the most popular Baroque music piece Bach's *Tocatta and Fugue in D Minor BWV 565*, we do not need to look any further than *Disney's Fantasia* in 1940 and 2000. The first one was abstract with some natural elements such as the sea, clouds, and mountains with the influence of Norman McLaren or Oscar Fischinger and while the latter is a typical *Disney* style as we see the humanized animals as visuals. Furthermore, the obvious connection between Baroque and John Whitney's works can be seen in his animations due to their mathematical structure, and twelve-tone compositions as Mollaghan notes one could speculate that this association exists predominantly between Whitney's film *Arabesque* (1975) specifically and Baroque music (Mollaghan, 2011: 232). Apart from animations, Baroque music finds its place in the movies, and it is mostly associated with genius especially in *A Beautiful Mind* (2001) and *Proof* (2005) as a background element because Baroque music, as Eaton (2008) notes, with its cultural associations of intellectualism, might also seem like an excellent choice to portray the mathematician (Eaton, 2008: 163). Another popular baroque piece, *Adagio in G minor* by Albinoni has been used as background music for such films as *Gallipoli*, television programs and in advertisements, to the point of becoming a cliché for self-consciously 'sad' moments (Morrel, 2015: 314). In addition, the use of the Baroque music in *The House of Mirth* sets up a complex series of associations regarding social class, "civilization" and nostalgia (Brownrigg, 2003: 180).

In more artistic movies such as in Francois Girard's *Red Violin* (1999), where the movie's main theme has been created in Baroque style, stylistic characteristics of the period's music such as clear diatonic harmonic progressions, and continuous rhythmic figuration reminiscent of the works by baroque composers (Chattah, 2006: 50). More experimental use can be observed in Andrei

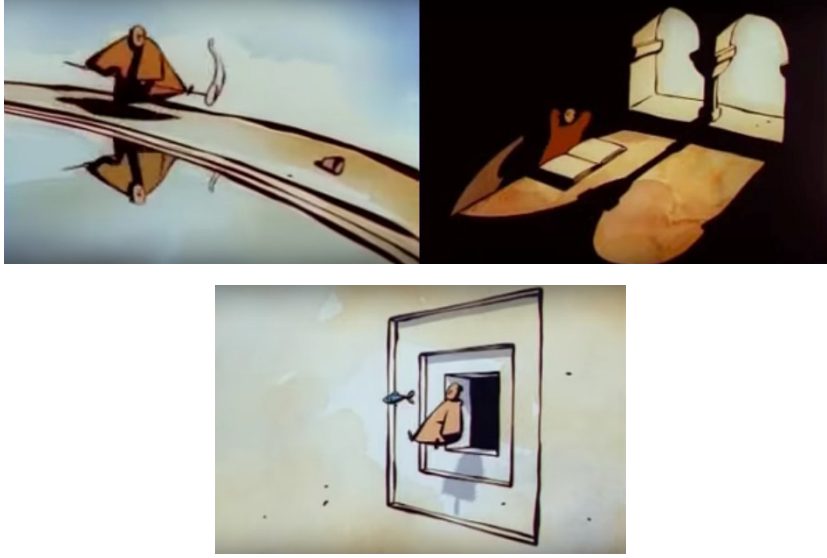
Tarkovsky's *Solaris*, when Johann Sebastian Bach's chorale prelude *Ich ruf zu dir, Herr Jesu Christ* is heard in the levitation scene that includes a man and a woman engage in a loving embrace as levitating slowly through a furnished room while the music renders this view in meta-diegetic level, adding a depth layer to the movie (Pontara, 2014).

"The Monk and the Fish" (1994)

1953 born Dutch animator, illustrator, and director Michael Dudok de Wit is known for his short animated movie *Father and Daughter* (2000), which won a BAFTA, the 2001 Academy Award for Best Animated Short, many other awards at festivals and *The Red Turtle* (2016), animated fantasy drama film that is premiered at the 2016 Cannes Film Festival and nominated for the Best Animated Feature Film. Dudok de Wit's experiments with music can be seen in his minimalist animation, *The Aroma of Tea* (2006), which is a story of a dot, finding its way through the abstract shapes similar to Zen brush strokes with the accompaniment of Corelli's Baroque music. But before all of these works, he created *The Monk and the Fish* in 1994 (Fig 1.); a short animated film tells the story of an insistent monk trying to catch an elusive fish with the synchronization of a baroque piece Corelli's *La Follia* based on the composer Serge Besset's new version for the film. The architectural tone in the film seems Christian, but the monks' appearance and the progression of the story have Buddhist elements similar to *The Aroma of Tea*. Moreover, *The Monk and the Fish* found its inspiration from *Ten Ox-Herding Pictures*, which is a series of Zen poems and images from 12th Century China, illustrating the journey to enlightenment through the story of an oxherd's strife with an incoherent bull. Despite the fact that he has changed his style to Miyazaki animation in his latest work *The Red Turtle* (2016) with the collaboration of *Ghibli* studios, as in all of Dudok de Wit's works, there are no close-up shots, and we see the characters mostly from a distance. Therefore, while the atmosphere and architecture make their contribution to music visualization, the main characters almost act as abstract elements. Even monk himself seems like a soft-edged triangle, with a little sphere on the top rather than a character. As a result, his works are usually formed of abstract, figurative, and spatial layers in the context of spirituality and mostly Baroque music visualization. Here, as Cook notes, the connotative qualities of the music complement the denotative qualities of the words and pictures, or the music interpret the words and pictures (Cook, 1998: 22). Last but not least, water as an element plays an important role in the film. Apart from being a habitat of the fish, it intertwines with the surreal architecture and creates a soothing effect similar to meditation. We see the monk's reflection on the water almost as liquid as a mirror, and this reflection can be read as a metaphor for finding oneself may require the purification in water, such as Baptism in Christianity. As de Wit puts, the images that follow represent the essence of the Zen philosophy. *The Monk and the Fish* is not a story about the solution of conflict; it's more about the rise above the conflict, the rise above

duality (Molinoff, 2009). Moreover, he has always been under the influence of Japanese, Chinese, and Korean calligraphy due to their way of leaving large space. Surely that is the most common point between his *The Aroma of Tea* and *The Monk and the Fish*, where the colossal space overwhelms the character or main element in the film.

Figure 1. Dudok, M. (1994)-Scenes from *The Monk and the Fish* (1994)



The Monk and the Fish starts with the tweet sounds while birds are flying around the temple tower, then Corelli's music starts playing. We see the distinct parts of the colossal and almost surreal temple. Monk stands in the middle of one of the circular temple bridges that are connected to a large pool. A fish jumps out of the water; as an answer, the monk jumps on the ground to show his excitement. The last notes of *La Follia's* intro are synchronized with his jumping movements. Monk goes back to his room to take some tools to catch the fish. Monk chases the fish with the cast. For a while, his movements are mirrored in the flute sound while the clarinet represents the fish. As the monk tries to catch the fish in a perspective view, clarinet passage accompanies his movements. In the second improved theme, the monk comes with a fishnet. The chasing in the pool is represented by the duet of clarinet and flute. As the second improved theme ends, strings take over the wind instruments. Gloomy strings accompany the scenes where the monk reads a book in the room. Sharp sun lights come through the window, fill the room. As the third theme evolves, monk calls help from the other monks. As they walk to the circular pool, their bouncing is represented with the clarinet in low pitch due to the heaviness of many monks. Clarinet's sound turns into a monk's voice as he tries to explain the situation. Other monks do not want to help, and they leave the scene. He gets angry, as he attempts to leave the

scene he trips over a bucket. As he tumbles and falls, bucket falls into his head. Bucket falling is represented by a bell sound. The scenes end with a silence longer than the one in original music after the falling of bucket. Monk cannot sleep due to thinking of catching the fish. His thinking is mirrored in a flute solo. He wakes up at night, goes to the circular pool, and lights up the candles very fast. We hear vibraphone sound for the very first time as it is synchronized with lighting up the candles. The next morning, we see the architectural character of the temple with the accompaniment of music, mixed with bird sounds. Suddenly, the duet of sharp flute and clarinet duet accompanies his movements. This time he uses a bow with the arrow as their pointed shapes are mirrored in the sharpness of music. As monk's jumping and bouncing are represented by flute sound, he falls into the pool to chase the fish while swimming. For the first time, we hear string pizzicato to represent the difference in the chasing as it continues through water channels. The tempo gets faster. Chasing continues through the narrow water channels. Timpani sound is heard for the first time as it strengthens the main theme that represents his bouncing. Monk keeps following the fish in surreal labyrinthine places with a perspective view, and almost every instrument in the music is heard. As they are about to leave the giant surreal temple and water channels, monk stops chasing the fish, and they start to levitate, the music descends to flute and soft string pizzicatos in slow tempo. They fade out in the sky and move away from the camera; music softly ends.

Result

Generally, it can be said that there is no distinct leitmotif attached to the monk, but the flute sound playing the main theme and its variations are heard when he moves. Gloomy strings, including contrabass and cello, mostly define the massiveness, dullness, and emptiness of the temple complex. As Eisenstein puts, this relationship is just as evident in the architectural landscape-classic architecture bearing the same relation to the classicists in music composition as the modern urban landscape bears to jazz. Indeed, Roman squares and villas, Versailles' parks and terraces could be "prototypes" for the structure of classical music (Eisenstein, 1957: 98). But on the other hand, this use seems cliché as particularly landscape shots without action seem to call for musical accompaniment, which then conforms to the stale programmatic patterns (Adorno and Eisler, 1947: 13). The main theme evolves with the variations as the events in the film are unfolded. As Stull notes, themes themselves can be lovely, powerful, heart-wrenching, or foreboding, but it is only in their development that we experience a sense of progress through music-dramatic (or musical-narrative) time (Stull, 2015: 56). Furthermore, not all the variations or specific instruments match the fish, monk, or camera movements. However, as we know, the leitmotif and its variations are associated with the monk's spiritual journey. Here we observe another type of mismatch, as Bordwell notes; "the musical sound causes us to anticipate the arrival of the referenced

character (...) to realize that the referenced character is significant in relation to events occurring onscreen" (Bordwell, 1985: 20).

The soundtrack of this film, *La Follia*, as one of the oldest European musical themes, has been used by many composers such as Vivaldi and Scarlatti. Arcangelo Corelli's *La Follia* in 1700 is one of the most popular ones, and it has been modified for *The Monk and the Fish* by the composer Serge Besset. Basically, he replaced the strings with winds, and as a result, we hear the main theme mostly from the flute and clarinet. Harpsichord still has its place as a chord, and the pauses between the passages have been prolonged to match the movements in the animation. Furthermore, towards the end, vibraphone and timpani beats were also added as the main character lights the candles and later bounces up and down. On the other hand, the synchronization between chasing and music gives the film a video game looking, and this feature adds another layer of aesthetic to its artistic elements. For instance, in the video game *Space Invaders*, the music increases in tempo when the player reaches the end of any level. This kind of synchronization, such as in tempo, pitch, timbre, and volume, were more common in many games.

Soft tones of yellow and orange dominate the visuals as soft blue-toned sky and water serve as a background element as a contrast. Monk's suit is surely a strong orange as in the suits of Buddhist monks. As orange is red brought closer to humanity, so removing red through blue creates Violet, which has the tendency to move away from humanity (Kandinsky, 1946: 71). When compared with the frame of mind of some individual, it would be capable of the color representation of madness - not melancholy or hypochondriacal mania but rather an attack of violent, raving lunacy (1946: 63-64). For Eisenstein it is more related to religion but also agrees with Kandinsky as he notes, in very large measure, no doubt, this was clearly the outcome of the whole of the Christian revulsion against the classic world the rejection of everything which stood as the symbol of joy and pride (Eisenstein, 1957: 26).

Discussion

Monk can be seen as a metaphor for spiritual purification rather than a religious figure that mirrored in the music as he lives a simple life and constraints himself from mundane affairs. Thus, he looks like an abstract element that overlaps with music's abstraction. Classical music's contribution to monks and their lives can be observed in other moves as well. For instance, as Eaton mentions, if Phillip Glass's use of indigenous instruments to mark a different culture -a conventional device- were the only part of his score to nod toward Tibet, then Scorsese might as well have chosen a composer of more conventional scores because this is equally possible within the Romantic idiom. For example, John's Williams's score for *Seven Years in Tibet* (1997), released the same year as *Kundun* (1997), employs the same indigenous sounds: Tibetan horns, cymbals, and Tibetan monk chanting (Eaton, 2008: 49). On the other

hand, interesting use of 'Monk' is seen in Laura Taler's choreographic and performance-based *Dances for a Small Screen: The Barber's Coffee Break* (1998), which is nominated for five Gemini Awards. This short film takes place in back and forth between a small, stark kitchen and a wide-open rural with some snow and trees. A monk (also a barber) prepares a coffee in the kitchen and dances in the open field on the red carpet with the accompaniment of Rossini's *Barber of Seville* (1813). The film cuts between the monk looking 'barber' having a cup of coffee and him dancing on a large scarlet rug in the middle of an icy cold field - the camera darts about to catch his waving hands, facial expressions and dancing body. Surely there is a connection between Seville Barber and the dancer monk barber because the aria is an ode to being a barber. Apart from that, the film is open to comments. The film and the aria end while he is looking out of the window and comes toward the camera in the barbershop. There is no specific leitmotif attached to this character, as in *The Monk and the Fish*. Moreover, as Gorbman notes, either the music resembles, or it contradicts the action or mood of what happens on the screen (Gorbman, 1987: 15) and here using a popular romantic aria about being a barber create a contrast to monk's life while baroque music sounds more religious and spiritual as in the monk and fish. Chion mentions that sound can provide unity through nondiegetic music: because this music is independent of the notion of real-time and space, it can cast the images into a homogenizing bath or current (Chion, 1994: 47). In this regard, while close shots that capture the barber's facial expressions, hand and body movement more suitable for the aria as it includes lyrics, shots from a distance showing architecture completes monk and fish's music similar to the fugue. The long pauses in the barber have been used deliberately to create another layer of contrast to Rossini's aria, and barber's thoughts, short pauses in *The Monk and the Fish* used only for synchronization. Surely barber does not concern about synchronization with the music at all. Seemingly in both films, they try to find a kind of spirit through a daily routine. In fact, break times, especially in daily routines, are mostly where we try to find the real meaning of life, have time to think about the universe and ourselves. The place doesn't matter; it can be a temple or barbershop, spirituality can be found through the music.

Conclusion

In this paper, Dudok De Wit's short animated film *The Monk and the Fish* has been analyzed in detail regarding music visualization. At first, the term Baroque along with Baroque music and its influence on visual arts, have been explained. Secondly, the analyzing methods for *The Monk and the Fish* have been briefly described. Before diving into the main analysis, the similar artistic use of Baroque music in another movies has been listed with descriptions. Finally, *The Monk and the Fish* has been analyzed with selected methods and also discussed by comparing to similar movies in the next chapter.

The Monk and the Fish, created in 1994, was an experimental music visualization work that was ahead of the curve. Despite being the use of Baroque music is harder than romantic ones, and it usually serves as a background element, this film artistically creates a poetic synchronization. Thus, the animated film is suitable for Leitmotif and Synaesthesia analysis, and it offers a wide range of artistic use of montage with music. Surely it influenced many movies as this comparison was analyzed in the discussion section. Furthermore, it even unwittingly takes the benefits of video game aesthetics as the chasing and music match, and tempo gets faster as the movie comes to an end. There is no doubt that gaming elements will be used more in music visualization in the near future.

As a result, analyzing one of the most important short animated films regarding music visualization can enlighten us to create more and more artistic relationships between historical assets such as Baroque and new technological trends such as computer games and animation. This relationship can lead filmmakers to be more creative with deep content in their movies.

References

- Adorno, T. and Eisler, H. (1947). *Composing for the films*. London: The Athlone Press. ISBN: 9780485121070.
- Bordwell, D. (1985). *Narration in the fiction film*. USA: University of Wisconsin Press. ISBN-13: 978-0299101749. ISBN-10: 9780299101749.
- Brownrigg, M. (2003). *Film music and film genre* (Unpublished PhD thesis). Philosophy University of Stirling, UK.
- Chattah, J. (2006). *Semiotics, pragmatics, and metaphor in film music analysis* (Unpublished PhD thesis). College of Music the Graduate School of Florida State University, USA.
- Chion, M. (1994). *Audio-vision: Sound on screen*. New York: Colombia University Press. ISBN: 0-231-07898-6. ISBN. 0-231-07899-4 (pbk.).
- Cook, N. (1998). *Analysing musical multimedia*. New York: Oxford University Press. ISBN: 0-19-816737-7.
- Dann, K. (1998). *Bright colors falsely seen: Synaesthesia and the search for transcendental knowledge*. New Haven, CT: Yale University Press.
- Duchting, H. (1997). *Paul Klee: Painting music*. Munich: Prestel. ISBN 978-3-791-4750-9.
- Dudok de Wit, M. (1994). Scenes from "The Monk and the Fish". Wanna Bana Animada (uploader). 14th January 2019. <https://www.youtube.com/watch?v=kt-Ga0fSA6Gg&t=78s>. 5 May 2020.
- Eaton, R. M. D. (2008) *Unheard minimalisms: The functions of the minimalist technique in film scores* (Unpublished PhD thesis). Faculty of the Graduate School of

- the University of Texas, USA.
- Eisenstein, S. (1957). *Film sense*. New York: Meridian Books. ASIN: B0007EDFVA.
- Gorbman, C. (1987). *Unheard melodies*. London: BFI Publishing & USA: Indiana University Press. ISBN: 0-253-20436-4 (pbk.).
- Hillier, P. (1997). *Arvo Pärt*. New York: Oxford University Press. ISBN-10: 0198166168. ISBN-13: 978-0198166160.
- Kandinsky, W. (1946). *On the spiritual in art*. New York City: The Solomon R. Guggenheim Foundation.
- Lambert, G. (2004). *The return of the baroque in modern culture*. London: Continuum. ISBN 0-8264-6648-6.
- Molinoff, S. (2009). A beautiful language. *The Oxonian Review*, 9(3), <http://www.oxonianreview.org/wp/a-beautiful-language/>. 21 May 2020.
- Mollaghan, A. (2011). *The musicality of the visual music film* (Unpublished PhD thesis). Department of Theatre, Film and Television Studies University of Glasgow, Scotland.
- Morrel, B. (2015). How film and tv music communicate. 3. https://www.academia.edu/12628840/How_Film_and_TV_Music_Communicate. 21 May 2020.
- Nelson, N. (2015). *Synaesthesia, harmony and discord in the work of Wassily Kandinsky & Arnold Schoenberg* (Unpublished Master Thesis). Master of Arts, History of Art to the School of Humanities, University of Buckingham, UK.
- Pontara, T. (2014). Bach at the space station: Hermeneutic pliability and multiplying gaps in Andrei Tarkovsky's *Solaris*. *Music, Sound and the Moving Image*. 8(1). doi:10.3828.
- Stull, M. B. (2015). *Understanding the leitmotif: From Wagner to Hollywood film music*. London: Cambridge University Press. ISBN: 978-1-107-09839-8.
- Taylor, E. (1989). *The AB guide to music theory*. London: Associated Board of the Royal Schools of Music. ISBN-10: 1854724460. ISBN-13: 978-1854724465.
- Vaubel, R. (2005). The role of competition in the rise of baroque and renaissance music. *Journal of Cultural Economics*, 29(277-297), 291-294. doi: 10.1007/s10824-005-0699-9.
- Vickhoff, B. (2008). *A perspective theory of music perception and emotion* (Unpublished PhD thesis). Department of Culture. Aesthetics and Media, University of Gothenburg, Sweden. ISSN: 1654-6261 ISBN 978-91-85974-06-1.

Conflict of interest: There are no conflicts of interest to declare.

Financial support: No funding was received for this study.

Çıkar çatışması: Çıkar çatışması bulunmamaktadır.

Finansal destek: Finansal destek bulunmamaktadır.

