

SVEUČILIŠTE U ZAGREBU

FILOZOFSKI FAKULTET

Odsjek za anglistiku

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MULTIMODAL MEANING CONSTRUAL IN VISUAL MEDIA

Diplomski rad

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Zagreb, listopad 2017.

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Diploma thesis

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Zagreb, October 2017

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## 1. Introduction

In this paper I will deal with the meaning of music in video games. By means of introduction, I will offer a brief history of music in games, after which I will dip into the concept of immersion, and finish the introductory part with an explanation of the difference between the linearity of movies and interactivity of video games. The main topics will be diegetic and non-diegetic music, cultural models, and establishing identity through music. I will finish with a discussion of the topics presented and will name some examples. I intend to show that music can serve as a medium to carry meaning in video games, and explain our perception of music when we experience it in this manner. I must note that I will focus on analysing music that comes solely from gameplay and our perception of music in this dynamic environment. I mention this because videogames sometimes also have cutscenes which most often serve as a way to introduce the story to the player. However, cutscenes are essentially short videos, and therefore do not require input from the player. As such they are beyond the scope of this paper.

## 2. Theoretical background

The reasons for the existence of music in any visual media (not just games, which I will focus on in this paper) are numerous, but the main ones are attraction to the product and easier immersion with, if possible, immediate and constant interest. Ads and commercials used in marketing the product usually have profound usage of music and sound effects whose function is to attract and encourage users to persevere within the game.

When game developers make a game, it is in their interest to make the game attractive in order for their player base to be as large as possible. According to Collins, music and sound have an attract function (Collins 2008, pg. 7).

When arcade games were gaining in popularity, game manufacturers realized that sound and music could be utilized to give people a feeling like they accomplished something within the game, and this resulted in people spending more time playing them. Gambling machine manufacturers were particularly interested in this realization, and research on the topic proved that sound can be used to attract and keep people playing longer. Game developers who went on to making non-gambling games brought the sounds' "call function" into the general gaming industry (Collins 2008, pg.7-8).

According to Sander Huiberts, a lot of people claim they enjoy being immersed when playing a videogame (Huiberts 2010, pg. 36). The sense of immersion depends on a lot of factors, and the level of immersion of a game is directly connected with how successful it is. Immersion in a game, Huiberts continues, is comprised of three elements. First is the feeling of being moved to and surrounded by the game world, second is absorption in the in-game activity, and third is the feeling of identification with the situation or a character of a game. Of course, music and sound effects are used to heighten these elements, deepening the connection to the

gameworld. Like with the gambling machines, music and sound effects are used to divert people's attention, and to keep them interested.

At Gamescom's Video Games Live Concert 2016, its host Tommy Talarico, a video game music composer had this to say:

People always ask me why do so many people love video game music. I think the reason is that when you play a video game you become that character that's in there, and the music becomes the soundtrack of your life as you're playing the game. It's a very unique experience. (...) It's not just music you're listening to, it's music that you're a part of and becomes a part of you.<sup>1</sup>

Most visual media such as movies, series and television in general, are presented to the viewer linearly in both storytelling and music and sound effects; they have a beginning and an end. Kramer claims that music is linear from its very inception, because its progression occurs as a result of events that have happened previously within the music (Kramer 1988, pg. 20). Videogames, however, are not linear but interactive. While in movies and television the audience cannot in any way influence the outcome, in videogames it is the opposite: the audience controls the flow of what happens within the game. Being so dynamic in nature, and the behavior of its audience or players very hard to predict, making music for videogames has turned out to be somewhat challenging for the composers. How does one incorporate something linear into something that is un-linear by its very definition?

Michael Land, famous composer behind the music of the Monkey Island series, came up with a possible solution to this problem. He developed a so-called iMuse system that helps composers make music appropriate to in-game situations.

The goal behind iMuse was to make the music respond to the unpredictable interactive changes in the game as if the music had been composed with advance knowledge about what was going to happen. (...) The system was designed to allow the composer to write music with lots of layers and lots of paths, and then during the gameplay the system would choose the layers and paths that worked best for the situation.<sup>2</sup>

The system gave composers unprecedented ability to manipulate the music to be adaptable and composed of many individual parts and sections but still sound fluid and uninterrupted.

From Kramer's statement we can deduce that videogame music is non-linear because it directly depends on the in-game situation that came about due to the actions of the player. Games have a branching structure, and game music attempts to follow suit. Players are constantly presented with options that have been put there by the developers, and they in such a way determine what happens in the game. For example, in the Might & Magic series there is usually a choice put before the players at a certain point in the game to continue as either good or evil, and the ending sequence depends directly on that choice.

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<sup>1</sup> <https://youtu.be/mVlpkEGBpno?t=42m25s> (Example 1)

<sup>2</sup> <http://www.gsoundtracks.com/interviews/land.htm>

In videogames, the music, as well as audio as a whole in general, is not a separate element that stands on its own. It is a component that is closely embedded with all other components that make a videogame complete, resulting in a fuller audio-visual multimodal experience.

## 2.1 Diegetic vs. non-diegetic music

Diegesis is a form of storytelling where there is a narrator who summarizes events in the plot and comments on the conversations, thoughts, etc., of the characters.<sup>3</sup> Mimesis is the opposite of this, where the story is told to the audience simply by showing events happen and seeing characters talk and interact with each other.<sup>4</sup> Both mimesis and diegesis can exist in a video game, but music can only be either diegetic or non-diegetic. Non-diegetic music in video games is the commonest, the kind that plays in the background but is not coming from the gameworld itself. Collins describes a non-diegetic sound as "any sound that occurs in a game which does not take place in the narrative space of the game." (Collins 2008, pg. 173)

Diegetic music, on the other hand, is the one that obviously exists in the gameworld as well, i.e. a music that is being played by a band, or a radio which the protagonist can hear and react to. An example of this would be *Grand Theft Auto 3*<sup>5</sup> where it is possible to listen to the radio and change channels upon entering a vehicle. Using diegetic music helps developers create a greater feeling of immersion into the game. However, even though games are not films, some games deliberately want to create a cinematic impression. The *Command and Conquer*<sup>6</sup> series were famous for their live-action cinematic intros and mission briefings recorded with actual actors, as well as the so-called "interactive movies". Interactive movies are exactly that, movies which at certain points offer their audience the option to choose a path, usually an ending (for example, *Daedalus Encounter*<sup>7</sup> had three possible endings). However, as mentioned earlier, music in cinematic cutscenes is not the topic of this paper.

## 2.2 Establishing identity through music

*Tetris*<sup>8</sup> is to this day one of the most known-about games in the world. People who never played any videogame in their lives at least heard about Tetris. Its music theme is also iconic, although maybe not as well known as the game itself. However, it is considered common knowledge what the game is about, and the music theme cannot be attributed with anything

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<sup>3</sup> <http://www.dictionary.com/browse/diegesis>

<sup>4</sup> <http://www.dictionary.com/browse/mimesis>

<sup>5</sup> Developed by DMA Design, published by Rockstar Games, 2001

<sup>6</sup> Developed by Westwood Studios and Looking Glass Studios, published by Virgin Interactive, Sega, Nintendo and Electronic Arts

<sup>7</sup> Developed by Mechadeus, published by Virgin Interactive, 1995

<sup>8</sup> Designed by Alexey Pajitnov, various subsequent developers and publishers, 1984

other than Tetris. In other words, the theme established the game's identity. Games can establish their identities in a variety of ways, not just through music, depending on the level of their complexity. From the simplest games like Tetris, where in addition to the core gameplay the music is the only audio component, to the more complex games like World of Warcraft, or the Civilization series, which have a number of elements and multiple musical themes.

## 2.3 Cultural models

What makes a sad music sad, or a happy music happy? Why do we perceive silent, slow, tender-sounding tones as romantic, or loud, fast-paced tones as aggressive or violent? What makes us perceive these sounds as such? The way we perceive various images and sounds is directly connected to cultural models. We use cultural models and culturally shaped mental maps to organize and understand our social world. They are made up of culturally derived ideas and practices that we utilize in everyday life. Cultural models help us define social values such as how to be a person, what is considered good, and most importantly, what is considered wrong. They give form and direction to individual experiences by shaping and informing perception, cognition, emotion and motivation.<sup>9</sup> Holland and Quinn also say "cultural models are presupposed, taken-for-granted models of the world that are widely shared by the members of a society and that play an enormous role in their understanding of that world and their behavior in it."<sup>10</sup> Nelson Goodman has developed a theory where, for example, a painting is a symbol in the same way a music or a sculpture is. These artistic symbols are regarded as expressive; a painting with prevalent grey tones and a somber scene is regarded as "sad". This sadness is not an attribute of the symbol, but is instead metaphorical. When we describe the painting as "sad", according to Goodman, we "transfer a system of concepts from its typical realm (the emotional states associated with sentient beings) into a new realm (colors and shapes on a canvas)." (Gibbs 2008, pg. 504)

Roger Scruton has a similar theory of transferring concepts from other domains. Scruton's aesthetic theory places works of art into intentional realms. This theory led Scruton to conclude that to hear various sounds as music requires perceiving these sounds as concepts which originated from some other, different domain. For example, when we hear a singer perform an ascending or descending intonation, our perception of the sound's "movement" is an illusion; no actual movement in physical space occurred. Jonathan Kramer also holds a similar stance towards this: "Nothing really *moves* in music except vibrating parts of instruments and the molecules of air that strike our eardrums." (Kramer 1988, pg. 25) Here is an example of the illusion of an "ascending" tone:

<https://www.youtube.com/watch?v=Z8xNeYcmBhY> (Example 2)

For Scruton, this illusion is crucial to viewing the sequence of notes as music; we associate the notes' succession to physical objects moving through space. Therefore, the metaphorical

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<sup>9</sup> [http://www.arizona.edu/sites/default/files/cultural\\_models.pdf](http://www.arizona.edu/sites/default/files/cultural_models.pdf)

<sup>10</sup> [http://www.tabel.tcu.edu.tw/r\\_Cultural\\_Models.html](http://www.tabel.tcu.edu.tw/r_Cultural_Models.html), first paragraph



transfer of concepts from one metaphorical domain (that of space, movement and physical objects) which are applied to another (sounds and music) is pivotal to perceiving sounds as music. Scruton said: "If we take away the metaphors of movement, of space, of chords as objects, of melodies as advancing and retreating, as moving up and down - if we take those metaphors away, nothing of music remains, but only sound." (Gibbs 2008, pg. 505)

However, a notion arose that metaphor is not an accurate enough a tool to determine the essential and true properties of music. Some music theorists believed that both Scruton and Goodman's perception and understanding of music was flawed. While Goodman denied music its expressivity, Scruton could not explain how music could be connected to metaphor.

Music theorists like Naomi Cumming and Lydia Goehr claim that both Goodman and Scruton are somewhat off-point. Cumming claims Scruton's differentiation between literal and figurative language is inadequate when it comes to using language to define music. This leads to a problem in philosophic writings about music. Language can offer a certain level and amount of factuality in conceptualization and grammar, and is considered as the "gold standard" when dealing with these aspects. Music, however, having an altogether different "dimension of existence" so to speak, can not be as easily and satisfactorily defined if language is the tool we choose to do it with. Similarly, Goehr claims that music is a general metaphor for everything and anything that otherwise cannot be known through the usual cognitive or rational means. (Gibbs 2008, pg. 505) The mystery of music is not "that which cannot be spoken of", but what cannot be described. In the end, if we use metaphor to explain music, metaphors being used for this themselves still being largely unexamined, is also a testament to the state of music's indescribability. (Gibbs 2008, pg. 505)

However, it is my opinion that the word "indescribable" may be too all-inclusive when used in the context of explaining and examining music. Music may be difficult to describe and place within the realm of the human language, but it is not unfathomable.

### 3. The Study: Music in World of Warcraft

I will use the theories of cultural models and identity establishment on the example of the video game World of Warcraft. World of Warcraft is a fantasy-themed MMO (massive multiplayer online game) created by Blizzard Entertainment in 2004. Gameplay revolves around creating a character of a certain race and class and performing quests, killing monsters, and gaining enough experience points to achieve the "level cap", in other words the maximum allowed number of power levels a character can obtain. World of Warcraft's first expansion, The Burning Crusade (2007), introduced new "starting" zones and races. Players who would choose to play a character of this new race would start in the new starting zone. In the new zones, specific music would be heard in the background, which is one of many defining elements of the new race. I am going to focus on the blood elf race and show how the music helps establish the feeling of identity and belonging, as well as how it takes advantage of supposed established cultural standards and values in combination with the visual surroundings.

Players' newly-made blood elf characters will find themselves in the starting zone, and in their adventures begin familiarizing themselves with the race's identity. This identity will be relayed to them both visually and auditorily. Granted, visual details will contribute more to the establishment of this identity, but the musical component is also relevant. Once the players are done with their character creation and find themselves in the gameworld, they can hear the music from the beginning, which, consequently, becomes part of the process of identity building. As the players play and build their character, the music starts to appear familiar, and becomes more and more connected with the "theme" of this fictional race of people. The developers were very careful to create a space that possesses a consistent visual pattern, but is at the same time dynamic and does not repeat itself (thus becoming boring and losing its attraction function). Visually, everything from the specific type of architecture of the buildings, the look of the wilderness and the type of creatures players can encounter, down to the style and colour of the non-player characters' clothing, all this gets connected with the background music which itself has its own specific style and musical instruments being used.



As the players roam around the environment, they participate, observe and generally soak in the visual components around them. As mentioned before, every little detail contributes to the general identity of the race: colours, patterns, clothing and architecture style, as well as types of creatures the players can encounter. Specifically, the Blood Elf starting zone is booming with bright colours: red, orange, yellow or gold, and green, and they are seen throughout the environment. The very first image players see when they appear in the gameworld is one brimming with bright colours, and they continue to see such imagery throughout the zone. The non-player characters' clothes are also drawn with the same or similar colours and patterns as the ones observed in the gameworld. The visual look of buildings and the general architecture style all have similar patterns and are painted in colours that match the surroundings of the wilderness. All the while the music is unchanged in the background, furthering the consistent pattern of the race's identity. The music's style starts to get connected to the visuals and deepen the connection, making a detailed mental image

which is evoked in whole if only one element is experienced. If a person hears only the music either in the game, or outside it, that mental image of bright colours, clothing style, and the look of buildings are all evoked, which makes music an integral part in creating the fictional identity of the (in this case) Blood Elf race. Put more simply, the music bonds itself with the visual cues that the players experience.



In that starting zone there are a lot of individual tracks, but they all have the same distinct style, same musical instruments that are used which make all musical pieces recognizable, despite each track being different. As players progress through the zone, they hear new music that have the same musical elements, which should by that point sound familiar to them, and the style and the overall "feel" of the blood elves' identity is established and obvious.

Even though the tracks which are heard at any given time are mostly randomly chosen by the game, I am going to choose the one at the following link for a more thorough analysis as a typical representative music of the beginning zone.

[https://www.youtube.com/watch?v=aiW7\\_h3kwrQ](https://www.youtube.com/watch?v=aiW7_h3kwrQ) (Example 3)

The two main instruments that lead the piece are harp and bass. The harp is heard first for a few seconds, after which the bass begins to lead the melody and moves the harp into the background. From there on the bass is the main instrument that is heard in the fore. The use of these two main instruments, as well as a choir in most other pieces, implies a grand and sophisticated high culture. The rhythm is not very fast, indicating stability and meticulousness, as well as nobility and grace. I draw this conclusion from a comparison with another race's musical theme in the game, the goblins, who are the complete opposite of the blood elves.



The contrasting theme to the blood elves' one is the goblin theme, heard in the following link: <https://www.youtube.com/watch?v=-SuyFxoM06g> (Example 4)

The goblins are small in stature, fast and jittery. They are entrepreneurs and very industrious, but at the same time superficial, clumsy, quick to blame others for their failures, and everything they do in their lives is to make money, as quickly as possible with as little effort as possible. All these traits are compacted into their theme music; the fast rhythm, the sound of whistling in the background, and the trumpets are the instruments that stand out the most. Their music sounds quick, just as the goblins are presented visually, and this symbolises their industriousness and superficiality, as well as their general speedy movements, and nervous demeanor. So when we compare these helter-skelter goblins to the calm and noble-sounding blood elves, the music seems to tell us and imply a race's characteristics, even more so accurately than the visual details.

In all these cases, music was used to imply and put forward certain racial characteristics with specific musical instruments in either a fast or slow rhythm and tempo. These elements can be directly connected with a type of demeanour or racial traits in a metaphorical way. In other words, the way in which a musical theme "manifests" itself gets translated into the objects that the music is a theme of.

#### 4. Discussion

I mentioned in this paper three aspects that are present in any music in a video game: cultural models, diegesis, and identity establishment. There are many more that could be listed as well, but I think these are the ones that encompass most of the aspects that are immediately recognized. Any musical piece has all three at the same time, with a varying degree of obviousness. By "degree of obviousness" I mean that while diegesis could be a bit obscure, it is generally agreed upon there are musical themes which serve as a way to identify a character (identity establishment). This is present in all visual media, not just video games. As an

example, I will mention the Diablo<sup>11</sup> series and its Tristram theme<sup>12</sup>. In Diablo I, Tristram is the starting location from which the player embarks on their journey and the Tristram theme is heard in the background whenever the player is in town. In the sequel the town is destroyed, however the music is the same. Regardless if the town is intact or not, its identity remains which is depicted through its music. When the player defeats Diablo, a short death sequence is shown with a silent accompanying sound of the guitar from the Tristram theme. The sound is effectively telling the player they managed to avenge Tristram's destruction<sup>13</sup>.

Homeworld<sup>14</sup> is a similar example, but more emotionally charged. It is a real-time strategy game where the player takes control of spaceships and uses them to solve missions in which one or more objectives need to be completed. Samuel Barber's Adagio for Strings is used in a non-diegetic manner to try to emotionally connect the player to the Mothership. The Mothership is the staple of the gameplay and must be protected at all times. Music instills both the feelings of pride, joy and satisfaction in one of the opening sequences of the game<sup>15</sup>, as well as feelings of sadness, loss, and anger in one of the later missions<sup>16</sup>. In the first mission Barber's piece is used only in the cutscene, but in the third and last mission it is used throughout the duration of the gameplay. Another way to interpret the piece is that it gives the sense of being lost, confused or without foundation, all of which induce that feeling of sadness<sup>17</sup>.

In the context of this paper, music is multimodal in the way that it can appear in any visual media, be it cartoons, films or video games. But there is another layer of its "multimodalness"; it can have multiple roles as well. Music can serve more than one purpose. It can be used to carry a subtle meaning, create a mood or atmosphere, as well as induce emotional response from those experiencing it. Music is the developers' nonverbal message to the players. From the simplest uses of using music to put forth an atmosphere and use it to reinforce the impression of what is seen on the screen, to the more complex usages such as music that evolves and becomes more intricate as gameplay progresses. Like in the short sound that is heard in the Diablo's death sequence, as well as Samuel Barber's piece being used throughout the final mission of Homeworld, the music is telling the player "this is what you fought for, this is why you are here." In the Elder Scrolls<sup>18</sup> series, there are two types of music a player can hear, exploration and combat. As you might expect, the exploration music sounds calming, slow, and silent, intended to relax the player and seamlessly blend into the peaceful surroundings, while the combat music has a faster tempo, is seemingly louder, and often uses drums to sound more aggressive. The message here is "you are under attack, defend yourself!" Music that evolves and "develops itself" can be heard in city-building or

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<sup>11</sup> Developed by Blizzard North, published by Blizzard Entertainment, Ubi Soft Entertainment and Electronic Arts, 1996

<sup>12</sup> <https://www.youtube.com/watch?v=XheJnmLAWhk> (Example 5)

<sup>13</sup> <https://youtu.be/4tD7TOEWRvQ?t=26m23s> (Example 6)

<sup>14</sup> Developed by Relic Entertainment, published by Sierra Studios, 1999

<sup>15</sup> [https://www.youtube.com/watch?v=q\\_eAxp6AZ6k](https://www.youtube.com/watch?v=q_eAxp6AZ6k) (Example 7)

<sup>16</sup> <https://www.youtube.com/watch?v=u3fyt322eGo> (Example 8)

<sup>17</sup> <https://www.quora.com/What-tools-does-Samuel-Barber-utilize-regarding-music-theory-that-makes-Adagio-for-Strings-so-sad> (first comment, first paragraph)

<sup>18</sup> Primary developer and publisher: Bethesda Softworks, multiple others along the course of the series' existence, 1994

empire-building simulators such as *Sim City*<sup>19</sup> or *Civilization VI*<sup>20</sup>. Music is first heard as a simple tune, with only few instruments used. But as the situation in the game progresses, so does the music, and from a simple tune and a couple of instruments, not before long we hear it evolve to a full-fledged symphony with multiple instruments. In *Sim City* the opening music<sup>21</sup> relates to the player's city still being small with only a handful of houses and a small population, so the tune is neither loud nor too complicated, but as the player's city grows in size and complexity so does the accompanying music<sup>22</sup> which is reflecting the level of development. A similar thing happens in *Civilization VI*. Every nation in the game has its national music accompanied with it (for example, England's is Scarborough Fair<sup>23</sup>). At the beginning of the game the music is still simple and quiet, using only one or two instruments. This indicates the player's civilization is still in its infancy, struggling to survive, discovering the world around it, barely making ends meet. But like in *Sim City*, music evolves as the player's civilization gets larger, stronger, more developed. The music is following the in-game situation and reflects the level of development by being itself more complex. The player is probably aware of the stage their game is in, but the music is additionally confirming it.

Everything any music is in any game, besides being used for whichever intended role, is that it is sending a subtle, nonverbal message to the player. These roles and intentions for music can be all blended into a single musical piece, or several different ones. The power of music can lie in people not acknowledging it properly, ignoring it or thinking it does not matter, but ultimately it is a powerful tool of an unconventional way to carry across an idea or expression.

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<sup>19</sup> Developed by Maxis, published by Electronic Arts, 2013

<sup>20</sup> Developed by Firaxis, published by 2K Games, 2016

<sup>21</sup> "Population = 1": <https://www.youtube.com/watch?v=fNv5KO4gPHM> (Example 9)

<sup>22</sup> "Metropolis Made Easy": <https://www.youtube.com/watch?v=rEV9u4ktDtI> (Example 10)

<sup>23</sup> <https://www.youtube.com/watch?v=CVI3J4PYWTY> (Example 11)

## 5. Conclusion

In this paper I tackled the notion of meaning of music in video games. I touched upon a brief history of music in games, dipped into the concept of immersion, and finished that introductory part by explaining the difference between the linearity and interactivity of video games. The main topics were diegetic and non-diegetic music, cultural models, and establishing identity through music. I wrapped up with a discussion of said topics and listed some examples. The goal and intent of this paper was to prove that music can convey meaning in video games, and to explain our perception of music when experienced in this manner.

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