Sounding Ethics: Musical Signification of Moral Choices in Video Games

Hayden Mesnick
hmesnic@bgsu.edu

Follow this and additional works at: https://scholarworks.bgsu.edu/honorsprojects

Part of the Musicology Commons, and the Other Film and Media Studies Commons

How does access to this work benefit you? Let us know!

Repository Citation
https://scholarworks.bgsu.edu/honorsprojects/925

This work is brought to you for free and open access by the Student Scholarship at ScholarWorks@BGSU. It has been accepted for inclusion in Honors Projects by an authorized administrator of ScholarWorks@BGSU.
Sounding Ethics: Musical Signification of Moral Choices in Video Games

Hayden Mesnick

Honors Project

Elainie Lillios & Ethan Jordan

December 3, 2023
Abstract

Interactivity is what distinguishes video games as a medium. In “moral choice video games,” or games in which the moral alignment of player choices affects plot and gameplay, the music often reflects the branching storylines. While scholarship exists that explores musical signifiers in video games, and scholarship alike exists that investigates moral choice video games, a gap in literature exists at the juncture of these two topics. This paper explores two moral choice video games—Undertale (Toby Fox, 2015) and Red Dead Redemption 2 (Rockstar Games, 2018)—in order to identify musical signifiers used by each game’s composer to represent these levels of morality and seek trends between the two that may apply to other games. Ultimately, two factors arose—depth and space—that distinguish moral musical cues from immoral ones. This analysis presents both an introduction to theory regarding moral signifiers in interactive media and a potential guide for composers wishing to score moral choice video games.

Keywords: ludomusicology, moral choice video games, signification, topic theory
Introduction

In 1978, Taito Corporation released *Space Invaders*, the first video game with a continuous soundtrack. While games before *Space Invaders* included music, these tracks were limited to specific moments, such as title themes. The music in *Space Invaders* is incredibly simple—a looping four-note bass line that speeds up over the course of each play—but it launched an entire tradition of music that centers intermedia and interactivity. Technological advancements, such as programmable sound generators, samplers, MIDI (Musical Instrument Digital Interface), and sound files, have allowed for the expansion of video game sound to include broader instrumentations, more tracks, and interactive music.¹

Interactivity is what distinguishes video games as a medium. Many plot-based video games present moral dilemmas that can impact the narrative—take, for example, the *Mass Effect* trilogy, in which a player’s choice to help Wrex in the first game determines whether Wrex attacks the protagonist in the third installment.² In games where player choice affects plot and gameplay, the music often reflects the branching storylines. Although literature exists regarding “moral choice video games,” which is the term I use in this text, no significant discussion has taken place concerning how moral choices are reflected in a video game’s musical score.

I have identified two games in which musical cues are dependent on the player’s moral choices.³ In *Undertale* (Toby Fox, 2015), the plot progresses distinctly depending on whether the

---

¹ Karen Collins, *Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design* (Cambridge: MIT Press, 2008). This paragraph is adapted from program notes I wrote in November 2023 for an event titled *Forum 6: Video Game Music*.


³ Although this likely goes without saying, I would like to insert a spoiler warning here: if you would rather play the games first, stop reading now.
protagonist kills or spares monsters; each path contains unique or altered musical cues. In *Red Dead Redemption 2* (Rockstar Games, 2018), the musical distinctions are more subtle, but nevertheless reflect the protagonist’s level of “Honor.” In both games, the composer or music director consciously invokes unique musical cues for different levels of morality. In this paper, I explore the musical signifiers used by each game’s composer to represent these levels of morality and seek trends between the two that may apply to other games. Ultimately, I identify two factors—depth and space—that distinguish moral musical cues from immoral ones. This analysis presents both an introduction to theory regarding moral signifiers in interactive media and a potential guide for composers wishing to score moral choice video games.

**Literature Review**

The literature referenced for this project encompasses a broad span of topics, including ludomusicology, psychology, topic theory, intermedia, popular culture, computer science, and beyond. Thus, it is impossible within the scope of this paper to approach every relevant piece of scholarship. Instead, I will focus on texts that particularly address topic theory in video games and scholarship regarding moral choice video games.

---

4 Toby Fox, *Undertale*, Toby Fox (OS X, Windows, Linux, PlayStation 4, PlayStation Vita, Nintendo Switch, Xbox One), 2015.
5 Rockstar Studios, *Red Dead Redemption 2*, Rockstar Games (PlayStation 4, Xbox One, Windows, Stadia), 2018.
Ludomusicology & Game Score Analysis

Scholars such as musicologist Juan Pablo Fernández-Cortés point to Guillaume Laroche as responsible for coining the term “ludomusicology.” Ludomusicology, a combination of ludology (the study of games; in this case, video games) and musicology (the study of music), is concerned with the study of music in video games. It is inherently interdisciplinary—composer Pieter Smal identifies marketing, music education, psychology, and history as a few of the many fields with which ludomusicology interacts.

In Understanding Game Music, musicologist Tim Summers provides a list of characteristics to consider when analyzing in-game music. He discusses interactivity as a trait unique to game music and investigates how game scores may be different for each play, especially if a player plays “against the grain” of the game’s intended path. Some analytical frames Summers describes include motives and themes, harmony, topic analysis, psychological effects, hermeneutics, form, culture/ethnomusicology, and performativity. For this project, I use particularly the first three frameworks: motives and themes, harmony, and topic analysis.

Summers and Smal similarly identify the challenges of analyzing and presenting game scores. Firstly, notated scores for game soundtracks are often unavailable, which means that the process of analysis likely involves transcriptions as well as descriptive approaches. Secondly, game music is frequently dynamic, as described by musicologist Karen Collins, meaning that the

---

9 Smal, “Constructing a Model Musical Idiom for Award-Nominated Video Game Soundtracks,” 4. See also Summers, Understanding Video Game Music, 51.
score reacts to in-game variables such as playtime, location, and player actions. This dynamic quality means that conventional notation is often insufficient to represent game music. Summers and Smal both present diagrammatic alternatives that illustrate how game music may change in conjunction with these variables. Since the tracks discussed in this paper are not interactive, I present notated musical themes rather than the diagram formats presented by Summers and Small. A discussion specifically regarding musical interactivity in moral choice video games can present further augmentation of this paper’s thesis.

Themes & Signification in Game Scores

Scholars have approached the use of motivic material in game scores from a variety of perspectives. One such framework, as noted by composer Winifred Phillips, Summers, Smal, and musicologist Stephanie Lind, is Richard Wagner’s “leitmotif,” as it appears in film musicology. Phillips compares leitmotif to “an arrow trained on its own individual bull’s-eye”; that is, a leitmotif is a theme that is specific to a character, location, or concept. Within a fictional world, like that of an opera, film, or game, leitmotifs amalgamate to create a vocabulary of themes. Summers posits that, in video games, leitmotifs take a new form beyond what they might in other large-scale media, primarily because of the longer playtime and lower-quality graphics. Phillips separates leitmotif

---

10 Collins, Game Sound, 4.
11 Summers, Understanding Video Game Music, 51-52. See also Smal, “Constructing a Model Musical Idiom for Award-Nominated Video Game Soundtracks,” 5-6.
14 Summers, “From Parsifal to the Playstation,” 207.
from composer Hector Berlioz’s “idée fixe,” with the distinction that leitmotifs evolve with their associated ideas throughout a work, and idée fixes match more general topic material. In Assassin’s Creed III: Liberation (Ubisoft, 2012), for example, Phillip’s distinction would place the main theme as an idée fixe, while a more topically specific theme, such as the “truth motif” would be considered a leitmotif. Lind groups both categories under the term “associative themes,” and adds musical symbolism, mottos, and more to the set. Lind and Phillips also identify instrumentation as a means by which musical association can be made beyond thematic material. Phillips provides a hypothetical example, in which a certain instrument is used throughout a game score to represent success.

Repetition fatigue is an issue that may arise alongside the repetition of themes, and Phillips suggests musical variation and fragmentation as solutions that allow for the continued use of a theme without literal repetition. Summers provides an example from Monkey Island 2 (LucasArts, 1991) in which Peter McConnell and Clint Bajakian use variation to create a geography of in-game locations, where a theme and its variations are location-specific. Through an analysis of Martin O’Donnell’s score for Halo 3 (Microsoft Game Studios, 2007), Lind provides an example of how a theme may be fragmented and restructured to produce many distinct musical cues.

Beyond in-game themes, composer Noah Kellman details how game scores may use universal and cultural sonic codes as a means of musical signification. While Lind’s associative themes require a composer to establish meaning through the score, composers may use sonic codes

---

16 Lind, Authenticity in the Music of Video Games, 97.
19 Summers, “From Parsifal to the Playstation,” 210-11.
to tap into preexisting signals, which have been established by film, popular culture, and even human biology. Kellman argues that the use of sonic codes is unique in video games because they can directly influence the player’s actions. Lind provides a definition of “trope” that combines popular culture with topic theory, not unlike Kellman’s sonic codes. The difference may be that musical tropes are more specific to archetypes in popular culture, and are perhaps more surface-level, while sonic codes may be subconscious and can be taken as parts of a whole—Kellman even describes ways in which codes may be mixed and matched to produce new signifiers. In this text, I seek to identify how motives, instrumentation, cultural codes, and other factors likewise mix and match to signify players’ moral decisions.

*Moral Choice Video Games*

Many games, such as *Mass Effect, Heavy Rain, Skyrim, The Walking Dead, Dragon Age, Fallout, Star Wars: Knights of the Old Republic*, and more, use moral choice as a plot device. These games often feature some sort of scale or measure of morality, which in turn affects gameplay; in the *Mass Effect* trilogy, for example, positive actions make the player a “Paragon,” while negative actions make the player a “Renegade.” The player’s actions and categorization impact how NPCs (non-player characters) interact with the main character and how the plot progresses.

---

Media scholars Arienne Ferchaud and Mary Beth Oliver identify two types of player engagement: parasocial interaction, in which players experience the main character as a distinct entity to whom they relate; and identification, in which players view the protagonist as an extension of themselves. The two authors conducted a study in which participants played the same game with moral or immoral choices, finding a positive correlation between ethical actions and the second type of engagement, identification.26

Boyan, Grizzard, and Bowman reference five basic moral foundations—harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity.27 Scholars Mia Consalvo, Thorsten Busch, and Carolyn Jong make a distinction between “ethics” and “moral norms,” in which moral norms are “empirically observable notions” of right and wrong in any given community, and ethics are the “philosophical reflection” of moral norms.28 For the present analysis, I am concerned more distinctly with musical factors as they align with clearly distinguished moral dichotomies than psychological or philosophical implications. Further research is necessary to address these topics more thoroughly.

Procedure

To understand musical signifiers in moral choice video game scores, I examined music written for two games—Undertale (Toby Fox, 2015) and Red Dead Redemption 2 (RDR2, Rockstar Games, 2018). Both of these games feature plots dependent on moral choices made by the player (described in further detail below) and in both cases the music follows suit, changing

26 Ferchaud and Oliver, “It’s My Choice,” 105-112.
27 Boyan, Grizzard, and Bowman, “A Massively Moral Game?,” 44.
with the storyline. I investigated two tracks from *RDR2* (two versions of “Unshaken” by D’Angelo; one each for the High Honor and Low Honor endings) and eight tracks from *Undertale* (“Your Best Nightmare” and “Finale” from the Neutral Route; “Fallen Down (Reprise),” “Don’t Give Up,” “Hopes and Dreams,” and “SAVE the World” from the True Pacifist Route; and “Battle Against a True Hero” and “MEGALOVANIA” from the Genocide Route). In this paper, I identify trends in the ways each game’s musical score addresses morally-altered plots.

I approached each of the ten tracks named above with a list of twenty-one questions for analysis, informed by the frameworks presented by Summers in *Understanding Video Game Music*:

1. Who is the composer? Performer(s)?
2. Where does this cue occur in gameplay?
3. Is there a known motive that comes from elsewhere in the game’s score?
4. What does the motive represent within the game universe?
5. Are there any indications of genre?
6. Are there any descriptive/emotional terms you might use to describe the music?
7. What is the instrumentation?
8. What are the specific timbres & tessiture? What is the overall timbre?
9. How many voices are there? What is the texture (technical & descriptive)?
10. What is the tonality/key?
11. What are the harmonies? How do they operate?
12. What is the harmonic rhythm?
13. What is the form and shape of the melody?
14. What is the tempo? Meter?
15. Are there any notable rhythmic structures?
16. What is the total form?
17. How are sections related?
18. Are there lyrics? What do they mean?
19. Is there anything else to note?
20. Is there anything to transcribe?
21. What does the literature say?

---

While this list of questions cannot possibly cover every piece of relevant information about each track, it covers many topics. It approaches concepts of context, motivic material, cultural signifiers, timbre, instrumentation, harmony, melody, rhythm, form, and more. Since this study centers primarily on the composers’ musical choices, I have excluded questions regarding computer science and interactivity. Technology and interactivity in moral choice game scores are two topics of discussion that call for further analysis beyond this paper.

Description & analysis

Extreme Moral Choices in Undertale

From the start of Toby Fox’s Undertale (2015), players are presented with a dichotomy: “kill or be killed.” This choice is presented repeatedly throughout the role-playing game, where the protagonist, a human child, must make their way through a realm of monsters called the Underground to confront King Asgore. Players have a choice—they can spare every monster, resulting in a True Pacifist Ending; they can kill every monster, resulting in a Genocide Ending; or they can achieve any of several Neutral Endings by killing some, but not all, of the monsters.

In the Neutral Route, the player must battle Photoshop Flowey after defeating or sparing King Asgore. In the True Pacifist Route, the player, in their battle with Asgore, is assisted by all the monsters with whom they have made friends throughout the game. Flowey intervenes, turning

---

30 Fox, Undertale.
32 “Neutral Route,” Fandom, Undertale Wiki, accessed November 25, 2023, https://undertale.fandom.com/wiki/Neutral_Route. The musical cues that play during this battle are “Your Best Nightmare” and “Finale.”
into Asriel Dreemur and battling the protagonist in a final boss fight. In the Genocide Route, the player must first fight Sans before confronting Asgore. The player kills Asgore in one shot and does the same with Flowey after he intervenes and begs for mercy. Chara, the first human, takes fourth-wall control and resets the game.

![Screen capture from Undertale](https://www.youtube.com/watch?v=pqbzLZ5jpqE)

**Figure 1:** Screen capture from *Undertale*. This frame occurs during the Photoshop Flowey battle in the Neutral Route, with the music track “Your Best Nightmare.” Carrot Helper, “Undertale Walkthrough [Neutral, True Pacifist, Genocide, Hard Mode],” August 7, 2022, game playthrough, at 04:03:46, https://www.youtube.com/watch?v=pqbzLZ5jpqE.


These moral choices are extreme. To achieve an ending other than the Neutral one, the player must either spare or kill every character they face—any deviation from these extremes results in a Neutral ending. If a player does manage to stick to a True Pacifist or Genocide Route, however, the ending is not the only feature that changes. The gameplay is different, as bosses change in difficulty and minigames are locked or unlocked. Dialog with NPCs and interactions with objects are different and reflect the character’s impact on the game world. And, most notably for the present discussion, the music is different.
For the True Pacifist and Genocide Routes, music in *Undertale* changes in two ways. Firstly, many of the tracks are different—of the 101 tracks released in the *Undertale Soundtrack*, three are distinct to the Neutral Route, fifteen are distinct to the True Pacifist Route, and four are distinct to the Genocide Route. I analyzed eight of these twenty-two tracks: “Your Best Nightmare” and “Finale” from the Neutral Route; “Fallen Down (Reprise),” “Don’t Give Up,” “Hopes and Dreams,” and “SAVE the World” from the True Pacifist Route; and “Battle Against a True Hero” and “MEGALOVANIA” from the Genocide Route. See the Tables 1a and 1b in the appendix for a summary of these tracks.

---

Multiple trends emerged in these analyses. The “Your Best Friend” motive, introduced early in the game and associated with Flowey, appears frequently in the Neutral and True Pacifist Routes. This motive was expected—both of these routes feature forms of Flowey as the final boss—but it also impacts the music. The motive is melodically simple and in a major key, indicating a more positive and morally unambiguous situation, as opposed to the Genocide Route. The True Pacifist music also heavily features the “Once Upon a Time” theme, which may be interpreted as the game’s main theme. This reflects the idea that the True Pacifist Ending is the real ending, as it is the only one that runs the full game credits. The two Genocide tracks I analyzed are more thematically disconnected—especially “MEGALOVANIA”—which may act to distance the player’s experience from the game, furthering the narrative detachment that is automatically built into the Genocide Route.

![Figure 4: Melody of “Your Best Friend” (Undertale Soundtrack, track 3) as it appears in mm. 5-8. This motive appears in “Your Best Nightmare” and “Finale” in the Neutral Ending and “Hopes and Dreams” and “SAVE the World” in the Pacifist Ending. A significantly slowed version appears in the Genocide Route.](image)

![Figure 5: Melody of “Once Upon a Time” (Undertale Soundtrack, track 1) as it appears in mm. 1-4. This motive appears in “Fallen Down (Reprise),” “Hopes and Dreams,” and “SAVE the World” in the Pacifist Ending.](image)

The Genocide Route music also notably lacks piano and orchestral instruments, which appear in the True Pacifist and Neutral tracks. These instruments may signal concepts such as hope.

---

37 Undertale Wiki, “Leitmotifs.”
38 Undertale Wiki, “True Pacifist Ending.”
and beauty in the two routes where these characteristics are built into the plot. By contrast, the artificiality of the synth-and-drums tracks in the Genocide Route may again work toward a sense of detachment from the narrative that must inherently come with systematic in-game killing.

The Genocide Route is also marked by versions of tracks that have been significantly slowed down. As more monsters are killed, music that would normally play in a section unfolds more slowly, as much as 0.13 times the original tempo. The *Undertale* Wiki identifies sixteen slowed tracks, played at rates ranging from 0.13 to 0.6 speed. If the player completes an area by killing a predetermined number of monsters, a file titled “mus_toomuch.ogg” plays. The file is a significantly slowed (1/13) version of a section from “Your Best Friend” with added reverb. Fox’s choice to use “Your Best Friend” for this moment is unmistakable—the track is the theme of Flowey, one of the main antagonists, but seems to have been claimed by the main character, a new sort of villain.

The impact of these slowed files is horrific—they are low-pitched, unidentifiable, and distant. This description closely aligns with factors that Kellman uses to identify musical signifiers of horror: unconventional timbres; unfamiliarity; and anticipation. Even though the main character remains the protagonist, they have been transformed beyond redemption; the music, like the fallen human, morphs into a new beast.

---

39 In my analysis, I used the word “hopeful” to describe all four of the True Pacifist tracks I studied.
41 *Undertale* Wiki, “Genocide Route.”
Honor in Red Dead Redemption 2

The moral system presented in Red Dead Redemption 2 (Rockstar Games, 2018)\textsuperscript{43} is much more linear than Undertale’s binary setup. In RDR2, an open-world action-adventure set in the Wild West, players control Arthur Morgan, a member of Dutch Van der Linde’s gang. The gang is pursued by lawmen and Pinkerton agents; eventually, it is revealed that a fellow gang member, Micah Bell, has been acting as an informant.\textsuperscript{44}

The moral metric in RDR2, called “Honor,” is one of many scales that impact the game’s plot in minor ways.\textsuperscript{45} In-game store prices, loot chances, and dialog are all impacted by Arthur’s Honor, which is in turn affected by actions such as helping NPCs, donating, robbing, and murdering.\textsuperscript{46} The plot progresses similarly regardless—Arthur dies after a fight with Micah—but the final mission of RDR2’s main storyline, titled “Red Dead Redemption,” is distinct. If Arthur has High Honor, Micah leaves after the fight and Arthur succumbs to wounds and illness, watching the sunrise. If Arthur has Low Honor, Micah either shoots or stabs Arthur.\textsuperscript{47}

In both cases, the music that plays upon Arthur’s death is a version of “Unshaken” by D’Angelo and Rocco DeLuca. The track first appears earlier in the game, at the start of the mission “Dear Uncle Tacitus,” upon Arthur’s return to the United States from an island in the Caribbean Sea.\textsuperscript{48} The song, described by Jon Caramanica as “lonely cowboy-western soul,” features a choir\textsuperscript{49}

\textsuperscript{43} Rockstar Studios, Red Dead Redemption 2.
\textsuperscript{45} Other factors include weight, fame, cleanliness, etc.
\textsuperscript{49} A choir of D’Angelos.
singing the lyrics “May I stand unshaken / Amid, amidst a crash of worlds.” These lyrics are derived from a Sri Paramahansa Yogananda proverb: “You must stand unshaken amidst the crash of breaking worlds.”

If Arthur dies with High Honor, the version of “Unshaken” that plays begins with an instrumental introduction. The choir then enters and sings the melody five times, accompanied by a

---

bassline, a rhythmic texture on acoustic guitar, and long tones on electric guitar.\textsuperscript{52} If Arthur dies with Low Honor, the same introduction plays, but the guitars and bass cease when the choir enters. The track is shorter, with the choir only singing the melody twice. The choir is marked by fewer voices, more emphasis on the lower voices, and heavy reverb; the accompaniment is merely an organ sustaining the harmonies. Both tracks end with a ritardando in the choir, the sonority sustaining briefly. The equalization (EQ) is different, with a low-pass filter shaping the Low Honor track and creating a darker, more muted overall sound, while the High Honor track features a full range of frequencies, allowing it a brighter quality. See Table 2 in the appendix for a comparison of the two tracks.

Most notable among these differences, perhaps, are the lower register material, reverb, and difference in accompanying instrumentation. Both versions are sorrowful—the protagonist has died—but the impact of the lowness, reverb, and organ sustain in the Low Honor track is one of retrospection, while the impact of the higher EQ and rhythmic accompaniment in the High Honor track is one of peace and even hope. These differences are subtle, but produce a significant alteration in the track’s meaning, especially when combined with the context of the game and its fifty-hour playtime.\textsuperscript{53}

\textsuperscript{52} Electric guitar is the most likely instrument here, although assured identification has proven evasive.
\textsuperscript{53} Gamer Max Channel, “Red Dead Redemption 2.”
Discussion

Although the scoring of immoral choices in RDR2 and Undertale achieve two distinct effects—the slowed tracks in Undertale’s Genocide scoring have the effect of horror, unlike anything in RDR2’s music—two trends may be identified between the games: depth and space. By “depth,” I am specifically referring to the pitch and frequency content presented in each track. The Low Honor track in RDR2 and the slowed tracks in Undertale’s Genocide Route both feature lower-pitched material. The RDR2 track employs a low-pass filter, which creates a deeper, darker timbre. The effect is aural darkness—low pitch and deep timbre create a sense of ominousness that foils the brightness of higher pitches and timbres. The metallic, pitch percussion glockenspiel—arguably the brightest instrument in Undertale’s sound palette—is notably absent in the Genocide Route,54 exactly as one may infer from this trend.

If depth is physical in its progression, “space” is temporal. In Undertale, Fox achieves his desired effect by slowing the tracks, sometimes even beyond recognition. The Low Honor version of “Unshaken” is not different in tempo, but the added reverb and lack of rhythmic accompaniment serve to widen the track’s perceptual space in a similar manner. Correspondingly, Fox applies significant reverb to the “mus_toomuch.ogg” file that plays along the Genocide Route. The tracks in each game’s morally positive paths lack these indicators of space and time. This enlarged space provides for a heightened level of retrospection and introspection; quicker tempi and busier rhythmic structures fill in this space for the player, so their absence may emphasize a greater level of self-awareness.

This analysis serves two purposes. Firstly, it presents an introduction to theory regarding moral signifiers in interactive media. While scholarship exists that explores musical signifiers in video games, and scholarship alike exists that investigates moral choice video games—such as those discussed in the literature review above—this paper fills the gap that exists at the juncture of these two topics. Further research about musical signification in moral choice video games may apply lenses of psychological, philosophical, or interactive analysis to augment the presented argument.

Secondly, this analysis provides a potential guide for composers wishing to score moral choice video games.\textsuperscript{55} Composers may choose to employ techniques used by Toby Fox in \textit{Undertale} and Rockstar Studios in \textit{RDR2} in their own game scores or use the present synthesis to ideate new and distinct ways of dealing with depth and space to signify levels of morality. With further research and analysis, a distinct language of musical topics might arise specifically to accommodate moral choice video games.

\textbf{Conclusion}

The aim of this paper is to explore how musical scores may reflect and further the impact of moral choices in video games. To achieve this goal, I examined music from two games: \textit{Undertale} and \textit{Red Dead Redemption 2}. In \textit{Undertale}, players may opt to kill (Genocide Route) or spare (True Pacifist Route) every foe they face. This extreme dichotomy is reflected in the game’s score, which features distinctive musical tracks in each route. Additionally, many tracks that play at normal speed in the Neutral and True Pacifist Routes play at half-speed or slower in the Genocide

\textsuperscript{55} Myself included.
Route. Toby Fox, the composer, uses different motivic materials and instrumentation to mark the three paths.

In *RDR2*, players’ moral choices are reflected by an “Honor” metric. The plot progresses similarly regardless of the character’s Honor, but notable details are different. When Arthur dies at the end of Chapter 6, the version of D’Angelo’s “Unshaken” that plays is dependent on Arthur’s Honor. If Arthur dies with High Honor, the track is longer and more rhythmically active than its alternative. The Low Honor version makes use of significant reverb and emphasizes lower frequencies more.

Two trends may be identified between these two instances—depth and space. With depth, the composer uses lower pitches and timbres to make the sound darker, deeper, and more ominous. With space, the composer uses time, level of activity, and reverb to create a larger perceptual area and allow the listener more time and bandwidth for retrospection and introspection.

*Undertale* and *RDR2* are but two of the many moral choice video games that exist, and the moral systems and respective scores presented in these games vary by means both small and large. Further studies may apply this discussion through a lens of hands-on research, in which subjects are presented with moral choices paired with different soundtracks. Future video games and their scores may supplement the present conversation by providing new insight and perspectives. Game music is unique, diverse, and unique in its diversity, and I am eager to see what happens next.
Bibliography


Fox, Toby. Undertale. Toby Fox. OS X, Windows, Linux, PlayStation 4, PlayStation Vita, Nintendo Switch, Xbox One. 2015.


## Appendix

### Table A1a

ANALYTICAL NOTES FOR EIGHT TRACKS FROM *UNDERTALE SOUNDTRACK* (2015) BY TOBY FOX. PART 1 OF 2.

<table>
<thead>
<tr>
<th>Route</th>
<th>Title</th>
<th>Moment</th>
<th>Motives</th>
<th>Desciptors</th>
<th>Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>Your Best Nightmare</td>
<td>Photoshop Flowey pt 1</td>
<td>Your Best Friend, Your Best</td>
<td>sometimes horrifying,</td>
<td>synths &amp; drums (Amen Break)</td>
</tr>
<tr>
<td>Neutral</td>
<td>Finale</td>
<td>Photoshop Flowey pt 2</td>
<td>Your Best Friend, His Theme</td>
<td>sometimes playful,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>motivating</td>
<td></td>
</tr>
<tr>
<td>True Pacifist</td>
<td>Fallen Down (Reprise)</td>
<td>after Toriel interrupts Asgore battle</td>
<td>Once Upon a Time, Toriel</td>
<td>hopeful, second half is waltz</td>
<td>synths</td>
</tr>
<tr>
<td>True Pacifist</td>
<td>Don't Give Up</td>
<td>Asgore battle, as friends  are encouraging</td>
<td>Ruins</td>
<td>hopeful, motivational</td>
<td>str, pno, dr, glock</td>
</tr>
<tr>
<td>True Pacifist</td>
<td>Hopes and Dreams</td>
<td>Asriel battle part 1</td>
<td>Best Friend, Dreams</td>
<td>hopeful, motivational</td>
<td>str, synths, dr, egtr, e bass</td>
</tr>
<tr>
<td>True Pacifist</td>
<td>SAVE the World</td>
<td>Asriel battle part 2, saving friends' SOULs</td>
<td>Once Upon a Time, Your Best Friend</td>
<td>hopeful; distorted guitar points to metal</td>
<td>egtr, glock, dr, bass, vc, more</td>
</tr>
<tr>
<td>Genocide</td>
<td>Battle Against a True Hero</td>
<td>Undine the Undying battle</td>
<td>Ruins (var), other smaller local motives</td>
<td>motivational</td>
<td>synth, dr, chm, bass, etc</td>
</tr>
<tr>
<td>Genocide</td>
<td>MEGALOVANIA</td>
<td>Sans battle</td>
<td>--</td>
<td>upbeat boss fight, energetic</td>
<td>synths, dr</td>
</tr>
</tbody>
</table>
### Table A1b


<table>
<thead>
<tr>
<th>Route</th>
<th>Title</th>
<th>Key</th>
<th>Harmony</th>
<th>Meter/Tempo</th>
<th>Other notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>Your Best Nightmare</td>
<td>Multiple keys</td>
<td>4/4 190</td>
<td></td>
<td>very sectional, sections connected by static</td>
</tr>
<tr>
<td>Neutral</td>
<td>Finale</td>
<td>fm</td>
<td>4/4 190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>True Pacifist</td>
<td>Fallen Down (Reprise)</td>
<td>C 3/4-sharp</td>
<td>6/8 110 // 3/4 330</td>
<td>reprise (extended version) of Fallen Down</td>
<td></td>
</tr>
<tr>
<td>True Pacifist</td>
<td>Don't Give Up</td>
<td>g#m</td>
<td>E-F#-g#-F#</td>
<td>3/4 120</td>
<td></td>
</tr>
<tr>
<td>True Pacifist</td>
<td>Hopes and Dreams</td>
<td>Bb, B (modulates at about 66%)</td>
<td>4/4 180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>True Pacifist</td>
<td>SAVE the World</td>
<td>B</td>
<td>4/4 180</td>
<td></td>
<td>&quot;alternate version of Hopes and Dreams&quot;</td>
</tr>
<tr>
<td>Genocide</td>
<td>Battle Against a True Hero</td>
<td>fm</td>
<td>4/4 150 // 6/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genocide</td>
<td>MEGALOVANIA</td>
<td>dm</td>
<td>4/4 120</td>
<td></td>
<td>composition predates Undertale</td>
</tr>
</tbody>
</table>

### Table A2

ANALYTICAL NOTES FOR TWO TRACKS FROM *RED DEAD REDEMPTION 2* (2018) BY ROCKSTAR GAMES.

<table>
<thead>
<tr>
<th>Version</th>
<th>Duration</th>
<th>Introduction</th>
<th>Choir</th>
<th>Instrumentation</th>
<th>EQ</th>
<th>Ending</th>
<th>Other notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Honor</td>
<td>1:05, 2 iterations of melody</td>
<td>nearly identical, bass more prominent</td>
<td>fewer voices, stronger low voices, heavy reverb</td>
<td>organ sustaining chords</td>
<td>more lows, less highs rit &amp; sustain</td>
<td>not in OST</td>
<td></td>
</tr>
<tr>
<td>High Honor</td>
<td>1:53, 5 iterations of melody</td>
<td>nearly identical, less bass</td>
<td>more voices, less reverb</td>
<td>gtr rhythmic accompaniment</td>
<td>more highs, less lows rit &amp; sustain</td>
<td>in OST, titled &quot;Crash of Worlds&quot;</td>
<td></td>
</tr>
</tbody>
</table>