How does background music (and other sounds) influence a player's gaming experience and emotional engagement in gameplay?

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

Imagine playing the survival horror game Outlast without any of the accompanying sound – no building crescendos into horrific screeches during jumpscares, no ominous advancing footsteps, loud banging, or garbled mumbling, nothing but the first-person point of view through a video camera. These auditory elements aren't simply background noise, these are purposeful signals designed to pull players deeper into the game, amplifying every decision and making every challenge more personal. For horror games, the strategic usage of sound is meant to heighten players' sense of vulnerability and fear throughout the game. Although video game music may seem trivial to some, the concept behind its implementation goes beyond just external background noise, and it is instead an internal key element to player experience. Despite the growing recognition of video games and their soundtracks, it's still left unanswered the effects on players' emotional engagement, how exactly the musical elements are impacting players. This gap leads into the research question I'll be exploring: How does background music influence a player's gaming experience and emotional engagement in gameplay?

To explore this question, I'll be analyzing secondary interviews with soundtrack designers and composers themselves to gain a deeper look into the behind the scenes process. In addition to composer insights, I'll be diving into discourse analysis, exploring online discussions and various threads to see what real people are saying in real time, collecting feedback from the players and developers themselves to obtain that real-world testimony. From Reddit alone, a good portion of the gaming community shares sentiments on how important the soundtrack is to the game, some even saying it's the soundtrack itself that makes people in love with the game, as opposed to the gameplay or graphics. Whether the composition is designed to be more ambient or complementary to in-game actions, the music fosters a deeper connection between the player

and the game through deeper immersion with a seamless integration of auditory elements with the visual and narrative elements.

Ultimately, music is a dynamic element, not a static composition and it truly transforms the simple press of buttons or keys into an interactive, memorable experience. It may be part of the background, but it's clear that it plays a larger role for players, and though subtle at times, its impact is transformative, easily taking on a key role in shaping personal experiences, enhancing interactions beyond just impressive visuals. An effective video game soundtrack can act as an extension of the virtual world, reinforcing movement, scenery, and player actions seamlessly. This synergy creates a flow, ensuring that the composition feels like a part of the game rather than an external feature.

Background and Context

One of the first games to feature a continuous background soundtrack was the 1978 arcade game *Space Invaders*, designed by Tomohiro Nishikado. While it is the same four notes played repeatedly, the tempo increases as the aliens get closer to the player's base, adding an element of growing intensity. Around a decade later, Koji Kondo became Nintendo's first employee to focus solely on music composition, later creating the themes for *Super Mario Bros* and *The Legend of Zelda*, still beloved by many worldwide to this day. Since then, video games have evolved and become increasingly more prevalent in the entertainment industry. The gaming industry has a vast influence on modern culture and media consumption and as these games are progressing with a growing digital world, game designs have increasingly utilized auditory elements to enhance players' emotional engagement and gameplay. Contrasting with traditional film scores, video game music has that *interactive* element, being able to adapt in real-time to

player actions. The music and sounds heard during the game aren't just part of the soundtrack – they're emotional partners, magnifying the emotional engagement, immersion, and excitement with the game. Many praises and accolades go out to both musical soundtracks and video games alike, though the union of both is often unsung. Developers and composers must dive beyond typical game design principles by exploring a new perspective, carefully designing adaptive scores that immerse the player in deeper, more personal ways that traditional media cannot achieve.

Rod Munday (2007) examined how video game music functions and contributes to the player experience, focusing on its role in supporting environmental contexts, player immersion, and narrative in video games. He identified three main functions: environmental, enhancing spatial awareness and player perception in the virtual world; immersive, acting as a cognitive barrier against distractions while fostering deeper engagement with the game; and diegetic, boosting the storytelling aspect of the gameplay. Game music goes beyond just aesthetics and enhancement, and Munday contends that immersion and active participation is the most important aspect, playing an essential role in maintaining engagement. So evolving is the recognition of music design in video games, Guillaume Laroche, a student at University of Alberta, coined a term for its study: *ludomusicology*, a blend between the study of games and the analysis of music. It was later redefined by Roger Moseley, an associate professor at Cornell, and proposed as "The New Drastic", a framework that supports music as an interactive agent, highlighting how video game music is more complex than the existing traditional interactions of individual, audience, and musical work emphasizing game music as a dynamic event rather than a static composition (Van Elferen, 2020).

With millions, even billions, of people playing video games across the globe, understanding how the background music influences player immersion and emotional engagement is essential for developers, researchers, and even the players themselves. By diving deeper into the minds behind the scores and other contextual applications, researchers are better able to uncover the elements to how music influences player's involvement with the game..

Methods and Theoretical Framework

The data collection process consisted of both secondary interview analysis and discourse analysis. For the former, I found interviews with composers and musicians of varying game soundtracks, gathering insights from the creators themselves about their processes for making captivating audio elements. My main focus was to figure out if there was a common "recipe" to designing soundtracks that's used all-around amongst different creators, or if it's more dependent on the individual creator and their own game. As for the discourse analysis, I focused on Reddit discussions, as it is one of more well-known or well-populated sites with an abundance of engaging threads to collect organic, unscripted feedback from players and developers alike. For the most part, gamers can be extremely passionate about the games they're playing, analyzing them beyond what's explicitly there, which I believe makes way for insightful commentary about personal experiences with a game. Reading and understanding real-life player accounts could help identify trends in how auditory elements aid player engagement. Through these methods, I aim to provide a deeper understanding of the ways background music shapes emotional engagement and immersion in gaming. Understanding these effects can offer insights into the gaming industry and address broader implications of sound in interactive media environments.

I directed my secondary interview analysis towards first-hand accounts from composers of well-recognized video game soundtracks, which provided insights into their creative approaches, inspirations, and technical processes in composing music for their respective video games. I did not have too specific a criteria for selecting the interviews, but the ones I included in this research were based on availability and accessibility with some degree of popularity factoring in as well. I wanted composer insights from a variety of different composers for different styles of games to ultimately determine if there was one universal process to designing video game soundtracks or if the process was more dependent on the game itself, in regards to gameplay mechanics and storyline. I sourced from four different composers who, collectively, cover a wide range of gaming styles. I first reviewed interviews with Koji Kondo, Japanese composer at *Nintendo*, best known for his lead in creating the *Super Mario Bros* and *The Legend of Zelda* themes, which are widely recognizable today. I then dove into a behind the scenes look at the music-making process for Stephanie Economou, composer of *Assassin's Creed Valhalla: Dawn of Ragnarok*, which received the first GRAMMY Award For "Best Score Soundtrack For Video Games/Interactive Media" in 2023. Keeping with the fantasy worlds, I turned to interviews with Darren Korb, best known for his composing for the game *Hades*. Finally, to square things off, I explored an interview with Daniel Rosenfeld, better known as C418, composer for *Minecraft's* official soundtrack. Just recently, the Library of Congress inducted *Minecraft: Volume Alpha* to the National Recording Registry, denoting it as one of the "defining sounds of history and culture" (Zongker, 2025).

In addition to analyzing secondary interviews, I conducted discourse analysis by examining a variety of Reddit threads. Reddit, specifically, was chosen because of its unfiltered, organic commentary from real players and developers who have a genuine passion for discussing

the games they adore, making it ideal to obtain valuable insights from. When researching, I considered threads with high engagement in terms of interactions with the OP and upvotes to ensure that it was a representative discourse. One thread in particular was similar to my first method of data collection in that it was a Reddit "Ask Me Anything" with Rosenfeld; he was interacting with the *Minecraft* community, answering their questions about his music process among a variety of other inquiries. I sifted through the data of this thread and included findings based on relevance to Rosenfeld's design process, as opposed to more subjective questions about his interests, hobbies, or other unrelated miscellaneous topics. Other Reddit threads included for this research were more general to the overall research question as a whole, highlighting the importance of music in video games from subreddits like r/truegaming and r/JRPG. By pairing composer interviews with player discourse analysis, this research captures both the intent from the game designers, like the 'how' to how music is designed to function in games, and then the player's experience, like how music is actually perceived and emotionally processed both during and after gameplay. This approach provides a bird's eye on video game music, emphasizing its role in the game design process, and enhancing both player immersion and emotional engagement.

From an STS perspective, this research can be viewed through a sociotechnical lens, acknowledging that gaming is not just a technological experience, but also an inherently social and even psychological one. Video game music functions through player experience, technical affordances, and cultural interpretation, making it a key component in understanding how immersion and memorable interactions are developed. This research analyzes how auditory elements contribute to enhancing player immersion and the "human-focused" aspect to design. By examining how composers and developers navigate system constraints, like hardware or

software limitations and the unpredictable nature of players, this framework considers the dynamics within game development, including who leads sound design and how they can best influence the gameplay experience. This research highlights video game music as a dynamic element that actively shapes engagement and immersion making within virtual spaces.

Findings and Analysis

Interview Insights

Koji Kondo's background with music and early experiences with synthesizers and fusion-style compositions heavily influenced his approach to designing game music professionally. His work in *Super Mario Bros* drew inspiration from Latin and lively Portuguese songs, and he mentions that the "Overworld" theme takes inspiration from Japanese fusion band, T-Square whose songs have rhythms that are easy to follow for listeners. Kondo's process seemed to involve making the music directly from the game itself, considering visuals and context within the game where he'd use the visual elements and then add in auditory elements that work in tandem with what a player would be seeing. He mentioned that one of his favorite compositions, the "Mayor's Meeting" from *The Legend of Zelda: Majora's Mask*, does well in conveying the feeling of a conference or meeting, creating that sense of harmony between sonic and visual components that are both crucial to the player's immersive experience. He also mentions that the "most important thing is feeling like the song really matches what's happening in the game", demonstrating a genuine connection to the game both from a composer's point of view and a player's. Kondo's approach to composing for games prioritizes a melody-driven piece that can enhance gameplay without necessarily distracting the player and creating music that is

both simple and memorable, allowing players to form deep connections between the music and in-game experiences.

Stephanie Economou's work on *Dawn of Ragnarok* took heavy inspiration from black metal and neo-folk, to evoke a "Viking-esque" imagery fitting for this particular game of the *Assassin's Creed* series. She had worked on *Assassin's Creed Valhalla: Siege of Paris* before going on to lead *Dawn of Ragnarok* and she explains how it was two very different environments to work with where *Siege of Paris* was more from a historical music lens and *Dawn of Ragnarok* was based more in a Norse mythological world. When describing her song writing process, more often than not, she found that she'd be writing music solely from concept art alone rather than in-game screen captures. She would go specifically off the "vibe" of a character and bring the visuals to life through sound and used a variety of approaches in a "puzzle-like" manner, finding joy in "finding different methods to engage the listener's ear and design these intricate twists and turns to immerse the player in the story". Economou is deeply involved with her creative process and how much of the player point of view she keeps in mind when designing. She emphasizes how sound and music both transport and transform us and how it's used as a strong manipulative narrative tool in, "open[ing] up an incredible depth and dimension that wasn't there before" like an intense horrific scene that's paired with lighter, ethereal music which completely changes the scene and emotional responses for the player in a way that solely visual elements could not convey.

For Darren Korb, when creating the character themes, his focus is on both the relationships between the characters and the relationship between the player and the characters, expressing their different personalities and what the tone of the music should be based on that feeling. The process for him is first looking at the character design, considering the character's

function in the game, and then thinking about how an interacting character or the player feels about them. Many of the *Hades* characters have character themes, but for Megaera, rather than one specific theme, a variety of different musical cues could play when interacting with her, and it's because of the *context* in which the player encounters her that different musical cues will play. Korb recognizes that players are likely going to be playing for multiple hours in one sitting and with a game that relies on repetition, there's certain strategies he takes to ensure that the gameplay doesn't get stagnant, that it's still enticing for the player. From a composer perspective, he can still understand the repetitive nature of entering one part of the game and hearing the same theme music playing and how that could become tiresome, so his approach to combating that listener fatigue is adding in *variation* "where multiple pieces could be playing in any given section of the main biomes". Similar to "choose your own adventure" style, for the main biomes, there's a playlist of four different pieces and depending on where the player is or what they're doing, different sections of the theme will play so that it still feels fresh. There's specific arrangements of bass stems, guitar, and synthesizers that either play or don't play depending on a variety of in-game factors and environmental changes that are based both on randomization and how the specific player is engaging (in terms of interaction with enemies and how long it takes to deal with them). This behind the scenes process adds further insight into how connected the music is to the game and how much it enhances the progression and storyline for the player, keeping them engaged even across multiple hours of playing and hearing the same tracks, just slightly remixed.

In the final boss battle of the game where the player fights against Hades, when Hades is defeated for the first time, there's a second round where another health bar appears while simultaneously, an electric guitar comes into play. Korb explains how his intent with that was to

"ratchet the intensity up to the maximum", building up the emotions of the scene where the player *thinks* it's over, but is thrown right back into combat. He reached out to "experts" to help carry out his vision for an extreme guitar duel between the characters, taking key inspiration from Megadeth's "Tornado of Souls", and beyond the visual in-game graphics, you can also hear how Zagreus, the hero, overpowers Hades through the boss battle music. The first time the player hears the theme begin, it's more a sense of "Oh no.." drawing out fear or panic as they quickly prepare for this final battle, but Korb makes a point that when re-hearing things as the context changes, the relationship to it changes as well, so when hearing that theme for maybe the fifth or so time again, the attitude is shifted to a more "Game on" or "Let's do this" kind of mindset, since that initial surprise has already happened and they know what to anticipate after repeated runs. Korb's design process involves getting deep into the actual story of the game, as opposed to designing melodies for the game's mechanics alone; he wants to create meaningful pieces that connect all possible elements of the game from character to player to setting and everything in between in order to truly immerse the player through both a conducive narrative story and accompanying music that'll resonate with players long-term.

Similar to Kondo, Daniel Rosenfeld grew up with music, starting to compose when he was a teenager and then discovering mastering and indie games communities where he met Markus, or Notch, creator of *Minecraft*. Contrasting with Korb's design process, Rosenfeld explains that for *Minecraft*, there's no one explicit thing the player "should" be doing – they could be mining in a cave, sleeping in a house they built out of dirt, anything imaginable – his process entailed making music that doesn't necessarily explain anything. There's no specific "boss battle" music or "day vs. night" music; it's somewhat generic, yet still distinct and unique. This process was also influenced by technical limitations where the sound engine would glitch if

there were multiple files playing at once, hence the lack of constant background music throughout the game. In turn, this gave way to the design choice of having music coming in and out at random intervals, allowing the opportunity for more emotional significance, noting that if something significant is happening, the player will remember the music associated with it. He also took advantage of Foley sounds, to which he says it's mostly trial and error in getting the perfect sound, and how it's interesting that something completely unrelated is often the better version of the sound like the real sound of walking on grass vs. crinkling a VHS tape in your hands to get that "crunchy" sound that's widely recognized today. Besides *Minecraft*, the level of detail to Foley sounds are often less emphasized in games than in film, which in part is due to a different focus for a player than a viewer. Again, it's the interactive element of video games that introduces a different type of immersion compared to film; the player is engaged with various action sequences within the game, interacting with the virtual world, so there's less need for subtle Foley details that are more noticeable in film. From a technical standpoint, video games also optimize resource consumption, occasionally compromising sound design in order to maintain quality performance, so where films put resources into Foley sounds, video games may instead focus on how to avoid the sound effects becoming too repetitive.

Patterns from these interviews reveal that, although the game mechanics themselves may differ, like how *Super Mario Bros* is a platformer game with levels and rewards where *Minecraft* is a sandbox game with no real objective and complete player freedom, the background auditory composing process seems to take on a similar approach across all four creators: in regards to the repetitive nature of soundtracks, creators find techniques to make reduce "listener fatigue" and make the game still engaging, especially after long gaming sessions. These composers emphasize the importance of a natural, evolving musical flow that prevents boredom and keeps players

happily immersed in their virtual world. Whether it's through distinct motifs, adding multiple layers with varied looped portions, or variation of musical cues based on in-game environmental factors from the player's position, the key to stronger engagement is in strategic repetition of the background soundtrack, executed in a manner that retains its freshness across hours of gameplay.

Another shared finding among these composers was the beginning process of finding the music. Kondo, Economou, and Korb all seem to begin designing their scores based off in-game material: Kondo matching up auditory with in-game character's movements and environments, Economou designing off character art and personality, and Korb designing off character design, function, and relationships. These overlapping similarities across composers further support a possible standard when it comes to composers and their processes for creating video game scores. This demonstrates that both purposeful, modified repetition and direct visual media inspiration may be common aspects to the creative process of composing video game scores, reinforcing the connection of visual and auditory decisions that best work for the player to give them a truly immersive experience.

Discourse Discussions

In Rosenfeld's "Ask Me Anything" on Reddit, he engaged with many members from the *Minecraft* community in answering questions related to his soundtrack design process, and in response to being asked what the biggest challenge was when creating music for a game, he described the three, or even four-dimensional aspect of making music for video games, as opposed to the more flat medium that movies or shows have. For games, the player typically controls the screen, meaning that designers have to anticipate the next outcome in a logical fashion and for *Minecraft*, there was a lot of "unknowns" and trial and error that made for the

randomized music rather than event-driven themes, which also pairs with the randomness of the gameplay itself where players are just in their own survival or creative mode to do as they please. Another user asked about why he thinks his music fits *Minecraft* well, to which he replies it's the nature of the game, especially in its earlier stages when there was "nothing to do except dig holes and build walls". That sense of loneliness and isolation to anything else helped him create the more melancholic tracks that work for a variety of encounters in-game.

In another Reddit thread, from r/truegaming, the discussion centered around the importance of music in video games, specifically the OP stating that it's the game's music that dictates whether or not they'll like a game. This sparked discussion where they argued how "beautiful and evocative" the *Ocarina of Time* soundtrack is, and how because of the music, it is their favorite game. They then expected to adore *Majora's Mask*, going off the same criteria, but found qualms with it largely because they didn't find it "very emotionally investing" since the soundtrack was "too same-y" and "always dark", attributing the lack of contrast to their lack of emotional investment. The OP's perspective illustrates how, for some players, the levels of variation in musical compositions can either enhance or detract from their immersion into the game. A user's direct response to the OP argued highlighted how their judgement on *Majora's Mask* was based on "comparative expectations" – they're expecting the soundtrack to evoke the feelings they felt from *Ocarina of Time*, but they're two different games entirely with different themes. Where *Ocarina of Time* was described as "beautiful and evocative", *Majora's Mask's* themes are more central to "despair, inescapable doom, repetitive fate, and futility", which are distinctly different. And while dark, the soundtrack is still a complement to that narrative, and as such, is still an emotional enhancer, just not what was expected. The overall discussion within

the thread collectively supports how video game music is an active, dynamic element that shapes players' engagement, their emotional investment, and even their perception of the game.

Similarly, in the subreddit r/JRPG, the OP prompts a discussion on whether video game soundtracks make the game (both modern or older games) more memorable. The general consensus amongst users here was that yes, the soundtrack elevates the gameplay. One user brought up a scene in *Final Fantasy VII*, mentioning how the soundtrack "greatly amplifi[ed] the emotional impact" of the scene, specifically because the technology at the time wasn't advanced for detailed facial expressions or high-quality animation, so the soundtrack playing with the scene heightened the emotional impact where visuals weren't able to. A couple other users seconded, adding on how music is extremely important or integral and is the one thing that stuck with them even after finishing the game, reinforcing music's timeless impacts. One user even described a memory with their father, who at the time hated their gaming habits, but at one point when walking into the room while a *Final Fantasy IV* scene was playing out, he had commented on how good the music was, thus reshaping both his and his son's perspective on video games, being "sucked into the music" and obsessing over how much emotion soundtracks could convey with just a synth and varying limitations. The discussions in this post touch on the importance of a soundtrack, shaping personal experiences and highlighting the impact music can have especially when graphics alone aren't enough to convey a scene. Through this analysis, it becomes more evident that video game music is more than just a background component. It is a core emotional and narrative feature that drives how players perceive and interact with the game.

Conclusion

Video game music plays a critical role in shaping players' immersion and emotional engagement during gameplay. In conducting secondary analysis of interviews with composers and sifting through discourse among players, it is apparent that video game music goes far beyond an external factor or just some aesthetic afterthought; it is an active agent that enhances storytelling, reinforces environmental context, and fosters long-term engagement through its dynamic adaptation and interconnection with game mechanics. It is a serious artistic endeavour that takes genuine passion and dedication to create and is arguably in the same league as pop music in terms of its impact in entertainment. Composers across different game genres have their own techniques, but the overlapping standard across them involves mitigating listener fatigue that could arise from poorly incorporated repetition through variation, skillful musical cues, and randomization to ensure an emotional resonance between the game and player, demonstrating that background video game music is purposeful and plays a crucial interactive component to the gaming experience. The adaptive and interactive nature of game scores challenges traditional musical composition, opening up new opportunities for understanding how sound functions in interactive media. Designing *for* players will ultimately provide more meaningful and enjoyable experiences, creating a stronger connection between the game and the players. Future applications of this research may explore physiological responses like heart rate and brain activity during gameplay to further understand the interaction between music and player engagement. Additionally, a deeper exploration of the effects on decision-making would expand on and enhance the conclusions drawn. As both the digital world and the gaming industry continue to evolve, an exploration of how AI is impacting both the music and game industry could touch on possible changes with the design process. Overall, a dutiful approach to music

design will lead to more immersive and emotionally engaged experiences for players, and with growing popularity, ludomusicology as a whole could reach broader audiences, and span beyond just entertainment.

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