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Video Gamers as Performers: Annotated Bibliography

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Video Gamers as Performers

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Summary:

This study is based on the concept and idea of video game players performing music through the games that they play. This serves as a very assessable way for people who do not have the money, time commitment, and or motivation to be able to play and perform music without any background in music literacy.

1. 8-bit Music Theory, "Pikmin's Interactive Soundtrack," May 25, 2018, game music analysis, 13:56, https://www.youtube.com/watch?v=dIHJW_kShVQ

8-bit Music Theory is a youtube channel that is dedicated to covering different video games using transcriptions that focus on a certain topic. This video covers the interactive soundtrack contained in Pikmin 3 and talks about how it interacts with the player's actions to create a more immersive experience of the game. The evidence that 8-bit Music theory uses is very effective as it contains score and audio examples of orchestration changing and different forms of accompaniment added to a fixed melody in order to change the meaning of the music as it adapts to a player's actions. 8-bit Music Theory indirectly engages with Yihui Liu's elements of video game music as one of the elements that he discusses is that although the music is very similar there are parts of it such as accompaniment or orchestration changes to keep the music fresh and interactive with the player. One topic that he does not go over is how this soundtrack and its ability to adapt can be a form of in-game improvisation as players have a lot of freedom to take on different actions that affect the music accordingly. This video is relevant to my research because I find this form of interactive soundtracks as an outlet of improvisation that can allow

for the player to change the music based on what actions they choose to or not to take in the game.

2. Atkinson, Sean E. "Soaring Through the Sky: Topics and Tropes in Video Game Music."

Music Theory Online 25, no. 2.

<https://mtosmt.org/issues/mto.19.25.2/mto.19.25.2.atkinson.html>

Sean Atkinson is the Director of the School of Music and an Associate Professor of Music Theory at Texas Christian University. This article explains the similarities in film and video game music through leitmotifs but also tries to draw the line between the two due to the levels of engagement both require. Particularly Atkinson focuses on the idea of a soaring theme that represents flight and or ascends in position and how different games carry out said leitmotifs. Atkinson does not go over how these leitmotifs can be interpreted differently apart from soaring and how that can play an effect on a player's experience in their playthrough. The evidence that he uses is score examples from both films and movies that relate to a flight theme or the action of flying/ ascending. This evidence is also effective as there is a correlation between motifs rising to resemble flight and is easy to understand due to the score examples. Atkinson directly engages with Tim Summers's "Epic Texturing in the First-Person Shooter: The Aesthetics of Video Game Music" as he mentions Tim's argument on why video game music is similar but is still very different from film music due to the levels of engagement and interactivity that both possess. He agrees with Summers and continues to draw the separation line between scores. This article ties into how players can perceive meaning potentials that composers intend for them to understand but Hart's previous article can create their own

interpretation of music which I find is an element of performing and interpreting of video game music.

3. Cheng, Paul. "Waiting for Something to Happen: Narratives, Interactivity and Agency and the Video Game Cut-scene." *Situated Play, Proceedings of DiGRA 2007 Conference 4* (2007): <http://www.digra.org/wp-content/uploads/digital-library/07311.24415.pdf>

While very little information can be found on Paul Cheng, the journal that wrote this article was founded in 2003 and is dedicated to scholarly writing on topics involving video games and other associated digital media. This article looks into the role of cutscenes in video games and sees how the line between films and video games can be blurred as many scholars like Tim Summers try to keep this line well-defined. One thing that the article does not go into is fully classifying and or distinguishing a clear divide between film and video game cutscenes music he gives examples but does not fully commit to a strong point. The evidence that Cheng uses includes examples from the game "Resident Evil 4" where he discusses the process of quick time events in relation to cutscenes which is where he starts to indirectly engage with Tim Summers's line of separation between film and game cutscenes. Cheng's focus on quick-time events starts to raise the question of how much of these cutscenes are considered film and how much is still considered a game. The evidence of the "Resident Evil 4" cutscenes is very effective in proving one of the points that it is hard to establish a clear divide between film music. I feel that this source is relevant to my research because not all forms of music require high levels of interaction and focus while others due similar to quick time events in cutscenes as there is a blend between little to no interaction needed to a big change and requiring split-second reflexes to reach a certain goal in a cutscene. I find this very similar to difficulty in performing

where not everything is difficult while at other times passages become technically challenging and require the same focus and reflexes as a quick-time event.

4. Collins, Karen. "Video games, music in." *Grove Music Online*. 25 May 2016, <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-1002293246?rkey=rxSizl&result=1>

Karen Collins is the Research Chair in Interactive Audio at the University of Waterloo where she teaches digital media, ranging from sound production to video game development. This article is about the definition of video game music and four main subsections of its evolution. The main definition of video game music is that it is dynamic and usually reacts to the player's actions to create more immersion to achieve the goal of enhancing the player's experience. The article does not mention any concepts or theories of video game music/ players as an outlet for performance and only stays with more objective facts about the definition. This article also engages with Tim Summers's "Understanding Video Game Music" by being in agreement to assigning a mainly objective definition to the term video game music and keeping it away from film music to create a clearer definition. The evidence that this article uses is very effective as it references older game consoles and games that were part/ still are part of certain eras or genres of video game music to better support her definition. Collin's article is relevant to my topic as it gives a clear definition of what video game music is and it especially dives into the meaning of music games in video game music which can tie into the performance of video game music as a player.

5. Grosser, Michelle. "Avatar/Player Subjectivity: An Agential Analysis of Crypt of the NecroDancer." *Journal of Sound and Music in Games* 1, no. 3 (July 2020): 1 - 14

Michelle Grosser is an adjunct faculty member of East Tennessee State University and is also a music theorist with active research interests in music cognition and ludomusicology. This article talks about the relationship between a player and an avatar or in-game character through the use of agents that bond the character to the avatar. In this article Grosser analyzes *Crypt of the NecroDancer*, a rhythm game where you must time your movements to the rhythm. Her main focus of the article is how the foregrounding of the music, and its restricting features socially bond the player to their avatar in a set of predictable movements in order to play the game. One thing that Grosser does not go over is how this restrictive feature of the music and game is like the concept of performing in a large ensemble as instrumentalists usually must follow a conductor and play what is in the music and how the conductor interprets the music. The evidence that Grosser uses various theories from other scholars of distributed agents and applies it to this video game and bonding with a virtual avatar. This is a very effective use of evidence as it takes already known theories and applies it to the video game to form a conclusion that due to the restrictions of the game a player can bond to their avatar. Grosser references many different scholars such as Ruth Perry's "Distribution of Agency across Body and Self" which talks about how humans can divide their body mentally and taken further to even project themselves mentally to a virtual avatar which establishes their bond to said avatar through the experience that they both go through in the game. I feel that this article is very relevant to my paper as the theory that Grosser supports can relate to the concept of a person's in-game avatar performing music and people can project themselves to their virtual avatar to establish a connection and a sense of performing music.

6. Iain Hart, "Meaningful Play: Performativity, Interactivity and Semiotics in Video Game Music." *Musicology Australia* 36, no. 2 (November 2014): 273 - 290.

<https://www.tandfonline.com/doi/abs/10.1080/08145857.2014.958272>

Iain Hart at the time of writing this article was a graduate student at the University of Sydney, Conservatorium of Music, who focused their research on ludomusicology and based most of his articles on semiotics in video game soundtracks. This article goes into depth about how people are able to have different interpretations of what a certain soundtrack in a game can mean to them and what they are doing. These interpretations can be based on previous experience as well that do not have to relate to the game itself. One thing that Iain does not address is how performers who play a more standardized repertoire can have different interpretations of their performance like how videogames can interpret music differently and act accordingly based on their interpretation. The evidence that Hart uses, while useful, is not as effective as it could be as he uses many hypotheticals associated with the game *Skyrim* and how the battle music can be interpreted differently from fighting for glory, dying in the challenges of battle, or fleeing for your life. Hart references Zach Whalen's article and further elaborates on how certain sounds that players hear can be interpreted differently and is not just the retraining of what people associate the sounds to. This article is relevant to my research since it goes into the concept of interpreting music differently which I feel has a relationship to performing music as not every performance and interpretation is the same to others. This is similar to how players have different experiences through various playthroughs from others.

7. Liu, Yihui. "Advanced Dynamic Music: Composing Algorithmic Music in Video Games as an Improvisatory Device for Players". DMA diss., University of California, 2021.

<https://escholarship.org/uc/item/1s995322>.

Yihui Liu, is a PhD student who is working toward their doctorate in psychology and their recent research has involved video game music. This Dissertation focuses on the idea of improv in video game music based on players' actions and how this is tied into the concept of video gamers performing music. Liu takes their dissertation in the direction of explaining elements of video game music that can allow players to improvise and then create their own video game and music to go along with it that puts these elements that she describes into action. The evidence that she uses is mainly from the game that she created with the elements in mind such as user interaction and Multidimensionality. This form of evidence is useful as it directly engages her argument and supports it since she constructs her own game based on her different elements. Liu mentions many previous authors such as Karen Collins "From Bits to Hits" where she talks about different factors that make video game music successful and then uses her own elements of video game music to support her agreement with Collins. This source is very relevant as Liu directly supports and adds substantial research to my topic of players of video games being performers of music. Unlike most other scholars her research interests line up perfectly with my topic.

8. Martin, Pichlmair and Fares, Kayali. "Levels of Sound: On the Principles of Interactivity in Music Video Games." *Situated Play, Proceedings of DiGRA 2007 Conference 4* (2007): <http://www.digra.org/wp-content/uploads/digital-library/07311.14286.pdf>

Martin Pichlmair is an associate professor and Co-Head of the Games Programme at IT University Copenhagen. He is also one of five co-founders of the award-winning boutique game studio Broken Rules and a member of the Copenhagen Game Collective. Fares Kayali is a researcher, educator, and designer living and working in Vienna, Austria. In 2018 he was appointed a full professor of digital education and learning at the Centre for Teacher Education at the University of Vienna. This article talks about how video games and the machine itself that games are being played on can act as an instrument. Game consoles contain synthesizers in order to produce a sound that allows it to function as a non-acoustic instrument and are very prevalent in older consoles. The authors also talk about how in rhythm games players do not have freedom but in a shooter, the music reacts to a player's actions in rhythm as a sort of beat that goes along with the game. One thing that is not mentioned is how a player can choose to not take action in a rhythm game as a form of freedom and improvisation similar to a shooter where actions are taken when the player wants to. The evidence that authors use is scenarios and information from different games and consoles about how either the synthesizer or how a game interacts with a player's actions to establish a beat. While I feel that this evidence is effective, I believe that accompanying their evidence with audio and score examples would be very effective in addition to their previous evidence. This article indirectly engages with Zach Whalen's previous article by indirectly agreeing that sounds in video games have meanings and that players associate that sound and meaning with an action that can contribute to freedom and or restriction. This source is relevant to my research as it talks about how games with free-form actions adapt to a player's reactions to establish a rhythm as a form of performance.

9. Mraz, Ronny. "The History of Adaptive Music in Video Games." *Splice Blog*. November 1, 2021, <https://splice.com/blog/adaptive-music-video-games/>.

Ronny Mraz is a technical sound designer at Avalanche Studios in New York City where he recently worked on Just Cause 4. He is an adjunct faculty member at the New York University Steinhardt where he teaches scoring techniques in video game music. This blog explains the history of adaptive video game soundtracks that react to the player's actions. Here he talks about how games have moved from very small sound cues based on action to full rescoring/ overhaul of instrumentation in a soundtrack to accommodate the new situation. One thing that Mraz does not mention is the idea of a player choosing to go back and forth between regions and or deliberately repeating actions to experience a certain part of music more often. The evidence that Mraz uses includes video and sound examples from the game that either explains how the music works or demonstrates how the adaptive music works and what action must take place for it to change. I feel that this is another use of effective evidence due to the objectiveness of explaining a concept and having an audio and visual representation to support the argument. While Mraz does not directly mention other articles he does use a video titled "How Did They Do That - Banjo-Kazooie" which explains how the orchestration of a region changes based on what a player does or goes. This short video is then further elaborated by 8-bit Music Theory who conducted a more in-depth analysis of Banjo Kazooie's adaptive soundtrack with a video called "Orchestration Techniques in Banjo Kazooie." This serves as three different sources agreeing upon each other but was taken into further elaboration by other researchers. I find this blog relevant to my research as it talks about how player activity causes the music to change in order to adapt to the actions that they are taking. I find this like the concept of guided

improv as the music can last indefinitely until a player chooses to do something different to achieve a new result.

10. Pasinski, Amanda C., Erin E. Hannon, and Joel S. Snyder. "How Musical Are Music Video Game Players?" *Psychonomic Bulletin & Review* 23, no. 5 (2016): 1553–1558.

Amanda Pasinski is an assistant professor in residence at the University of Nevada, Las Vegas, and is also a cognitive neuroscientist. Erin Hannon is an associate professor at the University of Nevada, Las Vegas. Erin Hannon's research goal is to understand the development of culture-specific and domain-specific knowledge of complex sound structures such as music and speech. Dr. Snyder received his Ph.D. in accessibility and audio description from the Universitat Autònoma de Barcelona, Barcelona, Spain and is currently the president of Audio Description Associates, LLC. This article is a study on how musical/ how people who play video games interpret music literacy to people who play instruments regularly. This study shows that people who played music games are more likely to score higher on literacy tests that include tempo, melody, and rhythm. The same people would also score high in higher difficulty stages of Guitar Hero as well. One question that is left unasked is if these results might prove that playing music video games could be a form of performing music as opposed to learning an instrument. The evidence that the authors use is the results that they received from their experiment which consisted of musicians, video game players who play music games, and a control group who did neither. Three different groups would perform tests based on music literacy and play Guitar Hero at various difficulty stages. This evidence is very effective due to the objectivity of the study and the explanation of the methodology and results. The authors directly engage with John Blacking's book "How Musical Is Man?" taking his same question and study but applying it to

the concept of video game players and musicians rather than just people and composers. I feel that this article is also relevant to my study since the results lead to the idea that playing music video games can be an effective and accessible way to maintain or gain music literacy as opposed to learning an instrument with the time commitment, motivation, and finally disparities that can come along with it and can be tied into a way of gaining musical advancement through games as a way of performing.

11. Sascha, Grollmisch; Dittmar, Christian; and Gatzsche, Gabriel. "Concept, Implementation and Evaluation of an Improvisation Based Music Video Game." In 2009 International IEEE Consumer Electronics Society's Games Innovations Conference. 210 -212. IEEE, 2009.

Christian Dittmar is currently working on a PhD with the Research Group of Meinard Müller, International Audio Laboratories Erlangen, Erlangen, Germany. He is also the CEO and Co-founder of the music technology start-up Songquito. Dr. Gabriel Gatzsche studied media technology at the Ilmenau University of Technology. Sascha Grollmisch received an engineering diploma in Media Technology in 2009 at Technische Universität Ilmenau. He started his career as a software developer at Fraunhofer IDMT and later was part of the spin-off company Songquito. Songquito oversees the distribution of the music education software Songs2See. He completed his doctorate at the Fraunhofer Institute for Digital Media Technology in Ilmenau together with Markus Mehnert in the field of tonal pitch space-based synthesis of music. This source demonstrates the effects of improvisation or lack thereof on the levels of entertainment in rhythm games. The authors conducted an experiment where three games were created, one that was purely improvisational, one that was purely rhythmic, and one that had elements of both.

The conclusion was that people, whether they were musicians or not, found more enjoyment in a rhythm game that included improvisation. One thing that this source lacked was that it only focused on the results of this experiment being used to produce more enjoyable rhythm games in the future. Rather than talking about how this experiment can serve as an accessible way for people who don't have a background in music to be able to make and perform music rather than having extensive knowledge in a particular instrument. The study kept the idea of accessibility in mind as they were designing the games so people who have no background in music could perform well. I feel that the evidence used was very effective as this was an experiment that provided results of the different levels of entertainment in the three different games. This article does not mention other articles or authors in particular but it does engage with the game "Guitar Hero" which is a very well-known rhythm game that does not require technical command over a guitar-like controller to play the game. The engagement comes from wanting to keep the game accessible to people of all levels like "Guitar Hero." I feel that this study is very relevant to my research as it directly engages the concept of improvisation in a game and how it increases the levels of entertainment and enjoyment people feel when playing a rhythm game. This can also tie into elements of freedom like jazz where musicians would improvise their own melody.

12. Whalen, Zach. "Play along: An Approach to Video Game Music." *Game Studies* 4, no. 1 (November 2004). <http://www.gamestudies.org/0401/whalen/>

Zach Whalen is an associate professor in Digital Studies at the University of Mary Washington and teaches courses in electronic literature and video games. At the time of this article, he was a Ph.D. student doing research on video game genre theories. This source explains how certain actions in video games produce sounds that players either like and try to recreate or

try to avoid based on the context of the sound. One issue that he leaves unaddressed is how these sounds can be linked to players performing music and being trained to know what and what not to do while playing/ performing. The evidence that he uses throughout this article are score and transcription examples from various video games and provides the context of these sounds. This is a very effective source of evidence as it is objective and provides the meaning of the sounds and how they are created based on a player's actions. Zach Whalen's argument stems from Annabel Cohen's research on music association in films and how it ties into positive and negative reinforcement of sounds in video games. The relevance of this article for my research is that similar to how instrumentalists know what right and wrong notes are, video gamers know what are good and bad sounds and what actions are mistakes are required to produce them. This ties more into the concept of how players are not only playing a video game but also performing music based on the actions they choose to take or the mistakes that they make.