6-15-2024

Resisting the Historical and Geographical “Other”: The Role of Expertise in Video Game Music

Tommy Dainko

Resisting the Historical and Geographical “Other”: The Role of Expertise in Video Game Music

Abstract

Video games create rich, virtual worlds for players to explore. Game developers have often utilized exoticism, allowing players to experience the “Other” from the comfort of home. Music is a powerful tool to evoke Otherness and can reinforce stereotypes about the past and different cultures. This thesis looks at recent games where developers have collaborated with expert musicians either from the culture depicted or with expertise in historical performance practices. I document two purposes these collaborations can serve. First, the use of expert musicians creates a veneer of authenticity allowing developers to market the games as “authentic” experiences. Second, these collaborations can resist crude musical stereotyping and present more nuanced musical depictions of historical and non-Western cultures. Nevertheless, the hierarchical power structures of game studios can undermine these goals. My case studies explore the nuances of these collaborations, highlighting both the opportunities and pitfalls.

Document Type

Masters Thesis

Degree Name

M.A. in Music

First Advisor

Zoe Weiss

Second Advisor

Jack Sheinbaum

Third Advisor

Mitch Ohriner

Keywords

Authenticity, Collaboration, Expert musicians, Music, Others, Video games

Subject Categories

Arts and Humanities | Game Design | Music | Musicology | Other Music

Resisting the Historical and Geographical "Other": The Role of Expertise in Video Game Music

_____

A Thesis

Presented to

the Faculty of the College of Arts, Humanities and Social Sciences

University of Denver

_____

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

_____

by

Tommy Dainko

June 2024

Advisor: Dr. Zoe Weiss

Author: Tommy Dainko
Title: Resisting the Historical and Geographical "Other": The Role of Expertise in Video Game Music
Advisor: Dr. Zoe Weiss
Degree Date: June 2024

Abstract

Video games create rich, virtual worlds for players to explore. Game developers have often utilized exoticism, allowing players to experience the "Other" from the comfort of home. Music is a powerful tool to evoke Otherness and can reinforce stereotypes about the past and different cultures. This thesis looks at recent games where developers have collaborated with expert musicians either from the culture depicted or with expertise in historical performance practices. I document two purposes these collaborations can serve. First, the use of expert musicians creates a veneer of authenticity allowing developers to market the games as "authentic" experiences. Second, these collaborations can resist crude musical stereotyping and present more nuanced musical depictions of historical and non-Western cultures. Nevertheless, the hierarchical power structures of game studios can undermine these goals. My case studies explore the nuances of these collaborations, highlighting both the opportunities and pitfalls.

Acknowledgements

This thesis is not only the product of hard work and dedication, but of the support and care I have received throughout my life. Thank you to my younger sister Aggie whom I spent my childhood playing Nintendo games with. Thanks to my friends who continue to play games online with me. Jaylen, Josh, Topher, and Johnny, you continue to share not only your love of games but your love of game music with me. And of course, thank you to my mother who would join my sister and I in playing video games. When my mother enrolled me in piano lessons seventeen years ago, I doubt she expected it would lead me to pursue musicology as my career, but I am forever grateful for her continued support of my schooling and work.

Thanks to my dear friends Makenna, Colleen, and Lee for reminding me to take breaks, going on walks, and for coffee—my time at university has greatly benefited from your presence in my life. Thanks to Dr. Petra Meyer-Frazier who has been a great mentor, who encouraged me to explore ludomusicology in a class of hers years ago. Thank you to Dr. Gillian Gower for her support as I carved out a space for myself in musicology. Thank you to Dr. Karen Cook for continuously sharing her expertise in medieval and video game music and for her guidance with my research.

Thank you to my committee Dr. Jack Sheinbaum, Dr. Mitch Ohriner, and Dr. Alejandro Cerón for your time and feedback. Thank you especially to Dr. Zoe Weiss who took on the role of my advisor and simultaneously introduced me to the viol, which I have grown to love the more I play and the more I learn about it. Without her countless meetings, patience, and guidance this thesis would not have been possible.

Table of Contents

Introduction: Hearing Video Games

I have just woken up. The family from whom I am renting a room has been up for a few hours already. As I head downstairs, I hear the crackling of the fire with a pot of bubbling soup over it, being tended to by Eva. I inform her and other family members that I am on my way to the abbey. It overlooks the small town of Tassing from atop a hill, making clear its power over those who reside in its shadow. Leaving the house, I hear the sounds of pigs, chickens, goats, and family members tilling in the fields. Walking through town I pass by Endris, the blacksmith, whose metallic clangs reverberate in my headphones. Continuing onwards I see the stonemason Lucky arguing with a visiting Baron, but I, or rather my character Andreas, maintains his pace towards the abbey, trying to avoid the many yelling sheep on the loose. Walking through the meadow to Kiersau Abbey, I, the player, note the variety of chirping birds accompanying Andreas on his morning commute to the abbey's scriptorium. The baron from earlier has caught up to Andreas and strikes up conversation, introducing himself as Lorenz of Rothvogel, enticing Andreas to answer questions on the occult and his opinions on Martin Luther's recent *Ninety-five Theses*, helping to reinforce the specific historical setting. Upon making it to the abbey, Andreas is berated by Abbot Gernot for having been late and for, in his view, wasting the time of the baron. Andreas gives his apologies and continues towards the abbey's scriptorium by way of the abbey's church. As Andreas enters the church, I hear the Easter sequence "Victimae pascali laudes" being rehearsed by a monk

named Rüdiger. Andreas and I stop to listen for a moment, enjoying the beauty of the space with its colorful stained-glass windows and stonework while also enjoying the aural beauty of Rüdeger's singing. We speak with Rüdiger to compliment him, ending our conversation with a Bavarian "*Grüß Gott*."

There is a complex relationship between the player and their character in video games. Through a tactile interaction with a controller—in this case a keyboard and mouse—the player can make their character interact with the virtual world. I press the "A" key on my keyboard and Andreas moves left, the "D" key to move him right. I control his actions and to me, I *am* Andreas. The relationship between the player and their character is reciprocal in this sense. As I command Andreas around his virtual world, I see the same landscapes he sees, and he relays to me what he hears aurally. His eyes and ears inform me of the sounds that shape my thoughts and experience of the virtual world in the video game *Pentiment* (2022), both musical and non-musical sources ranging from the clanging of metal to the variety of calls from fauna, and to the lone monk singing in a church. I cannot reciprocally inform Andreas of any non-diegetic sounds that I hear, yet this music may influence the way I make Andreas behave in-game. I have the benefit of hearing beyond what Andreas hears; the music that accompanies cinematics (short, film-like passages in the game in which the player loses control of their character) is available only for my ears, not my character, and has the power to shape the virtual world I experience. So, yes, it *feels* as though I am Andreas, but I also have an almost omnipotent access to elements of the game he does not. I hear what Andreas hears, and I hear what the game composers and developers want me alone to hear.

As this thesis will explore, *Pentiment* uses music of the past to create a soundtrack for modern video game players. Games have historically relied on either new composition or arrangements of pop tunes and classical music works (usually from the 18th to 19th centuries). When game developers of the past did look outside these traditional sources for music, it was often done at the expense of the musical culture and used to Otherize different cultures. In my first section, I will look at the history of video games and video game music development to show how games have created and borrowed music from a variety of sources, including different traditions from around the world. In the second section, I will examine the way that game developers may collaborate with musicians of musical cultures the game developers are unfamiliar with. Collaboration with expert musicians (those who are trained in or from a specific musical culture) demonstrates an effort to resist stereotypes and offer a platform for musicians. I view this resistance through the lenses of medievalism and exoticism and demonstrate how these tropes can create two kinds of Otherings, the historical and geographical. A complex relationship between the two emerges. In the third section, I will introduce my two case studies and discuss the framework surrounding exoticist and medievalist music practices in Western video games to show how those two lenses are closely related to generate allure for the player and how this allure helps market a veneer of authenticity for the game. My two case studies are video games which reflect the two different Others: *Pentiment* for the historical Other and *The Pathless* (2020) for the geographical Other. These two games show ways in which game developers attempt to resist creating stereotypical Others by collaborating with musical experts to create soundtracks for the game. By examining the

way these two games and their chosen expert ensembles are credited, the final musical product that is created, and how the music is performed in-game, this thesis aims to reveal the ways in which video games may interact with distinct musical cultures to resist creating a stereotyped Other and aim for a positive creative output.

A Brief History of Video Games and Video Game Music

The first documented graphical computer game is a digital version of *Tic-Tac-Toe*, made in 1952 by the University of Cambridge PhD student A. S. Douglas.[1] Games slowly made their way into popular culture as this early technology developed, with public arcades and eventually home systems appearing on the market. Famous games begin emerging in the 1970s, when titles like *PONG* (1972) and *Space Invaders* (1978) appear. Scholars make a distinction between 1983 and 1984 where "the Crash" of North American arcades, home systems, and game sales occurred, a rapid decline of sales and public interest in games which resulted in the loss of billions and product failures.[2] The introduction of the Nintendo Entertainment System (NES), a new and more advanced

[1]Frans Mäyrä, *An Introduction to Game Studies: Games in Culture* (Los Angeles: Sage Publications, 2008), 40. A difficulty with the study of video games is that the code for many games have been lost either due to lack of accessible hardware and/or the loss of the software itself. Organizations have been founded to recover and preserve this data such as the Video Game History Foundation, which besides recovery and preservation is interested in public advocacy for code preservation and video game education, the building of the United States' first dedicated library on video game history, and maintaining an archive of documents related to video game creation (gamehistory.org). The library director, Phil Salvador, has published a study on the accessibility of "historical" or "classical" games (meaning games produced for now obsolete hardware). In his study, he found that about 13% of historical games are available on markets and accessible to players. See Phil Salvador, "Survey of the Video Game Reissue Market in the United States," *Zenodo*, (2023), https://doi.org/12.5281/zenodo.8161056.

[2]Mark J. P. Wolf, "Introduction," in *Before the Crash: Early Video Game History*, ed. Mark J. P. Wolf (Detroit: Wayne State University Press, 2012), 4-5.

home entertainment system, in 1985 marks the end of the Crash as its popularity amongst consumers provided a surge in console and game purchases.[3]

Early arcades and personal game systems relied on physical sound generators. Karen Collins has tracked the changes to video game music and sound effects as audio technology and consumer technologies have advanced. Before the mid-1980s, there were two main types of speakers that generated game sound: beepers (being analog sound generators) and programmable sound generators.[4] Beepers were originally attached directly to a computer's motherboard and generated sound using piezoelectricity. Collins describes beepers metaphorically as "1-bit sound" as they could occupy an on and off position, similar to the 1s and 0s of computer bits. The description of 1-bit sound also relates to the early history of this sound production. Computers represent the analog waveform of audio as fluctuating numbers that represent intensity. The more numbers available to represent the waveform, the more intricate the representation can be. Thus, today's retail computers with 32- or 64-bits sound more realistic than beepers that must represent a fluctuating wave with either 0s or 1s. Programmable sound generators, on the other hand, take user input and generate wave forms by engaging oscillators, relying on technology like MIDI where composers could program sounds and instruments to be relayed. These generators had a wider range of timbres than the beepers due to three different types of generators that worked together to impact sound output. Besides

[3]Wolf, 5.

[4]Karen Collins, "One-Bit Wonders: Video Game Sound before the Crash," in *Before the Crash: Early Video Game History*, ed. Mark J. P. Wolf (Detroit: Wayne State University Press, 2012), 122.

memory issues, these technologies severely limited what kind of audio and music could be produced. There were few hardware channels for audio production as well and designers had to compromise between more channels for sound effects or more channels for music. Often, there were enough channels to produce polyphony, but this was ignored in favor of creating more sound effects.[5] The Arcade version of *Space Invaders* only has a short 4-note repeated melody for its soundtrack that speeds up as the aliens march forward; in another approach to the compromise, the arcade game *Rally-X* (1980) has a groovy monophonic line full of syncopation and dotted rhythms to create energy. The number of available musical voices was determined by the number of available speakers. Speakers were not always in tune with each other as well. For example, the sound chips for the Atari VCS—an early home video game console—had different tunings and access to notes, so the bass may have access to a G, but perhaps only a G♯ in the treble, which Collins notes as a likely reason why the music of the Atari system heavily utilizes the minor second in its game soundtracks.[6] These speakers relied more on the skillset of a coder rather than a composer and so often the music was written by those who developed the code for early games. Early games also had limited memory, encouraging the

[5]Karen Collins, *Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design* (Cambridge, Massachusetts: MIT Press, 2008), 15.

[6]Karen Collins, "In the Loop: Creativity and Constraint in 8-Bit Video Game Audio," *Twentieth-Century Music* 4, no. 2 (2008): 216.

composition of short repeatable phrases, otherwise known as "loops," or used no music at all.[7]

The 1980s also saw the rise of interactive story-worlds in which the goal of gameplay correlates with a narrative. *Donkey Kong* (1981) began the *Super Mario Bros.* franchise, which established a story as integral to gameplay objectives. This franchise debuted the video game trope of "advancing through fictional landscape to rescue a captured lady" seen also in the *Legend of Zelda* series (1986-present).[8] This continues to be a popular trope in the 21st century but can manifest in more abstract forms as in *Shadow of the Colossus* (2005), in which the player character, Wander, has the goal to defeat each colossus in the game and gain power to bring the girl Mono back to life. The award winning *Hellblade: Senua's Sacrifice* (2017) sees a reversal of the established gender roles, as the titular player character Senua travels to the Nordic Helheim to save her deceased lover Dillion. Influential early games established narrative and gameplay precedents and tropes that still shape the role-playing games (RPGs) that permeate today's market, though they are often twisted to suit different aesthetic purposes or to challenge cultural assumptions.[9] RPGs are games in which the player "role-plays" as a character in a fictional world that has been well-developed—*World of Warcraft* (2004-

[7]Melanie Fritsch, "History of Video Game Music," in *Music and Game: Perspectives on a Popular Alliance*, ed. Peter Moormann (Wiesbaden: Springer Fachmedien, 2013), 17.

[8]Mäyrä, *Introduction to Game Studies*, 75.

[9]One popular twist on this trope is family members being separated from each other and the player character takes on the role of finding the other, see *Death Stranding* (2019), *Genshin Impact* (2020), and *Resident Evil Village* (2021). *SIGNALIS* (2022) offers a queer version of this trope in which the female protagonist Elster must search for and rescue her missing partner, Ariane.

present) and *Final Fantasy XIV* (2013-present) are probably the most well-known games of this genre. The fictional worlds of RPGs are also often filled with virtual cultures who in turn are often given different styles of music to help express this diversity. The playable race of humans in *World of Warcraft* receives heroic brass fanfares, choirs, and large orchestral works as background music. On the other hand, the trolls' background music (whose accents relate to those found on Caribbean islands and origin in the virtual world is an array of islands) is a collection of instruments and sounds from around the world; blaring conch shells and throat-singing are accompanied with various percussion instruments, but brass fanfares and choirs do not appear in the trolls' soundtrack.

Unlike earlier games that used short melodic loops created by programmers, 1980s video game music is characterized by a mixture of original compositions and rewritten classical music works. This period is when Nintendo hired their first dedicated composer (whose job was only to write scores as opposed to also working on code), Koji Kondo, who wrote the beloved music for *The Legend of Zelda* (1986) and *Super Mario Bros* (1985). *Super Mario Bros.* was also the first time a game featured continuous background tracks and each area of the game had a different track that relates to its in-game environment.[10] The compositions in *Super Mario Bros*. were all achieved with only three channels of instruments and one percussive channel. William Gibbons notes that the technological limitations and the lack of musical training in coder/composers might have influenced the prevalence of classical music in early games. Besides residing in the

[10]Fritsch, "History of Video Game Music," 19.

public domain—thus saving time and money in production—Gibbons notes that the technological limitation to two or three voices affords engagement with "a fair amount of classical music, particularly contrapuntal baroque music, [which] could be more or less faithfully reproduced using this texture."[11] Gibbons has also suggested that the use of classical music might act as a marker for how advanced the sound technology had then become, one example being *Gyruss*'s (1983) use of J. S. Bach's Toccata and Fugue in D minor, a piece incredibly out of place in a shoot 'em up game set in space; here, the use of one of the "great" composers—and a well-known piece at that—is to tell the player that the audio systems are advanced enough to play "great" music.[12] Game soundtracks also exhibited a phenomena of recomposing, or "remixing" classical music to fit within these early sound systems, deriving a variety of meanings from the way the piece is presented. Remixing an identifiable piece of classical music creates multiple new layers of meaning for a work through surprising juxtaposition, sonic transformation, and novel contexts. Gibbons remarks that the gap that separates video games and classical music is shrinking as games become increasingly recognized as artistic creations and classical music continues to lower its barrier of entry to increase audience sizes.[13]

Video games in the 1990s saw further development in technology and audiovisuals. Computing systems were upgraded from 8-bit to 16-bit to 32-bit and further, allowing for

[11]William Gibbons, "Blip, Bloop, Bach? Some Uses of Classical Music on the Nintendo Entertainment System," *Music and the Moving Image* 2, no. 1 (2009): 40.

[12]William Gibbons, *Unlimited Replays: Video Games and Classical Music* (New York: Oxford University Press, 2018), 89. As Gibbons notes, this is not the only early game to use a "remixed" Toccata and Fugue.

[13]Gibbons, 174.

clearer graphics and more advanced audio production. The modern obsession with hyper-realistic games might have roots here as more popular and detailed 3D graphics emerged and succeeded in the market. Mäyrä notes that the iconic game *Doom* (1993) combined a "freely navigable 3D environment[s]" with a first-person perspective that led to the creation of the first-person shooter (FPS) genre.[14] The FPS genre continues to maintain a popular role within video game culture today. The *Call of Duty* franchise (2003-present) allows players to experience modern warfare as an American soldier while *Overwatch 2* (2022) provides high-speed, sci-fi team battles where one team attempts to take control of an objective and prevent the enemy player team from doing so. The CD-ROM was invented during this time, allowing for incredible freedom in video game music composition:

> They [video game composers] were now able to use all live instruments, plus vocals and dialogue, and they could be sure how their music would sound on most consumers' hardware because the influence of a soundcard's synthesis on the emerging sound decreased significantly. Streaming audio was now the dominant approach for games based on CDs. Using music that was entirely pre-recorded improved sound quality notably.[15]

No longer were electronically produced sounds the only method for game soundtracks. Entire orchestras could be recorded—maintaining the original timbres, instrumentations, and grandeur of a large ensemble. Now that orchestras could be recorded for games, composers incorporated already established compositional styles of film music due to its relationship to screen media.

---

[14]Gibbons, 101.

[15]Fritsch, "History of Video Game Music," 24.

The 2000s and 2010s saw some of the most drastic changes in game development. Besides advancing audiovisuals with a focus on hyper-realism, online games also ascended during this time, allowing for new formats of games, such as player-versus-player (PVP), massively multiplayer online games (MMOs), multiplayer online battle arenas (MOBAs), FPSs, and more. Another major development in twenty-first century gaming is the rise of indie game developers, whose success in recent years demonstrates their ability to market and produce games, and thus diminishes the historical power of large development companies.[16] The first gaming companies could be considered as originally independent, such as Atari, Inc., founded in 1972 by Nolan Bushnell and Ted Dabney who began their journey with *PONG* before being bought by the larger company of Warner Communications in 1976. The term "indie" came to describe a gaming culture that was a response or "alternative to what was seen as a glutted, uninspired, and corporatised game market."[17] Indie games are often developed by a small team of people working on a game or by a singular person who acts as developer, coder, producer, composer, game tester, marketer, and any other job necessary for their project. Indie

[16]There are many other important developments in the video game industry during the 2010s. One other prominent trend of the 2010s, for example, is the shifting of revenue models by major companies: instead of selling games for a one-time charge, games are released either free (known as the "free-to-play" or the "freemium" model) or at a cost to purchase but then have "microtransactions" through an in-game shop, meaning the player can then further spend real life money in-game to acquire some type of in-game item. Some games that function on this microtransactional model are *Fortnite* (2017), *Overwatch 2*, *Fall Guys* (2020), *Dead by Daylight* (2016), and *Valorant* (2020). For scholarship on microtransactions within video games—especially the ethics that surround them—see Erica Neely, "Come for the Game, Stay for the Cash Grab: The Ethics of Loot Boxes, Microtransactions, and Freemium Games," *Games and Culture* 16, no. 2 (2019): 228–47.

[17]Michael D'Errico, "Worlds of Sound: Indie Games, Proceduralism, and the Aesthetics of Emergence," *Music, Sound, and the Moving Image* 9, no. 2 (2015): 191.

developers and development companies were originally lauded for the possibility of challenging existing structures within the game industry, but research has shown that they often reify these existing hierarchies.[18] The visuals of indie games tend to have smaller file sizes due to the limited amount of resources and team size, leading to abstractions in their art assets.[19] A common form of abstraction is through pixelated art assets in which a large number of assets can be designed quickly by a small team or a single individual. This economy of development bucks the trend of hyperrealism in games developed by large game studios and serves as a visual marker of independence. Indie game music also works in a similar fashion. As opposed to the large orchestral scores featuring live recorded instruments players have come to expect from large game studios with million-dollar budgets, indie games have limited resources and often rely on digitally created sounds or recordings made in lower-tech studios.

Music is often the final element in a video game's creation. Composers may not even be hired until much of the game has already been developed and their music is a response to a mostly developed virtual world. Like film music, the music team is usually separate from the other departments in game development and the composer and lead sound

[18]Thomas Poell, David Nieborg, and Brooke Erin Duffy, *Platforms and Cultural Production* (Cambridge: Polity Press, 2022), 113; Felan Parker, Jennifer R. Whitson, and Bart Simon, "Megabooth: The Cultural Intermediation of Indie Games," *New Media & Society* 20, no. 5 (2017): 1954–72; and Alison Harvey and Stephanie Fisher, "Making a Name in Games: Immaterial Labour, Indie Game Design, and Gendered Social Network Markets," *Information, Communication & Society* 16, no. 3 (2013): 362–80.

[19]Chase Bowen Martin and Mark Deuze, "The Independent Production of Culture: A Digital Games Case Study," *Games and Culture* 4, no. 3 (2009): 280-81. Art assets refer to the game files for different visual elements in the game. For example, a game will have different art assets for clothing items, characters, or the world itself. The way these art assets are implemented vary as well—3D games often take 2D drawings and wrap them around untextured 3D objects. Some games are designed on a 2D space and so this step does not occur there.

designer report directly to the head developer. This means that while other creative directors, like art and narrative, may collaborate throughout the process, music is usually not part of that collaboration. Final musical choices are determined only by the composer who is often involved in the recording sessions of their music. The two games I will be examining in my case studies differ from this normative structure: for *The Pathless*, the composer joined the project at an earlier stage of development as he already had a rapport with the game studio Giant Squid; for *Pentiment*, Alkemie Ensemble also joined earlier and did not have a head composer to report to—instead, they worked as a team to create arrangements and original compositions for the head developer.

Games composers may choose a variety of musical forces to suit their aesthetic wishes. Given the usual continuity of background music in games, these aesthetic choices are central to the user's experiences. The composer must write for an ensemble that will best accompany the player and their time in the game in order to properly immerse them. Large game studios have the funds to hire orchestras and choirs for recording sessions and often blend both digitally produced sounds with live recorded sounds for the final soundtrack. The digitally produced sounds may come from sample packs which are collections of digital instruments built from short, recorded sounds (samples) of live instruments. Independent studios, on the other hand, may rely entirely on these sample packs or create their own unique instruments with digital sound generators. Modern game music composition, like film music, often develops Leitmotifs, using neo-Romantic flourishes, and favoring the orchestra as the primary ensemble. Games can also feature small and uniquely orchestrated chamber ensembles beyond the traditional string quartet.

Game composers are a rather homogenous group who comprise primarily of white American men and Japanese men with varying backgrounds in musical training, if they have any at all. Koji Kondo, for example, did not have a classical music background when he was first hired by Nintendo. Later, Nintendo hired the composer Koichi Sugiyama, who was a professional classical musician and conductor and was commended for bringing a classical sound to video game music in the 1986 NES game *Dragon Quest*.[20] Although a background in classical music training is not necessary for composers, especially those who are independently developing games, it is not uncommon for modern game composers to have some. Jeremy Soule, who has worked on many games including several in *The Elder Scrolls* series (most notably *The Elder Scrolls V: Skyrim* (2011)) does not hold a degree in composition but has took private lessons and music coursework at Western Illinois University before he got a job as a composer for Squaresoft.[21] While *Skyrim*'s soundtrack is mostly built on samples that create an orchestral texture, the iconic "Dragonborn" theme features a live choir. Composers may also have received university education in fields outside of music. For example, the independent developer for *Stardew Valley* (2016), Eric Barone, does not have a background in classical music but did earn a computer science degree from the University of Washington in Tacoma.[22] *Stardew Valley*'s soundtrack is entirely

[20]Fritsch, "History of Video Game Music," 19.

[21]Paul Semel, "World of Musicraft: Jeremy Soule," *Gamespy*, May 24, 2006, http://pc.gamespy.com/pc/guild-wars-campaign-2/710030p1.html.

[22]Sam White, "Valley Forged: How One Man Made the Indie Video Game Sensation *Stardew Valley*," *Gentlemen's Quarterly*, March 20, 2018, https://www.gq.com/story/stardew-valley-eric-barone-profile.

electronically generated and has textures ranging from small groups with a handful of instruments to tracks that approach the instrumentation of an orchestra.

Rather than "sampling" classical compositions in MIDI work as early "remix" games did, games now use recordings of actual musicians. Electronically generated music and sampling is still possible, but so are grand orchestral scores recorded by professional orchestras. Classical music and video game music have developed a reciprocal relationship with each other. Not only do games continue to borrow pieces from the classical repertory or draw on classical styles, but classical music now also borrows game music in a process Gibbons defines as "classifying game music" in which game soundtracks are arranged for live orchestral performances.[23]

[23]Gibbons, *Unlimited Replays*, 157-71.

Working with Distinct Musical Cultures

Parallel to video games' growing collaborations with orchestral music and musicians came a growing interest in, and availability of, music from other cultures. Increased immigration from Africa and Latin America to Europe and North America during the 1970s and 1980s fueled a growing interest in exotic music and led to the introduction, in 1987, of "world music"—a new genre of music from other cultures marketed by producers towards Western audiences.[24] Popular interests in exotic music coincides with the development and the rise of video game popularity, creating a ripe space for both to intersect. Games have long been interested in representing the exotic, and composers may look to musical cultures other than their own when writing game soundtracks to create distinct and exotic sounding aural landscapes for players who are navigating new virtual worlds. By using a musical language that evokes the exotic to an audience, the idea of exploring distant worlds is reinforced for the player. These musical traditions can be ones that have been recreated through historical performance practices or living traditions from around the world, the composer just needs to find one they believe affords the virtual world they are composing for. Despite these virtual worlds being fantastical or imaginary, they often draw on real world cultures and places to depict virtual settings,

[24]Aleysia K. Whitmore, *World Music & The Black Atlantic: Producing & Consuming African-Cuban Musics on World Music Stages* (New York: Oxford University Press, 2020), 44-47.

cities, art, and people. How composers represent these cultures aurally can reinforce stereotypes about the Other and of the specific culture the composer is borrowing from, even if the virtual setting is fantastical.

Dana Plank-Blasko has traced a history of games from the 1980s to the early 1990s that utilize visual and musical stereotypes of Russia and the Soviet Union, almost entirely to present the region in a negative (and an occasionally neutral) light to American audiences.[25] These early games did not have the ability to implement actual recordings of music, instead remixing Russian folk songs and classical "Russian sounding" works (e.g., Tchaikovsky) into 8- and 16-bit audio formats. The ability to use recorded performances today allows game developers and composers to import the expressive forms of any existing musical culture instead of just quoting and remixing musical lines. The original timbres and instrumentation can be maintained and presented to players in-game. Between globalization and the ever-growing size of the internet, game developers have access to musical cultures from all over the world. People have the opportunity to learn about different worldviews and kinds of music making, but they also have the possibility of using these traditions in culturally insensitive ways. Composers in and out of games have often used "exotic" traditions outside of classical music with varying motives and processes. Some composers and game developers work directly with these cultures, perhaps in an effort to present them authentically. Yet even these well-meaning efforts

[25]Dana Plank-Blasko, "'From Russia with Fun!': *Tetris*, Korobeiniki and the Ludic Soviet," *The Soundtrack* 8, no. 1 & 2 (2015): 7–24.

risk reifying the composer's interpretation of the culture in the absence of the views of cultural insiders.

Exoticism and medievalism can influence the way players receive gameplay and game soundtracks. Both have the ability to reinforce stereotypes players may hold about the different subjects they depict. Exoticism can stigmatize or romanticize those who are from the "exotic" cultures depicted and medievalism can alienate those who do not fit in with the stereotyped white, Christian, and male medieval European past, reinforcing these injurious stereotypes.[26] Both have the ability to elicit notions of primitivism and reinforce a teleological view of human culture. Medievalism can be, and often is, a facet of exoticism in which creators and consumers play in the past. The past also serves as an apt location for escapism, in which the portrayal of exotic elements draws in players. Both medievalism and exoticism generate allure for products that can be marketed to those who wish to experience something presented as different and exciting from their day-to-day lives.

Video games take advantage of exoticism to transport players to distant lands. Exoticism has always been fraught with the possibility of portraying the depicted culture in a negative light. One of the most infamous culprits of this is *Mike Tyson's Punch-Out!!* (1987) in which the player fights against a worldwide cast of caricatures from other countries. Each foreign (non-American) opponent is accompanied with entrance music meant to be emblematic of the opponent's country of origin. Piston Honda, the fighter

[26]Karen M. Cook, "Medievalism and Emotions in Video Game Music," *Postmedieval: A Journal of Medieval Cultural Studies* 10, no. 4 (2019): 493.

from Japan, is accompanied by the Japanese folk song "Sakura Sakura;" Soda Popinski of Russia (originally Vodka Drunkenski in the 1984 arcade version) is accompanied by the Russian "Song of the Volga Boatmen." Other characters were not connected to a folk song of their country, such as India's Great Tiger who—along with two other characters—is joined with Richard Wagner's "Ride of the Valkyries." The visual caricatures and vulgar naming conventions work with these music choices to draw on the player's understanding of stereotypes to place their opponents around the globe.

Games can create allure through their use of exoticism, an element particularly potent in modern video games in which the player may experience and interact with—or even *as*—the Other from the safety and comfort of their own home. By creating exotic-sounding scores, composers help realize these fantasies, evoking an aurally distant world as a backdrop for the player as they explore a visually exotic one. Studies in film music exoticism can help provide a framework for analyzing the same tropes found within video games. Mark Brownrigg identified several ways in which film composers aurally establish an exotic place to the viewer, which are:

> the use of a non-Western instrument; the use of Western instruments in imitation of non-Western ones; the use of a melody associated with a specific place; the concoction of a melody shadowing a tune with specific geographical connotations, adopting the theoretical principles of a music culture in order to produce a simulacrum of it; harnessing rhythms evocative of a certain part of the world; using genuine music and/or musicians from the country the film is interested in evoking.[27]

[27]Mark Brownrigg, "Hearing Place: Film Music, Geography and Ethnicity," *International Journal of Media and Cultural Politics* 3, no. 3 (2007): 312.

Obviously, the film genre pairs these sonic devices with visuals, which Brownrigg acknowledges renders these devices more compelling for the viewer, helping to immerse them in these stories.[28] In Brownrigg's article, two films he examines—*Seven Years in Tibet* (1997) scored by John Williams and *Kundan* (1998) scored by Philip Glass—occur in Tibet and borrow Tibetan instruments in the score. In these films, the visual setting in a foreign place reciprocally reinforces the aural exoticism of the scores; they both affirm a kind of distance for the viewer. Of course, this distance for a Western audience can be quite small in cases where the exotic is drawn from a European folk tradition and in this context feeds into notions of nostalgia.[29] Besides distance, conceptions of class, race, pastoralism, and more can aid in constructing nostalgia for the viewer.

Games can also exoticize the past and non-Western cultures simultaneously. Karen Cook has analyzed *Sid Meier's Civilization IV*'s (2005) teleological portrayal of music history and the primacy of Western advancement as the "correct" order of progress for human cultures.[30] *Civ IV* is a turn-based strategy game in which the player picks one of

[28]Brownrigg, 307.

[29]Brownrigg, 320. Brownrigg examines films that use Scottish music in his article to show that the same techniques used for the "external other" can also be used for the "internal other," to borrow Philip V. Bohlman's terms. See Philip V. Bohlman, "Composing the Cantorate: Westernizing Europe's Other Within," in *Western Music and Its Others: Difference, Representation, and Appropriation in Music*, ed. Georgina Born and David Hesmondhalgh (Berkeley: University of California Press, 2000), 187–212. While Bohlman's terms may serve as a replacement for my geographical and historical Other terms, the difference is that Bohlman is using these for practices that are still active today (although he is structuring his argument through a historical lens). As will be explored later in this thesis, the historical Other defines historical recreations of musical traditions, whereas the geographical Other encompasses both Bohlman's living internal and external traditions.

[30]Karen M. Cook, "Music, History, and Progress in Sid Meier's *Civilization IV*," in *Music in Video Games: Studying Play*, ed. K. J. Donnelly, William Gibbons, and Neil Lerner (New York: Taylor & Francis Group, 2014), 166–82.

many civilizations and attempts to progress the fastest against other civilizations, winning if they satisfy one of the game's five win conditions. The game starts in the "ancient" era and progresses all the way to the "future" era. Cook notes the inaccuracies between certain musical pieces and their purported eras, with composers like Johannes Ockeghem and Josquin Des Prez labelled as composers of the medieval era, but J. S. Bach and Wolfgang Amadeus Mozart are of the Renaissance.[31] The game's ancient era is conflated with ancient music, marked by the literal naming of the tracks as "Ancient Soundtrack 1-4." These four tracks "draw on stereotypical sound-images of pan-African, Native American, or Aboriginal music, despite their contemporary North American origins."[32] Humanity's ancient past is thus marked as something exotic, far away from the present-day player's reality but sounded with music that the player may recognize as belonging to a current living tradition. This exotic element of "primitive sounding" music reinforces the stereotype of non-Western music being primitive and thus making it a method of depicting humanity's past despite its ongoing production in communities. Games can then market the past as spectacle, something exciting for the player to experience that is distinct from their modern-day experiences. *Civ IV* thus functions both as something historically Other and geographically Other.

When composers look to the Western past for exoticism, they create a historical Other, rather than a geographical Other. The Othering of these historical cultures cannot bring harm to them; they are deceased, after all. Rather, harm is done to non-European

[31]K. Cook, 170-73.

[32]K. Cook, 173.

cultures by way of emboldening white supremacist ideologies. There are two responses here for the player: history becomes Other for those who are interested in playing a game that is exotic because of its historical setting. On the other hand, those who wish to use the past to legitimize bigotry will see this as *un-Othering* where a mythologized history is made interactive in a virtual game setting for them. One of the most popular time periods to draw on and use as a setting, for example, is Europe's medieval past. Aurally, the medieval past has been falsely presented as wholly Christian, white, and male.[33] Games offer a way in which players can then experience these fictionalized retellings of the past. Players with white supremacist ideologies might then feel a personal draw to these perceived Golden Ages. This affinity stems from a form of nostalgia for a fictionalized past. Svetlana Boym describes nostalgia as "a longing for a home that no longer exists or has never existed… a sentiment of loss and displacement," connected to one's constructed past as belonging to a culture or country and laying claim to it.[34] Nostalgia encourages such players to experience these games as accurate portrayals, allowing the players to act out their worldview in virtual settings that align with their beliefs and morals.

This engagement with the medieval can be described as medievalism. Medievalism as a concept encompasses both scholarship into the medieval, as well as creative engagement with medieval past, including popular media. In terms of music, the work of

[33]K. Cook, "Medievalism and Emotions," 484.

[34]Svetlana Boym, "Nostalgia and Its Discontents," *The Hedgehog Review*, 2007, https://hedgehogreview.com/issues/the-uses-of-the-past/articles/nostalgia-and-its-discontents.

historically informed performers like David Munrow is just as much a form of medievalism as the so-called "bardcore" arrangements of pop songs found on streaming services.[35] This concept of an expansive medievalism only emerged within medieval studies in the 1980s, spurred by the work of Lesley J. Workman. Richard Utz notes "Workman cherished the broad social appeal of medievalism as the all-encompassing process of (re)creating and (re)presenting the Middle Ages in postmedieval times."[36] Video games situated in medieval or fantastical settings reminiscent of the medieval easily fall within this broad definition of medievalism. While many materials of the historical medieval are still extant, sounding music is not, and is at best only suggested by the surviving notation and documentation.

What drives the prevalence and popularity of medievalist media? Consumers might be interested in medievalist media as a way to satisfy feelings of nostalgia for a bygone age—or to lay claim to the medieval past as their heritage. Nostalgia for the Middle Ages has often been connected to ideologies of white supremacy, misogyny, and antisemitism, views that continue to be supported in some medievalist games and their communities of players. A game's level of immersion can deepen the feeling of nostalgia for a player; they get to depart from their own day-to-day experiences and immerse themselves in a virtual narrative they can, depending on their identities, construe as depicting their own

[35]Bardcore is a somewhat new and niche genre of music in which a person arranges a popular song to sound medieval by using real-life historical instruments or MIDI mockups and changes texts to "sound" old but remain essentially the same as the original, commonly using words like "thee" or "thy." Two popular examples of this are the works by the online personality Hildegard von Blingin' or the musician Cornelius Link's work.

[36]Richard Utz, *Medievalism: A Manifesto* (Kalamazoo: Arc Humanities Press, 2017), 20.

history or ancestry, whether it is completely fictitious, construed from specific historical events or evidence, or somewhere in between. The distinction between the player and their character can become quite blurred as well. Since the method for interaction with the virtual world is through the player's character, it can feel as though the player is the hero of the story rather than watching a story unfold, an element that can be heightened if the game uses the first-person perspective from which the player sees through the character's eyes. These nostalgic feelings towards the past are always invented. Nostalgia for the Middle Ages is often coated in a rich romanticization. John Ganim has studied the longing to perceive the Middle Ages as a "lost Golden Age" in literature.[37] This longing can be imposed on other types of medievalist media and lead to the production of media that envisions the medieval past with stereotypes, reinforcing this longing in an endless cycle. Within the Middle Ages and its medievalist renditions in modern media, consumers find this nostalgic familiarity, but also a strangeness that is theatrical and desirable to observe and interact with, both "*gemütlich*" and "*unheimlich*."[38] It is exotic, yet a world in which consumers can create expectations based on stereotypes or general knowledge. Ganim argues that this historicization of the Middle Ages creates an "orientalizing ethnography," but I would posit that the immersive element of video games creates more of an *autoethnography* which players attempt to place themselves into. The pervasiveness of medievalism in popular media then becomes a familiar trope for

[37]John M. Ganim, *Medievalism and Orientalism: Three Essays on Literature, Architecture and Cultural Identity* (New York: Palgrave Macmillan, 2005), 22.

[38]Ganim, 107.

consumers; as Ganim states, the Middle Ages are "that foreign land in which we are always home."[39] Video games are the clearest medium in which the realization of an imagined Middle Ages can function as autoethnography: players immerse themselves into the roles of the characters they play; and they identify with their characters and interact with the virtual environment the game is set in, experiencing a constructed culture and world. The video game's narrative is not only a story unfolding before the player's eyes, but at some level is also a biography for the player, representing their experiences in the game.

Games capitalize on a generalized and often stereotyped understanding of the medieval, one in which players can feel connected to as well. This is a "known-yet-exotic factor" towards the medieval which works with nostalgia to draw players to consume medievalist media.[40] In video games, the virtual experience provides players interested in experiencing a construed heritage an ability to do so from the comfort of their home and avoid any physical dangers construed from stereotyping. Historical accuracy in these games is also simply unachievable—nor is it necessarily desirable. Veronica Ortenberg West-Harling states:

> So-called historical accuracy is not only unachievable, but misplaced because the writers' perception, even when real, has to be overruled to make the book palatable and interesting. This means inevitably projecting twentieth-century attitudes and moral issues onto medieval characters. While modern perception is that of a medieval world of cruelty, injustice, violence, intolerance, poverty, and filth, its characters are made to hold values seen now as lost, such as solidarity and a way of life attuned to nature. The reader can feel at the same time superior,

[39]Ganim, 107.

[40]Veronica Ortenberg West-Harling, "Medievalism as Fun and Games," *Studies in Medievalism XVIII: Defining Medievalism(s) (II)*, 2010, 4.

> nostalgic, and plunged into a world both strange but not totally unfamiliar through collective memory, and places still visible and enhanced by the Heritage world.[41]

West-Harling says that a narrative of historical fiction must conform at some point to modern perceptions and wants in order to gain an audience. Writers using this approach towards medievalist and, to a similar extent, historical narratives are prone to the use of stereotypical tropes to flesh out their stories. Games are not exempt from this phenomenon and might even be more harmful in propagating stereotypes through their critical interactivity; it is one thing to read a novel in which stereotyping occurs, it is another to be the conduit for it as a player. As a method to avoid medievalist stereotyping, games may employ expert scholars or conduct research on the Middle Ages. Historical accuracy is still unachievable in this sense as a perfect rendition is unattainable. But there can be an effort to conduct that research and also demonstrate it to an audience, creating environments that might feel more real to consumers interested in history and to create a more representative realization of the Middle Ages, one that dissuades stereotypes. Conversely, the nostalgic ideology can feel more real to white supremacists. Demonstrating an effort to target the former group, the medievalist murder-mystery game *Pentiment* has an extensive bibliography displayed in the credits of the game. The developers are aiming to attempt a level of historical accuracy while alerting their audience to their initiative as well as a way of painting their game as an authentic representation of the past. Players find value in this veneer of authenticity.

[41]West-Harling, 4.

One way in which exoticism may reinforce stereotyping is through a lack of cultural specificity and nuance. Take, for example, the recent game *Chants of Sennaar* (2023), the premise of which resembles the biblical story of the Tower of Babel.[42] The game takes place in a massive, mythical tower in which five distinct cultures exist stacked on top of each other, and all of which have created physical barriers between each other and ceased communication. They have all lost the ability to communicate with each other and therefore cannot understand the different cultures they are surrounded with. The player character, an unnamed hero who belongs to none of these cultures, must save the tower by learning each language—each language is entirely logographic, so the player learns one symbol for each word—and acting as a translator. The cultures are presented hierarchically: as the player progresses through the tower they continuously ascend, and with each major ascension between game chapters they encounter a new culture. Throughout their adventures the player hears a soundtrack that could be described as a type of "world music."[43] The soundtrack is rife with erhu, oud, varieties of throat-singing, and several other markers of the geographical Other to accompany the several distinct cultures. These markers of the Other are mixed with Western instruments and music such as the violin, oboe, clarinet, choral arrangements, and military marches. The player hears

[42]The soundtrack of *Chants of Sennaar* is scored by Thomas Brunet.

[43]For research on the topic of world music see Steven Feld, "Notes on World Beat," *Public Culture Bulletin* 1, no. 1 (Fall 1988): 31–37; Steven Feld, "A Sweet Lullaby for World Music," *Public Culture* 12, no. 1 (2000): 145–71; Louise Meintjes, "Paul Simon's Graceland, South Africa, and the Mediation of Musical Meaning," *Ethnomusicology* 34, no. 1 (Winter 1990): 37–73. For research on the act of marketing world music and its curation for Western audiences see Aleysia K. Whitmore, "The Art of Representing the Other: Industry Personnel in the World Music Industry," *Ethnomusicology* 60, no. 2 (2016): 329–55.

Tuvan throat-singing as they avoid being caught by the "Warrior" culture, which is intent on going to war with the lower culture of the "Devotees," which the Warriors word for is translated as "impure." This reinstates the stereotype of cultures found along the Eurasian Steppe as barbaric and war-like.[44] But then later, when approaching the higher culture of the "Bards," the player hears Tuvan overtone singing (as opposed to throat-singing) instead. Here, the Bards have an air of superiority about them in which the literal translation of their word for the Warrior culture is "idiot." The use of Tuvan music in these contexts then makes the cultural purpose of its use unclear; is Tuvan culture and music a marker of barbarism? Or is it a marker of elitism?

Part of the conflict in the game arises from the fact that these cultures develop assumptions about each other and do not have the ability to communicate, creating stereotypes of each other in language and behavior. Perhaps the point of the variety of musics in *Chants of Sennaar* is to explore as many musical cultures as possible and put them in a musical dialogue with each other, much as the distinct cultures in the game must enter into a literal dialogue with one another in order to get the "true" ending.[45] The five virtual cultures draw on different real life cultural architectures, clothing styles, and

[44]Andrew Bell-Fialkoff, *The Role of Migration in the History of the Eurasian Steppe: Sedentary Civilization vs. "Barbarian" and Nomad* (New York: St. Martin's Press, 2000), 9.

[45]Some games have multiple endings, each of which are achieved by completing certain objectives in the game. In *Chants of Sennaar*, the so-called "true" ending is achieved by interacting with consoles throughout the world that open a text chat interface between two representatives of different cultures. The player must act as a translator between the two cultures to reestablish lines of communication. When the player completes all of these challenges and then progresses through the final chapter of the game, they reach the true ending where some abstract concept each culture revered—such as "beauty" or "God"—is revealed to have been the same thing in the end, merely viewed differently by each culture. This abstract concept is visually represented by a rotating three-dimensional shape that when viewed from different angles makes the glyph the culture used to represent that word.

writing systems to establish a visual difference for the player, so the music should also mirror this borrowing. Reusing the same musical culture across different in-game cultures, however, eliminates the possibility of specificity. *Chants of Sennaar* transforms Tuvan music into "world music," making it a general marker of Otherness, a shorthand for listening players to accompany a visual landscape that is remarkably distinct amongst all five cultures.

Games whose settings are the historical past are also rife with opportunity to reinforce harmful stereotypes. The medievalist fighting game *For Honor* (2017) reinforces stereotypes of violence, primitivism, hyper-masculinity, and barbarism within the medieval period. In *For Honor*, the player takes control of a medieval warrior and battles against other players and physically smaller non-player characters (NCPs). Players are consistently exposed to blood and gore in a game with realistic graphics. The battles are set in ruined castles and forts meant to evoke one of the three medieval factions in game: the Vikings, the Knights, or the Samurai. The idea of the barbaric Middle Ages is reinforced through this game play, playing on modern expectations of the medieval. *For Honor*'s soundtrack incorporates string timbres reminiscent of early instruments such as the viol but are played on modern instruments. All faction themes feature drones, aurally establishing a sense of primitivism.[46] Percussion is an overwhelming force in the music

[46]Drones can serve as a marker of primitivism due to their connections with the past and a variety of musical cultures. Medieval chant can be, and has been, interpreted as a primitive form of music making. Historically, its performance could be accompanied with drones; organum and its different types are a prevalent example of this. Similarly, non-Western music—as Karen Cook has pointed out in her article on *Sid Meier's Civilization IV*—can be interpreted as primitive. Drones are found in music traditions all around the world today as well. Using techniques associated with the past and so-called primitive cultures can then reinforce ideas of primitivism in video games.

and reinforces the notion of the barbaric and militant Middle Ages, backdropping the gameplay of going to war with the other factions. Each faction has varying approaches to its music. The Knights have music reminiscent of European military drums through the use of consistent rhythmic patterns and field drums, powerful brass, and wordless choir. The Vikings also use percussion but are made distinct to European marching traditions by using polyrhythms instead of orderly repeated rhythms. The Vikings' music also contains wordless shouts (as opposed to a wordless choir, another distinction between the Knights) and a generally lower tessitura of instruments, aiming to separate them from the Knights aurally. The Samurai makes use of non-European instruments, especially the shakuhachi, gongs, and taiko—but lacks voice as in the other two. This absence proffers vocal traditions as inherently European, at least in regard to the medieval.

The wordless voice linked to chant as a typically "non-diegetic phenomenon," which Cook says "evokes the supernatural, indicating some sort of ghostly, even demonic, threat and instilling a sense of fear or danger."[47] In the connection to chant, the wordless male voices "reinforce a general sense of oldness and the medieval."[48] Wordless choirs can signify Christianity and reinforce the stereotype of the Middle Ages as entirely Christian.[49] *For Honor* also greatly elevates the hyper-masculine stereotype of the medieval. The use of only male-coded choirs accents hyper-masculinity, which is very

[47]K. Cook, "Medievalism and Emotions," 491.

[48]Karen M. Cook, "Beyond (the) Halo: Chant in Video Games," *Studies in Medievalism XXVII: Authenticity, Medievalism, Music*, 2018, 188-89.

[49]K. Cook, 200.

prominently linked to the war and bloodshed the player conducts in the game. The world of *For Honor* becomes one of consistent battle, fear, and danger that paints the medieval world as that of conquest. The player and their chosen faction must fight against and conquer the Otherized factions. The player aligns themselves with one historical Other and, to win matches, must persecute the two other historical Others. Drawing on these aural topics helps immerse the player into this world but depicts history as one of bloodshed conducted against those who are different from the player's character.

There is ample opportunity for crossing of the historical and geographical Other. The shakuhachi can serve as a marker for medieval Japan, for example, but if the intended audience is made up of Western players than the geographical distance as the exotic marker may be more compelling rather than its historical quality. The geographical Other can be built off both temporal and geographical unfamiliarity—these depictions are lands and times a player may only have stereotypical understandings of. The historical other is usually only built off temporal unfamiliarity, Western players will typically have a better understanding of the Western world and its culture but might not be familiar with history stretching all the way to the medieval; they are more likely to have a stereotyped understanding of the Middle Ages from popular media.

Case Studies

The following two case studies will analyze the historical and geographical Other, respectively, and the ways in which they employ expert musical ensembles to resist musical stereotyping. Both the geographical and historical Other are spectacle and, within games, function to draw in players who are interested in the spectacle.

Pentiment and *The Pathless* attempt to resist stereotype reinforcement and produce an "authentic" product by working with expert ensembles in a musical tradition. Expert ensembles—or in other games, sometimes a single expert musician—are made of musicians who are trained or otherwise deeply connected to the tradition they perform in. *Pentiment* draws on the expertise of the Alkemie Ensemble, specialists of medieval European music. *The Pathless* employs the Alash Ensemble, a group of Tuvan musicians who have worked to share their musical culture at home and internationally. Expert ensembles provide a marketable veneer of authenticity for games, highlighted in advertisements and in-game accreditation. These two games, and others, promote themselves to players through the construction of a perceived authenticity, a perception that is supported by the use of expert ensembles—a perception that may or may not reflect any measure of actual authenticity. These kinds of "authentic experience games" have varying levels of success in minimizing stereotype reinforcement, determined by the level of power and autonomy given to the expert ensemble in production, the art styles, narrative, and world building. Depending on the hierarchy of the game studio, there may

still be a head game composer who acts as a kind of musical filter, determining what aspects of the musical culture are allowed into the final product.

The Historical Other: *Pentiment* (2022)

The murder-mystery video game *Pentiment* is set in sixteenth-century Bavaria, taking place in a fictional town called Tassing. The player primarily plays as a painter named Andreas Maler and in its third and final act, a printer named Magdalene Druckeryn. Reckoning with the past and its repercussions is an important thread in the narrative of *Pentiment*. Throughout the game the player must solve murders across decades to uncover a scheme to hide the town's pagan past, which has been hidden to legitimize the local abbey's power and its relic: the hand of St. Maurice. The game was developed by Obsidian Entertainment, a previously independent studio acquired by Microsoft in 2018, with Joshua Sawyer as the director.

The New York-based Alkemie Ensemble was responsible for the music production of the game. As an early music ensemble trained in historically informed performance, Alkemie has long grappled with the tensions between scholarly knowledge and creative musicianship. Even in their work outside of *Pentiment,* they do not limit themselves to evoking "authenticity" and are interested in taking creative liberties in the performance of medieval music. They often work in collaboration with a variety of other artists (including electronic musicians) and have produced unique multi-sensory performances. Their April 21st, 2021, livestreamed concert "Verdant Medicine: Hildegard's Resonant Apothecary" incorporates electronic music and, prior to the livestream, ticket holders

were sent a package full of items to smell, taste, and touch while they watched the performance. All the core members of Alkemie are highly trained and have received degrees in historical performance practice.[50] Founders Tracy Cowart and Sian Ricketts both earned doctorates in historical performance from the prestigious program at Case Western Reserve University. Alkemie's interest in hybridizing medieval and modern sensibilities and musical aesthetics makes them the perfect ensemble to score a video game like *Pentiment*. When Sawyer hired Alkemie, he did so not only to record music for the game, but also to write all its music.[51] Sawyer's choice to give virtually all musical control to an ensemble from outside the game studio demonstrates not only a trust in the work that they produce, but an effort to use historically-informed practices within the game soundtrack to compliment the other historically plausible facets of the game.

Although *Pentiment* is set in the sixteenth century, it draws heavily on medievalism to reinforce its historical setting for the player. It is heavily stylized in both its art and sound design to produce a game that makes the player feel as if they are playing in history. The art design is styled from medieval manuscripts, lacking techniques associated with the Renaissance such as proportion or the use of shading and blending to create depth, relying heavily on the style of marginalia. The game also makes use of several different

[50]Biographies for the performers of Alkemie can be found at their website: https://www.alkemie.org/who-we-are.

[51]The only piece in the game not composed or arranged by Alkemie is the final one (set in a later time and style), instead being composed and sung by Kristin Hayter. Alkemie still performs on the piece. The text for this song comes from the 1834 poem by Heinrich Heine "Ich hatte einst ein schönes Vaterland." Alkemie commissioned the piece, however, and so would still have been involved to some degree on musical choices and material that Hayter composed.

text fonts for the characters' speech bubbles to portray class, also drawn from a variety of manuscript sources. Musically, sources come from as early as the eleventh century all the way to today with modern improvised pieces by Alkemie. Many works come from the fifteenth and sixteenth centuries, but they are presented with the same kind of stylized medievalism as the manuscript illumination art style, the prominence of the Benedictine abbey the player explores in the game, and the distinct social and class boundaries the player observes in the game world. Medievalism then becomes not just a way to depict a medieval past, but a way to generally place the player into a distant historical past.

Medieval music will never be performed today just as it was during the Middle Ages, so an "authentic" sound cannot be achieved. Richard Taruskin notes that the performance of Early Music at its onset was framed as "authentic," but in reality was actually a reflection of the tastes and thoughts of contemporary musicians.[52] Of course, the idea of an "authentic" rendition of Early Music has shifted over time, and scholarly arguments surrounding its sound have both been in contention with each other and served to solidify a "correct" way of performing Early Music.[53] Early Music's relationship to the classical canon has also generated conflict; Elizabeth Upton has documented the revival's initial conundrum of connecting itself to classical music or to develop as its own independent

[52]Richard Taruskin, *Text & Act: Essays on Music and Performance* (New York: Oxford University Press, 1995), 164-66.

[53]See Daniel Leech-Wilkinson, *The Modern Invention of Medieval Music: Scholarship, Ideology, Performance* (New York: Cambridge University Press, 2002).

genre.[54] Alkemie has positioned themselves in the latter camp, which perhaps makes them a viable option for early music performers to work within the video game medium.

Despite historical accuracy being unattainable, *Pentiment*, Alkemie, and Josh Sawyer have marketed the game as being authentically *medieval*. Kate Remington's podcast series *Music Respawn* hosted Sawyer, Cowart, and Ricketts in an episode titled "Josh Sawyer and Alkemie Create an Immersive Medieval Experience in 'Pentiment'" in which they discuss musical approaches, their creative process, and refer to *Pentiment*'s gaming experience several times as "authentic."[55] Alkemie had a lot of freedom in their musical output for the game. Sawyer often would let them know of a kind of sound he wanted for a scene to which they, initially, would send full arrangements for approval before learning to streamline this process by sending only the melody. Sawyer shares that he very rarely rejected a musical idea from Alkemie. While I will discuss musical elements of *Pentiment* later, the podcast reveals the intention to represent an authentic past for the player both in game design and music output, or, at least, one that could be marketed this way. This podcast episode exemplifies the historical wide-ranging-ness of the soundtrack: the depiction of sixteenth century Bavaria includes performances of music as disparate as modern improvisations meant to sound like the music of the ancient Greeks and Romans, to Renaissance consort music, to monophonic medieval music, all under a

[54]Elizabeth Randell Upton, "Concepts of Authenticity in Early Music and Popular Music Communities," *Ethnomusicology Review* 17 (2012), https://ethnomusicologyreview.ucla.edu/journal/volume/17/piece/591#_ftnref.

[55]Kate Remington, "Josh Sawyer and Alkemie Create an Immersive Medieval Experience in 'Pentiment,'" Music Respawn, February 21, 2023, https://www.wshu.org/podcast/music-respawn/2023-02-21/josh-sawyer-and-alkemie-create-an-immersive-medieval-experience-in-pentiment.

veneer of a medieval authenticity. Besides being scored by an expert ensemble, the game advertises itself as well researched to support its claim to authenticity. The development team for *Pentiment* researched European and Bavarian life from the Middle Ages to the Reformation-era in preparation for the game's creation, research that is broadcast to the player through an extensive bibliography displayed as a section of the rolling credits at the game's end. Some players have received this messaging positively with one player's review dedicated to their acknowledgment of the bibliography and a complete reposting of it.[56]

Pentiment exists within a larger genre of medievalist games and films, many of which make no such claims to authenticity, and which have developed a broad set of musical tropes to depict the medieval. Techniques between film music and video game music greatly overlap, as does the scholarly inquiry into both subjects. There is extensive work on medievalism in popular media, but much more focuses on film music than video game music.[57] Film music studies can provide extensive ways to analyze video game music

[56]Soltaire, Steam review for *Pentiment*, 2023. https://steamcommunity.com/profiles/76561198073431399/recommended/1205520/.

[57]For medievalism in film music, see John Haines, *Music in Films on the Middle Ages: Authenticity vs. Fantasy* (New York: Routledge, 2013); Stephen C. Meyer, "Soundscapes of Middle Earth: The Question of Medievalist Music in Peter Jackson's Lord of the Rings Films," *Studies in Medievalism XVIII: Defining Medievalism(s) (II)*, 2009, 165–87; Elizabeth Randell Upton, "Coconut Clops and Motorcycle Fanfare: What Sounds Medieval?," *Sounding Out!* (blog), 2016, https://soundstudiesblog.com/2016/09/19/coconut-clops-and-motorcycle-fanfare-what-sounds-medieval/; and Kirsten Yri and Stephen C. Meyer, eds., *The Oxford Handbook of Music and Medievalism* (New York: Oxford University Press, 2020), which the latter features one chapter on medievalism and video game music by Karen Cook titled "Gaming the Medievalist World in Harry Potter," a chapter by James Cook on medievalism and the screen in general titled "Fantasy Medievalism and Screen Media," and five other chapters on film music medievalism. The project Representations of Early Music on Stage and Screen (REMOSS) led by James Cook, Alexander Kolassa, and Adam Whittaker has produced a book in which only one of the twelve chapters is discusses early music representation in video games, written by William Gibbons and titled "Little Harmonic Labyrinths: Baroque Musical Style on the Nintendo Entertainment System." The rest of the chapters are dedicated to

because of its musical relationships to the screen in which music accompanies action and narrative that a viewer is witnessing, just as how a player watches action and narrative unfold in their gameplay. Video games differ from film, however, in that they are interactive and can provide different sonic experiences to players based on their decisions. The score responds to these gameplay choices, tailoring a unique sonic experience to each playthrough: a track might be associated with a location the player never goes, another track might be associated with a cutscene that the player never triggers or with a character the player never encounters.

Mass entertainment often looks to musical tropes to help evoke the Middle Ages aurally, though these tropes are often in danger of reinforcing stereotypes of the Middle Ages. John Haines's book *Music in Film on the Middle Ages: Authenticity vs. Fantasy* groups medievalist tropes found in films into six categories: bells, horn calls and trumpets, court and dance music, the singing minstrel, chant, and the riding warrior, and examines the different connotations and connections these tropes have.[58] Karen Cook extends Haines's work to video game music by examining the role of the bell, the Gothic organ, and the wordless choir in these soundtracks and tying these to possible evoked

opera, film, and one chapter on David Munrow. See James Cook, Alexander Kolassa, and Adam Whittaker, eds., *Recomposing the Past: Representations of Early Music on Stage and Screen* (New York: Routledge, 2018). For medievalism specifically in video games see K. Cook, "Beyond (the) Halo," and James Cook, "Playing with the Past in the Imagined Middle Ages: Music and Soundscape in Video Game," *Sounding Out!* (blog), 2016, https://soundstudiesblog.com/2016/10/03/playing-with-the-past-in-the-imagined-middle-ages-music-and-soundscape-in-video-game/. Rachel Collyer has conducted preliminary research on player perceptions of medievalism in video games, however her sample size is limited to Australian players and would need a more diverse sample in order to find more conclusive results. See Rachel Collyer, "Attitudes to Representations of Medieval Music in Role-Playing Computer Games," *Journal of Sound and Music in Games* 4, no. 2 (spring 2023): 1–23.

[58] Haines, *Music in Films on the Middle Ages*.

emotions in the player and the stereotypes they reinforce.[59] Cook warns against the injurious nature of medieval stereotypes, adding that: "notions of goodness, peace, safety, healing, and spirituality on one hand, desolation, superstition, danger, violence, evil, and death on the other are not simply emotional states; they stem directly from a long history of stereotypes about the medieval period."[60] It is important for game developers and game composers to understand how their work can reinforce these stereotypes. Medievalist media intended for large audiences have the ability to influence public thought and views of the Middle Ages, shaping the ways in which people interact with the past.

While in many of these games the depiction of the medieval past implies, or even supports, harmful agendas, games like *Pentiment* can use depictions of the past to counteract these agendas. For example, in *Pentiment*, the player interacts with a Jewish family who is travelling through the town. The player shares a meal with the family and learns some small aspects of Jewish medieval life. The player can also interact with a Romani man who has unique and, for the time, dangerous ideas related to Christianity, to which the player can either express discomfort at discussing these topics, or push on and have a detailed conversation.

In its pursuit of an authentic rendition of medieval musical life, *Pentiment* chooses to present music as part of daily life rather than as the continuous background music typical of video games where the musical changes of mood act as emotional markers for the

[59]K. Cook, "Medievalism and Emotions."

[60]K. Cook, 493.

player. In *Pentiment*, the music supports the narrative primarily through cutscenes and as diegetic music within the game environment. *Pentiment's* focus on diegetic music and sounds rather than background music can be thought of as an ecological sound world designed to help establish the game's setting in the past.[61] If Alkemie's goal was to create an authentic sound world of the past, this approach advertises that goal to the player. As the player moves through the town, they will hear sounds corresponding to their specific environment: in the forest there are chirping birds and babbling brooks, at the blacksmith's shop, the player will hear a hammer hitting metal, and in the fields they will hear hoes tilling the ground. Kate Galloway has described a type of "ecologically informed game" that "use[s] a combination of narrative, visuals, gameplay, and—crucially—sound to convey knowledge about an environment and how it operates to players."[62] While Galloway is writing specifically about farming simulation games, this idea of multimodal stimuli conveying environmental knowledge is applicable to games outside of this genre—including *Pentiment*. Specifically, *Pentiment* uses this potent combination of narrative, stylized artwork, and ecological sounds as a method of transporting the player to an immersive and historically informed experience of the past. In addition to creating a sound world devoid of the cars, phones, airplanes, computer keyboards, and other technological sounds we're so accustomed to now, *Pentiment's*

[61]For research on ecological sound in video game music see Kate Galloway, "Soundwalking and the Aurality of Stardew Valley: An Ethnography of Listening to and Interacting with Environmental Game Audio," in *Music in the Role-Playing Game: Heroes & Harmonies*, ed. William Gibbons and Steven Reale (New York: Routledge, 2020), 159–78.

[62]Galloway, 160.

commitment to foregrounding diegetic sounds encourages to player to feel they are experiencing sound as a sixteenth-century subject might.

In addition to diegetic sound, much of the music in *Pentiment* is also diegetic. One of the more personal encounters of diegetic music for the player occurs somewhat early in the game, being when the player hears "Victimae paschali laudes" at Kiersau Abbey. The diegetic source of Rüdeger is presented on screen as he rehearses alone in the church. The player can stay and listen to Rüdeger sing the sequence as long as they want to and can interrupt the singing to converse with Rüdeger, just as I did in my playthrough, adding an interactive layer to the experience of the plainchant. At this point in the game, it is April 1518. "Victimae paschali laudes" is an Easter sequence and Easter would have fallen on the 4th of April in 1518, a niche detail that most players will miss, but one which demonstrates the layers of historical specificity and plausibility through which Alkemie's choices create a realistic historical setting for the player—encouraging a belief in the authenticity of their reconstructed sound world. The player can hear Rüdeger sing a different chant in Act II of the game (taking place in 1525), the "Petruslied." He has difficulty singing this chant due to the conflict between the peasants of the local town and the abbey caused by a recent murder. The text of the "Petruslied" functions as a way for Rüdeger to ask St. Peter for salvation from the potential danger he and his fellow monks are in from the peasant mob. The text speaks to St. Peter's ability to open the gates of heaven, and here it can be interpreted that Rüdeger is asking for St. Peter to let him and his monks into heaven to save them from the peasants.

Haines has claimed that when plainchant is heard within films, it generally functions as a herald, signaling something good, dubious, or bad.[63] When chant heralds the good, it is usually depicted as inspiring characters to create positive change. Haines refers to chant as heralding the "dubious" when it stands in for musical or cultural primitivism, often in an orientalist context. In cinematic scores, chant can also herald the supernatural and evil, even Satan. The two examples of plainchant in *Pentiment*, however, do not neatly fit any of these categories. Rüdeger singing the "Petruslied" could be construed as an instigator in the good category, compelling the player to figure out who murdered the peasants once they hear him stuttering the initial word "kyrie." But the musical encounter with Rüdeger is optional and the player, having witnessed the pitchforks and torches of the mob outside the abbey library, may already feel enough of a call to action. Earlier in the game, Rüdeger's rendition of "Victimae paschali laudes" acts more as an educational moment than an emotionally tinged narrative marker, offering the player an experience of chant in its functional context. As one player noted in an anonymous review of *Pentiment*, they found their first hearing of "Victimae paschali laudes" completely entrancing, characterizing it as an "I just stood there for a while" moment.[64] While the emotional charge of this moment does not fit within Haines's scheme, it is still a deeply

[63]Haines, *Music in Films on the Middle Ages*, 111-132.

[64]Watchmaker2112, "I've had a number of 'So I just stood there for a while' experiences in games and this is one of the best," March 1, 2023, comment on post by literal_brainlet, "What is Rüdeger chanting/singing in the church?" https://www.reddit.com/r/Pentiment/comments/11fq10o/what_is_r%C3%BCdeger_chantingsinging_in_the_church/jakum2m/?utm_source=share&utm_medium=web3x&utm_name=web3xcss&utm_term=1&utm_content=share_button.

affecting encounter for players—perhaps for the intimacy of having stumbled upon a private performance of music.

Diegetic sources of music are not limited to sacred settings in *Pentiment*. In Act III, the player (now playing as the character Magdalene) is celebrating a Christmas feast with the town at the local inn where two *Landknechts* are performing music. To start the performance, Magdalene must walk up to them and speak to them, picking one of three musical pieces for them to play: "Be Welcome to Us, Lord Christ," "Good Christian Men Rejoice," or "From Heaven Above to Earth I Come." Here, if the player wishes to hear all three, they must save the game before making a decision and reload the save each time choosing a different track, otherwise they are limited to just one playthrough of the song they choose, in a way, personalizing the soundtrack. After choosing, the *Landknecht* that Magdalene is speaking to will make some comment on the chosen piece and then perform for the whole town with matching animations of people raising and swinging their glasses of wine and ale in time to the song.

Several moments in *Pentiment* are set to improvisations or newly made compositions. Improvisation, including polyphonic improvisation, is a well-documented technique in both sacred and secular musical traditions in the Middle Ages.[65] In Act III, Magdalene (and therefore the player) is followed around by a shadowy figure. The music that accompanies this person is an improvisation by Alkemie. It features modern extended techniques, prominently the scratching of bowed strings to create unpitched sounds that

[65]See Ralf Mattes, "Ornamentation & Improvisation after 1300," in *A Performer's Guide to Medieval Music*, ed. Ross W. Duffin (Bloomington: Indiana University Press, 2000), 470–81.

resemble the squeaking of doors or to make harsh drones. The sound of the scratching strings can evoke unease for the player and emphasize the shadowy figure's threat to Magdalene, instantiating tropes from horror film music. While the sound of Alkemie's improvisation may not feel historical, many of the techniques, such as drones, are. The music that plays when the player finds the bodies of murder victims are original compositions by Alkemie titled "The Body" and "The Second Body," the latter functioning as a development of the music from the former. This music features the full ensemble of Alkemie and aurally represents the weight of the situation with a slow pulse and simple melody. When dealing with the ancient past as opposed to the Middle Ages, the music also makes use of microtonality, referencing the ancient Greek species of tetrachord: diatonic, chromatic, and enharmonic. When Magdalene investigates the ancient Roman salt mine in town, she finds a map scratched into a wall leading to a secret *Mithraeum*. As she investigates, music plays in the background. The melody is played on a lyre that is tuned microtonally, evoking the enharmonic species, and a low-pitched woodwind joins in as accompaniment.

Despite the use of historically-informed practices, Alkemie still makes use of Leitmotifs. Leitmotifs are a musical technique in which a melodic phrase, chord, or texture is paired with an element of the story or characters. While Richard Wagner is not necessarily the inventor, he is largely responsible for their prevalence in classical music and the coining of the term. The use of Leitmotifs is ubiquitous in modern film and game scores. Instead of small units of musical material usually associated with Leitmotifs are, Alkemie uses full pieces of music instead. They use the tune "L'homme armé" whenever

the military is referenced—an association, like "Victimae paschali laudes," that rewards players with prior knowledge. The text's reference to an "armed man" requires familiarity with the tune since it appears in *Pentiment* exclusively without text. The first time "L'homme armé" is heard is in a cutscene when the local duke's herald enters town. The short arrangement of "L'homme armé" with only a drum and single recorder represents the presence of one person. The source of this music is not depicted and functions as a rare instance of background music for the cutscene. The next iteration, however, occurs the following day, when the player hears a more elaborate arrangement of "L'homme armé," in what turns out to be acousmatic music (meaning the source is perceived somewhere off screen, here an army approaching Tassing). As the player completes events to move forward in time, the music becomes louder as the army approaches, creating urgency for the player to solve the murder. The orchestration of this version of the music also reflects the larger group of people in the army; there are now multiple shawms playing the "L'homme armé" melody, along with bagpipes, dulcian, and a drum.

Another Leitmotif in *Pentiment* is the tune "Fortuna desperata" which is associated with the character Andreas Maler himself. Andreas has an internal mind-world the player experiences, and each time it recurs, it is scored with a different arrangement of the quodlibet "Ich stund an einem Morgen/Fortuna desperata" by Ludwig Senfl (c. 1489-1543), with each tune depicting a different layer of Andreas's character. The choice of "Fortuna desperata" is also an apt representative of Andreas's journey throughout the game as he experiences both elevation and defeat at the hands of Fortune's wheel. The

text from “Ich stund an einem Morgen” also provides commentary on Andreas’s emotional distance from his wife, whom he struggles to connect with throughout the game. The choice of Senfl’s piece illuminates the way *Pentiment* and Alkemie assign value to an authentic rendition of the past. Senfl’s work originally comes from Hans Ott’s 1534 songbooks. This is not the only extant arrangement of “Fortuna desperata” from the period used in the game, just simply only used in Andreas’s mind-world. Other settings of “Fortuna desperata” accompany Andreas in his other cutscenes outside of his mind-world. These settings come from anonymous composers, Antoine Busnoys, Josquin des Prez, and several arrangements by Alkemie. The wide variety of arrangements grounds Andreas, and the player, within the historical setting by giving several styles and composers and demonstrating the long-lasting effects Andreas and the player will have on the town across decades.

A third important Leitmotif characterizes Sister Amalie, a mystic anchoress who has visions from God, and who is associated with Hildegard von Bingen’s “Quia ergo femina.” The parallel drawn between Amalie and Hildegard is apt: both are mystics who received visions from God, which they both turn into writings (specifically, Amalie produces notes from her visions warning of future murders and the player finds these notes during the game, whereas Hildegard produces chant and texts from her visions). Alkemie’s scoring choices for this work represent Amalie’s visions aurally by adding a second contrapuntal voice during the second vision in-game, musically depicting the accumulation of visions. Alkemie twists the expected technique of Leitmotifs and gives modern listeners something familiar to video games to hold onto as Alkemie introduces

unfamiliar music. By blending modern techniques with early music, Alkemie deftly negotiates the desire for historical specificity and the accessibility necessary in popular media.

Besides using extant pieces as a form of Leitmotifs, Alkemie also uses music to expand the notion of diverse music practices of the past. At one point during Act II, Tassing holds a celebration for St. John's Eve where a massive bonfire is lit in the town center in the evening and members of the town dress up in masks and costumes to represent the hunters and beasts of the Wild Hunt. Late at night, the town's peasants go into the forest to fool around and chase each other in their masks, the very forest Andreas must run through as he chases the shadow of the unknown suspected killer. The music heard in the forest is an arrangement of Hildegard von Bingen's "Karitas." The music features a drone on what sounds like a small organ that shifts to support the melody as needed. The melody is played by a low-pitched wooden flute. This timbral approach to a piece written by the mystic Hildegard and paired with visuals of the clearly pagan rituals on a holy day poses a unique way of creating a historical Other. It evokes both the image of a historical Christian past with the celebration of St. John, but it also connects to pagan practices that existed in Europe before the rise of Christianity and its later absorption into certain holy days. The use of drones also helps to evoke this dual Christian and pagan Other. Drones, I argue, can function as a shorthand for a variety of Others based on its context in the music and game. Drones are connected to plainchant practices as organum but are also found in many cultures around the world, making them versatile. Hindustani classical music relies on a drone for performances, Tuvan and Mongolian throat-singing

requires a drone as the fundamental pitch in order to achieve overtones, and the iconic sound of Scottish bagpipes and their drones evoke pictures of rolling hills in the Scottish Highlands. This arrangement of "Karitas" is also one of the few moments in *Pentiment* where the music does not come from a diegetic source and functions as background music, heightening the emotional state of Andreas's pursuit.

Alkemie's role as an expert ensemble for *Pentiment* is an important part of the game's projection of historical authenticity. However, Alkemie's engagement with the past is much more nuanced and varied than traditional "authenticity" and matches the illumination-inspired stylized art in the game. While rooted in historical performance practices, Alkemie approaches this music from a creative position, pushing boundaries on timbres and musical arranging, incorporating familiar techniques such as Leitmotifs but leaning heavily towards diegetic music and ecological sounds. Alkemie imagines an aural past that presents itself as an authentic rendition, in which the past is presented diversely, undermining popular stereotypes about the medieval. They expose the player to a variety of musical practices across centuries, in tandem with visual elements and character interactions that show the diversity of historical Europe. By the end of the game, the player has met a Romani man, a Jewish family of printers travelling to Prague, and an Ethiopian monk who visits Kiersau Abbey. Alkemie's virtually unlimited freedom as an expert ensemble for *Pentiment* allows for a soundtrack that avoids the reinforcement of harmful ideas of Europe's past and teaches the player that the past was a more diverse

world than generally understood.[66] The educational aspects of this game may not be advertised, but are supported through multiple modalities, including the music and character interaction.

The Geographical Other: *The Pathless* (2020)

Set on a distant island, shrouded in darkness, the player explores the world of *The Pathless* as the Huntress. The island is at the epicenter of a curse, threatening to plunge the entire world into darkness. The stakes are high for the player as they are informed that the Huntress is the final remaining hunter who is capable of venturing to the island and stopping the curse spread by the Godslayer. After becoming disillusioned with the religion in the game, the Godslayer believes he must destroy the world and remake it in his image. To cleanse the curse, the player/Huntress must travel to the four different domains the island is split into. Each domain is ruled by a corrupted spirit—known in game as the Tall Ones—that the player must battle and defeat in order to remove the corruption. *The Pathless* was developed by the indie game studio Giant Squid and was directed by Matt Nava. The game's music was composed by Austin Wintory and features a Tuvan music group, the Alash Ensemble. Wintory's prior acclaimed credits in video

[66]Scholarship has shown that the European Middle Ages are much more diverse than what is portrayed in popular media. Hadrian of Canterbury, for example, is an important figure in English music history for his role in spreading the sacred choral tradition throughout England. He was African and is documented in Bede's *Ecclesiastical History of the English People* for his work in music and education. See Gillian L. Gower, "Race-Ing Plainchant: Theodore of Tarsus, Hadrian of Canterbury, and the Voices of Music History," *Viator* 51, no. 1 (2020): 103–20. For scholarship on a general history of Africans within Europe, including contributions to music and art, see Olivette Otele, *African Europeans: An Untold History* (New York: Basic Books, 2021).

game music include *Journey* (2012), *Assassin's Creed: Syndicate* (2015), and *Abzû* (2016).

When developing the music for *The Pathless*, Wintory hired the Alash Ensemble to collaborate with him on the game's soundtrack. Wintory and the Alash Ensemble held a recorded "jam session" where both parties had the opportunity to record musical ideas with each other and for Wintory to learn about Tuvan music and culture.[67] In the jam session, Wintory plays keyboard and listens intently to the Alash Ensemble and performs with them while also trying to plant what he called "musical seeds," meaning motifs and musical ideas he had come up with, hoping that the Alash Ensemble would respond by playing with and developing those musical ideas. After recording this jam session, Wintory wrote an orchestral score for the game that includes the recordings from this session. The jam session marks a collaborative space in which Wintory can learn of a non-Western music tradition and interact with its tradition bearers. However, the musical contributions of the Alash Ensemble are limited in the game's final soundtrack. The jam session thus marked a crucial point in the game's development, where Wintory acted as a filter of what aspects of Tuvan music culture would be included in the project.

Wintory's publicity around this collaborative space also serves to reinforce the trope of collaboration in world music spaces. As Timothy D. Taylor notes, "if in the last couple of decades the dominant discourses dealing with difference have been globalization and multiculturalism, collaboration has become the dominant trope in examining the

[67]Austin Wintory, "The Alash Ensemble Raw Recording Session Footage - *The Pathless*," November 23, 2020, YouTube video, 1:15-1:53, https://youtu.be/7Olvs7Tzyx0.

interactions of western stars with nonwestern musicians."[68] To my knowledge, Wintory's keyboard playing does not actually appear the final soundtrack. The orchestral parts were recorded by different sections of the orchestra, with separate sessions for percussion, horns, and strings. Wintory's composition also includes "exotic" instruments such as the nyckelharpa, oud, sarod, and more, which contribute to the exotic sound of the soundtrack. Presenting all these different kinds of music interacting with each other contributes to a decentralizing of one specific exotic sound, making a general "ethnicized, racialized Other" that puts the player far from home.[69] Taylor writes that "hybridity has become an important lens through which cross-cultural encounters are understood, sometimes displacing lenses of authenticity."[70] The music of the Alash Ensemble, various non-Western instruments, and orchestral arrangements are mashed together to form a hybrid soundtrack that Otherizes the gameplay experience for the player. Despite the hybridity of the score, the marketing of this game foregrounds Tuvan culture. For instance, the Alash Ensemble is prominently advertised, especially in a series of YouTube videos published by Wintory on his channel. The game environment itself includes Tuvan cultural aesthetics surrounding nature and animism, making Tuvan culture a focal point for the geographical Other in *The Pathless*.

[68]Timothy D. Taylor, *Beyond Exoticism* (Durham, NC: Duke University Press, 2007), 127.

[69]Taylor, 128.

[70]Taylor, 141.

The integration of samples of the Alash Ensemble into an orchestra creates a complex dialogue and layers of meaning for the player. Aural geographical markers are present in film music, a concept Brownrigg notes:

> Broadly speaking, films are scored for an orthodox Western symphony orchestra comprising strings, brass, woodwind, percussion, piano and so on. Western audiences are so accustomed to this that standard orchestral film music sounds geographically neutral to them. Even though it's largely written following the conventions of Nineteenth Century European and Twentieth Century American Romanticism, when the march that opens *Star Wars* (1977) begins the audience is not intended to think 'Ah, here we are in the Western hemisphere'; to Western ears this music carries with it little sense of place. But over the neutral backdrop of the symphony orchestra, the introduction of an exotic instrument stands out and begins to articulate a sense of place.[71]

The Pathless, of course, functions very similarly. Its orchestral soundtrack might function as a kind of aural safety blanket for the player, giving them a home base of familiar music to rely on. The sound of the Alash Ensemble, as well as other various non-Western instruments, help to articulate a sense of place that is distant from home. Wintory acting as the cultural filter, however, reinforces a Western musical hegemony: not only does his orchestration surround the Alash Ensemble's work, he also chose which audio samples from the jam session would work best with an orchestra as well—the specific Alash Ensemble clips are chosen to support a musical language that he is familiar with which he could control the output of Alash clips for with his musical "seeds."

Wintory's use of Tuvan music in *The Pathless* participates in a complex history of the reception of Tuvan music in the West and other colonial powers, one that is particularly intertwined with globalization. There is a long history of the West importing Tuvan

[71]Brownrigg, 309.

music for CDs, advertisements, and games. In *Where Rivers and Mountains Sing: Music and Nomadism in Tuvan and Beyond*, Theodore Levin explores the complexities of being a Western scholar working with Tuvan musicians.[72] In describing the aspects of the natural and supernatural associated with Tuvan music and its development of throat- and overtone-singing, Levin also compares the tradition with Carole Pegg's 2001 work on Mongolian music in *Mongolian Music, Dance, & Oral Narrative*, in which she also connects Mongolian music to spiritual places and examines a history of Western import.[73] Both traditions faced persecution under the USSR. In the 1920s, Lenin's policies focused on the active repression of folk and religious practices throughout Mongolia unless it could be adjusted to socialist aesthetics.[74] Pegg adds that later:

> under Stalin, the formula 'national in form, socialist in content' was interpreted within Mongolia as the elimination of all diversity… anything symbolizing separate ethnic or group identities, was forbidden and where possible confiscated and destroyed. [75]

Traditions then had to be maintained in secret, or cease to exist. Punishment for those caught participating in these traditions could result in prison sentences away from their homes and families.[76] Later Soviet policies complicated the connection to traditions as

---

[72]Theodore Levin, *Where Rivers and Mountains Sing: Sound, Music, and Nomadism in Tuva and Beyond* (Bloomington: Indiana University Press, 2019).

[73]Carole Pegg, *Mongolian Music, Dance, and Oral Narrative* (Seattle: University of Washington Press, 2001).

[74]Pegg, 253.

[75]Pegg, 256.

[76]Kira Van Deusen, *Singing Story, Healing Drum: Shamans and Storytellers of Turkic Siberia* (Montreal: McGill-Queen's University Press, 2004), 16.

certain genres were forced into a national standard in an effort to create a national image. These required specific places of performance and changed texts to promote communist values.[77] The transformation of folk traditions into a regulated, state-backed art form creates dissonance between what is traditional and what is commodified to support a regime. This dissonance ripples today with new generations of shamans having to rediscover traditions while being "products of a Soviet education which denied the reality of spiritual life and taught that shamans were primitive charlatans."[78] This recent history may explain the Alash Ensemble's interest in having their music used in a Western game, supporting its exposure to new audience.

Tuvan cultural aesthetics are at play in the game environment. The names of the island's four regions are derived from natural landscapes and climate regions: the Forest Plateau, the Redwood Steppe, the Great Plains, and the Mountain Tundra. The word "steppe" in particular is heavily connected to the region of Tuva and inner Asia where nomadic culture lent itself to the development of throat-singing. As Levin notes, the natural environment is reflected in Tuvan music in which songs can be an aural reflection of the landscape or sometimes even a duet with natural elements which have spirit masters.[79] The regions of *The Pathless* are each protected by a unique spirit master that

[77]Pegg, *Mongolian Music*, 259-61.

[78]Van Deusen, *Singing Story*, 164.

[79]Tuvan throat-singing, given the right context, can be interpreted as a duet with nature. One of the Tuvan musicians Levin worked with, Tolya Kuular, sang simultaneously with the Xündergei River and for its spirit master as an offering. The song intentionally emulated the sound of the river whose sound is interpreted as the river's singing. When Levin questioned this, Tolya responded with "The river is alive. Rivers sing" (Levin 26-28). A singer may also perform a duet with mountains, in which the reverb is the mountain singing back (Levin 38). Songs may attempt to aurally reflect the soundscape, as shown in a

the player must defeat and cleanse of the curse in order to progress through the game. This draws a direct connection to Tuvan culture in which a physical place has a spiritual guardian. To understand this, Levin quotes the Tuvan musician Toyla Kuular who says:

> every natural place has an *ee*—a master or guardian—who looks after it and protects all the beings that live there… mountains, rivers, caves, springs—all are under the protection of a spirit-master. When you visit that place, you should show your respect to the master.[80]

Another element of Tuvan musical culture, is to sit and listen to the natural environment, creating a kind of duet between the landscape and the performer.[81] *The Pathless* deploys these cultural notions into its game audio system which Wintory had learned from his jam session with the Alash Ensemble.[82] Utilizing this nature-musical relationship, one that is not prevalent within Western cultures, helps solidify a specific geographical Other for the player. This kind of specificity when working with non-Western music cultures can help to avoid stereotype reinforcement as the music is drawing on details as opposed to generalizations.

The Pathless features a complex music system that is reflective of both the player's location in the game world and their place within the narrative. Wintory shares in his YouTube video, "Why 'No Music' Was the goal in *The Pathless*," that the music system relies heavily on the location of the player, with each spirit being represented by a

---

performance by Grigori Mongush that Levin recorded in which his whistling is a "mimetic representation of landscape" (Levin 91).

[80]Levin, *Where Rivers and Mountains Sing*, 27.

[81]Levin, 54.

[82]Wintory, "Raw Session Footage."

different instrument that plays the solo line of the track the player is currently hearing, seamlessly switching the instrument if the player crosses the border of two domains.[83] Wintory effectively ties musical instruments to space and spirit, much like how certain genres of Tuvan music and certain instruments are tied to a place, spirit, or animal. One prominent example, found both in Tuvan and Mongolian culture, is the *igil*, a two-stringed, bowed instrument that is associated with horses and often used to imitate horse "neighs" or galloping in Tuva and both horse and camel sounds in Mongolia.[84] For the player, this creates a relationship between the virtual environment and to timbral elements of the music. They learn to associate certain sounds with their environment as they explore the island, and the specific spirits they must eventually battle.

In continuing the exploration of the complex music system, the music of the game is divided into "acts." The environmental music of each act has a specific solo melody. Depending on the domain the player is in, the respective instrument associated with that Tall One will play the act's melody. Wintory explains that the player will hear the music from an act until they enter a boss fight—an event in which the player engages in battle with a "boss" enemy, usually a difficult and time consuming encounter that often takes place within a specific game area, often referred to as an "arena"—which each has its own unique music.[85] Once the boss (the corrupted Tall One of that domain) is defeated

[83]Austin Wintory, "Why 'No Music' Was the Goal in *The Pathless*" (2021), https://youtu.be/EkgpbQuRtIM, 1:04-4:41.

[84]Levin, *Where Rivers and Mountains Sing*, 145-9; Pegg, *Mongolian Music*, 239.

[85]Wintory, "No Music," 5:51.

and cleansed of the curse, music will no longer be heard in that domain, the music from that act is removed, and the player will no longer be able to hear that respective instrument in the soundtrack's layers. Whenever a boss is defeated, there is a short cutscene showing the player removing the curse from the spirit. Once the spirit has returned to its normal form, it makes an animal call before leaving the arena the player battled it in. Afterwards, the player will only be able to hear "natural" sounds in that region, such as bird calls, wind, or rushing water. The transformation of the soundscape shows the influence of narrative on the game environment, ties to Tuvan traditions, and what could be read as an implied association of Tuvan music with danger (read barbarism). Nomadic cultures, especially those of the steppe, have often been stereotyped as barbaric, including in scholarship. Andrew Bell-Fialkoff's book *The Role of Migration in the History of the Eurasian Steppe: Sedentary Civilization vs. "Barbarian" and Nomad* tends to valorize sedentary cultures like the Romans and the Greeks, while equating nomadism with barbarism. In his view, the Romans and Greeks are the protectors of Western culture against the invading barbarians from the East.

There are difficulties in assessing the implications of barbarism with Tuvan music in the game. On the one hand, the game's background music system could be read as rewarding the player for eliminating the ever-present threat of the boss. Before a boss fight, the Tall One roams their domain with a giant red cloud surrounding them, teleporting every now and then across the vast landscape, eventually attempting to hunt the player. When the player is caught, they are transported to a new area colored with hues of dark red, a stark contrast from the prior natural landscape. They must avoid being

seen by the Tall One during this event and to escape it, the player must retrieve their companion, which is the Mother Eagle spirit reduced to the form of a regular eagle. During the boss fights, the player progresses through two stages. Stage one can be characterized as the hunt with the player chasing after a Tall One they have weakened by completing challenges in each domain. After striking the Tall One with enough arrows the fight progresses to stage two. In this stage, the Tall One will retreat to its arena where the player will further weaken it before purifying it. The music also follows these different stages, becoming more rhythmically exciting and switching to faster tempos as the player progresses to the second stage. After the fight is completed, music is removed from the domain. The music's removal from the domain at the end of the fight signals an association with danger. The red storm's foreboding presence in each domain makes each domain feel dangerous to be in. Paring its removal with the removal of background music reinforces an association of barbarism. There is difficulty in this assessment as music is not heard continuously while exploring these domains, so the music's removal only becomes noteworthy because of its narrative placement and the new extreme the removal represents. Levin notes that Tuvan musicians will spend time listening to nature before throat-singing or otherwise performing music, listening to formulate responses to the soundworld of nature.[86] The music's removal in *The Pathless* might then be interpreted as a chance to let nature sing instead; finally having had its balance restored, the player can then hear this restoration.

[86]Levin, *Where Rivers and Mountains Sing*, 53.

On the other hand, the music functions as powerful emotional markers throughout the game and notions of barbarism are perhaps avoided in the final cutscene for the game. The Godslayer, originally a devotee of the Tall Ones who, after finding the "pathless" teachings of their religion too chaotic, wanted to reform the world in his own image where every person is set on a path. To do so, he slew the Tall Ones' physical forms and cursed their spiritual forms to be under his control, leading to the red storms the player must avoid. After his defeat, the Huntress sacrifices herself to rid the world of the Godslayer's curse by absorbing it. Her heroic efforts are supported by a background featuring prominent Tuvan throat-singing and orchestral music in the final cutscene. Instead of the removal of Tuvan music with the defeat of the boss as seen before, this time being the final boss and most difficult fight of them all, the player is aurally rewarded with a final musical piece for saving the world and completing the game.

The Alash Ensemble's role as an expert ensemble is somewhat limited when compared to Alkemie's influence in *Pentiment*. Wintory's jam session provided an opportunity for the Alash Ensemble to transmit cultural knowledge to Wintory, but he ultimately decided what elements would make it into the final score. Tuvan music is used as a focal point for creating an exotic world for the player. The exotic is emphasized through the use of a variety of instruments found around the world, even if they are not found within Tuvan music. The Alash Ensemble was a major component of the game's advertising, signaling to the player a level of authenticity in the game world, just as how *Pentiment* advertises authenticity with Alkemie and its extensive bibliography. Alash is prominently credited in the music creation, even if they did not have the final say in what

elements of their music made it into the final game. *The Pathless*' soundtrack and marketing, however, allow for players to learn a little bit more about musical cultures outside of what has become the "standard" orchestral repertoire people are familiar with.

Conclusion

Medievalism and exoticism are both common elements in video games, where they usually function as a shallow veneer of interest and are not deeply integrated into the music and narrative. My case studies have highlighted two games which engage at a deeper level and leverage this deeper engagement as evidence of the authenticity of the game world. Music, particularly, can be a potent conveyer of authenticity, medievalism, and exoticism; sounds can ground the player in an already visually distant world, and gesture towards a foreign ethos. *Pentiment* and *The Pathless* both advertise the way they interact with expert ensembles to develop notions of authenticity. By using expert ensembles and making it clear they did, the game developers might hope to tell the player that they have conducted research and collaborated with the right people to produce an authentic game—the expert ensemble's presence validates the game's claim of an authentic portrayal. *Pentiment* clearly marks this not only with its employment of Alkemie, but in the bibliography the player reads through in the credits. *The Pathless* credits the unique singing styles and timbres of the Alash Ensemble to show a collaborative effort with representatives of another culture, even if their contribution represents a small portion of the music in the game. The virtual landscape and environment are important elements in both *Pentiment* and *The Pathless* who use those to help immerse players in an authentic world. For *Pentiment*, it imagines what the real world, historical environment would have sounded like both with musical and ambient

sounds. *The Pathless* recreates Tuvan aesthetics of music making with the environment in its structure of background tracks and the removal of layers as the player progresses through the narrative.

The historical and geographical Other offer opportunities for players to explore distant worlds from the comfort of their home. The historical Other may function as exotic for those who are merely interested in exploring a depiction of the past. But for those who hold bigoted beliefs, they may view these depictions as accurate representations of history and heritage, instead un-Otherizing the historical Other to reinforce their worldviews. *Pentiment* dissuades this by having a diverse range of characters and a diverse soundtrack that encompasses a variety of music to show what kinds of music were historically created. Medievalist music can challenge our ideas of temporality and periodization. *Pentiment*'s score utilizes tunes from across many centuries, highlighting the change and continuity of history emphasized by the narrative. One thread throughout *Pentiment*'s narrative is the aspect of change, tied explicitly to the abbey which is mentioned several times throughout the game to be one of the last Benedictine abbeys and is often considered in need of changing its Rule. The town looks to its medieval and ancient past, and so the music looks to the medieval and ancient past; just as the town looks forward to its future through change and discovery, the music looks towards today with creative arrangements, improvisations, and modern compositions that reflect the modern tastes we impose on the medieval, and the inclusion of modern extended techniques.

Authenticity is constructed within *The Pathless* by using the Other's—being Tuvan music in this setting—cultural aesthetics in tandem with music. Even though Wintory filtered what musical elements he wished to use in the soundtrack, and worked to direct what musical elements Alash would create with his "seeded" musical ideas, he still developed a sound system that allowed for musicians and nature to sing. In an increasingly globalized world, these sorts of cross-cultural relationships are important to understand—especially when they are placed in a medium as popular as video games. Deciphering where pitfalls occur in these kinds of collaborations can help teach future composers how to work with a musical culture outside of their own.

While *Pentiment* and *The Pathless* demonstrate ways that musical medievalism and exoticism are intertwined and how they can contribute to veneers of authenticity, they do not represent the mainstream of video game composition. What these outliers can demonstrate, however, are the ways that music participates in creating immersive representations of Otherness—representations that are not without impact. My case studies here serve as an initial exploration of both the potential and potential pitfalls of the approach of using "expert" musicians in the production of video game soundtracks. More research is needed on the role of music in communicating culture and values in video games; an ethnographic approach to players interpretations of musical collaboration can help show how they receive music as in *Pentiment* and *The Pathless*. I hope that this thesis can begin the exploration into how collaborating with expert musicians can produce games that are creative and exciting for players without hurting

those who helped its creation or alienate players who may feel unwelcome with perpetuated stereotypes.

Bibliography

Bell-Fialkoff, Andrew. *The Role of Migration in the History of the Eurasian Steppe: Sedentary Civilization vs. "Barbarian" and Nomad*. New York: St. Martin's Press, 2000.

Born, Georgina, and David Hesmondhalgh, eds. *Western Music and Its Others: Difference Representation, and Appropriation in Music*. Berkeley: University of California Press, 2000.

Boym, Svetlana. "Nostalgia and Its Discontents." *The Hedgehog Review*, 2007. https://hedgehogreview.com/issues/the-uses-of-the-past/articles/nostalgia-and-its-discontents.

Brownrigg, Mark. "Hearing Place: Film Music, Geography and Ethnicity." *International Journal of Media and Cultural Politics* 3, no. 3 (2007): 307–23.

Collins, Karen. *Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design*. Cambridge, Massachusetts: MIT Press, 2008.

———. "In the Loop: Creativity and Constraint in 8-Bit Video Game Audio." *Twentieth-Century Music* 4, no. 2 (2008): 209–27.

———. "One-Bit Wonders: Video Game Sound before the Crash." In *Before the Crash: Early Video Game History*, edited by Mark J. P. Wolf, 119–37. Detroit: Wayne State University Press, 2012.

Cook, James. "Fantasy Medievalism and Screen Media." In *The Oxford Handbook of Music and Medievalism*, edited by Stephen C. Meyer and Kirsten Yri, 729–49. New York: Oxford University Press, 2020.

———. "Playing with the Past in the Imagined Middle Ages: Music and Soundscape in Video Game." *Sounding Out!* (blog), 2016. https://soundstudiesblog.com/2016/10/03/playing-with-the-past-in-the-imagined-middle-ages-music-and-soundscape-in-video-game/.

———. "Sonic Medievalism, World Building, and Cultural Identity in Fantasy Video Games." *Studies in Medievalism XXIX: Politics and Medievalism (Studies) (I)*, 2020, 217–38.

Cook, James, Alexander Kolassa, and Adam Whittaker. "Music in Fantasy Pasts: Neomedievalism and *Game of Thrones*." In *Recomposing the Past:*

Representations of Early Music on Stage and Screen, edited by James Cook, Alexander Kolassa, and Adam Whittaker, 229-250. New York: Routledge, 2018.

Cook, Karen M. "Beyond (the) Halo: Chant in Video Games." *Studies in Medievalism XXVII: Authenticity, Medievalism, Music*, 2018, 183–200.

———. "Gaming the Medievalist World in Harry Potter." In *The Oxford Handbook of Music and Medievalism*, edited by Stephen C. Meyer and Kirsten Yri, 750–66. New York: Oxford University Press, 2020.

———. "Music, History, and Progress in *Sid Meier's Civilization IV*." In *Music in Video Games: Studying Play*, edited by K. J. Donnelly, William Gibbons, and Neil Lerner, 166–82. New York: Taylor & Francis Group, 2014.

———. "Medievalism and Emotions in Video Game Music." *Postmedieval: A Journal of Medieval Cultural Studies* 10, no. 4 (2019): 482–97.

D'Errico, Michael. "Worlds of Sound: Indie Games, Proceduralism, and the Aesthetics of Emergence." *Music, Sound, and the Moving Image* 9, no. 2 (2015): 191–206.

Domsch, Sebastian. "Space and Narrative in Computer Games." In *Ludotopia: Spaces, Places and Territories in Computer Games*, edited by Espen Aarseth and Stephen Günzel, 103–23. Bielefield: transcript Verlag, 2019.

Eco, Umberto. "Dreaming of the Middle Ages." In *Travels in Hyperreality*, translated by William Weaver, 61–72. San Diego: Harcourt, Inc., 1986.

———. "Living in the New Middle Ages." In *Travels in Hyperreality*, translated by William Weaver, 73–85. San Diego: Harcourt, Inc., 1986.

Feld, Steven. "A Sweet Lullaby for World Music." *Public Culture* 12, no. 1 (2000): 145–71.

———. "Notes on World Beat." *Public Culture Bulletin* 1, no. 1 (Fall 1988): 31–37.

French, Jeremiah Sundance. "The Virtual-Musical Other: Creating Unique Sound Worlds through Musical Sound in Videogames." Thesis, University of Hawai'i at Manoa, 2014.

Fritsch, Melanie. "History of Video Game Music." In *Music and Game: Perspectives on a Popular Alliance*, edited by Peter Moormann, 11–40. Wiesbaden: Springer Fachmedien, 2013.

Galloway, Kate. “Soundwalking and the Aurality of *Stardew Valley*: An Ethnography of Listening to and Interacting with Environmental Game Audio.” In *Music in the Role-Playing Game: Heroes & Harmonies*, edited by William Gibbons and Steven Reale, 159–78. New York: Routledge, 2020.

Ganim, John M. *Medievalism and Orientalism: Three Essays on Literature, Architecture and Cultural Identity*. New York: Palgrave Macmillan, 2005.

Gower, Gillian L. “Race-Ing Plainchant: Theodore of Tarsus, Hadrian of Canterbury, and the Voices of Music History.” *Viator* 51, no. 1 (2020): 103–20.

Gibbons, William. “Blip, Bloop, Bach? Some Uses of Classical Music on the Nintendo Entertainment System.” *Music and the Moving Image* 2, no. 1 (2009): 40–52.

———. *Unlimited Replays: Video Games and Classical Music*. New York: Oxford University Press, 2018.

Haines, John. *Music in Films on the Middle Ages: Authenticity vs. Fantasy*. New York: Routledge, 2013.

Harvey, Alison, and Stephanie Fisher. “Making a Name in Games: Immaterial Labour, Indie Game Design, and Gendered Social Network Markets.” Information, Communication & Society 16, no. 3 (2013): 362–80.

Ketchum, Paul R., and B. Mitchell Peck. “Marketing Computer Games: Reinforcing or Changing Stereotypes?” In *Utopic Dreams and Apocalyptic Fantasies: Critical Approaches to Researching Video Game Play*, edited by J. Talmadge Wrights, David G. Embrick, and András Lukács, 125–42. Lanaham, MD.: Lexington Books, 2010.

Lamb, Brendan, and Barnabas Smith. “From *Skyrim* to Skellige: Fantasy Video Game Music Within a Neo-Mediaevalist Paradigm.” *Musicology Australia* 40, no. 2 (2018): 79–100.

Leech-Wilkinson, Daniel. *The Modern Invention of Medieval Music: Scholarship, Ideology, Performance*. New York: Cambridge University Press, 2002.

Levin, Theodore. *Where Rivers and Mountains Sing: Sound, Music, and Nomadism in Tuva and Beyond*. Bloomington: Indiana University Press, 2019.

Martin, Chase Bowen, and Mark Deuze. “The Independent Production of Culture: A Digital Games Case Study.” *Games and Culture* 4, no. 3 (2009): 276–95.

Mattes, Ralf. “Ornamentation & Improvisation after 1300.” In *A Performer’s Guide to Medieval Music*, edited by Ross W. Duffin, 470–81. Bloomington: Indiana University Press, 2000.

Mäyrä, Frans. *An Introduction to Game Studies: Games in Culture*. Los Angeles: Sage Publications, 2008.

Meintjes, Louise. “Paul Simon’s Graceland, South Africa, and the Mediation of Musical Meaning.” *Ethnomusicology* 34, no. 1 (Winter 1990): 37–73.

Meyer, Stephen C. “Soundscapes of Middle Earth: The Question of Medievalist Music in Peter Jackson’s *Lord of the Rings* Films.” *Studies in Medievalism XVIII: Defining Medievalism(s) (II)*, 2009, 165–87.

Neely, Erica. “Come for the Game, Stay for the Cash Grab: The Ethics of Loot Boxes, Microtransactions, and Freemium Games.” *Games and Culture* 16, no. 2 (2019): 228–47.

Otele, Olivette. *African Europeans: An Untold History*. New York: Basic Books, 2021.

Parker, Felan, Jennifer R. Whitson, and Bart Simon. “Megabooth: The Cultural Intermediation of Indie Games.” New Media & Society 20, no. 5 (2017): 1954–72.

Pegg, Carole. *Mongolian Music, Dance, and Oral Narrative*. Seattle: University of Washington Press, 2001.

Plank-Blasko, Dana. “‘From Russia with Fun!’: *Tetris*, Korobeiniki and the Ludic Soviet.” *The Soundtrack* 8, no. 1 & 2 (2015): 7–24.

Poell, Thomas, David Nieborg, and Brooke Erin Duffy. *Platforms and Cultural Production*. Cambridge: Polity Press, 2022.

Remington, Kate. “Josh Sawyer and Alkemie Create an Immersive Medieval Experience in ‘Pentiment.’” Music Respawn, February 21, 2023. https://www.wshu.org/podcast/music-respawn/2023-02-21/josh-sawyer-and-alkemie-create-an-immersive-medieval-experience-in-pentiment.

Robinson, Carol L., and Pamela Clements. “Living with Neomedievalism.” *Studies in Medievalism XVIII: Defining Medievalism(s) (II)*, 2010, 55–75.

———, eds. *Neomedivalism in the Media: Essays on Film, Telivision, and Electronic Games*. Lewiston: Edwin Mellen Press, 2012.

Salvador, Phil. “Survey of the Video Game Reissue Market in the United States.” *Zenodo*, 2023. https://doi.org/12.5281/zenodo.8161056.

Semel, Paul. “World of Musicraft: Jeremy Soule.” *Gamespy*, May 24, 2006. http://pc.gamespy.com/pc/guild-wars-campaign-2/710030p1.html.

Summers, Tim. *Understanding Video Game Music*. Cambridge: Cambridge University Press, 2016.

Taruskin, Richard. *Text & Act: Essays on Music and Performance*. New York: Oxford University Press, 1995.

Taylor, Timothy D. *Beyond Exoticism*. Durham, NC: Duke University Press, 2007.

Van Deusen, Kira. *Singing Story, Healing Drum: Shamans and Storytellers of Turkic Siberia*. Montreal: McGill-Queen’s University Press, 2004.

West-Harling, Veronica Ortenberg. “Medievalism as Fun and Games.” *Studies in Medievalism XVIII: Defining Medievalism(s) (II)*, 2010, 1–16.

White, Sam. “Valley Forged: How One Man Made the Indie Video Game Sensation Stardew Valley.” *Gentlemen’s Quarterly*, March 20, 2018. https://www.gq.com/story/stardew-valley-eric-barone-profile.

Whitmore, Aleysia K. “The Art of Representing the Other: Industry Personnel in the World Music Industry.” *Ethnomusicology* 60, no. 2 (2016): 329–55.

———. *World Music & The Black Atlantic: Producing & Consuming African-Cuban Musics on World Music Stages*. New York: Oxford University Press, 2020.

Wintory, Austin. “The Alash Ensemble Raw Recording Session Footage - *The Pathless*.” November 23, 2020. YouTube video, 9:02. https://youtu.be/7Olvs7Tzyx0.

———. “Why ‘No Music’ Was the Goal in *The Pathless*.” February 19, 2021. YouTube video, 10:24. https://youtu.be/EkgpbQuRtIM.

Wolf, Mark J. P., ed. *Before the Crash: Early Video Game History*. Detroit: Wayne State University Press, 2012.

Upton, Elizabeth Randell. “Coconut Clops and Motorcycle Fanfare: What Sounds Medieval?” *Sounding Out!* (blog), 2016. https://soundstudiesblog.com/2016/09/19/coconut-clops-and-motorcycle-fanfare-what-sounds-medieval/.

———. “Concepts of Authenticity in Early Music and Popular Music Communities.” *Ethnomusicology Review* 17 (2012). https://ethnomusicologyreview.ucla.edu/journal/volume/17/piece/591#_ftnref.

Utz, Richard. *Medievalism: A Manifesto*. Kalamazoo: Arc Humanities Press, 2017.

Van Deusen, Kira. *Singing Story, Healing Drum: Shamans and Storytellers of Turkic Siberia*. Montreal: McGill-Queen’s University Press, 2004.

Yri, Kirsten, and Stephen C. Meyer. “Introduction.” In *The Oxford Handbook of Music and Medievalism*, edited by Kirsten Yri and Stephen C. Meyer, 1–14. New York: Oxford University Press, 2020.