The Sound of Hyrule: The Relationships among Sonic Environments and Gameplay in *The Legend of Zelda: Breath of the Wild*

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ABSTRACT

This thesis explores the relationships among music, sound, virtual environments, and gameplay within the video game, *The Legend of Zelda: Breath of the Wild* (Nintendo 2017). Utilizing frameworks and methodologies from musicology, ethnomusicology, film studies, and sound studies, the analyses presented in this thesis provide a better understanding of how music and sound impact a player’s perception of a virtual environment. The first chapter analyzes compositional works by Koji Kondo, focusing on musical themes and motifs from earlier *Legend of Zelda* games. As subsequent *Legend of Zelda* games utilize these themes and motifs, it is necessary to provide a historical analysis. The second chapter discusses the application of concepts from film studies to video games, first by providing a comparison of the development of sound technology in both industries. Case studies from *Ocarina of Time* (Nintendo 1998) and *Breath of the Wild* conclude the chapter. The third and fourth chapters analyze the relationships between sonic environments and players’ gameplay experiences. The first of these two chapters examine “stationary sonic environments,” defined as sonic spaces that remain in place and relatively unchanged by a player’s movement. The second analyzes “moving sonic environments,” defined as sonic spaces that change and develop as the player moves through them. The conclusion of this thesis offers ideas for additional areas of research as well as emphasizes the importance of scholarship on video game music.
INTRODUCTION

The screen is black until a golden light appears in the center, generating a sort of humming sound. Immediately, I think of Light Arrows from previous Zelda games, most notably Wind Waker. Then I hear a mumble, which turns into a discernable voice. It’s a woman. She tells me to open my eyes or rather, tells Link to open his eyes. I guess we’re one in the same, in a sense. Perhaps I’m like a puppet master with a stubborn, sentient puppet. Link opens his eyes, but I have no control over it. He gets up after apparently being asleep in this futuristic tub-like apparatus, and sees (well, the screen pans towards) an illuminated pedestal. At this point, I regain control over my Hylian puppet and become him again. I walk over to the pedestal to investigate. I lose control of Link as the woman’s voice tells me what it is. It’s a Sheikah slate! I (am supposed to) have no idea what this is! I wander into the next room and find a couple of chests with clothes in them. The traditional “Item Get” motif plays, the virtual instruments I hear remind me much of Wind Waker and Skyward Sword. Finally, I leave the bunker-like space and lose control again. Link is outside now, he runs up to the edge of a cliff and looks into the vast land that is this game’s iteration of Hyrule. A short, musical introduction plays as Link looks on. It ends with a motif from Skyward Sword.

I regain control again and start running around this Hyrule. Birds sing, crickets chirp, and the wind blows through the trees. The sound of rustling grass is so pleasing to my ears. But something is different here. Different than the versions of
Hyrule that came before it. There’s no music. (Personal gameplay journal, October 2017)

**Overview of the Field**

Though the study of game music has not been around as long as other branches of musicology, it has established itself as a valid field of study and many scholars have published material on the subject. Many of these works focus on music and sound’s effect on player immersion but others have extended their research to other areas, utilizing various interdisciplinary fields.

It is almost necessary to reference Karen Collins’ works in any publication regarding video game music. Her monograph *Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design* (Collins 2008a) provides a historical analysis of important developments regarding sound technology and its relation to video games. In *Playing with Sound: A Theory of Interacting with Sound and Music in Video Games* (Collins 2013), Collins analyzes players’ interactions with various sonic elements in games. By utilizing an interdisciplinary approach, she contributes her research towards the understanding of the role of music and sound in interactive media.

Other scholars have focused on defining theoretical approaches to analyzing video game music. Zach Whalen’s essay, *Play Along – An Approach to Video Game Music* (Whalen 2004), uses concepts from film studies in order to provide an analysis of three prominent video games he uses as case studies. Isabella van Elferen’s essay, *¡Un Forastero! Issues of Virtuality and Diegesis in Videogame Music* (Van Elferen
2011), builds upon theoretical concepts to measure the role of sound in players’ immersion in a virtual space. Her chapter, “Analyzing Game Musical Immersion: The ALI Model” (Van Elferen 2016) within *Ludomusicology: Approaches to Video Game Music* (Kamp, Summers, and Sweeney 2016) further provides a theoretical framework by which to do this.

It is not surprising that scholars have utilized concepts and approaches from film studies in order to analyze video game music, as both are audio-visual media. In addition to Zach Whalen, Tim Summers has greatly contributed to the field in this way. In his monograph, *Understanding Video Game Music* (Summers 2016), Summers devotes a chapter towards the comparison of Hollywood film music and video game music, highlighting the similarities and differences between the two.

A less common approach to video game music is the use of ethnography. Kiri Miller is among the few scholars who used an ethnographic approach to her research, and her work on *Grand Theft Auto: San Andreas* (Rockstar Games 2005) has been published in the journals *Ethnomusicology* (Miller 2007), *Game Studies* (Miller 2008a), and *Journal of American Folklore* (Miller 2008b). She has also worked extensively on interactive music-themed video games such as *Guitar Hero* (Harmonix Music Systems 2005), *Just Dance* (Ubisoft 2009), and *Dance Central* (Harmonix Music Systems 2010). She has produced two monographs, *Playing Along: Digital Games, YouTube, and Virtual Performance* (Miller 2011) and *Playable Bodies: Dance Games and Intimate Media* (Miller 2017), using the research she has done on these games. William Cheng is another scholar to extensively utilize ethnographic methods in his research on video game music. Cheng’s ethnographic work on *Lord of
the Rings Online was published in Ethnomusicology in 2012 (Cheng 2012). His monograph, Sound Play: Video Games and the Musical Imagination (Cheng 2014), provides a more in-depth autoethnographic account of five different games while providing an interdisciplinary approach towards analyzing these experiences.

A more unique approach to analyzing video game music is that of William Gibbons, who utilizes concepts from musicology. He has published articles and contributed chapters on the use of classical music in video games. In Ludomusicology: Approaches to Video Game Music, his chapter, Remixed Metaphors: Manipulating Classical Music and Its Meanings in Video Games (Gibbons 2016), analyzes two video games in which Frederic Chopin is the protagonist.

In terms of video game music literature, The Legend of Zelda is not a new topic. Because of its longevity and use of music for advancing plot and gameplay, the series has been used as a case study for many scholars. The Legend of Zelda: Ocarina of Time (Nintendo 1998) is particularly popular, and has been analyzed by scholars such as Zach Whalen, Tim Summers, Karen Collins, Stephanie Lind, to name a few. In Music in Video Games: Studying Play (Donnelly, Gibbons, and Lerner 2014), Elizabeth Medina-Gray’s chapter, “Meaningful Modular Combinations: Simultaneous Harp and Environmental Music in Two Legend of Zelda Games”, covers musical modularity in both The Legend of Zelda: Wind Waker (Nintendo 2002) and The Legend of Zelda: Skyward Sword (Nintendo 2011).

My thesis aims to contribute to the growing body of video game music literature. I offer interdisciplinary analyses using frameworks from musicology, film
studies, ethnomusicology, and sound studies. With the fieldwork I have conducted, I seek to add to the limited available literature on gameplay ethnography in regard to music and sound. By using this approach, I investigate players’ connections and responses to in-game environments by utilizing concepts from sound studies. In addition to analyzing a new Legend of Zelda game that is quite unlike most of its predecessors, my thesis contributes to the field by applying concepts from soundscape ecology to that of a virtual environment.

Project Outline

As previously stated, the purpose of this thesis is to expand upon the growing body of literature regarding video game music, utilizing The Legend of Zelda: Breath of the Wild (Nintendo 2017) as a major case study. The following chapters utilize an interdisciplinary approach to analyzing various facets of music and sound within The Legend of Zelda series, with the last two chapters focusing solely on Breath of the Wild. The data and subsequent analyses presented within build a case for the importance of the relationships among in-game environments, music and sound effects, and the players’ perception of such. Additionally, each chapter provides a different perspective from which to analyze video game music and sound within this particular case study.

Chapter One presents a historical analysis of influential music from The Legend of Zelda series. A significant emphasis is put on Koji Kondo, the original composer for The Legend of Zelda series. Musicological analyses are provided on important themes composed by Kondo that have influenced subsequent Legend of
Zelda soundtracks. The end of the chapter provides a brief biographical description of the composers for Breath of the Wild, as little information about them is publicly available.

The analyses presented in Chapter Two are derived from concepts utilized within the field of film studies. By offering a comparison of the development of sound technology in the film industry with that of the video game industry, this chapter examines the overlap between the two disciplines. Additionally, case studies from Ocarina of Time and Breath of the Wild are analyzed in order to highlight the similarities between the use of sound in film and video games. As well, they provide a framework by which to analyze the more traditionally cinematic elements of the game.

Chapters Three and Four focus on the various kinds of environments within Breath of the Wild and the role game audio plays in the experience of interacting with them. Chapter Three approaches in-game environments by classifying the specific case studies as “stationary environments.” These are defined as places within the game that do not move nor are directly affected by the player’s movement through them. Chapter Four classifies its case studies as “moving environments” and focuses primarily on the movement of the player or other objects in the game that essentially change the surrounding environment. Both chapters utilize methodologies used in anthropology and sound studies, drawing upon works from Miriam Kahn, R. Murray Schafer, Bernie Krause, Edward S. Casey, and Keith H. Basso. As well, these last two chapters heavily utilize data collected from my ethnographic fieldwork performed from May 2017 through February 2018.
Ethnographic Methodology

*The Legend of Zelda* has been a part of my life for over twenty-four years. According to my sister, our parents had purchased a Super Nintendo Entertainment System for Christmas of 1992. The next winter, our dad had brought home what was to become my first favorite game, once I was old enough to hold a controller. It was *The Legend of Zelda: A Link to the Past* (Nintendo 1991) and I was just shy of my second birthday.

As an individual who has been playing *The Legend of Zelda* series for nearly their entire life, I am very interested in how the music and sound of the game series affects players’ thoughts, emotions, and perspective on gameplay. Narrowing my focus to the most recent release, *Breath of the Wild*, I have used various ethnographic methods by which to obtain this data. The first includes a couple of forms of auto-ethnography. Playing the game and taking notes (either mentally or physically) was my first methodological approach. During my first three playthroughs, I did not take any notes on purpose, in order to play the game as the average player would. In my fourth playthrough, I took very detailed notes and came to realizations I might not have made if I did not intend to write my thoughts down later. The second major form of ethnography I conducted was surveying other individuals by means of Google Forms (See Appendices I and II). Through different social media platforms and the help from some colleagues and peers, I was able to obtain nearly a hundred responses. It is through these forms of ethnography that I hope to draw some valuable conclusions regarding the role of music and sound in *Breath of the Wild*. 
Methodology – Game Journaling

A key element of ethnography that is often overlooked is the thoughts, feelings, and opinions of the ethnographer. Naturally, the focus is put on the “others” of the study, which include the people that make up the demographic being represented. But in many cases, the ethnographer is also a member of the group of people being studied. Ethnographic studies have evolved and expanded beyond the traditional trope of the white man immersing himself within the culture of the “exotic (usually nonwhite) other.” Now, the diversity of ethnographers rivals that of the number of ethnographic groups that can be studied.

With this in mind, I sought an initial ethnographic method that would emphasize my experience: “game journaling.” This simply entailed keeping a journal in order to record my thoughts and opinions while playing the game. However, I chose to play the game for the first three times without taking any notes whatsoever. In this manner, I could play the game without any academic burdens.

The primary reasoning behind this is that I would be experiencing my first playthrough just as my informants would be. I can imagine that most people do not play through a game for the first time while taking detailed notes with an academic thesis in mind. Of course, the caveat of this approach is the possibility of forgetting important reactions to the game. However, by recalling memorable moments of gameplay, I would be able to discern the unmemorable moments as well.

Additionally, waiting until my fourth playthrough to take notes allowed me to celebrate the special moments in which I had noticed something that I didn’t while


playing the first three times. The following is an excerpt from my journal in which I enthusiastically discover a connection I had missed before,

Link is outside now, he runs up to the edge of a cliff and looks into the vast land that is this game’s iteration of Hyrule. Music plays as Link looks on. What I never noticed in my first three gameplay, is that the last three or four notes are quoted from the Eldin Volcano Silent Realm theme from *Skyward Sword* (Nintendo 2011). I love that theme, it is absolutely melancholy. I also can’t really believe that I noticed it. (Personal gameplay journal, October 2017)

The musical quote that I mention in this excerpt is so subtle that I was absolutely overjoyed upon noticing it. Being a lifelong Legend of Zelda fan, this moment was particularly touching to me and I had felt so glad to have caught it. Had I not been focusing with the intent of journaling my experience later, I may have never noticed it. This moment exemplifies the importance and usefulness of game journaling.

**Methodology – Surveying and Google Forms**

In order to get an overview of other people’s thoughts, opinions, and gameplay experiences related to *Breath of the Wild*, I created two surveys through Google Forms. The first asks mostly open-ended questions about the game’s audio (See Appendix I). Consisting of twelve questions, the survey collects basic demographic information such as age and gender, “gameplay data” including if they played with sound and the language in which they listened to the voice acting, whether or not they had played *The Legend of Zelda* before, and general questions of the player’s opinions on the audio.

As of this writing, sixty-two people have responded to the survey. I initially struggled with the decision on whether or not to require respondents to sign in with
their Gmail account in order to complete the survey. By requiring this type of login, one may choose to limit the amount of responses any given account can provide; in this case, one per account. Additionally, requiring this “login-wall” might ensure a level of seriousness from respondents. If respondents are willing to login, I conclude that it shows desire and enthusiasm for the project, and thus honest and well thought out answers. Lastly, by requiring a Gmail account to answer the survey, I am able to reach out to respondents for follow up questions regarding their answers. However, the “login wall” is not without its drawbacks.

By requiring this sort of “wall,” this survey blocks potential respondents from participating. Most obviously, it excludes individuals who do not have a Gmail account. Looking at the issue from an even broader perspective, it also excludes individuals who do not have Internet access and/or a computer. Additionally, and perhaps most importantly, a login wall can discourage people from participating. It is an extra tedious step that some people may not feel like taking. On a more serious note, individuals may not want to provide a link to their identity as well as describe their opinions to an unknown person. In an age where cyber security is necessary and identity theft is prevalent, providing so much as an email address to an unknown individual can prove daunting. I serve as an example of this; if I encountered a survey of this sort that required a login without knowing the creator, I would not answer it.

I ultimately chose to keep the login wall. I made this decision because my original plan was to disseminate the survey by means of posting it on my Facebook timeline. Due to my profile being completely private, only respondents who have
some connection to me would be exposed to it. The post was initially met with enthusiasm and I was excited to receive seven responses.

Shortly afterward, I was contacted by my academic advisor who offered to share the survey on her Facebook profile, thus increasing the survey’s exposure. Her post was met with much more enthusiasm than mine; some of her friends were so enthusiastic that they offered to share the survey among their social media contacts. I gave them permission on the condition that they do not share my name or gender. After that, the responses flooded in.

I created the second survey a few months after the first (See Appendix II). The initial survey brought a wealth of responses, most of which were very detailed and well thought out. Reading through them all, however, seemed to raise more questions in my mind. By picking out keywords used among the many answers of the first survey, I was able to isolate a myriad of themes to investigate further. Among these are concepts of silence and sonic subtlety, nostalgia, and in-game environments; all of which are discussed in the last two chapters of this thesis.

The second survey was not as well received as the first and only acquired twenty-seven answers. This is most likely because the questions I asked were far more specific and required informants to truly reflect upon their experiences rather than be given a simple opportunity to rave about the game. Unlike the first survey, the subsequent one does not ask for demographic data. Because of the timeframe and limited resources available to complete this thesis, I chose to omit drawing sociological connections and instead utilize the collected ethnographic data to support the analyses I have made about the game.
Google Forms proved to be a useful ethnographic tool because it removed a lot of the busy work from organizing data such as creating graphs and tables based on respondents’ answers. This allowed for an easier analysis of simple yet numerous demographic facts such as age, gender, answers to yes or no questions, and more.

Google Forms also allows for easy comparison of more in-depth questions. Instead of sifting through paragraphs upon paragraphs of informant’s answers, Google Forms attempts to mitigate this by allowing an option to view all respondent’s answers to a single question within a color-coded, scrollable window embedded on the webpage. But, the feature is not without its imperfections. Answers, though visually separated by color, are not labeled by respondent. Thus, the ethnographer must scroll to the top of the page to a different embedded window containing the email addresses of all the respondents and match it to the corresponding answers (the ninth response belongs to the ninth email listed etc.). As of the moment, the only way to counter this is by printing the data and labeling the respondents’ answers by hand.

Of the sixty-two individuals that answered my initial survey, only one person had never played *The Legend of Zelda* before *Breath of the Wild*. Though the series is thirty-two years old, it is understandable that many may not be familiar with its lore and legacy especially if they are not involved in gaming culture. However, in order to fully understand and appreciate the analyses presented in this thesis, it is imperative to have a basic understanding of the series’ plot and mythology. Hence, I have outlined a synopsis of *Breath of the Wild* in addition to two other earlier *Legend of*
Zelda games (*The Legend of Zelda* and *Ocarina of Time*) that have made a lasting impact on the series.¹

**The Legend of Zelda (1986)**

*The Legend of Zelda* is a Nintendo-exclusive video game series that began in Japan in 1986 with the release of its self-titled installment for the Famicom Disk System.² Since then, nineteen installments have been released including the latest, *The Legend of Zelda: Breath of the Wild* (Nintendo 2017). Each game follows Link, the series’ player character, and his endeavors to save the kingdom of Hyrule (or any other land in which he finds himself). Often, though not in every game, the series’ titular character, Princess Zelda, calls for Link’s assistance and in return offers him guidance in some way. *Legend of Zelda* games require the player to conquer locations where evil forces have taken over and to assist people along the way. Almost all installments of the series require the evil forces of these locations to be defeated in a specific order, usually by obtaining an item in one location necessary in order to gain access to the next. Aside from the very first *Legend of Zelda* title, *Breath of the Wild* is the only other installment of the series in which the entire gameworld is accessible from the very beginning. Technical limitations of the time kept the plot of the first

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¹ I debated between using *A Link to the Past* (1991) or *Ocarina of Time* (1998) in order to build a suitable description of *The Legend of Zelda* series. Because both games share a very similar storyline, I decided to use *Ocarina of Time* due to its revolutionary impact at the time as the first 3D *Legend of Zelda* game. Additionally, many musical themes established in *Ocarina of Time* are present in subsequent *Legend of Zelda* games, solidifying its place as one of the most influential installments in the series.

² It was later released in North America in 1987 on the *Nintendo Entertainment System*. 
Legend of Zelda game very simple (defeat Ganon, rescue Zelda, save Hyrule) yet it constructed the framework upon which almost every subsequent Legend of Zelda game would be built.

Ocarina of Time (1998)

Ocarina of Time was released in 1998 for the Nintendo 64 console and was the first title to launch The Legend of Zelda series into the realm of 3D gaming. Lauded as one of the best video games ever made (Metacritic), Ocarina of Time continues to find its way into players’ homes nearly twenty years later. Since its initial release for the Nintendo 64, the game has been ported to nearly every Nintendo home console since. In 2011, the game was remastered for the Nintendo 3DS handheld console as Ocarina of Time 3D. This remake featured an overhaul of the original graphics and reconfigured controls for the Nintendo 3DS, but maintained the original soundtrack. Even with two decades passing, Ocarina of Time continues to influence subsequent Legend of Zelda games, Breath of the Wild included.

The game begins with Link as a young boy, who suffers from nightmares. He lives among the Kokiri, a group of spirit children overseen by the Great Deku Tree – a giant, anthropomorphic tree that provides protection over the forest in which they reside. Each Kokiri child is granted a fairy companion for guidance. Link, however, is known as the “boy without a fairy.” As his nightmares worsen, the Great Deku Tree sends the fairy, Navi, to summon Link and reveal his destiny. At this point, the player begins the game and is required to seek out a sword and shield in order to meet with the Great Deku Tree. As the player accomplishes this, the Great Deku Tree asks Link
to enter his trunk and defeat an evil force that has cursed him from within. This is the game’s first dungeon.

After the player completes this dungeon, Link is awarded a “Spiritual Stone,” an important relic that will serve him in his quests later. Perhaps more importantly, the Great Deku Tree explains the Hyrulean creation myth which leads to a cutscene depicting the creation of the world. With his dying breath, the Great Deku Tree asks Link to leave Kokiri Forest in order to meet with the Princess of Hyrule, Zelda. Upon leaving the forest, Link is bestowed an ocarina by his only childhood friend, Saria.

Afterwards, the player makes their way to Hyrule Castle. Link meets with Princess Zelda who shares her prophetic dreams of an impending doom, only to be stopped by a hero that emerges from the forest. Unsurprisingly, Link is to be that hero. Princess Zelda shares her concerns about a man named Ganondorf, whom she suspects is behind the evil she senses in her dreams. The two decide that precautions must be taken, which includes the retrieval of two other Spiritual Stones.

Once the player has collected all three Spiritual Stones and begins their return to Hyrule Castle, Link finds Zelda and her attendant fleeing on horseback from the gates. Zelda throws an object that lands in the moat before disappearing from view. Ganondorf appears and it quickly becomes clear that he is the cause for the Princess’s need to escape. Link then retrieves the object from the moat, which turns out to be the legendary Ocarina of Time. This magical instrument is the key to opening a sealed door that protects the Master Sword, another item needed in order to vanquish evil. Upon retrieving the Master Sword, Link is sealed away for seven years only to
awaken as an adult to a post-apocalyptic Hyrule. From this point, the character must complete six dungeons in order to reach and defeat Ganondorf.

Though the linear gameplay of *Ocarina of Time* is heavily derived from its predecessor, *A Link to the Past* (1991), the advent of 3D technology is most likely one of the most important reasons why *Ocarina of Time* met such success and is heavily drawn upon in other *Legend of Zelda* games. Many symbols, locations, and even characters from *Ocarina of Time* are referenced and reappear in subsequent *Legend of Zelda* games.

**Breath of the Wild (2017)**

*Breath of the Wild* is significant for several reasons including the simple fact that it is critically acclaimed to be a masterpiece (Kamen 2017, Morales 2017, Thier 2017). This success partly or wholly derives from the fact that Nintendo took a game series already beloved by millions and readapted to fit the immensely popular genre known as “open world.” Open world games are defined by their expansive “maps,” which contain little to no restrictions regarding where a player can explore at any point in the game. Unlike the linear and arguably restrictive gameplay of its predecessors, *Breath of the Wild* allows the player to explore anywhere and obtain anything at any point in the game. Yet despite the massive size of the gameworld, *Breath of the Wild* features the sparsest soundtrack yet.

*Breath of the Wild* begins with the awakening of Link, whom we soon find out has been slumbering for one hundred years in order to heal from near-fatal war wounds. Additionally, it is quickly revealed that he has lost most of his memories as a
side effect of this great sleep. Link learns that the war from which he obtained such extreme wounds also led to the fall of the Kingdom of Hyrule and the near decimation of its people. Upon looking at the ruins of Hyrule Castle shrouded in a shadowy evil, Link is compelled to learn what he has forgotten in order to face the beast that still dwells within. Then, the main questline starts.

As the player explores Hyrule, they encounter a myriad of different places, settlements, environments, and structures, most of which are connected by a sonic or musical theme. Hyrule is dotted with one hundred and twenty mound-like Ancient Shrines, which contain a large and technologically advanced interior that presents a puzzle challenge to the player (See Figure 0.1). If the player succeeds, they encounter the mummified corpse of a Sheikah monk who gifts the player a “Spirit Orb,” an item that can increase the player’s health or stamina if enough are collected. Both the sonic and visual representation of these monks is rooted in Japanese Buddhist practices. Upon interacting with the monk, the player will hear a few “ohm” chants. The visual design of the monks themselves is based on an archaic Buddhist practice known as sokushinbutsu (即身仏) or, self-mummification through extreme asceticism in order to obtain enlightenment (Zelda Wiki). These are not the only examples of references to Buddhist or traditional Japanese culture. Kakariko Village, one of the first settlements discovered by the player if they choose to immediately follow the main questline, contains both physical and sonic references to Japanese culture. It is home to the Sheikah tribe, an ethnic group of humans who are visually indistinct from Hylians save for the fact that they all have white hair. The village echoes the aesthetic
of feudal Japan, with buildings containing sliding paper doors and angular thatched roofing.

Figure 0.1 Link stands in front of an Ancient Shrine. Screenshot by author.

Aside from shrines, another common structure the player will encounter are stables, which are small settlements that cater to travelers and their horses. They serve as an area of refuge for the player; a place where they can rest, choose a different horse, and interact with NPCs (non-player characters). In addition to the ambient sounds of nature, these locations are sonically identifiable by a musical theme reminiscent of that of Lon Lon Ranch – a location that originally appeared in *Ocarina of Time* nearly twenty years earlier.

There are many villages throughout Hyrule that the player will discover, each with their own unique theme. Most, though not all, have homogenous populations. For example, Rito Village is home to the Rito, a race of anthropomorphic birds. Zora’s Domain, as the name suggests, is the location where the Zora, a race of
humanoid fish, call their home. All of these settlements have their own musical theme, the volume of which changes as the player moves closer to the area. Both of these locations include arrangements of themes that debuted in earlier *Legend of Zelda* games.

In addition to these types of settlements, the player will discover four structures entirely unique to *Breath of the Wild*. These are the Divine Beasts, giant mechanical beings built by the ancient Sheikah tribe originally designed to provide defense against the evil Ganon while being piloted by four extraordinary “Champions” (See Figure 0.2). However, in the last war against evil incarnate, Ganon was able to slay the Champions and usurp control of the Divine Beasts, turning the colossal machines against the people they were created to protect. It is up to the player to free these machines and the Champions’ spirits from Ganon’s control and use their ancient powers towards its defeat. Though it is technically optional to appease these beasts due to the freedom of the open world format, it is necessary in order to complete the main questlines as well as gain certain abilities. All four Divine Beasts have a unique mechanized roar and a “battle theme” which sounds as the player works to subdue the mechanical creatures. Upon entering the machines, the player will hear six variations of a musical theme unique to each Divine Beast’s interior depending on the progress they have made in regaining control from Ganon.
Despite the subtle soundtrack, the numerous environments and how they change and evolve throughout the game provide a wealth of topics to analyze. Due to the limited time and resources available for this project, not all of these topics will be covered. However, this thesis seeks to offer some analyses from which scholars from a range of disciplines may build their own.

Figure 0.2 The four Divine Beasts: Vah Rudania (top left), Vah Medoh (top right), Vah Naboris (bottom left), and Vah Ruta (bottom right). Screenshots by author.
CHAPTER 1

COMPOSING A LEGEND

Introduction

Nearly everyone in the developed world has heard music by Koji Kondo. They may not know him by name, but they are sure to know his most famous melody: the theme to *Super Mario Bros.* (Nintendo 1985). Kondo has been composing music and directing the sound teams for Nintendo games since the 1980s. This chapter focuses on his work as composer and sound designer for *The Legend of Zelda* (Nintendo 1986) and all of its sequels through *Ocarina of Time* (Nintendo 1998).

Before reading any analyses of music from *Breath of the Wild*, one must understand the musical heritage of *The Legend of Zelda*. It all begins with composer Koji Kondo.

Technological Aspects of Early Video Game Sound

Before Koji Kondo’s compositional choices can be thoroughly analyzed, one must have an understanding of the limitations a game composer faced in the late 1970s and throughout the 1980s. During this time period, a computer’s dedicated memory for sound was understandably small or even non-existent. The first video games featured no music or sound at all, for doing so would have meant subtracting valuable memory devoted to running the game. With the release of *Pong* (Atari 1972), sound finally entered the world of video games and subsequently into players’ homes (Collins 2008a). However, the sounds featured in *Pong* were limited to a
couple of beeps, one tone for when the “ball” (literally a square on the screen) touches a player’s “paddle” and another tone for when the “ball” misses a player’s “paddle.” Thus, Pong can be considered the first video game to feature sound effects but not a dedicated musical soundtrack (Collins 2008a:8). It wasn’t until 1978 with the publication of Space Invaders (Taito 1978) that music was featured in a video game.

8-bit Games and the Use of PSGs

By the early 1980s, sound was an emerging element in the continuous development of personal computers. Around this time, gaming machines were utilizing PSGs, also known as Programmable Sound Generators. As game scholar Karen Collins describes them, PSGs

used analogue synthesis, or subtractive synthesis, which starts with a wave form created by an oscillator and uses a filter to attenuate or subtract specific frequencies and then passes this through an amplifier to control the envelope and amplitude of the final resulting sound. (Collins 2005:3)

However, because of their use of analog signals, the sounds produced by PSGs were unstable and often varied from computer to computer. Obviously, this created problems for games that were playable on an array of personal computers produced at the time. However, it was mainly a nonissue for Nintendo since their games would only be playable on their devices. By taking this approach, Nintendo could ensure that all players experienced the same quality of sound.

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3 An example can be watched here: https://youtu.be/fiShX2pTz9A
The Nintendo Entertainment System, or NES, was Nintendo’s debut home-console (known as the Family Computer, or Famicom, in Japan) and utilized a five-channel PSG that had one dedicated waveform for each channel: two pulse waves, a triangle wave, noise channel, and a sample channel (Collins 2005:4). Collins provides an exemplary description of the sound chip,

The pulse and triangle channels had an 11-bit frequency control, capable of about eight octaves. The pulse channels had four duty cycle options and a 4-bit amplitude envelope function, and one of the channels had a frequency sweep function that could create portamento-like effects and was often used for UFO or laser-gun effects. The pulse waves could also be detuned, and vibrato effects could be simulated. The triangle wave channel was one octave lower than that of the pulse waves, had a four-bit frequency control, and had no volume or envelope control, as it was mainly intended for bass (ibid). The noise channel could use white noise or periodic sounds created by the four-bit frequency control … The fifth channel is a PCM channel sampler, also known as the Delta Modulation channel. (Collins 2005:5)

Sound for the Famicom improved with the release of the Famicom Disk System.4 This was an external device that relied on floppy discs to expand the memory of the Famicom. Relying on wavetable synthesis, the FDS was able to produce a broader array of sounds (Matsui, Totsuka, and Yoshida 2001).5 Additionally, the sound chip within the Famicom Disk System added an extra sound channel.6 However, until the development and release of the Super Famicom (known as the Super Nintendo Entertainment System, or SNES, in North America) sound capabilities were still quite limited.

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4 I use the Japanese name “Famicom” instead of the North American name NES, because the Famicom Disk System was only released in Japan.
5 As Collins explains it, “wavetable synthesis uses pre-set digital samples of instruments, usually combined with basic waveforms of analogue synths” (Collins 2005).
6 The sound chip used was a Ricoh RP2C33. For more information, see: http://famitracker.com/wiki/index.php?title=Sound_hardware
16 to 64-bit Evolution of Game Sound

The SNES utilized a sound chip developed by Sony, the SPC-700. The chip provided more advanced wavetable synthesis than that of the FDS. It supported 8 sound channels, and its then-advanced processors allowed for greater memory, specifically for sound. However, Nintendo decided that the square waves that dominated 1980s video game audio had set a precedent for how future games should sound. Collins remarks that the SNES, “still maintained a distinctly ‘chip-tune’ and poppy feel, relying on the aesthetic of the 8-bit era” (2008a:47). In a 2001 interview, Kondo reflected upon how this affected his compositional choices,

The Super Famicom…was a decisive split from the game music of the past. It truly was a new sound. I spent a lot of time then thinking about what direction game music should go from here. The cheap square wave sound of the Famicom had come to define ‘game music’ for most people, but the Super Famicom could play a much wider variety of tones and sounds. That being the case, should I try and imitate ‘regular’ music that we hear all around us? Or should I try and use these sounds to create a new style and lexicon of game music? (Matsui, Totsuka, and Yoshida 2001)

Ultimately, Kondo chose a dualistic approach by utilizing the myriad of sound options now available on the SNES but also trying to maintain the aesthetic of earlier games, most likely to achieve a unifying element between decades.

The Nintendo 64 (also known as the N64), released in 1996, brought new freedom to game composers. The sound was now controlled by the unit’s main processor which allowed for sound quality that rivaled that of a CD (Collins 2008a:69). Kondo has stated that this era in Nintendo’s line of consoles changed his compositional approaches dramatically, “I no longer needed to do sound

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7 For a detailed explanation of the Sony SPC-700’s technical specifications, see Collins 2008b.
programming; I could focus entirely on the music composition… With the N64, because I was now able to focus purely on the music, I could also spend more time on the music production/direction side and pursue more of my ideas” (Matsui, Totsuka, and Yoshida 2001).

**A Musical Biography of Koji Kondo**

As a youth, Kondo began his music education by learning organ, specifically on a Yamaha Electone. In addition to organ, Kondo learned to play the marimba in elementary school and has cited this as the experience that helped him learn to play within an ensemble (Matsui, Totsuka, and Yoshida 2001). As Kondo began high school, his parents bought him a Yamaha CS-30 which was the composer’s first introduction to electronic music. The CS-30 was one of Yamaha’s top of the line monophonic synthesizers at the time, featuring a myriad of controls that allowed the user to control and shape the sound. At the time, Kondo had an interest in sound design. In a 2001 interview, Kondo said, “I was really interested in sound design, making a sound that sounded like a lion’s roar, for instance… I loved figuring things out by twiddling knobs on analogue synthesizers, I thought it was awesome how many different sounds it could produce” (Matsui, Totsuka, and Yoshida 2001). Naturally, this interest led Kondo to enroll in the Osaka School of Fine Arts, where the composer would consider working at Nintendo as a possible career path.

Nintendo accepted Kondo’s application to work as a sound programmer. The concept of hiring a programmer solely for sound production in video games was still so new that Kondo got the job without the need for an interview or even a portfolio of
works. It’s important to note that the idea of hiring a composer was unheard of at the time, as game sound was produced through means of computer programming. Unlike today, where composers have the tools to write electronic music with a MIDI controller and digital audio workstation, video game sound designers in the 1980s had to be proficient in the programming language in which the game was being written. Though Kondo had explored electronic sound design through his Yamaha CS-30, he did not begin extensively programming until he began his employment with Nintendo (Matsui, Totsuka, and Yoshida 2001).

**NES and The Legend of Zelda (1986)**

With very strict technical limitations, Kondo had to be creative in terms of composing music that the NES’s PSG could handle. The chip only provided five channels, with one dedicated primarily to percussive sounds and another dedicated to samples. Thus, Kondo only had three “instruments” with which to create melody and harmony. Kondo described his methods overcoming this issue, “The Famicom uses square waves, which have a richer harmonic content than normal instruments. This means that when you’re writing chords it’s better to use wider intervals rather than shorter ones” (Matsui, Totsuka, and Yoshida 2001). However, technical limitations were only the first of Kondo’s challenges, the composer also had to contend with creating music that was reflective of the game’s environment, engaging to the player, and did not cause listening fatigue.

Koji Kondo’s most well-known work includes the several themes present in the original *Super Mario Bros.* game (Nintendo 1985). But given the technical
limitations of the time, his music composed for *The Legend of Zelda* is arguably a much bigger achievement. While *Super Mario Bros.* featured bright and chipper sounding melodies required to reflect a simple but colorful world, *The Legend of Zelda* brought a new level of sophistication to mainstream video gaming. As expected, this required fitting music to reflect a land of magic and mystery in which the player would explore.

The opening theme to *The Legend of Zelda* is particularly notable. The first two bars, in a minor mode, establishes a feeling of tension. Shifting to a major mode in the second two bars, this tension is resolved (See Figure 1.1). This is appropriate for setting a sonic exposition for the game, as the player’s role is that of a hero on a quest to save the world from destruction.

![Figure 1.1](https://example.com/music.png)

**Figure 1.1** Introduction before the main theme.
Transcription by author.

For two bars, the “melody instrument” drops out leaving the listener with bass and percussion (See Figure 1.2). They play rhythms that alternate between eighth and sixteenth notes, driving the piece along. It creates a march-like feel, appropriate for setting the scene for a game in which the main character traverses treacherous lands.

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8 The recording that will be referenced in regard to *The Legend of Zelda* can be listened to here: [https://youtu.be/uyMKWJ5e1kg](https://youtu.be/uyMKWJ5e1kg).
9 This can be heard at 0:10 in the reference video.
This rhythmic pattern continues in the percussion for the rest of the piece, maintaining the driving feel. Soon after (at 0:27 in the reference recording), the listener is introduced to the iconic main theme that would be present in nearly every Legend of Zelda game to follow. Kondo creates a memorable melody by creating an arc-like contour (See Figure 1.3). By looking at the transcription of the melody, one can see Kondo’s preference for triplet motives and sixteenth note passing tones. Similar motives appear in music in Legend of Zelda games to follow.

This theme is also played in a loop as the player traverses the land of Hyrule, the overworld\(^\text{10}\) in the game. Thus, Kondo had to make sure that the melody was sonically pleasing and did not induce listening fatigue upon the player.

\(^{10}\) The term “overworld” is a concept in video gaming. It refers to the main map in which all other locations (such as dungeons) can be accessed.
**SNES and *A Link to the Past* (1991)**

With the release of the 16-bit Super Nintendo Entertainment system, Kondo was allowed much more compositional freedom. In November of 1991, players were introduced to a new world of *Zelda* in *A Link to the Past*. By utilizing the SNES’s superior processor, *A Link to the Past* featured bright and vibrant settings and far less pixelated character design. As expected, the music and sound effects improved too.

Compared to *The Legend of Zelda* which had roughly three musical themes (the overworld theme, the dungeon theme, and the final dungeon theme, the latter two not discussed in this chapter), *A Link to the Past* featured a new theme for nearly every change in environment. This meant that the music changes to a corresponding theme if the player entered a cave, a forest, a town, a dungeon, and so on. *The Legend of Zelda* main theme is kept as the music that plays when the player is exploring the overworld but with more harmony and embellishment. Most significantly, Kondo added a fanfare to the beginning of the main theme which would become canon in future performances of the piece (be it in the form of spin-off games or real-life symphonic performances).11 This iconic fanfare is heard at 13:40 in the reference recording. By looking at the transcriptions, one can see Kondo utilize his preference for both triplets and sixteenth notes (See Figure 1.4). By comparing the bass and percussion lines from *The Legend of Zelda* to the fanfare present in *A Link to the Past*...
Past, it becomes obvious that Kondo uses these motives to create forward motion in his work.

This fanfare was an appropriate addition to the main theme, as it reflects the heroic mood of the game. A major element of the game series includes the interaction with and protection of the royal family of Hyrule and the fanfare reflects the sonic parallels between the introduction of in-game royalty and that of real life. In later games this fanfare is played by trumpets, thus solidifying this parallel. However, most likely due to the technical limitations of the time, the fanfare in A Link to the Past is played by a MIDI instrument that sounds vaguely like a low brass section.

Nintendo 64 and Ocarina of Time (1998)

Like its predecessors, the development and release of the N64 brought more memory and thus more musical opportunities for game composers. Additionally, because programming became so advanced, Kondo was freed from his responsibilities as a sound programmer and was able to focus solely on composing. Regarding the Zelda series, the release of Ocarina of Time (Nintendo 1998) for N64 absolutely stunned the gaming community with its then-advanced graphics, highly detailed story, and extensive soundtrack. The game would go on to have an incredible
legacy and continues to be placed among the top ten games of all time by established gaming news networks.

As the name of the game suggests, Ocarina of Time is inherently musical. The player guides the hero throughout the land of Hyrule, equipped with a magical ocarina with special powers depending on what the player plays. The game even utilized its own form of staff notation, with each yellow arrow symbol on the staff corresponding to a button on the controller (See Figure 1.5). A set of twelve, short tunes for the player to learn within the game was only a small addition to the new amount of work Kondo had to compose. Ocarina of Time was the first Zelda game to feature a battle theme (music that plays when the player approaches an enemy) as well as individual character leitmotivs. Of course, every environment had its own theme and the game was rarely devoid of music. All of this was made possible by the N64’s technical advances.

Figure 1.5 Example of the in-game notation system. Image taken from http://www.zeldadungeon.net/, cropped to show only notation.

Kondo chose not to include the iconic overworld theme in the game, at least not an exact copy of it. Instead, he composed a new theme that consisted of twelve interchangeable phrases (Yoon 2007). Commenting on Kondo’s presentation at the
2007 Game Developer’s Conference, Engadget reporter Andrew Yoon summarizes Kondo’s approach to composing these phrases,

One of the more fascinating techniques demonstrated during the session is to have random phrases play through music. There were twelve phrases that could be incorporated into the field song from The Legend of Zelda: Ocarina of Time: by introducing random variance, traveling the massive Hyrule Field wouldn't feel so tiresome, as the music has subtle differences. (Yoon 2007)

Despite being composed of twelve phrases, to say the original overworld theme isn’t present is not an entirely true statement. The phrases draw upon Kondo’s earlier works and in one phrase, he even quotes the beginning of the original overworld theme.12

By looking at the selected transcription, one can see the stylistic similarities to the original Legend of Zelda overworld theme (See Figure 1.6). Like the original, Kondo begins with perfect fifths, utilizes triplet passing tones, and creates forward motion by putting four sixteenths notes on the fourth beat in some measures. Not only are these compositional similarities among Kondo’s earlier works, but most of these motives are present among the twelve phrases and function in a rather unifying matter. Ocarina of Time would not be the last of The Legend of Zelda games to feature these motives, which have had a major impact on the defining elements of Zelda music.13

12 This can be heard at 1:21 here: https://youtu.be/Gjbi2w81zB8?t=1m20s
13 For a more in-depth analysis of thematic unity in The Legend of Zelda series, see Brame (2011).
Kondo most likely stayed with using these motives due to the success the series had achieved at this point. As the central location of the game (geographically speaking), Kondo must have chosen the Hyrule Field theme music to be reflective of the series as a whole; its music now widely known and associated with questing and adventure. Thus, it only makes sense that Kondo would choose to compose such a theme for the part of the game in which the character does the most traveling.

*Breath of the Wild* (2017)

As the series grew, Nintendo needed to hire larger and more advanced sound teams in order to keep up with the technological advancements in the video game industry. After *Ocarina of Time*, Kondo no longer took the role as the primary composer.\(^{14}\) Instead, he has lead the sound teams for the subsequent installations to *The Legend of Zelda* series through *Skyward Sword* (Nintendo 2011). Though the series’ latest entry, *Breath of the Wild*, includes arrangements of themes that Kondo composed, he does not appear in the credits at all.

The main composers credited for *Breath of the Wild* include Manaka Kataoka and Yasuaki Iwata. Kataoka’s earlier works include composing music for *Wii Fit*.

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\(^{14}\) Kondo did, however, compose the opening theme for *Wind Waker* (2002).
(Nintendo 2007), as well as two Animal Crossing games: City Folk (Nintendo 2008) and New Leaf (Nintendo 2012).\textsuperscript{15} Prior to Breath of the Wild, her experience with The Legend of Zelda series includes composing the music for Spirit Tracks (Nintendo 2009). Iwata’s earlier work includes composing music for various Super Mario games.

The music of Breath of the Wild includes a number of new themes, as well as new arrangements of some of Kondo’s works including “Zelda’s Lullaby,” the theme for Zora’s Domain, and the original Legend of Zelda main theme. Interrelationships between Breath of the Wild’s iterations and that of their originals will be discussed in later chapters.

\textbf{Conclusion}

Almost thirty years later, Koji Kondo’s compositions for The Legend of Zelda game series continue to inspire and impress gamers and non-gamers alike. Drawing from his musical and technical background, he was able to create thematic music that would literally stand the test of time. And regardless of this passage of time, gamers still get ecstatic upon hearing the ascending and descending triplets of the main theme. It only makes sense that composers for subsequent Legend of Zelda games would draw heavily upon his work, reworking and reshaping it into something new, yet distinctively Legend of Zelda. Breath of the Wild is no exception.

\textsuperscript{15} In Wii Fit and Animal Crossing: City Folk, she is credited as Manaka Tominaga.
CHAPTER 2
LUDIC FILMS

Early Video Game Sound and the Silent Era of Cinema

Much like film, early video games were silent. This was primarily due to hardware limitations of the time. Computers were built without speakers and processing power was devoted to graphics and gameplay. It was not until the early 1970s that basic sound was utilized as a game mechanic. *Pong* (Atari 1972), in the form of a coin operated machine present at arcades, is attributed as the first commercially successful video game to utilize sound. It set a precedent for the early video game industry and after its release, several companies sought to produce games that mimicked *Pong* (Collins 2008a:8).

After *Pong*’s then-revolutionary use of sound, sonic elements became the norm among arcade games and was often used as a selling point. According to game scholar Karen Collins, “most coin-operated (coin-op) machine flyers of the era advertised the sound effects as a selling feature, an attribute that would attract the customer to the machines, much as had been witnessed with pin-ball and slot machines” (Collins 2008a:9). Sound was now an essential component to arcade games, and companies had to quickly adapt their products in order to stay ahead of the competition.

The arrival of *Pong* and its effects on the early video game industry could be seen as a reflection of early Hollywood cinema, primarily the adoption of sound systems in picture palaces of the 1920s. Like the early computers on which video
games were played, theaters were not equipped with sound systems either because the technology did not exist or shortly after its invention, installation was cost prohibitive. Instead, venues were outfitted with a piano for smaller establishments or an orchestra pit for larger, more metropolitan venues. Performers would usually improvise as the film progressed, which naturally required talented musicians to fill the role. Sound accompaniment for silent film was ultimately dependent upon the availability of musicians able to improvise live at the showing.

As sound systems became more accessible, film production companies raced to produce films with sound. Film scholar Douglas Gomery describes the transition, “The widespread adoption of sound – its diffusion – took place quickly and smoothly … Since an enormous potential for profits existed, it was incumbent on the majors to make the switchover as rapidly as possible” (Gomery 2006:249). With this in mind, it is reasonable to claim that the advent of sound in both film and video games was largely motivated by money. However, similarities between both mediums’ adoption of sound runs even deeper than a drive for profits.

Returning to the 1970s and going forward into the 1980s, it is important to note that video game sound was not standardized. Generating sound varied from machine to machine, and the quality was often determined by the needs of the game. In other words, the game’s content further limited the sound design, in addition to other factors such as remaining memory and budget. As sound programmers began taking the role of composers, there was also a need to discover just how certain sounds could be obtained or at least emulated especially considering the technical limitations of the time. In a 2001 interview for Japanese game magazine, *Game*
Maestro, composer Koji Kondo discusses experimenting with sound on the 1985 Famicom (Nintendo Entertainment System in the United States),

The Famicom uses square waves, which have a richer harmonic content than normal instruments. This means that when you’re writing chords, its [sic] better to use wider intervals rather than shorter ones. For example, take a 1-3-5 (do-mi-so) C-major chord… with the Famicom, open voicing (ie. [sic] wider intervals between the notes in a chord) sounds much clearer. That was a principle I discovered before I made Super Mario Bros, which is why I think Mario’s songs use chords with an open, wide feel to them. The Famicom only has three channels for sound, but using this technique, I was able to make it sound more like 5. (Matsui, Totsuka, and Yoshida 2001)

The Famicom was a video game console for the home produced by Nintendo and all models utilized the same programmable sound generators (PSGs) thus ensuring a unified quality of sound among machines, unlike that of arcades. Despite this, as Kondo’s words describe, there was still a significant amount of experimenting to be done in order to successfully work with the available technology. Unsurprisingly, very similar issues were present in the late 1920s among film sound engineers.

Not only were theaters all equipped differently but approaches to film sound in the late 1920s varied among production companies. It was a period of trial and error among sound engineers as the concept of film sound was so new that successful recording methods were a matter of discovery. An article titled, “Sound Men and Cinematographers Discuss Their Mutual Problems”, that was published in 1929 in the magazine American Cinematographer, documents this progress. Functioning as a report documenting a meeting among members of the American Society of Cinematographers and various Hollywood sound engineers, the article describes seven questions the two groups asked each other regarding the different conditions and approaches required to attain ideal photography and sound recordings. Today, the
solutions to many of these issues are blaringly obvious. For example, sound engineers at this meeting describe that “an ideal or location for making a perfect vocal record would be in the middle of the Mojave Desert, unhampered by camera, walls or any other disturbing elements” (1929:8). Contemporary sound engineers understand that this would make for a poor choice for film, as the lack of reverb would compromise the realism and intelligibility of the voice recording. However, it demonstrates the trial and error mentality that film sound engineers of the time needed in order to discover the methods to attain a decent soundtrack.

When analyzed side by side, there are stark similarities between the early development of sound in video games and film. Despite a gap of nearly fifty years between the advent of sound for both mediums, it is interesting to see that both industries grappled with the same problems. But similarities exist beyond early technical issues. By the late 1980s and early 1990s, video games would be utilizing cinematic techniques for music, dialogue, and sound as technology evolved and allowed for more vibrant and immersive gameplay.

**Sonic Emotion, Immersion, and Identity**

As most Western movie-goers have experienced, the musical soundtrack in a film is often a sonic representation of emotion, particularly regarding events (or soon-to-be events) in a scene. The average viewer is sure to be aware of sonic elements such as minor modes representing sadness, brass instruments and percussion representing heroism and adventure, high-pitched string tremolos to indicate suspense and fear, and so on. One may question the importance of these non-diegetic sonic
elements in cinema, for there is no soundtrack to life and thus it is not an accurate representation of reality. Ironically, these elements’ very purpose is to facilitate the viewer’s immersion and better understand the film’s reality.

The use of music as a means for enhancing immersion and advancing the narrative in film occurs as early as the Silent Era. Musicians would utilize musical elements such as tempo and tonal modes to create leitmotifs for the viewers to better understand the nature of the film’s characters and the direction of the narrative. One might think that the introduction of spoken dialogue would eliminate the need for filmmakers to employ these techniques, however, it simply introduced new reasons to utilize music. Relatively mundane yet important scenes were given musical themes so as to maintain the pacing of the film and emphasize the emotion of the scene. One prominent Studio Era film to utilize these techniques is Captain Blood (Curtiz 1935). Film scholar Kathryn Kalinak writes extensively on the score, which was composed by Erich Wolfgang Korngold. Regarding pacing, she states that Korngold “uses the standard musical device of the ostinato, a repeated melodic or rhythmic figure, to propel scenes which lack dynamic and compelling visual action” (Kalinak 1991:85). In such scenes, Korngold applies this method in order to maintain viewer engagement, since such scenes are usually necessary for plot advancement but visually uninteresting. Kalinak also comments on Korngold’s use of leitmotifs, a musical mechanic that is employed in the film in order to inform the viewer of the characters’ emotions. She states,

Korngold’s music responds not to what is explicitly stated in the dialogue … but to what is implicit in their [Peter Blood and Arabella Bishop] demeanor and reinforced by conventional expectations of classical narrative (that two attractive stars of the opposite sex belong together) … Music draws out the
emotional content of the scene, hidden from characters but not from the spectators. (Kalinak 1991:88)

Since Peter and Arabella generally show mild animosity for each other until the very end of the film, Korngold utilizes a classic leitmotif (flourishing strings performing arcing melodies) to inform the viewers protagonists’ feelings for each other.

This technique is not wholly exclusive to Western films either. In Kenji Mizoguchi’s period film, Sanshō the Bailiff (Mizoguchi 1958), composer Fumio Hayasaka utilizes the high-pitched komabue, a Japanese flute of Korean origin, which has a sharp timbre to the Western ear. This instrument is often heard during scenes in which the film’s characters (a noble mother, her children, and their caretaker who are kidnapped and sold into slavery) experience events that cause them great pain. Commenting on the choice of instrument, musicologist Michael W. Harris claims that “the sound represents the power structure of Japan because of its association with court music and echoes the cries of those oppressed by such power” (Harris 2015:38). One could even liken the sound of the komabue to the mother calling out for her children, Zushio and Anju, further emphasizing the instrument’s representation of grief and suffering. Ultimately, the extensive presence of the komabue throughout Sanshō the Bailiff aids the viewer in feeling the characters’ grief.

Shortly after video games adopted sound, the same musical elements were used to facilitate the player’s immersion. This can be identified as early as 1978, with the release of the now-classic arcade game, Space Invaders (Taito 1978). Featuring a “melody” of only four notes, it is credited as the first video game to utilize non-diegetic music (Collins 2008a:12). In terms of gameplay, the objective is simple: destroy a horde of incoming alien invaders before they destroy you. In order to do
this, the player moves a pixelated icon representing a tank across the bottom of the screen as a slew of aliens descends slowly from the top. As the player (represented by the tank) fires lasers and destroys individual aliens, the remainders of the horde increase their speed in their descent upon the tank. Naturally, this adds difficulty to the game. As this is happening, the four-tone “melody” increases tempo along with the speed of the descending aliens. This is to instill a sense of urgency in the player, as the time remaining to defend their base is quickly diminishing and one improperly timed move could mean the difference between a win and a loss.

Because of technical limitations, plots and narratives in early video games were not complicated. Or, at the very least, gameplay was too simple to facilitate narrative complexity. Nevertheless, as better technology evolved, the video game industry was quick to adopt the same musical techniques used by filmmakers. With the release of the Nintendo Entertainment System (Famicom in Japan) in 1985, just enough CPU and memory were available for continuous non-diegetic music and sound effects. Sound programmers sought this opportunity to compose theme music to create a melodic identity for the game. By creating a catchy melody similar to methods used by composers for major film franchises, video game consumers would have a tune by which to remember and identify with a game. An early example of this technique being applied to a video game is present in the title screen and opening sequence of The Legend of Zelda (Nintendo 1986). When the game is turned on, the player views the title screen and may press the “start button” in order to proceed to gameplay. If the player delays in pushing start, the title screen fades and the music transitions into the game’s main theme. A small paragraph of expositional text moves
from the bottom to the center of the screen, pauses, and then continues to move upward until all of the text is off-screen. This is followed by a pictographic list of items encountered in the game, continuously moving from the bottom of the screen to the top and off-screen, much like credits rolling at the end of a film. Game music scholar, Tim Summers, suggests that *The Legend of Zelda* main theme draws heavily upon Korngold’s adventurous film scores,

Korngold’s music for films like *The Sea Hawk* (dir. Curtiz, 1940) and *The Adventures of Robin Hood* (dir. Curtiz and Keighley, 1938) established the horn fanfare-led orchestral score as a signifier for the kind of heroic/action narratives that Zelda emulates… Without directly citing a Korngold theme – a direct inter-textual reference would be inappropriately specific, despite the behatted, green-clothed and brown-booted heroes of both *The Adventures of Robin Hood* and *The Adventure of Link* – the emulation of Korngold’s style creates a semiotic link to these heroic adventure movies along with their associated iconography and narrative tropes, as well as the Korngold-inspired style of John Williams that has accompanied more recent films filled with derring-do (*Raiders of the Lost Ark* (Spielberg, 1981), *Hook* (Spielberg, 1991), *Star Wars* (Lucas, 1977), etc.). (Summers 2016:148-149)

Summers also mentions the similarities between *The Legend of Zelda* theme and the *Star Wars* (Lucas 1977), but the similarities transcend music. Both *The Legend of Zelda* and *Star Wars* feature expositional text before the main content begins, and both works progress by having the text move in a similar manner. Even in terms of musical structure, the themes for both *The Legend of Zelda* and *Star Wars* begin with an introductory fanfare and proceed to open with punctuated perfect fifths. Both main themes play while important expository information moves from the bottom to the top of the screen. Whether or not Koji Kondo and the developers of *The Legend of Zelda*

\[16\] For reference, the entire sequence can be watched here: https://youtu.be/uyMKWJ5e1kg
drew inspiration from John Williams and Star Wars, it is impossible to deny the stark similarities between the two.

**Cutscenes and Moving Lips**

The advent of 16-bit games and the technological advances to follow brought new opportunities for developers to explore ways of adding depth to their games. The early 1990s saw games with more vibrant and defined graphics as well as sound that offered the player a richer polyphony. Video games began to better resemble animated films save for one important feature: dialogue. At this point in time, communication between in-game characters was handled similarly to that of silent films. “Dialogue boxes” that consisted of text usually encapsulated by a rectangular border, would appear on screen when the player or the game would initiate dialogue. These “boxes” function much like intertitle cards in silent films, especially considering that non-diegetic music is usually playing when they are activated. Like viewers of silent films, players would often have to use context clues to determine which characters were speaking, since 16-bit games were still two-dimensional and offered limited camera angles. The development of 3D games, however, would change all of this.

The term “cutscene” is used to describe short movies that occur at certain points in gameplay, usually to build exposition, advance the plot, or bring a deeper understanding of the game’s character(s). The player usually has little to no control over what occurs during these scenes, especially in titles released in the mid-1990s
when games were increasingly 3-dimensional and the concept was arguably new.\textsuperscript{17} By the late 1990s, cutscenes offered a unique blend of both cinematic and ludic elements. A great example of this comes from Nintendo’s 1998 title, \textit{The Legend of Zelda: Ocarina of Time} (Nintendo 1998). Often considered one of the best video games ever made by gaming news networks and fans alike (Metacritic), \textit{Ocarina of Time} offers players a unique cinematic-ludic experience. One example includes the scene that occurs after the player has completed all but the last dungeon and returns to the Temple of Time.\textsuperscript{18} As the player enters the temple, normal gameplay stops and the cutscene begins (at this point, the player can only control the progression of dialogue). As Link runs into the temple, a dialogue box appears that reads, “I have been waiting for you, Link”. Immediately, the cutscene is drawing from cinematic techniques as the dialogue box is inherently acousmatic. Though the player may have an idea of the identity of the speaker, they cannot know for sure until the source of the voice is revealed in the following cut. As in many films, the use of the acousmatic voice here is to heighten suspense. The player is relieved of these emotions once the camera reveals that the voice belongs to Sheik, a friendly character that has guided Link/the player for at least half of their quest. At this moment, the game employs the cinematic use of the leitmotif by playing a harp tune to sonically represent Sheik. This harp tune is used because the character himself plays a harp, and the player hears this tune every time they encounter Sheik in the game. At 0:27, the camera focuses on

\textsuperscript{17} One may argue that cut-scenes include all in-game content in which exposition is built or plot is advanced in which the player has no control. However, for the purposes of this chapter, I am focusing on such scenes that utilize different camera angles to create a “scene”.

\textsuperscript{18} The scene can be watched here: \url{https://youtu.be/MkksEXbTfwQ}. 
Sheik’s face as text in the dialogue box appears. This can be interpreted as video game mimicking “cinematic ventriloquism”, an idea explored by film scholar Rick Altman. He proposes a reason as to why films focus on the lips and faces of actors when speaking by stating that “they transfer the origin of the words, as perceived by the spectator/auditor, from sound ‘track’ and loudspeaker to a character within the film’s diegesis” (Altman 1980:69). Though the game does not feature spoken dialogue and does not have a reason to maintain the illusion of a person talking in real life, it nonetheless mimics the camera style of films that do try to maintain said illusion. Thus, the focus on Sheik can be interpreted as a video game mimicking this technique for the sake of appearing more like a film, rather than masking the source of dialogue. At 3:30, the cutscene utilizes the leitmotif again, as Sheik reveals himself to be Princess Zelda in disguise. The player hears an arrangement of the tune known in-game as “Zelda’s Lullaby,” which is also used as the non-diegetic music when the player encounters Zelda for the first time in the game. At 7:00, Princess Zelda is captured by a magical barrier and there is a brief moment of silence. The scene once again utilizes the acousmatic voice and a dialogue box of a different texture appears on screen reading, “Princess Zelda… you foolish traitor!” As this text appears, the leitmotif changes to that of Ganondorf, the game’s antagonist, to give the player a sonic idea of who is speaking. The scene ends with Princess Zelda fading away and the sound of a roaring laugh of a man not pictured on the screen. The use of the acousmatic voice in this part of the scene is more traditional, by representing the distant and unreachable power of the evil king Ganondorf. The different cinematic elements present in this cutscene serve as a precursor for games to follow.
As graphics improved to show actual movement of lips and voice acting became standard for cutscenes, video games would soon include features nearly indistinguishable from that of film.

Zelda Speaks after Thirty-Two Years

Since 1986, *The Legend of Zelda* has been mostly devoid of the human voice for the exception of wordless expressions of emotions such as Link’s shouts, Zelda’s laughs and gasps, and other characters’ exclamations. The release of *Skyward Sword* (Nintendo 2011) gave players a listen to what Zelda could sound like, as she sings “The Ballad of the Goddess” to the statue of Hylia.\(^\text{19}\) It wasn’t until the release of *Breath of the Wild*, however, that Nintendo fully utilized voice acting in a *Legend of Zelda* game.

*Breath of the Wild* is arguably the most cinematic *Legend of Zelda* game to date. All cutscenes are fully voiced in nine different languages, a first for the nearly thirty-two-year-old series. As with many other contemporary games, players must watch a cutscene before they gain control of Link and begin playing.\(^\text{20}\) Before this scene begins, white text appears on a black background that reads, “Nintendo presents / The Legend of Zelda / Breath of the Wild.”\(^\text{21}\) The sequence is very much like watching a feature film at a movie theater where the production studio and name of the film are presented on intertitle cards. Then, a light appears on screen accompanied with the disembodied voice of an unknown woman. Her voice is soft and kind, and

\(^\text{19}\) This scene can be watched here: [https://youtu.be/ZANKFYLYLjc?t=16m47s](https://youtu.be/ZANKFYLYLjc?t=16m47s)
\(^\text{20}\) This scene can be watched here: [https://youtu.be/G8DNpB_k4CM](https://youtu.be/G8DNpB_k4CM)
\(^\text{21}\) Each slash represents text fading out and the subsequent text fading in.
she guides Link after he awakens from his slumber. This transitions into the game’s brief tutorial as the player gains control of Link and follows the voice’s directions. This is another perfect example of Michel Chion’s *acousmêtre*, the voice that is heard but whose source is unseen. The unknown voice is of the rarer type, benevolent and in Chion’s words, “tutelary” (Chion 1999:23). Later in the game, the player will discover that the unknown voice is that of Princess Zelda.

This is evidence that complex cinematic elements are present in *Breath of the Wild*'s cutscenes in addition to the more obvious use of non-diegetic music and sound effects. The game is not shy of revealing its relationship with cinema. One of the main quests in *Breath of the Wild* requires players to recover Link’s lost memories. This is done by finding specific locations in-game and activating a ray of light that appears once the location is found.22 This triggers Link to recall a memory which then transitions into a short movie. Players can watch these memory-movies by opening their quest log and selecting one. Interestingly, the icon for Link’s memories is a piece of film stock (See Figure 2.1).

22 “Activating” is another term for “interacting with”. In this case, the player would press the A button when standing in the ray of light.
Breath of the Wild showcases the many aspects of film that have been adapted for use in video games. From its main fanfare that is reminiscent of early adventure films to the memories one gathers in Breath of the Wild, The Legend of Zelda has utilized cinematic elements since its beginning.

Figure 2.1 Players can choose to re-watch collected memories. Notice that the icon for “Memories” is film stock. Screenshot by author.
CHAPTER 3

STATIONARY ENVIRONMENTS

When people think of place, they often think of tangible environments in which they can see, feel, smell, and hear the world around them. These are fueled by experiences, for experience is the main outlet through which humans conceptualize a place. As Edward S. Casey mentions in his chapter in *Senses of Place*, “There is no knowing or sensing a place except by being in that place, and to be in a place is to be in a position to perceive it” (Casey 1996:18). But what of virtual places such as that of video games? The same mode of thinking applies, as players are absolutely in a position to perceive the places they visit in-game. The avatar is an extension of the self and thus allows the player to know the virtual place. Because environments present in video games are not real in the traditional sense, real-world experiences and sensory data must be utilized in order to conceptualize an in-game environment.

This chapter analyzes the relationships between sound and music and players’ perceptions of in-game stationary environments through their gameplay experiences. Examples of stationary environments within *Breath of the Wild* include places such as settlements and shrines, as these locations remain static and do not move.

Overview of the Hyrulean Soundscape

*Legend of Zelda: Breath of the Wild* is the most expansive *Zelda* title to date, in terms of overworld size and accessible terrain. The title itself hints at a gaming experience that focuses heavily on the virtual exploration of natural landscapes. However, it is arguably the “quietest” addition to the series, offering the player a
soundtrack that focuses less on continuous non-diegetic music and more on diegetic sounds and performances. Thus, many concepts from soundscape ecology can be utilized in order to analyze how music and sound function together as part of the game’s environment.

In order to continue, one should be informed on the history of the term “soundscape.” The word was coined by composer, R. Murray Schafer, in his monograph, *The Tuning of the World* (1977). Though he used the term in an earlier work, *The New Soundscape: A Handbook for the Modern Music Teacher* (1968), *The Tuning of the World* is an in-depth investigation of the term. He defines soundscape as, “any acoustic field of study. We may speak of a musical composition as a soundscape, or a radio program as a soundscape or an acoustic environment as a soundscape. We can isolate an acoustic environment as a field of study just as we can study the characteristics of a given landscape” (Schafer 1977:7). However, Schafer was openly biased about which sounds should constitute a soundscape, going as far as stating, “Ultimately, this book is about sounds that matter. In order to reveal them it may be necessary to rage against those which don’t” (Schafer 1977:12). Since the book’s publication, the term “soundscape” has been recycled, reused, and redefined. Like words of any language, “soundscape” has ultimately evolved beyond its original meaning.

In addition to ethnography, much of the following analyses were inspired by concepts from within soundscape ecology, a field of study which investigates the relationships between sound and organisms. Data collected from this field has a wide range of applications, many of which involve measuring environmental change. In his
2008 article, “Anatomy of the Soundscape: Evolving Perspectives”, Bernie Krause defines three groupings of ecological sounds: geophony, biophony, and anthrophony. He then provides an outline of fields which utilize soundscape ecology such as acoustics, anthropology, biology, medicine, and environmental studies to name a small few (Krause 2008). These concepts have been expanded upon in greater detail, prominent ecologist Almo Farina’s monograph, *Soundscape Ecology: Principles, Patterns, Methods, and Applications* (Farina 2014) being one example. My research brings these concepts into the virtual in an attempt to highlight how players respond and interact with the environments in *Breath of the Wild*.

The game exhibits numerous examples from each of the three groupings that collectively define a soundscape according to Krause. Hyrule contains a wealth of geophony in *Breath of the Wild*, including but not limited to the sound of waterfalls, wind blowing, rock falls, rustling grass, and more. Biophony is present in the form of wildlife sounds such as birds tweeting and cows mooing. Unlike Krause, however, I include human-made sounds such as footsteps or conversation as biophony. Anthrophony, the sounds produced by manmade technology and machines, are nevertheless present. Though they represent the smallest percentage of sound in the Hyrulean soundscape, they are arguably some of the most important. These include the sounds produced by the Divine Beasts; massive, animal-shaped machines built by an ancient tribe and programmed to guard the land. Arguably, there is a fourth element unique to audiovisual and virtual environments, which consists of non-

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23 Krause groups human-made sounds within anthrophony. Though I understand his thought process, I reject this definition as it ignores the fact that humans are biological organisms and separates us from the natural world.
diegetic music and sound effects. For the purposes of this and the following chapter, I will name these elements “tetraphonies” as they are not only a fourth element, but also create a sort of “sonic fourth wall” between the player and the in-game environment. All of these elements are present in the Hyrulean soundscape, though not necessarily present simultaneously at all times.

**Rito Village and Shared Histories**

Many people that I surveyed, along with individuals with published material on the Internet (such as writers of reviews or YouTube videos) mention a connection with the music and sounds of Rito Village. The theme heard as the player draws closer and/or is within Rito Village is an arrangement of the same theme assigned to Dragon Roost Island, a location within *The Legend of Zelda: Wind Waker* (Nintendo 2002). The instrumentation of the original relies heavily on acoustic guitar, panpipes, and shakers. The island itself is home to a race of anthropomorphic birds called the Rito, making the lightness of the acoustic guitar and airiness of the panpipe an apt choice on part of the composers to represent these people as air, wind, and swift flight are essential to their culture.

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Rito Village, the home of the Rito people in *Breath of the Wild*, differs both aesthetically and sonically from that of Dragon Roost Island. The village is located at the foot of a mountain, rather than an isolated island. Its theme has two manifestations in *Breath of the Wild*, both of which are heard when the player is around or in Rito Village and does not occur elsewhere in the game. The first iteration plays during in-game daytime while the second plays during in-game nighttime. Both versions maintain similar instrumentations as the original heard in *Wind Waker*, but both *Breath of the Wild* arrangements employ slower tempos. Instead of panpipes, the melody in the daytime theme is scored for a clarinet, maintaining the use of a wind instrument to sonically identify a race of anthropomorphic birds (See Figure 3.1). The melody instrumentation alternates to a tremolo stringed-instrument reminiscent of a *chitarrìa battente*. A classical guitar still serves as the accompaniment, though utilizes larger note values to slow the theme down. The nighttime version of the theme is at

![Figure 3.1 Link speaks with Harth, a Rito bowyer, at his home in Rito Village. Screenshot by author.](image)
an even slower tempo than that of the daytime but utilizes the same instrumentation. Aside from tempo, the other major difference is the change of key to below that of the daytime theme, giving the nighttime theme a lower, more restful sound. A very slight difference from the daytime theme also includes subtle string tremolos that follow each measure of the four-bar introductory phrase.

Rito Village is a fitting example of how the musical theme of an in-game location heavily affects a player’s emotions and memory of the place. Many individuals have commented on the importance of this particular theme and how it allowed the creation of an emotional bridge to the game. By hearing a theme that they previously identified with, players were able to make connections that had a positive effect on their gameplay experience. In my second survey, I asked respondents to provide a description of their favorite sonic moment in the game, which could include a sound effect, musical theme, or anything that affected the soundtrack. One response mentioned their connection to the Rito Village theme in detail,

My favorite sonic moment in the game was hearing the Dragon Roost Island theme play in Rito Village. Zelda games are (typically) full of nostalgia trips and musical themes that refer to other games, etc. And I had so far been pretty disappointed that BOTW lacked pretty much anything exciting or anything I really related to thus far. I missed “Hyrule Field” music, I found the Horse music repetitive, nothing stuck out to me (unlike most other Zelda games). So, when I was hit by that, immediately Rito Village became my favorite locale.

This player is not an outlier among others that have critiqued or simply responded to this theme. The top result for searching “Rito Village Theme” on YouTube contains a wealth of comments reiterating the importance of this connection to players (See Figure 3.2). Many commenters mentioned the emotional joy or pleasant feelings of
nostalgia they experienced upon recognizing the new arrangement of the Dragon Roost Island theme as that of Rito Village.

Figure 3.2 A sample of comments on the video “Rito Village - Day - The Legend of Zelda: Breath of the Wild Music Extended” by BrawlBRSTMs3 X on YouTube.

These sorts of connections are not unique to video games. There are anthropological accounts that emphasize the importance of physical place among groups of people. Miriam Kahn’s writing on the landscapes of Wamira, Papua New Guinea, is one such example. In her ethnography, Kahn discusses the importance of place and individual experience that shape perceptions of and within place, “Places are complex constructions of social histories, personal and interpersonal experiences, and selective memory” (Kahn 1996:167). In the ethnographic examples I have
presented (See Figure 3.2), it is clear that players are drawing upon their histories, experiences, and memories when experiencing the game. Kahn further states that to the Wamiran ethnic group, “The landscape surrounds the people with a sense of shared history rooted in the past and memorialized in the present through shared symbols” (Kahn 1996:178). In the context of Rito Village, the musical theme is the symbol of a past memorialized. Through means such as my survey or online forums, players are given a platform in order to express their shared histories (such as having played *Wind Waker*) and to connect with others through this shared symbol.

**Zora’s Domain and Connections to *Ocarina of Time***

Zora’s Domain first appeared in 1998 with the release of *Ocarina of Time*. As the home of a race of aquatic humanoids called the Zora, their residence continued to appear in four canon games since. The overall physical structure of Zora’s Domain has evolved over the years, originally appearing as an illuminated cavern hidden behind a waterfall, its entrance only accessible to those who could play the melody of the Hyrulean royal family. The original theme consisted of a rubato introduction of descending notes played on a higher pitched steel drum before establishing a consistent tempo with the entrance of the melody played on guitar. Rhythmic percussion included MIDI instruments that could be identified as shakers, and a conga or pair of bongos. The same audio was recycled in *Majora’s Mask* (Nintendo 2000) for a location known as Zora Hall, which served as the Zora’s place of

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residency and rehearsal hall of the famous Zora band known as The Indigo-go’s. This was most likely due to the fact that Majora’s Mask is a direct sequel to Ocarina of Time and utilized the same game engine as its predecessor. Though Zora Hall existed in a tropical area as opposed to the woodland river setting of Ocarina of Time’s Zora’s Domain, both featured a subterranean location. Thus, it was most likely an economical and aesthetic choice to use the same audio track.

Zora’s Domain appeared again in 2006 with the release of Twilight Princess (Nintendo 2006) and again featured a subterranean location. Though with new hardware at the composer’s disposal, the game introduced the first arrangement of the original theme presented in Ocarina of Time. This version of the theme again utilized an acoustic guitar and relied on a synthesized vocal choir for harmonic accompaniment. In 2013, Zora’s Domain appeared again in the game A Link Between Worlds (Nintendo 2013). However, the design of Zora’s Domain and the Zora themselves differed greatly from previous games, as did the location’s musical theme. This theme employs a completely different character, disregarding elements of previous Zora’s Domain themes and instead relies on instrumentation consisting of piano, bells, clarinet, and strings. The reason for this deviation possibly relates to A Link Between Worlds being a direct sequel to A Link to the Past (Nintendo 1991) in which the Zora were originally depicted as hostile, monstrous characters. It is important to note, however, that A Link Between Worlds was released for Nintendo’s portable gaming system, the 3DS, and thus did not receive the same media attention or acclaim as it would have if it were developed for a home console. This is most
likely due to the fact that the 3DS does not have the ability to render as complex and detailed graphics nor process advanced physics.

The latest iteration of Zora’s Domain appears in *Breath of the Wild* (See Figure 3.3). Much unlike its predecessors, the location in this game consists of a series of open air platforms situated above a fast-paced river and before several waterfalls. Initially plagued by constant rainfall, Zora’s Domain becomes a vibrant city of lapis blue once the player has dealt with the menacing nearby Divine Beast. Again, the main theme is another unique arrangement of the original that appeared in *Ocarina of Time*. The advanced hardware of the Nintendo Switch in comparison to that of the N64 allows for more diverse instrumentation including the addition of a harp accompaniment, multiple sophisticated piano and guitar lines, synth pads that provide additional harmonic background, and very subtle percussion that includes shakers and sleigh bells. Like Rito Village and all other inhabited settlements in *Breath of the Wild*, the music for Zora’s Domain also features a noticeably different night theme. Aside from obvious elements such as a lower key and slower tempo, the Zora’s Domain night theme features sparser instrumentation which emphasizes the difference between the *Breath of the Wild* soundtrack and previous games. The harp performance features accompaniment only and is much quieter and played only in the mid and lower registers of the instrument, leaving the piano to softly play the melody. Percussion is completely absent, and synth pads are only used to transition into what I consider to be the B section of the theme.
Both the music and location of Zora’s Domain is yet another example of the relationship among sound, music, and the player’s perception of place. As with the Rito Village case study, Zora’s Domain demonstrates the importance of shared history and memory. Referring to my own experience of playing Breath of the Wild, I was immediately taken back to my childhood playing the original Ocarina of Time. The presence of geophonies such as a coursing river and raging waterfalls further display the importance between these sonic indicators and the in-game environment. Keith H. Basso describes this in his chapter in Senses of Place, “When individuals step back from the flow of everyday experience and attend self-consciously to places – when, we may say, they pause to actively sense them – that their relationships to geographical space are most richly lived and surely felt” (Basso 1996:54). Because listening is a form of sensing, a player’s recognition of sonic themes such as Zora’s Domain adds to their relationship with the current environment. By forming these
connections to previous games, a cause to be more emotionally invested in the game is created.

**Shrines and Enclosed Space**

The sonic environments of Rito Village and Zora’s Domain blend with the greater Hyrulean soundscape and present a permeable boundary of music. In other words, the volume of the music increases or decreases depending on the position of the player in respect to the location. Whereas the music for Rito Village will play quite strongly if the player is directly within the settlement, the music will play at a softer volume if the player is within the outskirts of the settlement and will not play at all if the player is located beyond that. This is most likely due to the openness of these spaces and the fact that they do not require a loading screen to function.

The Ancient Shrines found throughout Hyrule affect the soundscape in two ways. First, their exteriors function much like that of other settlements such as Zora’s Domain or Rito Village. Upon coming within a certain proximity to a shrine, a subtle piano theme will play. The surrounding Hyrulean landscape affects which theme will be played, for example, coming upon a shrine in a cave within a mountain will trigger a different theme than discovering a shrine on a beach.

However, the interiors of these shrines are “enclosed spaces” and present a very different environment than that of settlements. Built by the ancient Sheikah in order to test the courage of the hero, these ancient shrines are technologically advanced structures that contain a puzzle that must be solved by the player. Upon completion of the puzzle, the player is awarded a “Spirit Orb,” an item that will allow
them to increase their health or stamina after collecting four. Like many other questlines in the game, completing the puzzles within the Ancient Shrines is not necessary to complete the main quest of defeating Ganon.

The interiors of shrines are entirely separate from the greater Hyrulean soundscape. As a player activates a shrine and enters, they trigger a loading screen within the game. After the loading screen, they may choose whether or not to skip a very short cutscene that shows Link exiting the entrance portal. After this moment, the name of the shrine appears on screen and the title of the puzzle appears in smaller text underneath it. As this happens, the player will hear an “ohm chant” which is likely an allusion to subtle traditional Japanese and Buddhist references in the game. This chant is most likely non-diegetic due to the fact that one shrine is occupied by only one Sheikah monk and the chant itself has multiple voicings. However, one could argue that the chant is acousmatic and indeed coming from within the game-world in order to add to the mystery of the atmosphere.

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26 This does not apply to subsequent DLC content.
After the audio for the chant plays, the music for the interior of the shrine begins. This theme is the same for the majority of the one hundred and twenty shrines found across Hyrule. The exception to this includes “blessing shrines,” which are shrines that do not present a puzzle for the player to solve because a related quest has been completed. Thus, the “monk’s blessing” is the final reward for the quest. The theme for “puzzle shrines” begins with a chime that plays simultaneously with the monk’s chant followed by a low synth drone. A tempo is then established by the playing of synth triplets, allowing the listener to conclude a compound duple meter. About forty seconds after the theme begins, a tremolo string accompaniment enters in the second half of the measure. Soon after, a lower pitched synth instrument provides additional accompaniment. A melodic line enters after about a minute and thirty seconds, performed by an instrument that can be likened to an “electronic” or processed zurna and continues for two measures. The theme then loops back to the

Figure 3.4 A Sheikah monk has bestowed a Spirit Orb to Link. Screenshot by author.
triplet synth accompaniment and continues the cycle for the duration of time that the player is present in the shrine. The theme for “blessing shrines” is simply a heavy reduction of the “puzzle shrine” theme and includes only the initial triplet synth part.

The Ancient Shrines were not a very common topic among the responses to my survey, but it is important to include an analysis due to their prevalence and importance in the game. As well, the Ancient Shrines offer more of a traditional Legend of Zelda sonic experience due to the constant non-diegetic music and “closed space.” However, among the few individuals that mentioned the Ancient Shrines in their responses, a common opinion was that the music was too repetitive. This could be due to the sheer number of Ancient Shrines present throughout the game or even the fact that their musical theme offers little variation and melodic change. One respondent mentioned, “I wish there was more variety of music in specific areas. Most notably the shrines felt even more repetitive from having the same music.” While another informant said, “I appreciate the moments in the game that have unique music, as a lot of it I feel is repeated too much (e.g. the Shrines).” In terms of my autoethnography, I felt very similarly in my experience of playing the game. The sheer number of these enclosed spaces and the lack of variation among them most likely resulted in a sort of listening fatigue. As discussed in the following section, it is possible that this approach—repetitive and constant non-diegetic music within a single type of space—was not pleasing to players in contrast to the sonically sparser soundscape of greater Hyrule.
Silence, Subtly, and Skyrim

It is significant to note that in my fieldwork and various industry and fan-produced content on the Internet regarding the game, silence and sonic subtly was mentioned often when discussing the soundtrack in Breath of the Wild. As stated before, Breath of the Wild is the first Legend of Zelda game to feature extensive breaks from non-diegetic music. Most in-game music transitions subtly from silence unlike past games which featured sharp cuts (usually accompanied by silent black loading screens) when the player entered one area to another. One reason for this is functional, as it was vitally important for early game consoles to conserve RAM. Thus, in an earlier game such as Ocarina of Time, there were predetermined zones in which non-diegetic music was present. Moving between zones presented a fadeout of the current music, a brief blank screen in which no music was present, and then theme assigned to the new zone would begin once it had finished loading. However, Breath of the Wild presents little of this for a few exceptions. One is the player’s use of “fast travel,” a game mechanic used in order to teleport to a remote location on the map. This is accompanied by a minimalist black and white loading screen displaying text that includes gameplay tips. The second exception is entering and exiting Shrines, in which a similar instance as in Ocarina of Time occurs, the difference being that the loading screens in Breath of the Wild are much longer. A possible third exception is the transitions between controlled gameplay and cutscenes, however, these usually do

27 Mark Brown of Game Maker’s Toolkit and Mathew Dyason of Game Score Fanfare provide a phenomenal analysis on the game’s use of sonic subtlety through videos on their respective YouTube channels.

28 Additional DLC allows the player to play in “Master Mode”, which is essentially a higher difficulty. In this mode, loading screens are black and red.
not result in a change of physical location. Instead, the majority of exploring Hyrule in *Breath of the Wild* occurs without non-diegetic musical themes for the exception of encountering a monster or approaching a settlement, in which the musical theme fades in as the player approaches the next location.

*Breath of the Wild*, as a *Legend of Zelda* title constructed in the currently popular open world genre, puzzled and amazed players with its sparse use of non-diegetic music (McCarter 2017). Before and upon release, *Breath of the Wild* was heavily compared to an incredibly successful older game of the same genre: *The Elder Scrolls V: Skyrim* (Bethesda 2011) (Kane 2017). *Skyrim*, though not the first game in *The Elder Scrolls* series, made a significant impact on the open-world fantasy genre most likely due to its expansive world map, cross platform availability, and its accessible gameplay. It established itself as the measuring stick for open world RPG’s, with many describing and reviewing new games based on “how much like *Skyrim* it is” (Hernandez 2012). Six years have passed since *Skyrim*’s release and new games are still being compared to it; *Breath of the Wild* is no exception. This is exemplified in the analysis of responses from my initial survey. Of sixty-two people who had answered, three individuals sought to compare *Breath of the Wild* to a game outside of *The Legend of Zelda* series. Each of the three respondents used *Skyrim* as a method of comparison.

In order to better understand the further analyses, it is important to have basic background knowledge regarding *The Elder Scrolls* and its fifth installment, *Skyrim*. The series is generally considered within the fantasy RPG genre or, role-playing games. *The Elder Scrolls* takes place on the continent of Tamriel, which is divided
into eight provinces (of which Skyrim is one) unified by an empire. Though each installment takes place in a different era of time, the player usually begins the game as a prisoner who is recently granted release. This is usually the point where the player designs their character. A major difference between *The Legend of Zelda* and *The Elder Scrolls* is that the latter allows the player to design a completely customizable avatar (See Figure 3.5). Whereas in *The Legend of Zelda*, the player must always play as Link; in *The Elder Scrolls*, the player can essentially be whoever they want. This allows for a highly customizable gaming experience, giving the player freedom of imagination to perceive their character however they want. After character creation and a brief tutorial, the player is free to explore the province of Skyrim at their leisure, picking up main quests and side quests along the way.

Figure 3.5 One of my many *Skyrim* characters (left) with Serana (right), an essential NPC. Though aesthetically and sonically very different, many people have compared *Breath of the Wild* to *Skyrim*. Screenshot by author.
A key difference between *Skyrim* and *Breath of the Wild*, however, is the soundtrack. While *Breath of the Wild* utilizes silence and sparse instrumentation as the player explores the world, the *Skyrim* experience presents players with constant non-diegetic music that utilizes grand orchestration that one would hear at a famous philharmonic performance. Two of the three respondents previously mentioned considered this a flaw in *Breath of the Wild*’s soundtrack. When responding to my query, “Describe your overall opinion and feelings about the music and sound in *Breath of the Wild*”, the first individual began with, “Sparse. Distractingly minimal to reduce lag. I found myself wanting more overall music, a la *Skyrim*”. In a similar vein, the second respondent stated, “Sound is beautiful. The music is beautiful when there is something actually there. However, far too many parts of the game were totally silent. I think a *Skyrim*-esque system of music with ambient cues periodically playing would have been better.” These two particular responses are significant due to the fact that they place the influence of *Breath of the Wild*’s soundtrack on a greater spectrum than a comparison among games in *The Legend of Zelda* series. Secondly, it offers insight regarding the importance of non-diegetic music on a player’s immersive experience.

Before, during, and after my autoethnographic fieldwork playing *Breath of the Wild*, I spent a significant amount of time playing *Skyrim*. I had recently purchased a PlayStation 4 in late January of 2017 (about a month before *Breath of the Wild*’s

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29 Jeremy Soule is the composer for *The Elder Scrolls V: Skyrim* soundtrack. He also composed the soundtracks for *The Elder Scrolls III: Morrowind* and *The Elder Scrolls IV: Oblivion*. 
release) along with a copy of *The Elder Scrolls V: Skyrim Special Edition*. I was absolutely consumed by this game, despite the fact that, at the time, it was dated by five years. The mountains, forests, cities, villages, and beasts of *Skyrim* provided an escape from the lonely mundaneness that came with beginning graduate school. Above all, I was captured by the enthralling soundtrack.

*Skyrim*’s soundtrack features an expansive array of music (both non-diegetic and diegetic) and sound effects that bring life to Tamriel. Every NPC is capable of spoken dialogue, much unlike that of *Breath of the Wild* which relies heavily (though not exclusively) on dialogue boxes. The most notable difference between the two games in term of soundtrack is the use of non-diegetic music. Whereas *Breath of the Wild* contains subtle piano cues while exploring the land of Hyrule, in contrast, an orchestra is always playing for the adventurer in Skyrim.

Despite my love for *Skyrim*’s musical soundtrack, I came to a very odd realization while beginning *Breath of the Wild* again after a few months break. I recorded in my game journal,

> After spending an extraordinary amount of time playing *Skyrim*, I have to say that playing *Breath of the Wild* again is kind of a breath of fresh air. I greatly appreciate the silence in *Breath of the Wild* more. In *Skyrim*, the music is almost nonstop, and is almost always a complex blend of strings, percussion, and choir vocals. I love it, but I never expected that I could get listening fatigue from it without really knowing. But when restarting *Breath of the Wild* today, it was so nice to hear subtle sounds, mostly nature sound effects such as birds chirping and wind blowing through the grass. Even Link’s footsteps sounded beautiful to me – especially when jumping down from the first Sheikah Tower. (Personal gameplay journal, October 2017)

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30 Bethesda has re-released *Skyrim* several times. The “special edition” was released in October 2016 for PC, Xbox One, and PlayStation 4 and in November 2017 for Nintendo Switch and PlayStation VR. It differs from the original release by including a graphical upgrade and all official DLC content.
Another respondent from my initial survey provided similar insight. Though this individual was not one of the three to mention *Skyrim* by name, they still offered a similar comparison,

> The music is one of my favorite parts—I would expect an open world game to have an expansive, wall-to-wall orchestral score, but the minimalist piano riffs are so refreshing, and seem to open the world up even more. There’s something about the music leaving space for you to fill in the world—it intensifies the immersion a little bit when you have to bring some of yourself to the experience. The scale of the music seems to contrast with the size of the map, showing you just how small you are; and yet, the music is never shy or lacking in a sense of adventure.

As the respondent mentioned, it can be argued that *Breath of the Wild*’s use of silence and empty sonic space facilitates a better feeling of immersion for the player. If one were to explore a wide expanse of fields, forests, and mountains in reality, they would most likely not be hearing a grand orchestral score accompanying their adventure. They would, however, hear wind rustling through the trees and the soft crinkling of grass underneath their feet as they take their next step. *Breath of the Wild*’s subtle piano cues may be interpreted as a reminder to the player that they are indeed playing a game, a sort of attempt to reemphasize the enjoyment the player is expected to gain from the experience.

*Breath of the Wild*’s lack of continuous non-diegetic music and sonic subtly is ultimately a reflection of the greater Hyrulean environment. While the plot and game mechanics of *Skyrim* creates a dramatic atmosphere that warrants an equally intense soundtrack, the emphasis on nature and environment that is present in *Breath of the Wild* allows for subtle piano cues and a lack of non-diegetic music to be more appropriate. However, it is not unreasonable to suggest that a player’s opinion and
subsequent experience of such a soundtrack is ultimately influenced by their personal preferences.

**Conclusion**

*Breath of the Wild* utilizes different methods of establishing a soundscape than that of previous *Legend of Zelda* games. Whereas previous installments of the series sonically framed stationary environments with nearly constant non-diegetic music, *Breath of the Wild* frees the sonic space to create emphasis on diegetic sounds, particularly those of the virtual natural environment. However, non-diegetic music is not absent, and is utilized particularly within and around human-made structures. By building and arranging themes from previous *Legend of Zelda* games, players form a stronger connection to these virtual environments that they play in and live as Link.
CHAPTER 4
MOVING ENVIRONMENTS

_Breath of the Wild_, as the title suggests, places a heavy emphasis on exploring the wilderness of a post-apocalyptic Hyrule. Unlike the environments analyzed in the previous chapter, the following case studies analyze certain environments in terms of how they move and/or how the player moves through them. As Basso describes, “No longer is movement circumscribed by the restrictions of a single position or one place; now it ranges among a number of places. In this case, the motion is a genuine transition and not just a transportation. The most salient instance is the journey, and cases in point are emigrations, pilgrimages, voyages of exchange, and nomadic circulations” (Basso 1996:23). This is ever true in _Breath of the Wild_, for movement between environments presents numerous different meanings. In these case studies, differences in sonic textures provide indicators of how the environment is changing around them. These examples seek to establish a connection between the player’s perception of the in-game environment and the sonic changes that occur when Link or another entity moves through them.

The amalgamation of the type of sounds described in the previous chapter can be grouped into zones in the style of Denis Smalley in his article on space-form and the acousmatic image with a few additions (Smalley 2007). A space that encompasses the player character, Link, is a mobile personal space. As the player, Link is not fixed in one spot on the map as one might be if they were standing stationary in reality. Within his, and essentially the player’s, personal space, there are a number of zoned spaces that may overlap. For example, as Link approaches a town or a stable these
sonic spaces will overlap in his/the player’s personal space creating a nested space. In a sense, these nested spaces are “activated” by the player, considering they do not make sound if the player is not within the right vicinity. Unlike in reality, such sounds may continue despite the listener having left the area. Ultimately, the groupings of these sounds show that sonic spaces within a virtual environment function quite similar to that of reality.

Monsters and Enemies

Like many action-adventure video games, *The Legend of Zelda* contains a wealth of enemies, monsters, and bosses for the player to discover and conquer. Even the first *Legend of Zelda* game presented a land in which players needed to be constantly wary of contact with hostile creatures, especially if taken by surprise. It wasn’t until the release of *Ocarina of Time* that this was made a little easier, by introducing a “battle theme” to accompany the presence of vicious beasts. This mechanic functioned by the triggering of specific audio as a player approached a hostile entity. Game scholar Zach Whalen discusses the impact of *Ocarina of Time*’s “danger music” in his article, *Playing Along: An Approach to Video Game Music*, “The application of this safety/danger binary in the fluid schematic of the three-dimensional space of Hyrule exhibits the complexity and richness of this fictional space. The character of the soundtrack is both charming and haunting, and the complexity of the blending and overlapping musical themes invite serious immersion in the game’s world” (Whalen 2004). To describe the theme in greater detail, the battle theme in *Ocarina of Time* included a continuous sixteenth note snare roll
accompanied by a syncopated double bass line. About thirty seconds into the theme, if the player is close enough, a menacing melody is played by a MIDI brass instrument. Even as a new mechanic to the series, the use of a battle theme greatly changed and shaped the surrounding soundscape, sonically alerting players of a change from a safe to a hostile environment.

Though battle themes have been utilized in *The Legend of Zelda* for nearly twenty years, their function and how they develop in-game has relatively remained the same. One major change since the battle theme from *Ocarina of Time* is that the combat music in *Breath of the Wild* is highly dependent on the surrounding environment – mainly, the type of hostile creature present and the number of them. For example, one of the first types of monsters encountered in *Breath of the Wild* is the Bokoblin, a goblin-like creature with a pig-like face (See Figure 4.1). Though these monsters may pose a threat to the player at the very beginning of the game, they become sort of a mild nuisance once decent weapons and armor are acquired. As such, the battle theme that plays when one encounters them is a relatively simple rhythmic pattern played by a marimba and followed with syncopated clips of white noise, violin, piano, and trumpet. After about thirty-five seconds, the piano creates a rhythmic accompaniment as the other instruments play syncopated entrances. After about a minute from the start of the battle, the music will loop back to the beginning. If the player is battling numerous enemies or particularly strong ones (such as a Lynel or Yiga Clan member), the theme will introduce a syncopated violin part.31

31 There are some exceptions where the battle theme is not played despite the presence of enemies. One such example is within Hyrule Castle.
There are a few enemies present in *Breath of the Wild* that have a unique battle theme. One might describe them as “mini bosses”, as engaging with them will cause the name of the specific enemy to display along with a health bar at the top of the screen. However, the term “mini boss” is usually used to describe unique and difficult enemies that a player might battle once in order to progress in a dungeon. The monsters that have a unique battle theme in *Breath of the Wild*, however, can be encountered throughout Hyrule and will respawn after a period of time. Much like the Bokoblin, these enemies influence the soundscape in a similar manner. Traversing through one of these unique monster’s space will trigger their battle theme, alerting the player of the change in environment. The theme assigned to one such monster, the Molduga, takes a further step in relaying information to the player sonically (See Figure 4.2). The Molduga is essentially giant fish that “swims” through the sands of
the Gerudo Desert in Hyrule. Its musical theme is arranged in two parts: one version that plays when the monster is submerged and another for when it is exposed. The submerged variation consists of a lively conga drum line that accompanies a gritty double bass part. The exposed variation utilizes higher pitched instruments and more varied instrumentation. Instead of a conga drum, the percussion line is dominated by what could be bongo drums.\textsuperscript{32} Violins provide a coursing melodic line while piano and other tuned percussion provide an accompaniment. The bass line from the “submerged variation” is still present but no longer provides the main focus for the theme. The theme for a Molduga not only shapes the surrounding sonic environment but it could be argued that the environment shapes the music, for the “submerged variation” is characterized by lower tones and timbres and the “exposed variation” utilizes higher pitched instruments, creating a sonic reflection of the beast’s position in the world.

\textsuperscript{32} It is possible that the part is played on the outer edge of the skin of the conga drum to obtain a higher pitch.
Battle themes are a quintessential component of the soundscape in many action adventure games. In *Breath of the Wild*, they serve as the primary example of moving sonic zones overlapping and manipulating the soundscape. Much like how an individual might judge an environment in real life, the sonic space that surrounds a monster and the biophonic sounds generated within provide information to the player regarding the safety of their environment. One survey respondent mentioned, “When you are out in the fields, I love the open sound and minimal piano music so you can hear if there are enemies nearby, because after all, it is a survival game. And you can’t save the day if a Bokoblin kills you because you can’t hear it coming.” As this individual describes, if the battle theme is triggered and the player has no visual information regarding any surrounding entities, they can still determine that a hostile creature has entered their personal space by the overlapping sonic zones in the soundscape.
Guardians and Sonic Fear

Guardians are among the most fearsome entities present in *Breath of the Wild*. Created by the ancient Sheikah tribe in order to combat the evil Ganon, these machines come in a variety of forms and are found throughout Hyrule. The player’s basic arsenal of weapons and armor are often no match, and Guardians are best avoided until the proper gear is acquired. Their sonic qualities are reflective of this and present one of the most interesting environmental case studies in *Breath of the Wild*.

There are three different groups of Guardians and each have a musical theme. The first grouping includes only the decayed Guardians which lack the ability to navigate the environment around them. The second grouping includes the larger Guardians with the ability to move throughout Hyrule. The third grouping includes the smaller Guardian scouts, which are found in Ancient Shrines and within the Divine Beasts. For the purpose of analyzing movement through environments, I will be focusing on the first and second group of Guardians.

Though they possess the ability to cause a lot of damage, Decayed Guardians are less threatening than their moving counterparts and their musical theme reflects this. As their name suggests, these machines are decrepit, missing parts, and half-buried in the ground rendering them immobile (See Figure 4.3). Upon sighting Link,

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33 There are six individual types of Guardians: Decayed, Stalker, Scout, Turret, Skywatcher, and Sentry. Sentries appear only when completing the Vah Rudania questline. Because of their unique nature, I do not include them in this analysis. Additionally, Guardian Turrets are initially only found around Hyrule Castle (subsequent DLC changes this). Because of Hyrule Castle’s unique theme music, and most likely to emphasize the drama of the environment, any enemies encountered within and around the castle do not trigger their usual battle theme.
their bodies will illuminate with a pinkish-purple glow and they will target him with a red light projected from their eye, before firing a devastating blue laser attack. They are reminiscent of the Beamos, a similar enemy that appeared in *The Legend of Zelda* series as early as *A Link to the Past*. Being spotted triggers their musical theme, which begins with a synth and a low-register piano note played simultaneously. There is a one-measure introduction played by a violin. The main theme then begins and is played by a piano, consisting of two ascending quarter notes followed by two descending eighth notes.

![A Decayed Guardian awakens as it senses Link approaching.](image)

The second group includes the infamous Guardian Stalker; a large, spider-like machine that attacks like its decayed counterpart; with a menacing eye that shoots lasers at the player if spotted (See Figure 4.4). In addition to the Stalker, the second group also includes the Guardian Skywatcher which maintains the ability to fly whilst
projecting a surveying light upon the ground. Being spotted by any Guardian of this group triggers their musical theme to play, which begins with a chilling piano introduction in a high register. The main theme begins afterwards and is melodically the same as the Decayed Guardian, except it is played at a much faster tempo.

![Figure 4.4 Link faces a Guardian Stalker. Screenshot by author.](image)

The introductory piano part is very significant, as it is the first indicator of a major change in environment. As the player traverses Hyrule, perhaps at a leisurely pace, the soundscape will be defined by the relaxing geophonic and biophonic sounds such as the wind rustling through the grass and birds chirping away. It is reminiscent of a natural getaway in which one is not burdened by the sounds of the city or the sonic notifications of current technology. However, the alarming piano introduction that occurs as a Guardian Stalker spots the player changes this environment from that
of a vibrant and peaceful space into one that threatens the player’s in-game life. One survey respondent described it succinctly in their words,

From the beginning these kinds of encounters are intended to be stressful, and even avoided if possible earlier on in the game if you are not familiar with how they operate. The feeling of stress and tension is only brought to the levels that it is because of the music and sound effects used when encountering them. Without it there is a significant loss of tension.

This account is just one of many that mentioned the effect of the beginning of the Guardian theme on their gameplay. When asked of their overall opinion on the music and sound in *Breath of the Wild*, one person mentioned the beginning of the Guardian theme a bit more comically, “[My opinion of the soundtrack is that it is] Haunting. Somber. Until a Guardian shows up, then NOPE NOPE NOPE…” Regardless of how respondents described it, their input further displays the purposely jarring transformation of the in-game environment as these entities move within the player’s space.

However, the piano introduction is not the only element of the Guardian theme that transforms the Hyrulean soundscape. Depending upon how the player chooses to handle the Guardian, other sonic moments occur and shape the soundscape and the player’s perception of their environment. I described the moments in my gameplay journal,

Additionally, there are extra sound effects when the player fights a Guardian using a shield parry technique. The first successful parry cues a stringed instrument sound, which always occurs on the downbeat of the next measure regardless of when the player made the strike. It usually takes 3 successful parries to defeat a moving Guardian. The second cues a synth sound that I don’t know how to describe. Finally, the third strike defeats the Guardian and the music wraps up with a cadence that sounds like it doesn’t resolve. Instead of where the tonic chord/note should be, there is just the explosion of the defeated Guardian. It’s a very satisfying sequence. (Personal gameplay journal, October 2017)
These extra sound effects almost serve as sonic “rewards” to the player, as well as another indicator of how the environment around them is developing. The string and synth sounds that occur when completing a successful shield-parry attack allow the player to hear the change in the environment’s dynamic, as their visual attention is most likely completely occupied on the Guardian. The “victory cadence” and subsequent explosion of the Guardian that sounds when the player wins the battle can also be interpreted as sonic cues to the destruction of the sound-space that surrounded the machine. Thus, by hearing these sounds, the player understands that the soundtrack will revert to that of the greater Hyrulean soundscape.

Riding on Horseback

Riding on horseback is an in-game mechanic that first appeared in *Ocarina of Time* in 1998. This game introduced Epona, a horse that would become Link’s trusty companion later in the game and also serve as a means of traveling around Hyrule faster. The influential power of *Ocarina of Time* allowed Epona and horseback riding to become a staple mechanic in almost every *Legend of Zelda* game since.\(^\text{35}\) *Breath of*

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\(^{34}\) Because Decayed Guardians have less health than their mobile counterparts, they are destroyed in one hit if battled with the shield-parry technique. Thus, the sonic effects I mention in my autoethnography only occur when battling a Guardian Stalker/Skywatcher. The “victory cadence”, however, still plays at the defeat of a Decayed Guardian.

\(^{35}\) *Skyward Sword* (2011) is the only home console *Legend of Zelda* game after *Ocarina of Time* in which neither horseback riding nor Epona appear. However, the game features creatures called “Loftwings” which are giant, ridable birds. Link has his own unique Loftwing that is a bright red color, which is a possible allusion to Epona from previous games.
the Wild, however, is the first game of the series to include a musical theme specifically for horseback riding.

The importance of shared history and memory is not exclusive to stationary environments. Much like that of Rito Village and Zora’s Domain, Breath of the Wild utilizes arrangements of themes from previous Legend of Zelda games while the player rides a horse in-game. The theme used depends on whether the player is riding during in-game day or night. Riding a horse during the day will trigger an arrangement of Zelda’s Lullaby, a theme that originally appeared in A Link to the Past and was named in Ocarina of Time. Riding a horse at night will trigger an arrangement of the original Legend of Zelda theme.

The use of these themes undoubtedly contributes to a much more cinematic experience as the player hears non-diegetic music while they watch Link leisurely explore Hyrule. However, these themes also foster a connection between the player and the in-game environment. Utilizing arrangements of musical themes from previous Legend of Zelda games allows veteran players to interpret in-game surroundings as that of Hyrule, a different iteration of the same land they had explored in the past.

In my second survey, I had asked prospective respondents the following questions, “The sound track in Breath of the Wild utilizes themes from previous Legend of Zelda games. What is your opinion on this? Do you find this important to the identity of the game?” The overwhelming majority of respondents said yes, with their own descriptions as to why. One informant expressed,

It’s extremely important. I have always felt the common musical themes across the Zelda games have contributed in cultivating an unforgettable
identity. The game can look different in almost every way, and yet, the music is what lets you know: this is Zelda.

By this individual’s description, the act of riding a horse and the accompanying themes that play are crucial to establishing a very “Zelda soundscape.” Other informants hinted at the importance of this in terms of shared history and identity. One individual stated,

I enjoyed the use of previous Legend of Zelda themes. It helps connect this game to the previous ones. I feel that’s important since so much can be considered different in this game, especially sound wise. It gives the LoZ series player something to fall back on and feel comfortable with as they navigate the new landscape/soundscape. For a newer player it gives them a good dose of melody against the minimalist tracks. To not include old LoZ themes wouldn’t feel right since the LoZ is so reliant on music as a part of its overall identity.

As this individual expressed, the use of these themes defines the environment in which they play as Hyrule. This is particularly important when considering that these musical themes are triggered by riding on horseback in Breath of the Wild. Because the overworld map is so expansive, it is both useful and beneficial for these themes to play in order to define the in-game environment as Hyrule.

**Dragons and Spiritual Connections**

Despite its many callbacks to previous Legend of Zelda games, Breath of the Wild is not devoid of completely original characters and accompanying soundscapes. One fascinating example is the presence of three dragon spirits: Dinraal, Naydra, and Farosh. Though their existence relates to the games series’ lore – they are “spirit forms” of the three core Goddesses present in Hyrulean mythology – the soundscape that they carry with them bridge a connection between the in-game mythology and
real-world mythology and spirituality. They take the form of floating, serpentine
dragons much like those that appear in ancient Chinese and Japanese mythology (See
Figure 4.5). Their musical theme reinforces their East Asian influence. The melody is
played on a huqin instrument, most likely an erhu, and is sonically flanked by
sixteenth-note piano motifs. After the huqin instrument plays two phrases, a human
choir sings for two measures and the theme begins again.

Figure 4.5 The dragon spirit, Naydra, rests on a mountaintop. Screenshot by
author.

Unlike Guardians, the dragon spirits are non-hostile creatures. However, their
sudden appearance and theme drastically changes the soundscape which may cause a
range of reactions in the player. Dragons were only mentioned once among the
responses to my surveys, however that one individual did express, “I love the use of
silence and the times when the underscore uses low growly piano timbres, but the
Music that plays when a dragon is near gets me every time. I love how it feels ancient and otherworldly.” In terms of “silence,” this individual is most likely referring to the lack of non-diegetic music that defines this Hyrule’s soundscape. The presence of a nearby dragon spirit, which is a moving sonic zone that traverses the environment, creates a major shift in the soundscape and may cause the player to manipulate their gameplay accordingly.

My own gameplay serves as an example. Encountering a dragon spirit was one of my favorite experiences while playing the game. It is possible that my experience studying guzheng and traditional Chinese music played a role in my appreciation for the theme accompanying the dragon’s presence. Regardless, I was often entranced by the theme to the extent that I would immediately stop what I was doing in-game just to pan the camera in order to watch and listen to the dragon pass by. I had taken multiple screenshots of the various dragons and even posted one to Facebook with the following caption,

I can’t get a good screenshot of the dragons, but their theme is possibly my favorite in the game. It consists of a huqin instrument playing melody, a subtle piano accompaniment, and ends with this grand choir. Anyway, now I want to learn how to play erhu. (Personal Facebook post, July 27, 2017)

Needless to say, I was entranced by the dragon’s theme to the point where I would listen to the track on YouTube when time allowed for it. It is important to note that I did this without the intention of research, but simply because I loved the music. However, I couldn’t help but notice that many people leaving comments had a similar experience by describing how the music shaped their perception of the environment. One user, Annette Ricci, commented on the track uploaded as a YouTube video titled
“The Legend of Zelda: Breath of the Wild OST - Dragon Theme” by user Edwguard Flows,

I was just wandering around the mountains, killing random monsters and gliding around as usual, when all of a sudden, I turn around and this GIANT BEAST was directly over me, filling the entire screen, and I have no idea what it is, and it was so sudden my heart rate actually went up quite a bit haha. And then this music starts playing and I’m trying to comprehend what is going on, and just completely in awe of this gorgeous majestic creature. And I just watch it float away, completely stunned. Best part of the game. (Annette Ricci, July 2017, comment on YouTube)

Looking at the comments on Crunchii [Music Extensions]’s upload of the dragon theme as a YouTube video named “Dragon - The Legend of Zelda: Breath of the Wild - Music Extended”, other people had left similar testimonies. One user, Kitnighty, simply stated, “Nothing can ever replace the first time you see one of these things” (Kitnighty, 2017, comment on YouTube). Their response succinctly summarizes the feeling of awe that many players, including myself, experienced upon listening and viewing one of the dragon spirits.

As mobile entities with their own musical theme, the sonic zones that encompass the dragon spirits can be considered its own moving environment. As these spirits float across Hyrule, occasionally intersecting with the player’s personal space enough to trigger the theme to play, they shape and manipulate the soundscape accordingly. A peaceful nighttime walk in the valley, with only the sounds crickets of one’s footsteps, becomes something of a dream as the sound of an erhu accompanies a massive dragon gliding through the sky. These spirits exemplify the power and importance that moving sonic zones have over an individuals’ experience of the in-game environment.
Conclusion

Unlike the many stationary environments which serve as fixed sonic zones within the Hyrulean soundscape, the moving environments discussed in this chapter shape the sonic space around them as they or the player traverse the land. These unique moving spaces are essential to providing key information about the environment to the player. The combinations of surprise, wonder, awe, and tension that some of these moving environments make allow the player to build a connection with the in-game land and its surroundings. The absence of these crucial sonic zones would ultimately create a vastly different experience amongst players.
CONCLUSION: BEYOND SPACE AND PLACE

*Breath of the Wild* is easily the most expansive *Legend of Zelda* title to date and perhaps the most sonically unique. Due to the timeframe, limited resources available for this project, and the sheer size of this game, I was not able to cover every point of interest. Many of the case studies I did analyze could easily have been chapters in their own right. Thus, there is plenty of material for other scholars to expand upon and explore.

As I demonstrated in Chapters One and Two, the analysis of video game music adapts concepts from different disciplines. Chapter One focused primarily on Koji Kondo, but since the release of *Ocarina of Time*, the series has featured works by many different composers that can be analyzed. Chapter Two discussed the parallels between the development of film and video game sound, utilizing two cutscenes from two different *Legend of Zelda* games as case studies. *Breath of the Wild* features a myriad of cutscenes worthy of further analysis.

Regarding Chapters Three and Four, another area of interest includes the four Divine Beasts. In addition to a chilling, mechanized roar, each has a unique musical theme that utilizes some of the same sonic elements (such as instrumentation) as the musical theme of the nearby city, town, or village. The theme for a Divine Beast develops as the player activates “terminals” within the giant machine. This development could be a change in tempo, new instrumentation, and even new melodic lines. A brilliant element to each of the Divine Beast themes, discovered by
Redditor Takfloyd, is the use of Morse Code as a rhythmic device. This was possibly included in the themes to emphasize the deaths of the Champions that died within the machines, or perhaps a call for help from the machines themselves. Regardless, it is clear that there is still much to explore in *Breath of the Wild*.

Of course, video game music literature is not limited to the relationships among sounds and environments. Ethnographic approaches are still relatively new in the field of video game music thus there is much work that can be done. My ethnography focused on sound-related gameplay experiences among informed individuals. Most reported that they were in their mid-twenties to early thirties. Because the surveys were circulated among my friends and my advisor’s colleagues, it is not outlandish to assume that most respondents were college graduates and well-versed in video game and/or academic literature in general. A larger and more diverse sample size may yield very different analyses than my own.

If someone were to ask me, “What is your favorite place in the world?”, I might ask them to clarify, “Which world?” Through video games, I have been to so many different places and lands that it should be hard to pick one. Of all the virtual worlds I have traveled to, I must say that the Forest Temple from *Ocarina of Time* has always been my favorite.

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36 Takfloyd, “Has anyone noticed that all the Divine Beasts play morse code saying S.O.S. when you first enter them?” Reddit (post), May 10, 2017 (6:24 pm), https://www.reddit.com/r/zelda/comments/6aelup/has_anyone_noticed_that_all_the_divine_beasts/

37 To be completely honest, the Forest Temple is tied with the Forgotten Vale and Chantry of Auri-Eí in the *Dawnguard* DLC for *Skyrim*. Both are ancient, abandoned, and relatively forgotten places.
Located in a mysterious forest called “The Lost Woods,” the Forest Temple from *Ocarina of Time* resembles a crumbling, once-glorious, stone mansion. It is the first dungeon Link must face as an adult, and many players consider it the creepiest dungeon in the game. As a child, however, I found the entire place to be marvelous and enchanting, to the point where I would load the game on my N64 and revisit the temple long after I completed the quest related to it.

While researching for this project, I often consulted YouTube uploads of the *Breath of the Wild* soundtrack. However, the musical theme from the Forest Temple would often appear in my “Up Next” section, and I found myself mentally returning to my childhood by listening to the eerie yet beautiful theme. One night, it inspired me to open my main file on my Nintendo 3DS version of *Ocarina of Time*. I hadn’t opened the game for a couple of years and I wondered where Link would be when the game loaded. I smiled, for where I left him years ago was, of course, the Forest Temple.

Virtual environments are certainly different than those of real life, but they can absolutely have just as much of an emotional impact. Because sound is almost always present in these spaces, it deserves as thorough an analysis as one would devote to the visual. The virtual spaces in video games are the result of teamwork,

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38 A quick perusal through the comments on this YouTube video shows the dichotomy of opinions regarding the Forest Temple in *Ocarina of Time*: https://youtu.be/huN376F3QTg.

39 A playthrough can be watched here: https://youtu.be/wG7mzo2UGfE. According to the original poster, this video was captured from an N64 cartridge. Thus, it is a close representation of how I experienced the game nearly twenty years ago.
creativity, imagination, and technological skill. They are, in my eyes, works of art and a new form of literature.

In our real world that is so rife with violence, many people – media personalities, politicians, even parents – are quick to place the blame on video games. They ignore the fact that, like art, video games represent a wide array of genres and serve purposes beyond simple entertainment. Video games can provide a fun way to exercise, teach a new skill, tell a story, offer new worlds to explore, and so much more.

I am not exaggerating when I say that The Legend of Zelda helped me become who I am today. Playing this series as a youth taught me to face my challenges head-on and stand up for what is right even in the midst of a much more influential opponent. The places in Ocarina of Time and Majora’s Mask, my personal favorite Legend of Zelda titles, inspired me as much as the natural world around me.

This thesis displays the complexity of the relationships among sonic environments and gameplay in The Legend of Zelda: Breath of the Wild. It is but one example among many that exhibit the intricacies of a video game soundtrack and how it functions in relation to the virtual environments in which it is present. New concepts and discoveries will surely be made as current and new scholars pursue research in the field of video game music. It is my hope that this thesis not only inspires other scholars to investigate The Legend of Zelda, but to show that video games and their soundtracks are an artform deserving proper attention and respect.
APPENDIX I

Music and Sound in Breath of the Wild

I have created this brief survey to further my research on music and sound in The Legend of Zelda: Breath of the Wild. The goal is to get an ethnographic overview of people’s thoughts and opinions regarding sound in the game. If you have any questions, please let me know!

* Required

**Email address** *

Your email

**What is your gender?** *

- Female
- Male
- Prefer not to say
- Other: 

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What is your age range? *

- 18-24
- 25-30
- 31-40
- Over 40

If you're feeling brave, feel free to volunteer your exact age.

Your answer

Have you played Legend of Zelda before? *

- Yes
- No

Have you completed Breath of the Wild? *

- Yes
- Not yet
Which language do/did you have the voice acting set to? *

- English
- Japanese
- French (France)
- French (Canada)
- German
- Spanish (Spain)
- Spanish (Latin America)
- Italian
- Russian
- I play/played without sound
- I play/played in multiple languages

Why did you choose the language(s) you play/played in? *

- It is my native language
- Other:  

What are your thoughts and feelings about the voice acting in Breath of the Wild? *

Your answer

Describe your overall opinion and feelings about the music and sound in Breath of the Wild. *

Your answer

How do/did you feel about the game overall? *

Your answer

If you've played other Legend of Zelda games, how would you compare the music and sound in those games to that of Breath of the Wild?

Your answer

If you have any additional comments or opinions about the music and sound in Breath of the Wild, feel free to add them here.

Your answer
APPENDIX II

Music and Sound in Legend of Zelda: Breath of the Wild: Part II

This is a more specific follow up survey to my original, which asked general questions about music in sound in Legend of Zelda: Breath of the Wild. Please be as descriptive as conveniently possible. Do not worry about length!

To take the original survey, please follow this link: https://goo.gl/forms/wekPV2wmPgu0M5AK2

* Required

Email address *

Your email

Have you finished Breath of the Wild? *

- [ ] Yes
- [ ] No
What is your age range? *
- 18 - 24
- 25 - 30
- 31 - 40
- Over 40

What is your gender? *
- Female
- Male
- Prefer not to say
- Other: ___________

Have you played Legend of Zelda before? *
- Yes
- No
Which cutscene from Breath of the Wild is your favorite? Why? Is music/sound a factor? *

Your answer

What is your favorite "sonic moment" in the game and why? (This could be a specific sound effect, voice acting, a musical theme, or even the use of silence.) *

Your answer

What is your opinion on the use of piano in the game's soundtrack? Why do you feel that way? *

Your answer

The soundtrack in Breath of the Wild utilizes themes from previous Legend of Zelda games. What is your opinion on this? Do you find this important to the identity of the game? *

Your answer
The soundtrack in Breath of the Wild utilizes a lot of silence and subtle motifs, which is a distinct change from previous Zelda games. What is your opinion on this? *

Your answer

Do you have any further opinions or thoughts regarding specific moments of music and sound in Breath of the Wild? If so, please describe. *

Your answer

May I email you to further discuss your answers?

- [ ] Sure
- [ ] No, thank you
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