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Creating Places: Musical Worldbuilding and Immersion in Role-Playing Video Games

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1. Introduction

Video games have undoubtedly become an integral part of popular culture in recent decades, with the gaming industry amassing billions of dollars in revenue annually—solidifying their position as "the leading medium of contemporary society" (Fuchs 7). This surge of interest is not only observable in video games themselves but also in the music associated with them. This is, for instance, exemplified by the innumerable re-arrangements and covers of video game music on the internet, thus creating a form of participatory culture. This growing impact of video game music in the cultural sphere coincided with a parallel surge in academic interest, resulting in the emergence of an entire field dedicated to it. As such, *ludomusicology* – a neologism derived from "ludology" (the study of video games in general) and "musicology" – is an interdisciplinary field that deals with the history, function, composition, and culture of video game music. One particular branch of research within it seems to gather rather special attention among ludomusicologists: the question of how video game music influences *immersion*.

While the question of how music transports players into the game world is a crucial one, this thesis goes a step beyond. It argues – using the example of Role-Playing games – that video games prudently utilize certain musical elements not only to immerse the player in the game world but also to construct this world in the first place by musically ascribing narrative meaning to the traversable spaces within the game—thus creating meaningful immersible places. By showing that music holds the semiotic power to shape and construct the diegetic[1] spaces of a game world and also convey their role in a narrative context, this thesis also aims to connect certain concepts that have often been regarded as somewhat oppositional in game studies. Drawing on the – often neglected – notion that spatial and narrative practices are highly intertwined, this research will show how specific music connected to certain spaces, that is, in-game locations, is capable of communicating their characteristics and role within a narrative structure, thus not only facilitating immersion but also taking an integral part in the game's spatio-narrative[2]

[1] The term *diegesis* emerged in film theory and refers to the "narratively implied spatiotemporal world of the actions and characters" (Gorbman 21), that is, the world and its matters the characters of a film, or game in this case, would actually perceive. For instance, sounds that originate from within the fictional world would be categorized as *diegetic (*or sometimes *intra-diegetic)*, whereas a soundtrack (which the characters of the story would not hear) is referred to as *non-diegetic* (or *extra-diegetic*).

[2] Referring to the interplay and interdependence of space and narrative.

worldbuilding.

The approach this thesis takes is intrinsically interdisciplinary. It combines musicological analysis with notions central to cultural studies, narratology, and an analytical mode of close reading in order to assess how space and music collaborate in the creation and communication of meaning. Moreover, this interdisciplinary approach is also reflected in the musicological component itself, as formal compositional analysis is integrated along with insights from the field of music psychology in order to assess affective and thus semiotic qualities of certain musical manifestations.

Preceding concrete analyses and case studies, this thesis will initially elaborate and critically engage with theoretical frameworks on the underlying concepts of immersion and (narrative and spatial) worldbuilding as well as music's broad role within these notions and processes. This section will conclude with special attention given to Isabella van Elferen's ALI model, which constitutes a recent – and rather compelling – attempt to outline a way of adequately analyzing game musical immersion and proposes concepts that can be extended to game music and its capacity for semiotic and affective communication more generally. Chapter 3 will then give a brief overview on the issue of genre and music in video games with an introduction to Role-Playing games, specifically, outlining the peculiarities and functions of game music within it. Worldbuilding processes within the genre will be examined using John Campbell's famous notion of the "Hero's Journey", or monomyth, outlining implications for the spatial structure of Role-Playing games, which in turn allows for adequate comparison of narratively comparable spaces within a selection of games. Chapter 4 constitutes the primary analysis section of this thesis and will examine not only *how* but, more concretely, *what* music (in terms of its parameters) is utilized to reinforce, construct, and communicate the particular characteristics of diegetic places in terms of spatial and narrative worldbuilding in a selection of prominent Role-Playing games representative for the genre. Finally, the fifth chapter will further expand upon these analyses and showcase how a deliberate change in the elaborated musical parameters effectively signifies and communicates more explicit narrative development and a corresponding shift in the affective and thus spatio-narrative character of a diegetic location—thus further demonstrating the capacity of certain musical elements beyond the screen to immerse the player into a space infused with meaning, that is, a sense of place.

2. Theoretical Framework – On Immersion and Worldbuilding in Video Games

2.1 Immersion

The term immersion – originally referring to "dipping or plunging into water or other liquid" ("immersion" def, 1.a) – has been used in academia for some while now, perhaps most notably when talking about processes of language acquisition and is now often used as a metaphorical term for similar phenomena in other academic fields—including media studies.

Within the realm of video game studies – or *ludology* – specifically, the first description of immersion is often attributed to Janet Murray and her 1997 seminal monograph titled *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, in which she deals with the influence of emerging digital technologies on modes of storytelling and narrative and argues that immersion is "the experience of being transported to an elaborately simulated place [...] regardless of the fantasy content" (98). This notion has been put somewhat differently by Laura Ermi and Frans Mäyrä defining [video game] immersion as "becoming physically or virtually a part of the experience itself" (4). While the term immersion is in no way connected to video games only and can appear in non-digital media as well, Kubinski rightfully points out that virtual realities and especially video games "provide the unique techniques and possibilities that deepen immersion and players' presence in a fictional world" (134). However, while these definitions have been widely used in literature, there is a visible lack of consensus with regard to the "destination" of the immersion process, if you will. As can be seen above, both Murray and Kubinski write about being transported into the fictional game world and space, whereas Ermi and Mäyrä talk about becoming a part of the (gaming) experience rather. Nonetheless, one can argue that this points to a close interlacing of spatial and narrative characteristics of video games, as will be examined throughout the course of this thesis. In fact, it would be unjust to even propose a universal description of immersion processes and goals, as different games and genres call for different approaches altogether.

Due to this multilayered nature of immersion and it being advocated as "the holy grail of video game design" (Zhang and Fu 1), there have been multiple endeavors to categorize and analyze various dimensions and aspects of video game immersion. In their now well-known SCI Model, Ermi and Mäyrä identify three major components of video game immersion: sensory, challenge-based as well as imaginative immersion (7-9). While the first two mentioned dimensions pertain mostly to notions of being immersed into the experience of play, the last one is most in tune with how Murray initially describes the major aspect of immersion—pointing to its spatial character. A more recent attempt towards categorizing types of immersion that aptly deals with this juxtaposition of immersion destinations (i.e. [gaming] experience vs. fictional world [setting]), is given by Marie-Laure Ryan in her 2015 monograph *Narrative as Virtual Reality 2*. On a macro level, Ryan draws a distinction between *ludic* and *narrative* immersion. On one hand, ludic[3] immersion refers to being immersed into the actual gameplay activities, which usually happens through the player overcoming challenges (see Ermi and Mäyrä) and is not dependent on the actual presence of a narrative at all (Ryan 84). On the other hand, narrative immersion refers to the immersion into the fictional world and story through engaging with it and processes of imagination (ibid. 86). Moreover, Ryan proposes a further micro categorization by dividing narrative immersion into three dimensions: temporal, emotional, and spatial immersion. While temporal immersion alludes to the players engaging with the plot of a game, emotional immersion refers to them being emotionally connected to characters within a game (ibid.). The third category, spatial immersion, expands upon the ideas laid out by Murray and describes the experience of being immersed into the setting, that is, the fictional world of a game/narrative, thus creating a sense of space (ibid. 91). By placing the notion of spatial immersion under the umbrella of narrative immersion as opposed to proposing it to be a separate category on its own, Ryan already implies the undeniable interdependence of space and narrative in games. Furthermore, this notion of spatial immersion is in close relation to another concept referred to as (spatial) "presence". Hartmann et al. define it as "the subjective experience of a user or onlooker to be physically located in a mediated space, although it

[3] Mostly referring to actual gameplay as well as game-mechanics such as rules, interfaces etc.; derived from the Latin term "ludus" (game). Often used – such as in this case – in somewhat of a bipolar opposition to narrative elements, such as a game's fictional story or plot.

is just an illusion" (117). While a minority of researchers[4] view immersion and presence as two opposing concepts, the close relation of notions of presence and the proposed concept of spatial immersion is self-evident. However, in order to avoid definitional confusion, this thesis will henceforth only refer to spatial immersion as opposed to presence.

As the very concept of spatial immersion is at the heart of this thesis, one not only has to look at how this immersion into the game space is achieved. In fact, for any kind of immersion to emerge, there needs to be an immersible space in the first place. Game designers inevitably need to construct and create game worlds and spaces they want the player to immerse in. This necessity points to the crucial process of *worldbuilding*.

2.2 Worldbuilding: On Spatiality and Narrativity

In its broadest sense, worldbuilding (also "world-building") has been defined as the "deep and intricate design of a fictional world" (Fullerton 117). As such, it is inevitably dependent on particular understandings of the term "world"—which mostly are associated with the construction of the *setting* of a fictional text (Wolf, B*uilding Imaginary Worlds* 29). However, Wolf expands upon this idea and notes that:

> The term "world" [...] is not simply geographical but experiential; that is, everything that is experienced by the characters involved, the elements enfolding someone's life (culture, nature, philosophical worldviews, places, customs, events, and so forth), just as world's etymological root word weorld from Old German refers to "all that concerns humans", as opposed to animals or gods. (ibid. 25)

Adapting this understanding of the term "world", Wolf alludes to the undeniable connection of spatial and narrative structures in fictional texts—including video games. Nonetheless, this intertwining of space and narrative has for a long time been neglected within certain game studies branches. Espen Aarseth, for instance, argues that game spaces such as explorable landscapes are a strictly ludic element in games and as such

[4] See Nacke and Lindley; Hooper, for instance.

only concerned with modes of interactivity, whereas narrative structures operate on the other side of the spectrum and are (mostly) inherently non-interactive (130). While this differentiation does prove useful in certain applications, it neglects the fact that spaces are not only ludic elements of the worldbuilding as they are inherently connected to the world's narrativity, as will be examined within this chapter in more detail. McKernan provides perhaps the most apt definition of worldbuilding, describing its process as "the practice of shaping meaningful spatial narratives" (53).

Opposing the binary distinction between ludic/spatial elements and narrative elements proposed by ludologists like Aarseth, the importance of spatiality for all aspects of the medium of video games – including their narratives – has been pointed out frequently in literature. Dietmar Meinel, for instance, goes as far as to describe video games as "first and foremost [...] a medium of space" (1). Emphasizing this character in relation to a video game's overall narrative structure, media scholar Henry Jenkins writes:

> Game designers don't simply tell stories; they design worlds and sculpt spaces. It is no accident, for example, that game design documents have historically been more interested in issues of level design than plotting or character motivation. [...] Games fit within a tradition of spatial stories [...]. ("Game Design" 121)

Jenkins describes the narrative mode of video games as a form of what he calls spatial or *environmental* storytelling. According to him, "environmental storytelling creates the preconditions for an immersive narrative experience" (ibid. 123). Thus, spaces are not only responsible for the immersion into the game space or world but just as much for the immersion into the narrative experience of a game due to their interlacement. He argues that game designers do so by creating *evocative spaces*. Evocative spaces are described as the (virtual) environments in video games that "draw upon our previously existing narrative competencies" and thus evoke narrative connotations (ibid.). This technique is often used in Disney's amusement parks where "the story element is infused into the physical space a guest walks or rides through, [and] it is the physical space that does much of the work of conveying the story the designers are trying to tell" (ibid.). This employment of evocative spaces in Disney theme parks serves as a poignant comparison in terms of understanding spatial storytelling in games. In a way, one can say that players develop a sort of spatial and narrative literacy: (frequent) players have seen or played

stories (in all kinds of media) building on similar spatial and narratological structures and thus have those somewhat engrained at least to some degree. Hence, one can say, that in video games, the traversable space also provides predicting narrative clues and that narratological structures have spatial implications and vice versa. It is this very notion of literacy that constitutes a major aspect of the analysis of music's role in spatial storytelling as well as will be analyzed in chapter 2.4. As can be seen, the player takes on a very important role when it comes to spatial storytelling. To put it in Lischka and Meißner's words: "Space and the experience of space are a crucial motive of computer games. A game does not describe; it is experienced" (487). Hence, game spaces tell their stories by provoking the player to construct those within their own mind (Domsch, *Storyplaying Agency and Narrative* 99). While this also holds true for other (audiovisual) media), the connection of narrative and space is most prominent in video games because of this particular involvement of the player, or agency, as one could call it (Domsch, "Hearing Storyworlds" 194).

Hence, it is necessary for games to construct spaces that evoke certain associations, and emotions, and have narrative information embedded into their mise-en-scène (and music, as will be argued). In a cultural studies and humanities context, then, one can argue that it is indispensable to create *places* out of the game spaces. The definitional and conceptual distinction between notions of 'space' and 'place' was coined within mainstream academia by humanistic geographer Yi-Fu Tuan, according to whom, the difference between 'space' and 'place' lies in the way, in which humans ascribe meaning. Thus, a 'space' is merely the physical (or in the case of video games, then, the virtual) location, which has no further meaning resulting from experiences whatsoever, whereas a 'place' is a location that has (cultural) meaning and is constructed through human experience (Tuan 4pp.). The implementation of these cultural geography notions into the ludology realm is also given by David Hutchinson, who writes:

> Instead of "designing spaces", place-conscious game developers are in the habit of "creating places." They create places that are culturally meaningful and resonate emotionally with players. (37)

This thesis argues that the musical underscoring of spaces plays a crucial – and oftentimes underestimated – role in ascribing meaning to the fictional game world, thus

creating and constructing places as opposed to mere spaces. The following chapter will therefore provide an introductory overview on the role of music in worldbuilding and immersion processes in video games and in how far academia has dealt with – or neglected – this issue.

2.3 Role of Music in Immersion and Worldbuilding Processes

With immersion and worldbuilding being at the heart of game design and shaping the player's experience, it is no wonder that ludomusicology has been attempting to examine the role of music within these crucial and desired processes—with varying rates of success. It is especially noteworthy that analyses of game audio and music in particular have been mostly concerned with its impact on game immersion, often understating its role in shaping the immersible game world in the first place. Despite an academic focus on music and immersion processes and immersion being described as "one of the central functions of game music" (Munday 56), the categorization of music within models and concepts of immersion still remains ambiguous in the ludomusicological literature. In the aforementioned SCI-model, for instance, Ermi and Mäyrä place music and related aspects of the soundscape into the category of sensory immersion, claiming that "powerful sounds easily overpower the sensory information coming from the real world" (7). However, this categorization is criticized by Isabella van Elferen, arguing that music can very well be part of challenge-based immersion in music games (e.g. *Guitar Hero*) as well as imaginative immersion, since the soundtrack of games is crucial for the imagination of a fantasy world (3)—which holds true for Role-Playing games especially as will be examined in following chapters. This lack of academic consensus is further exemplified by the fact that while the SCI-model has widely been used in ludomusicology, Karen Collins – regarded as a founding figure of the discipline of ludomusicology – describes the musical aspects of games under the column of "imaginative immersion" in her seminal work *Game Sound* (134), though she only deals with issues of immersion peripherally. Nevertheless, with music being held accountable for the imagination of the fictional game world, as Van Elferen and Collins suggest, it does undoubtedly fall under the column of Ryan's more in-depth conceptualization of spatial immersion. Even though

these specific categorizations of music's role in immersion prove to be ambiguous, several empirical studies over the years show that (the presence of) video game music does indeed play a crucial part in making the player feel more immersed in both the experience and the game world.[5] Accordingly, it does seem inappropriate to hold music accountable for only specific types of immersion, as research shows it to be effective in several – if not all – domains of immersion, depending on its specific manifestations.

While Ryan's specific notion of spatial immersion and its connection to narrative concepts is still addressed somewhat rarely in ludomusicology[6], the role of music in video games' spatiality and worldbuilding has been discussed increasingly more often. As established, "your entire perception of the gameworld is constructed by communications through visual and aural signs" (Hart 224). However, when it comes to the construction of a game's setting or world, the focus has traditionally been on diegetic aspects of the soundscape such as realistic sound effects that would occur similarly in the physical or non-virtual world. In fact, this idea might seem logical at first. At first glance, it might seem inappropriate to utilize non-diegetic music for immersion and worldbuilding purposes as one might expect game spaces to attempt to approximate spaces of our physical world. However, as Grimshaw points out, music's purpose in immersion and worldbuilding is "based primarily on contextual realism rather than object realism" (362). As such, music, and other non-diegetic sounds "are immersive because of their unrealism (rather than in spite of it), because of how they engage with the player's cognitive processes" (ibid. 363). As players automatically extract meaning from all elements of media, including music (Summers, *Understanding Video Game Music* 41), the music a player hears within a game is "turned [...] into an understanding of space, and also an interpretation of that space according to the game's fiction" (Domsch, "Hearing Storyworlds" 196). Not only academics but also video game composers themselves are aware of this circumstance. In his prescriptive guide *A Composer's Guide to Game Music*, Winifred Phillips writes:

> The music should surround the player with aural details about the intrinsic nature of the setting in which the game takes place. In essence, the music should serve as a world builder, joining forces with all the other elements of game design [...] to complete the sensation of full immersion [...]. (103)

[5] See Huiberts; Zhang and Fu; Gormanley; Grimshaw et al.; Jorgensen; Williams, for further empirical insight.
[6] For one of the only exceptions, see Armstrong, "Sounding the Grind".

If successful, music manages to "mediate the player's sense of space [...] with the complex interactions of a game's musical [and] narrative structures" (Armstrong 16).

Hence, video games often utilize what can be called an environmental composing approach, where specific locations trigger specific musical cues. This approach, where different types of locales and environments are linked with different types of music, allows the player to "identify their whereabouts in the narrative and in the game" (Collins 281). The inception of location-based musical cues in video games coincided with the emergence of iMUSE, an engine developed in conjunction with the SCUMM-engine by LucasArts in the early 1990s, which allowed for "both characterization (specific tunes for specific characters) as well as localization cues to generate responsive soundtracks" (Lee 13). It was not until then that video game music was considered to be actually interactive (Strank 81). The first game to utilize iMUSE was *Monkey Island 2: LeChuck's Revenge*, in which the music followed this specific scheme: "If Guybrush (the protagonist) entered XY, music XY would play" (ibid. 82). Most notably in terms of technical advancement was the fact that that would occur without any significant audible interruption within the music (Rauscher 99). With the use of musical tracks that trigger when a player enters and exits locations, musical change is intrinsically connected to changes in space and place and "provides an affective character to the [related] area" (Grasso 25). Julianne Grasso expands upon this with her concept of *affective zones*, which she defines as "spaces in games defined by boundaries created by musical sounds rather than by walls, levels, or screens" (60). In a most drastic sense, then, musical changes alone hold the power to communicate to the player a change in space and place that might not be initially obvious through visual means. Tim Summers alludes to the same notion by writing that "music can act as a substitute for, or reinforcement of, visual communication" (*Understanding Video Game Music* 140). While this notion constitutes a major foundation for this thesis, it lacks a further dimension. In fact, music cannot only substitute or reinforce visual information but also contradict it, as will be shown. A space that visually communicates a feeling of safeness and peace can very well have this quality stripped from it through the means of contrapuntal musical underscoring, thus (re-)shaping its character altogether. This semiotic power of music and sound in audiovisual media is also emphasized by composer-filmmaker Michel Chion who argues that oftentimes the meaning of visual

images is determined by sound instead of the other way around, as one might expect (5). This idea is further examined by Annabel Cohen who adds a layer of realism to this notion. Talking about the medium of film, she argues that "the less realistic the images, the more music must contribute to a suspension of disbelief" (368). Thus, music is necessary to fix an image's meaning especially when the visuals are limited in terms of being "realistic". As will be analyzed, this is particularly observable when talking about spaces and places in early and indie video games that are extremely limited when it comes to graphics and thus hold limited potential for visual communication. Take, for instance, this juxtaposition of two opposing places from the first-generation *Pokémon* games.

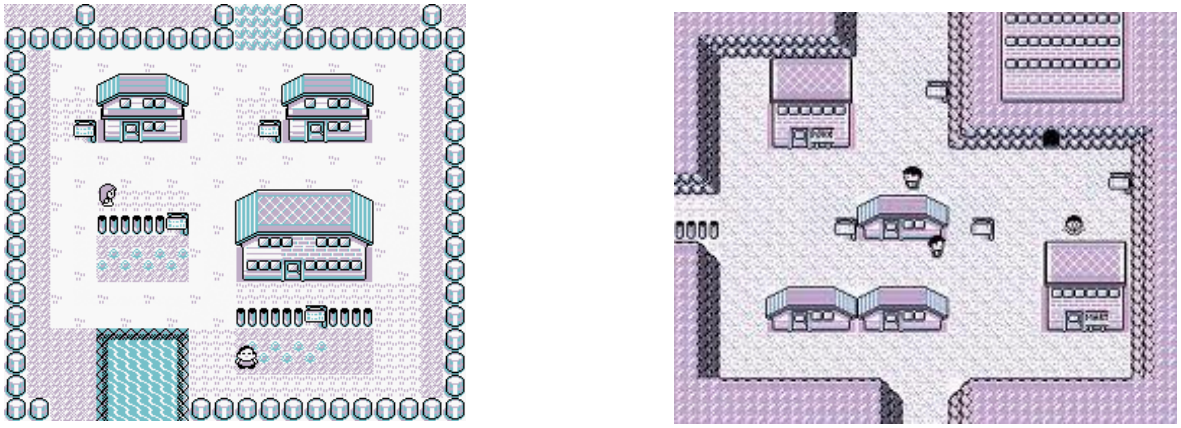

Figure 1. Pallet Town and Lavender Town from *Pokémon (1st Generation)*.[7]

As seen, these two towns within the *Pokémon* world only differ marginally in terms of visuals due to the GameBoy's limited graphical capabilities. Therefore, the player – upon first entering these areas – cannot tell what kind of a place he ought to expect. The actual characteristics of these two places is ultimately only determined by the diegetic soundscape and non-diegetic music that plays when traversing them.[8] Hence, music can indeed function as a central worldbuilding tool in games, thus not only aiding immersion but also making it possible in the first place by creating an immersible affective space the visual image is not able to facilitate on its own.

Furthermore, keeping in mind the examined interlacement and interdependence

[7] All game(play) screenshot from author, unless noted otherwise.
[8] A close analysis of the musical elements used in both these places (among others) and how these shape their character will follow in chapter 4.

of spatiality and narrative, this environmental approach to video game scoring bears heavy potential for communication and navigating narratological structures as well—something that has been neglected in ludomusicological research thus far as music's role in shaping spaces is often viewed in contrast to how musical cues reinforce narratives by underscoring certain actions, events, and characters. Thus, this thesis aims to take on this desideratum and – in line with Ryan's notion of spatial immersion – considers spatiality created by music also as a form of narrativity—highlighting its role in worldbuilding overall. As will be shown in following chapters, this usage of music as a worldbuilder by creating a *musical geography* on both a spatial and narrative level through underscoring certain environments is especially prominent and observable in the highly story/plot-oriented genre of Role-Playing games.

In order to analyze the specific usage of music in certain games, however, it is not sufficient to merely show *that* music is used for worldbuilding and immersion purposes, but rather *how* music accomplishes that and *what* it is in the music itself that elicits certain responses within the player. The very issue of *how* is addressed within Isabella van Elferen's ALI-Model, which aims to provide a somewhat conclusive model for analyzing game musical immersion and thus will be looked at in the following chapter more precisely.

2.4 ALI – A Model for Analyzing Game Musical Immersion

In recent years, there have been numerous attempts to create frameworks for analyzing how sound influences video game immersion, most of which, however, are mostly concerned with the diegetic aural environment of games and how those make the diegetic world feel more realistic, in a sense. Obviously, these frameworks fall short when trying to analyze music, specifically in Role-Playing games, as in such games, musical elements are mostly composed as a non-diegetic soundtrack (Crathorne 34).

Other endeavors in trying to analyze the role of non-diegetic music include what German ludomusicologist Melanie Fritsch calls "absolutist" attempts that aim to extract meaning and affects solely out of the music itself ("It's a-me, Mario!" 94). However, Isabella van Elferen points out:

> Because musical meanings – like the emotions with which they are entwined – are far from fixed, objective or universal, affective musical immersion would seem to be highly subjective and therefore unpredictable. (35)

Therefore, it is crucial to consider the various dimensions and contexts in which music and their effects operate. In order to fill this lack of theoretical frameworks for analyzing how music affects immersion, Isabella van Elferen developed what is known as the ALI model. In this model, van Elferen distinguishes three dimensions that play a role in musical immersion: affect; literacy; and interaction (34).

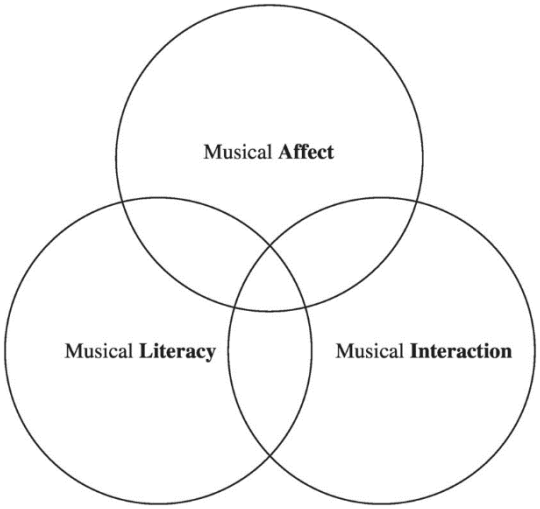

Figure 2. Isabella Van Elferen's ALI Model, from "The ALI Model: Towards a Theory of Game Musical Immersion".

According to the model, "player involvement [and thus, immersion] is likely to be most intense where the three areas of the framework overlap" (ibid.), which is illustrated in Figure 2.

AFFECT

The musical affect dimension alludes to the fact that "music cannot but stir emotions" (Van Elferen 35). Thus, musical affect can be described as the meaning or emotional connotations presumably derived from the music itself. The aforementioned absolutist

attempts by musicologists only consider this dimension on its own. Yet – as mentioned before – this affective role of music is highly subjective and thus cannot possibly be analyzed by looking at musical examples by themselves without context due to its unpredictability. Other ludomusicologists go as far as to say that "music cannot prescribe its own meaning, except within cultural and textual conventions and relationships" (Hart 222). However, other musicologists argue that:

> Musical systems [melody, harmony, rhythm, timbre, etc.] do have 'independent' meaning, in the sense that they constitute meaning potentials which specify what kinds of things can be 'said'. Meaning potentials delimit what *can* be said, the context what *will* be said. (Van Leeuwen 26)

Empirical research within the realm of systematic musicology hints towards a similar direction, with studies showing that some musical parameters do indeed elicit the same emotional connotations and reactions cross-culturally beyond contexts.[9] Nevertheless, as Van Leeuwen rightfully emphasizes, the context will still inevitably influence how the listener decodes (affective) meaning present in the music. Furthermore, it must be noted that when looking at musical parameters, "each expression may depend on many different structural factors" (Gabrielsson 221), meaning that within a piece of music, the parameters used also influence each other. Therefore, it is crucial to consider the interplay of certain musical elements in conjunction with the context (i.e. gaming situation) in which they are used and how decipherable conventions are established through that process. As Van Elferen argues, "game music needs to evoke predictable emotions so that it can help assess gameplay situations" (35). This is where the crucial aspect of *literacy* comes into play.

LITERACY

Van Elferen describes musical literacy as "the fluency in hearing and interpreting [...] music through the fact of frequent exposure" (36). Thus, musical literacy can be compared to the notion of literacy in writing and reading since it is concerned with the semiotic recognition of certain patterns, and tropes in conventions. Much like Jenkins's

[9] See Thompson & Balkwill, for instance.

notion of evocative spaces, then, music heard in a certain situation evokes certain associations and connotations, as the listener connects music heard in past situations and contexts to similar situations in the future. When it comes to video games, this literacy is not only tied to this medium but also different types of multimedia. As Tim Summers rightfully states, "game music does not exist in a musically sealed world but draws upon a common musical lexicon from broader culture" (*Understanding Video Game Music* 40). In regard to video game music, the usage of music in film, for instance, serves as somewhat of a foundation for the media music literacy of players in general (ibid. 145). By adopting aesthetic conventions from other types of media, all aspects of video games – including their spatial and musical design – thus engage in a process of *remediation*[10], that further aids the player's literacy in extracting meaning (Meinel 9). It is argued that game composers prudently deploy the player's literacy in order to enhance their immersion in the game world. Soundtracks arguably do this by utilizing musical elements that were previously used in similar situations, thus coinciding with the player's expectation, or – as will be seen throughout this thesis – deliberately defying those. This notion of game musical literacy aims to solve the inherent problem of gauging musical affects as the role of musical elements is no longer only attributed to the music itself but also to the player being able to recognize certain composing styles due to having been exposed to them throughout their lifetime. Van Elferen specifically points out the importance of such audio-visual literacy in Role-Playing Games and argues that due to their often fantastical content, their immersive quality can be at least partly attributed to an "epic composing style that relies heavily on existing compositional idioms from epic and fantasy films" (37).

In a way, one can therefore say that affect and literacy are highly intertwined and codependent on each other. Though there are several musicological studies on musical form and perceived[11] emotion, these can never truly come to undoubted conclusions due to the aforementioned subjectivity and interdependence with other elements. Hence, it is arguable whether it is the music-psychological attributes of music that lead to composers using certain idioms that in turn lead to a specific musical literacy, or if it is actually the frequent use of the same musical tropes in similar [gaming] situations and

[10] For a comprehensive overview on the concept of *remediation*, see Bolter and Grusin.
[11] The distinction between *perceived* and *felt* emotions will be dealt with more closely within the methodology (chapter 4).

thus the literacy itself that leads to the player being affected in a particular way—that is, the player has learned to perceive certain emotions in certain musical elements through frequent exposure, which then leads to composers utilizing these elements. As this question remains unanswerable, the notion of an interdependence of musical affect and musical literacy serves as a valuable bridge in analyzing game musical immersion.

INTERACTIVITY

When it comes to comparing video games and other audiovisual media, such as film, the most prominent difference lies in the fact that video games are inherently *interactive*. Ludologist Espen Aarseth describes video games as 'ergodic' cybertexts, meaning that "nontrivial effort is required to [...] traverse the text" (1). Hence, in video games, the player takes on the role of a kind of co-author, considering the played experience of the game to be the text (Wirman 3). In terms of musical interaction, specifically, Van Elferen defines it as the player's "interaction with and through music" (37) and refers to the player directly influencing the game's audio. Musical interactivity is said to be most prevalent in so-called music games in which the player's aim is to produce or play music –often using "haptic interfaces shaped like musical instruments" (ibid.) – such as *Guitar Hero*. In these cases, the game's soundtrack is diegetic and thus part of game environment itself. However, van Elferen also claims that musical interaction is present in games featuring mainly non-diegetic music – which Role-Playing games are undoubtedly a part of – through "the player's influencing of pre-composed game soundtrack by way of her movement through the game" (38). Therefore, the soundtrack of a video game, especially when *environmental scoring* is utilized, can be considered an ergodic text as well. As a certain piece of music will only play, when the player traverses a certain space, the player becomes not only the receiver of the sound signal, but also partly its transmitter "playing an active role in the triggering and timing" of the music (Collins 3). This type of music usage has been labeled as "reactive" music, as it is "directly connected to the actions of the players" (Liebe 47). Especially in regard to a game's spatiality, the player becomes the central part in their own spatial immersion through their "agency of movement through in-game environments", as "the soundscape must react to their spatiality" (Caron-Smith 84).

Vice versa, it can be argued that the player also reacts accordingly to the

soundscape. Empirical studies have shown that music affects the playing behavior throughout gameplay, influencing behaviors like risk-taking (Rogers et al.). Moreover, it was found that a lack of non-diegetic music resulted in a lack of control and "the sense of a presence and lifelike universe [being] affected" (Jorgensen 167). Thus, it is no exaggeration to conclude that music also communicates to the player information on how to approach gameplay. Players might approach certain locations and places within the game world differently than others depending on what meaning they decode from their musical underscoring. Hence, in the case of environmental scoring, the music is able to tell one how to behave and navigate the space—beyond the visual. Hence, while video game music draws from film music, it is this interactivity between player and music that constitutes a major difference. Due to this adaptive and interactive quality, video game music undoubtedly has a "greater aesthetic priority, narrative agency and informational content" than its 'cousin' (Summers, *Understanding Video Game Music* 8)—highlighting its crucial role in immersion and worldbuilding processes.

In following chapters, this thesis – using the example of the Role-Playing game genre – will look at how these dimensions of *affect*, *literacy*, and *interaction* interplay by utilizing musical parameters and conventions in certain spaces—thus creating meaningful places that communicate with the player and convey information about the spaces they navigate through as well as the game's narrative structure. Before thoroughly analyzing specific musical examples, it is crucial to take a look at the genre peculiarities and spatial as well as narrative structures prevalent in Role-Playing games (including the use of music on a greater scale), as will be done in the succeeding chapter.

3. Game (Music) and Genre: Role-Playing Games

3.1 Issues of Genre: What is a Role-Playing Game?

Even though the issue of video game genre has been frequently addressed in academic video game literature, the categorization of video games into certain genres proves to be somewhat problematic due to their very nature. This problem mainly evolves from the fact

that video games fuse different generic levels of genre—for instance, a video game may very well be described as a Medieval Role-Playing Game, a Sci-Fi-Horror-Shooter, or a Fantasy Platformer. There we have a visible distinction between what Mark Wolf calls "interactive" and "environmental" genre ("Genre and the Video Game" 3). The "interactive" genre is determined by a game's interactive character, that is, the mechanics and gameplay modes of a game, whereas the "environmental" genre alludes to the (fictional) setting of a game (ibid.).[12] As Tim Summers argues that in terms of musical scoring, the environmental genre "does not determine the music in the way the type of game [i.e. interactive genre] does"[13] ("Playing the Tune" 4), it makes sense for this research to focus on the interactive genre (of Role-Playing Games, in this case), though the settings of games that fall into this category are often similar by default and the environmental genre certainly has its own impact on musical underscoring as well (as will be seen in chapter 4.2.3 with *Skyrim*, for example).

Before looking into specific ways of music utilizations and its connection to notions of spatiality and narrativity in Role-Playing Games, though, it is essential to define this particular (interactive) genre and look at its genre-specific peculiarities. According to Wolf, Role-Playing Games – usually and henceforth abbreviated as RPGs – are games "in which the players create or take on a character represented by various statistics [and] various abilities, such as strength and dexterity [...] usually represented numerically" ("Genre and the Video Game" 13). Melanie Fritsch further describes the explorations of "dungeons" as well as the receiving of "experience points" (EXP) through finishing tasks ("quests") or beating opponents as major constituents of the genre (*Performing Bytes* 147). Another attribute connected to those is the fact that RPGs more often than not heavily rely on storytelling and narrative structures, more so than other video game genres (Sextro 35), as will explored more elaborately in 3.2.

While these attributes hold true for RPGs and its sub-types across the board, there are still observable differences when looking at their geographical origin. In fact, the RPG genre proves to be an interesting case study as its evolution advanced somewhat simultaneously but independently in two different regions, namely North America and Japan. Due to that, RPGs – especially earlier ones – can mainly be divided into the two

[12] For example, in the case of a Medieval Role-Playing Game, "Medieval" would then be the environmental genre, whereas Role-Playing would be the interactive genre, or type of game, if you will.
[13] Some empirical studies point to the same conclusion. See Zehnder and Lipscomb 241-258.

categories of WRPG (Western-RPG) and JRPG (Japanese-RPG), both of which differ from one another in some respects. According to Stenström and Björk, WRPGs like *The Elder Scrolls* and *Dragon Age* focus more on exploration of more or less open worlds, whereas JRPGs like *Final Fantasy* tend to have a heavier focus on narration (2). William Gibbons elaborates more on that difference:

> Broadly speaking, Western RPGs tend to favor individualized character creation, free exploration, and the creation of dark, 'realistic' fantasy worlds; JRPGs, on the other hand, typically privilege colorful, often cartoonish environments and situations, and a linear narrative with preestablished characters. (413)

Acknowledging these differences, then, one could conclude that in general WRPGs rely more on spatiality as opposed to JRPGs that favor a game's narrativity. Nevertheless, as already established, these two modes are inherently intertwined and influence each other. Also, while these still aspects still hold true for most J- vs. W-RPGs – especially earlier ones – the lines have become somewhat blurry and much less overt in recent times, with games from both geographical regions blending elements from both sub-genres or not adhering to those at all. For instance, the *Dragon's Dogma* and *Souls* series by Japanese game developing studio Capcom are oftentimes referred to as a Western-style RPG due to it mostly adhering to Western traditions, notwithstanding its country of origin. Furthermore, while their respective focus and approach might differ in some detail, all RPGs depend heavily on worldbuilding practices. Bowman goes as far as to state that RPGs are inherently more immersive that other interactive genres of video games due to elaborate worldbuilding serving as a major constituent of the genre (35).

3.2 A Hero's Journey: Narrative and Spatial Worldbuilding in Role-Playing Games

While – as elaborated – there are differences in how overt and linear certain narrative and spatial structures are laid out across the RPG genre, the similarities certainly prevail. One aspect that can be observed throughout a majority of RPGs is the fact that more often than not, these follow a certain established narrative trajectory: The Hero's Journey. The

Hero's Journey – or "monomyth" as it is often referred to – is a narrative structure coined by Joseph Campbell, who based this pattern on Carl Jung's analytical psychology, and was first described in *The Hero with a Thousand Faces* in 1949. Breaking down this narrative pattern, Campbell writes:

> A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man. (23)

Throughout the years, different adaptations of this scheme emerged, most notably Christopher Vogler's *The Writer's Journey*, which served as a basis for the immensely popular *Star Wars* movie franchise (Gordon). However, different adaptations of the monomyth still follow a common route: a point of familiarity – oftentimes the protagonist's home (town) – followed by the crossing of a threshold into an unknown world characterized by disorientation, getting acquainted with that unknown world through fights eventually leading to a final quest (in the case of video games, often represented by a final boss fight) before returning home having saved the world in some way or another.

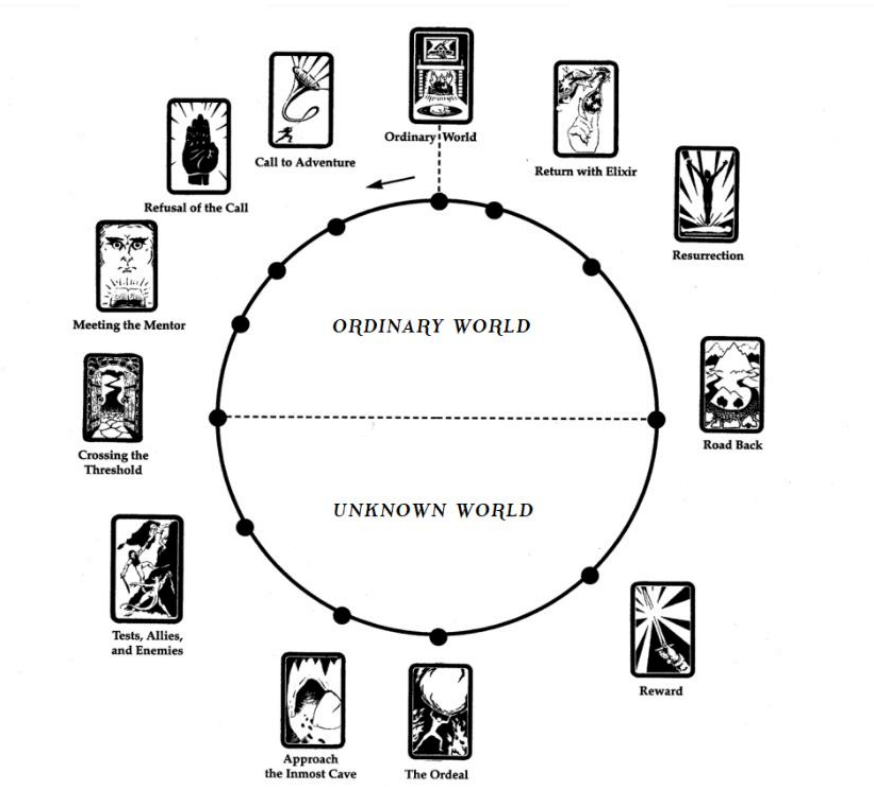

Figure 3. Model of the Monomyth, from Voytilla, *Myth and the Movies*.

Figure 3 lays out a common linear representation of the monomyth as it can be found in all kinds of (fictional) texts. However, it is no surprise that video games do not follow this narrative structure as linearly as other types of media. While JRPGs do follow narrative structures more linearly than its Western counterparts, these types of games are inherently interactive and non-linear. In a way, it is a game's interactive spatiality and the associated movement and agency of the player that further perforates this usually linear narrative structure. As Caron-Smith notes, "in (both Japanese and Western) RPGs, it is common for geographies to change as the player should have [free] access to various locations" (89). As such, the player has agency over movement and navigates through the fictional world spaces and explores the different places as they want to—to a certain degree at least.[14] Hence, this agency in terms of spatiality has important implications for the spatial and narrative practice of RPGs.

In terms of spatial structures within the monomyth scheme, there is a visible binary distinction between the so-called "ordinary world" versus the "unknown world". As most modern RPGs – at least in parts – follow the monomyth trajectory (Knopf 105), the worlds and spaces therein can be categorized into those two worlds, so to speak. However, due to the inherent non-linearity and spatial design of games, the distinction between those two is not always straightforward and cannot only be contingent upon a game's storyline and its advancement. Hence, video games employ what can be considered a non-linear interactive adaptation of the Hero's Journey. For instance, the player might encounter places pertaining to notions of the "ordinary world", or zones of *familiarity* and *safety*, if you will, at the very end of a game and places connected to the "Uknown World", or zones of *disorientation*, *unfamiliarity*, and *danger*, early on. In way, then, spaces of the "ordinary" and the "unknown" must be decoded by the player for them to adapt their gameplay behavior in those. As narrative progress of a game is not always as reliable for determining a space's character as it is in more linear iterations of the monomyth, the RPG player initially upon entering a new place has to rely on other means of semiotic communication and worldbuilding provided by the game: most obviously the

[14] Specific video games differ in terms of "openness" of the game world, i.e. some (especially more recent) games offer completely open-worlds that are explorable and freely roamable from the very beginning, whereas in others, the player is somewhat restricted in what places they can visit at which point in the game's story progress.

game's visuals, but – just as importantly, as explored in 2.3 – also the game's soundscape and musical score.

3.3 Musical Worldbuilding in RPGs: Location-Based Leitmotifs (*Spatial Themes)*

What makes Role-Playing Games stand out musically is that they – more so than games of other genres – are much more elaborate in their utilization of music as a major part of the worldbuilding and storytelling process through the means of musical "themes" or leitmotifs[15] (Summers, "From Parsifal to the Playstation" 5). Within the RPG music realm, this technique of using musical leitmotifs was popularized by Nobuo Uematsu, the composer for most of the *Final Fantasy* franchise, who starting with *Final Fantasy IV*, used associative musical ideas to represent different characters (Fritsch, *Performing Bytes* 150). The effect and influence these leitmotifs had on players and fellow composers alike is expressed by Greening:

> In what has been called one of the most iconic moments in gaming, millions of players wept to Uematsu's gentle melodies and Aerith's Theme was ingrained into the general gaming consciousness. (qtd. in Fritsch, *Performing Bytes* 162)

However, as already mentioned in 2.3, musical pieces can not only be connected to certain characters or situations, but also to certain locations within the fictional game world by what can be considered environmental scoring—even though the analysis of such location-based themes has widely been neglected in ludomusicological research on the RPG genre with it mostly dealing with character-based leitmotifs[16]. RPGs, however, can even be considered a pioneer genre in terms of adopting such an approach as Gibbons points out that the combination of narrative-based cues and location-based cues within games has existed ever since the immensely popular JRPG *Dragon Quest*

[15] Usually referring to a fragmentary or complete musical theme that represents an idea, situation, or person within the story. Often used in film music as well, this means of composing was popularized by Richard Wagner in the Romantic Period.

[16] For more insight concerning the use of leitmotifs, or themes, for characters in RPGs, see Sextro, *Press Start*, as well as Summers, "From Parsifal to the Playstation".

(418). This is all the more observable in a lot of Western action RPGs, where oftentimes there is an intentional lack of narrative- or character-based music and a pure focus on environmental scoring. Michiel Kamp goes as far as to say that "a purely environmental approach to scoring is a 'marked feature' of the [Western] action RPG genre that was started by the first *Diablo*" (141). Furthermore, while dynamic location-based cues have existed throughout a myriad of genres of video games ever since the emergence of the iMUSE engine, the specific approach utilized in most RPGs, especially those from Japan, still constitutes a particularity due to its intricacy. In fact, while games like the mentioned *Monkey Island 2* were able to change their musical score upon the players entering a new space, these scores were rather short, looped musical ideas that were re-used in different spaces that were designed to feel similar to the player. Composers like Nobuo Uematsu, though, refined this approach by composing complete, formally structured, and distinct musical themes for every single unique spatial location the player encounters within the virtual world. For instance, a look at the score tracklist of *Final Fantasy VII* – the most successful entry within the entire series – shows that at least 15 musical pieces directly correlate to unique locations within the fictional game world ("Tracklist | *Final Fantasy VII* Original Soundtrack"). Consequently, one can argue that with RPGs like these, the musical leitmotifs of spaces function as a literal worldbuilder by structuring the game world.

While a lot of ludomusicologists refer to any type of musical scoring connected to spaces as "location-based cues" – a term that has been used here as well up to this point – this thesis suggests yet another term for referring to the use of more intricate musical leitmotifs connected to unique locations, especially in RPGs: *Spatial themes*. This term aims to acknowledge and emphasize the role of musical underscoring in creating meaningful places that are crucial for a game's *spatiality* and thus worldbuilding. Moreover, the term "cue" does not always account for the more elaborate musical intricacies of scores utilized in those spaces, often found in RPGs, which is why the musical term "theme" is preferred here as well.

4. Creating Places: A Musical Analysis of Spatial Themes

Even though it has been acknowledged that such spatial themes are "significant for the spatial practice of a game" (Stockburger 5), more in-depth analyses on *what* kind of musical elements are used in those in order to attain spatial immersion and shape the character of a space (thus constructing places) are comparatively scarce in ludomusicological literature.[17] One possible reason for that might be the fact that ludomusicology – as mentioned – borrows a lot of academic modes and methods from the medium of film music which creates an inclination to focus on musical examples that overtly project narrative meaning, much like film music operates in cinema. However, this neglects the fact that due to the examined interlacement and interdependence of spatiality and narrativity, spaces and places – and hence also the spatial themes that help construct them – do hold their own narrative meaning. Therefore, the following analyses will deal with spaces pertaining to the narratological notions of the monomyth, that is, the ordinary and the unknown world, and how musical spatial themes act as reinforcement or even as their initial construction tool at times and hence enter a type of semiotic communication with the player—thereby facilitating (spatial) immersion.

4.1 Methodology

In order to apply the ALI model and examine how certain musical parameters shape spaces and amplify immersion, certain spatial themes from established RPGs will be musically examined and compared with each other. In order to draw conclusive assertions from those comparative analyses, the chosen spatial themes represent similar types of spaces within their respective game worlds and narratives, examining three

[17] Nonetheless, there are noteworthy exceptions: "The Common Cold" by Lavengood and Williams deals with the musical elements associated with the Winter topic and spaces connected to that. However, dealing with such "Topic" theory does not necessarily account for the broader narrative structures underlying spaces and places. For instance, a space projecting themes of winter in its musical underscoring can both be shaped as "ordinary" or "unknown" through the use of other contrasting musical parameters. Similarly, Kamp and Sweeney ("Musical Landscapes in *Skyrim*") analyzed the use of compositions using ambient *Klangflächen* in creating a Nordic fantastical environment in *The Elder Scrolls V: Skyrim* (more on that in chapter 4.2.3).

examples each for the musical underscoring of the "ordinary world" – or places of safety and security – and the "unknown world" – or places of disorientation and danger. Thus, similarities and conventions in the (environmental) composition style within the RPG genre – leading to an implied RPG-musical **literacy** – can be exposed and examined. To account for the crucial notion of frequent exposure leading to such a literacy, video games are chosen that can be considered especially representative for the genre due to being immensely successful commercially – suggesting that a big number of players within this realm are acquainted with them – and regarded as influential within the realm of game music and its development. As such, the games chosen stem from the *Pokémon*, *Kingdom Hearts*, *Elder Scrolls*, *Final Fantasy*, and *Diablo* series—all major staples of the RPG genre and renowned for their respective soundtracks.[18] Furthermore, this selection of games is also based on historical/temporal and transpacific dimensions as this analysis will look at both early and more recent examples as well as games from both Japan and the West (mainly North America)—thus allowing a broader – and somewhat more representative – picture of the RPG genre and its (spatial) music.

Aside from diving into the musical peculiarities of the spatial themes, the spaces they underscore will be described and analyzed in terms of their role within the game's broader setting and narrative as well as their visual (graphical) representation. Thus, their role within their respective iteration of the narratological monomyth structure will be examined. It is only after that, that an in-depth analysis of the musical spatial themes can reveal the role music plays in reinforcing or even constructing the meaning of these places. Thus, this interplay of space and music can reveal how the game's specific musical soundscape communicates emotional meaning to the player, influences their playing behavior and thus facilitates a semiotic **interaction**.

In order to examine music's role in that interaction, the musical underscoring or spatial themes and their formative structural parameters (e.g. tonality, harmony, melody, instrumentation etc.) will be formally analyzed. While most musical analyses make sense of the meaning of those parameters through mere use of interpretation and hermeneutics, this analysis will also consider them in conjunction with their presumed **affect** dimension

[18] Especially the soundtracks of *Final Fantasy*, *Kingdom Hearts*, and *Skyrim*, for instance, are an integral part of the famous Symphonic Game Music Concerts series, which organized the first live concert featuring video game music in the Western hemisphere in 2003 and is now considered highly influential for the broader public perception of game music. For more insight into this 'concertization' of game music, see Greenfield-Casas, *On the Classical Arrangement and Concertization of Video Game Music*.

by considering findings from music psychology. Though – as has been established in previous chapters – it seems virtually fruitless to examine musical elements on their own when it comes to assigning definitive emotional responses, the following analyses will hence analyze the musical elements and their co-occurrence and context with regard to well-established findings by renowned music psychologists drawing from Diana Deutsch's *The Psychology of Music* – now regarded as a main staple in the field – as well as Alf Gabrielsson and Erik Lindström (whose findings on the relationship between musical structures and perceived emotional expressions have been released both in *The Oxford Handbook of Music Psychology* and the *Handbook of Music and Emotion*) among others. By considering the notion of literacy and presumed underlying affects, the musical parameters utilized can be considered part of the composers' toolkit for "[evoking] predictable emotions" (Van Elferen 35), or in other words, conventions. However, as already briefly mentioned in 2.4, most music-psychological studies conducted are aware of the difficulty in empirically examining certain parameters and correlating inductions of emotions within the player, which is why most empirical studies make a distinction between *felt* emotions and *perceived* emotions, meaning that emotions within and through music are not necessarily felt but "perceived as [emotionally] expressive properties of the music" (Zentner et al. 502). However, more recent studies that measure psycho-physiological responses to music hint towards a close relation between those two categories[19] and this distinction does not necessarily change the conceptual ideas underlying the interlacement of musical affect (what *can* be said) and contextual literacy (what *will* be said).[20] By considering the multifold interdependence of affect, literacy, and interaction in the musical-spatial practice of RPGs, then, these analyses aim to showcase the crucial and often neglected role of music and its formal parameters in immersion and worldbuilding processes.

[19] See Song et al; Korsmit et al.

[20] Note that in order to enhance and ensure traceability, the (re-)sources of music-psychological findings and presumed perceived affects will be given repeatedly (along with the formal analyses) across the case studies, so that a consultation of specific examples is facilitated without having to return to preceding case studies.

4.2 The Ordinary World – Case Studies

This subchapter will deal with the musical underscoring of safe and familiar spaces within the fictional game world. As mentioned earlier, these safe spaces are considered part of the "ordinary world" according to Campbell's narrative scheme and often take the role of the home of the protagonist in Role-Playing games. However, that is not always the case, especially in video games due to their non-linear spatiality and narrativity. Hence, it is crucial to look at how the musical dimension facilitates the familiar character of a seemingly safe and ordinary space and consequently reinforces and at times even creates places with narrative and emotional meaning. Consequently, the musical parameters for musical spatial themes relating to such safe spaces in RPGs will be analyzed with regard to their presumed perceived affect and in turn compared for their implications on specific literacies.

4.2.1 Pokémon Red / Blue

Pokémon Red and *Blue*[21] were jointly released for the GameBoy system on February 27, 1996, as the first (J-)RPGs of the *Pokémon* franchise, which as of now constitutes the world's most valuable media franchise overall with an estimated all-time revenue of over 100 billion US-Dollars (Buchholz). The music for these titles – as well as most *Pokémon* games after this first generation – is composed by Japanese video game composer Junichi Masuda.

The games are set in the fictional region named Kanto, which is loosely based on the real-life region of Kanto in Japan. Like in all other *Pokémon* main titles thereafter, the player assumes the role of an aspiring Pokémon trainer (meaning a person who catches Pokémon – the term for the animal-like creatures within the game, deriving from a portmanteau of "pocket" and "monsters" – and fights using them), who sets out to a journey throughout the game world in order to become the next Pokémon-Champion,

[21] *Pokémon* games are generally released with two versions simultaneously. As these only differ in terms of some minor version-exclusive features and thus do not have any major difference in their ludic nor narrative elements, they will henceforth be regarded as one.

which is realized by beating so-called Gym leaders within every major city along the way and eventually defeating the Elite Four—the best Pokémon trainers in the fictional world. Additionally, the main plot revolves around battling the evil forces of Team Rocket, an organization that aims to abuse Pokémon in order to take over the world. The major plot-driven objective (aside from becoming Pokémon-Champion) hence is to save the world, in this case, Kanto—complying with Campbell's monomyth notion.

The player begins their quest through Kanto in their hometown named Pallet Town. The very first frames after an initial set-up prologue feature the player character in their bedroom, sitting in front of a TV with a console and gaming controller set up (revealed to represent an SNES console when pressing A in front of it). Despite the graphical limitations of the first iteration of the GameBoy, the virtually represented space is immediately decoded as a "typical" children's bedroom, with a bed, a plant, the aforementioned console, a computer, and a desk. As such, it inevitably represents notions of the ultimate safe haven for a lot of (young) players. On the first floor of the house, the player finds their mother sitting at a table in the living room—confirming it to be their house, their home, their most "ordinary world".

Figure 4. The player's room from *Pokémon Red/Blue*.

Upon exiting the house for the first time, Pallet Town as such becomes visible. Pallet Town is a small settlement with three visible buildings: the player's house, the rival's house, and Professor Oak's laboratory—a research lab where Professor Oak does research on the Pokémon. Visually, those buildings do not differ greatly, though, which is mainly due to the technical limitations mentioned. Aside from the buildings, one can see other

structures that are meant to represent fences and flowers as revealed after interacting with associated signposts.

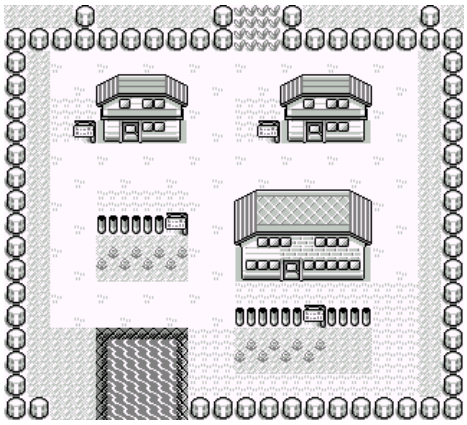

Figure 5. Birds-Eye View of Pallet Town.

While there is not a lot of information attainable from the graphical rendering of this town alone, there is enough for the player to recognize it to be a place pertaining to their "ordinary world"—especially considering that it is their hometown as revealed at the start of the game. Pallet Town's supposed state as a safe place is further emphasized by the town's slogan on the signpost that reads: "A Tranquil Setting of Peace & Purity". Even disregarding all the spatial and narrative information one gathers from the place upon interacting with it such as it being the player's hometown, the town's state as a safe space will arguably be of no surprise for the player, considering Jenkin's notion of evocative spaces. Towns are indeed a common type of space within the RPG genre and have been so since its inception. As a consequence, players who might have played other RPGs before draw on their genre-specific literacy and associations contained in such town environments. As Rossetti mentions, "towns are generally known to be safe spaces in RPGs" (11). Hence, Pallet Town's character assorts with the player's presumed spatial and narrative expectations. In terms of narrative progress and plot, the "ordinary" nature of this space is further facilitated by the fact that since the player starts out being an ordinary child living with his mother, he does not own any Pokémon yet, thus not being involved in any fights whatsoever.

Nevertheless, it is not only after traversing and navigating the space, that its character as a place is revealed. In fact, it is reinforced and initially communicated by the

musical underscoring of Pallet Town (eponymously named “Pallet Town” in the soundtrack) which immediately begins its first loop as the very first frame inside the player’s room appears.

“Pallet Town” by Junichi Masuda

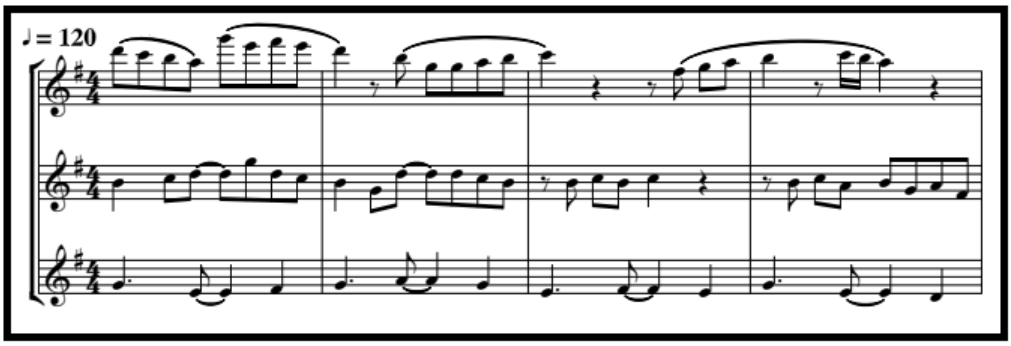

Figure 6. Section-A excerpt from "Pallet Town" by Junichi Masuda – Transcription.[22]

Mode/Harmonic structure:

The three-part piece[23] is set in the key of G-major and never leaves this tonal environment. It is widely said that major keys arouse affects of joy, happiness, and hope and even though this statement seems rather primitive at first, this notion has been empirically confirmed by an overwhelming number of music-psychological studies (Hevner 105; Gabrielsson and Lindström 384). In terms of harmonic movement, the piece mainly consists of perfect cadences (IV-V-I) leading to the tonic (even though these are partly only outlined by a somewhat stepwise moving bass), which was found to evoke expressions of joy and serenity (ibid. 380). Also, this gravitation towards the tonic makes sense looking at it metaphorically as Pallet Town is indeed the home of the player and the tonic of a key is often also referred to as the “home” of a tonal piece in musical jargon.

[22] All transcriptions by author, unless noted otherwise.
[23] Due to the GameBoy’s sound limitations, composers could only use up to three pitched channels for their music. For further insight into the history of video game music in terms of technical developments, consult Collins, *Game Sound*; Fritsch, “History of Video Game Music”. A slightly more in-depth elaboration also follows in chapter 4.3.1.

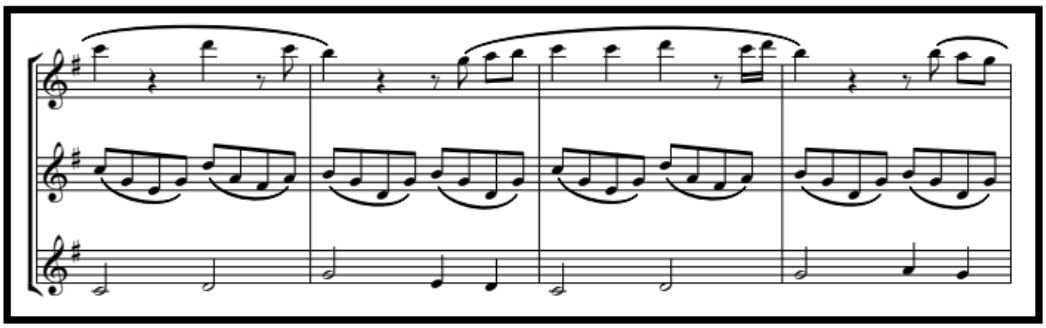

Figure 7. Section-B excerpt from "Pallet Town" by Junichi Masuda -- Transcription.

Section-B makes the harmonic progressions all the more obvious through the use of arpeggiated chords outlining perfect cadences before moving into a II-V-I cadence – the most commonly used progression to prepare a certain tonic in Jazz – for the last four measures (note that some music theoretical outputs, especially those concerning classical music mainly, describe II-V-Is as regular perfect cadences, where a sixth interval is added to the subdominant chord and moved to the bass).

Melody:

The melody of "Pallet Town" spans over a tenth interval and is mainly moving in a stepwise manner – associated with perceived expressions of dullness and ease (Gabrielsson 220) – with occasional intervallic leaps. Thompson and Robitaille further found that melodies that were most frequently perceived as peaceful almost always "involved stepwise motion leading to melodic leaps" (qtd. In Gabrielsson and Lindström 390). This particular motion is most obvious in measure 1 with a seventh leap from A4 to G5 that is preceded by a descending motion from D5 to said A4 (see Fig 5.). Moreover, the melody always lands on a chord tone within a strong beat, further facilitating its strong tonal and consonant character as tensions between the melody and harmonic chordal structure are thus averted.

Tempo:

The piece's tempo is approximately 120 beats per minute and thus falling between the *moderato* and *allegretto* spectrum[24] signifying a slightly high-pace tempo, which was

[24] Note that "classical" markings relate to – sometimes largely – different tempos regarding beats per minute, depending on historical era and performer. For more information, see Gersmann, "Klassisches Tempo für klassische Musik".

found to enhance perceived affects of potency, excitement, and happiness when coinciding with major modes (ibid. 26; Juslin and Sloboda 596). As such, tempo's effect on the perception of emotions is highly dependent on the harmonic/melodic structure, meaning that the same tempo can increase or decrease either positive or negative emotions in different pieces (see 4.3.1 for an opposite example).

Rhythm/Meter:

"Pallet Town" is written in 4/4-time and stays within it throughout. The main melody incorporates mostly regular rhythms (in this case, eighth notes) which "may be perceived to express happiness [...] and peace" (Gabrielsson 220) leading to small sections of syncopated movement, whereas the lowest section – assuming the role of a bass instrument – constantly plays a syncopated dotted rhythm. This variation or dualism leading to a flowing kind of rhythm between voices was found to as well express happiness and joy (ibid. 221).

Essentially, the analysis of the musical underscoring of Pallet Town with its associated spatial theme reveals a heavy focus on musical parameters connoted with (perceived) positive affects such as peacefulness, pleasantness, and happiness. Even though these parameters can be somewhat ambiguous on their own, their obvious co-occurrence in scoring the player's hometown, their ultimate place of familiarity, does already imply certain presumed affects and compositional intentions in conveying semantic meaning. Hence, the musical soundscape within the space not only fittingly reinforces, but – considering the technical limitations in terms of visual storytelling – also takes a role in constructing its spatial and narrative character and meaning, creating a *place* of safety and comfort—or, in other words, an "ordinary" world.

4.2.2 Kingdom Hearts

The first installment of the *Kingdom Hearts* series was released on March 28, 2002, for the (then recent) PlayStation 2 console by the Japanese development studio Square, which was already famous within the RPG genre for its work on the immensely successful *Final Fantasy* series. Being a collaboration between Square and The Walt Disney Company, the

Kingdom Hearts series constitutes a kind of fusion of the *Final Fantasy* reals with Disney's cinematic universe by re-introducing characters from *Final Fantasy* titles as well as characters from Disney movies. Unlike the Final Fantasy series, though, the game's score was composed by Yoko Shimomura – a female Japanese contemporary of the aforementioned Nobuo Uematsu.

The *Kingdom Hearts* series follows the story of Sora – the main protagonist and player character. This story unfolds in the first installment – simply named *Kingdom Hearts* – with Destiny Islands, the home of Sora, and his friends, Kairi and Riku, being attacked by so-called "Heartless" (monster-like enemies) and thus swallowed by what the characters later refer to as "The Darkness". As their home of Destiny Island is inevitably destroyed, Sora himself is sucked into a massive dark cloud, after which a black screen appears, lasting for several seconds.

Figure 8. Sora being swallowed by The Darkness.

Figure 9. Sora exclaiming: "I'm in another world!".

Subsequently, Sora wakes up confused in Traverse Town—a foreign place unknown to him. At first glance, this new place Sora, and thus the player, encounters, seems to adhere perfectly to Campbell's notion of the unknown world: As Sora must leave his familiar home, he crosses the threshold into a new, unknown world, associated with feelings of disorientation and lurking danger. This is initially emphasized by several factors. Sora wakes up in a dark alleyway, which does not communicate much information in terms of visual storytelling, as the initial view is somewhat limited. Furthermore, what even further enhances the player's sense disorientation is the fact that within the first sub-area, that is, the dark alley in this new place, there is an absolute lack of musical underscoring—which is all the more striking, as up to that point, there is a continuous use of musical soundscape in the game. After the player moves a few steps out of the alleyway, the virtual camera pans out in front of Sora, who exclaims, "I'm in another world!".

The term “world” here Is to be understood in a somewhat literal sense, as the player eventually learns that the game universe, so to speak, is actually separated into different autonomous worlds that are only connected through an in-game realm resembling outer space. This spatial plurality is emphasized by the fact that it is only the protagonist group as well as certain antagonists that hold the power to traverse to different worlds. Apart from them, all characters in their respective worlds are not aware of the fact that their world is not the only one. These autonomous worlds within the *Kingdom Hearts* series are, for the most part, spatial representations of Disney franchises such as *Tarzan*’s Deep Jungle, *Little Mermaid*’s Atlantica, *Frozen*’s Arendelle, or *Nightmare Before Christmas*’ Halloween Town, among several others. Within the game’s spatial structure, these worlds function as their own traversable narrative spaces and draw on their own respective associations, much like physical Disney amusement parks, as elaborated in chapter 2.2. Hence, these spaces constitute elaborate complex ludifications of Disney movies, and thus showcase a poignant example of transmedia storytelling in the sense of Jenkin’s theory of convergence culture, in which he remarks that:

> Media convergence makes the flow of content across multiple media platforms inevitable. In the era of digital effects and high-resolution game graphics, the game world can now look almost exactly like the film world–because they are reusing many of the same digital assets. (*Convergence Culture* 106)

Due to this nature of most of the game’s worlds, their character as well as their own narrative role within the structure of the game is rather overt to the player. These spatial remediations of well-known Disney classics are perhaps the most overt example of evocative spaces in a “Jenkian” notion. Since the sub-plots within these worlds are more or less one-to-one reiterations of the movies they are based on, these Disney-fied spaces do not necessarily rely on non-diegetic communication through music in order to convey a spatial and narrative character.[25]

This is certainly not the case for Traverse Town, however, which constitutes one of

[25] Nevertheless, the (re-)use of musical elements from the respective Disney soundtracks in the spatial themes of their associated worlds would certainly prove fruitful for further musicological research beyond the scope of this thesis, albeit not in a narratological vein necessarily.

the few original worlds within the game, where the actual narrative surrounding Sora unfolds. As the player is initially just as clueless as Sora upon arriving there, they rely on other means of information in their evocativeness—all of which, especially on a narrative level as well as on an aural level (due to the absence of music), seem to cement its role as Sora's unknown world within his own Hero's journey. However, this changes as the player exits the alley and subsequently enters the town's square, where the main area of the space becomes visible and fully traversable, allowing the player to gain information from the game's visual and musical representation of the space.

Even though the *Kingdom Hearts* series emerged only 6 years after the first *Pokémon* installments, the technical landscape and thus the development conditions – both in terms of graphics as well as audio possibilities – had improved drastically over the intervening years, with the PlayStation 2 system constituting a major milestone within the evolution of video game technology (Fritsch, "History of Video Game Music" 29). Consequently, the graphical 3D renderings of spaces in *Kingdom Hearts* create a more "realistic" image (in the sense of it being an approximation of our physical space) as opposed to the achromatic 2D visuals within *Pokémon* and thus make meaning much more inferable for the player at first glance.

Figure 10. The player's first view of the Town Square (1st District).

Figure 11. Birds-Eye View of Traverse Town's 1st District.

It is only after the virtual camera pans to the town's main square that the player realizes they are in a presumably safe town-like environment. This is not only due to the place's architecture that evokes connotations of the aesthetics of a calm and cozy Victorian-age town with an accessories shop and a small café being visible immediately upon the camera's first pan, but also because of the mere presence of NPCs (non-player-characters) standing in the town's district. While all these elements may certainly evoke connotations with other town-like "safe spaces" so prevalent in the RPG-genre, it is the

musical soundscape that immediately signals to the player that there is no looming danger and thus creates a sense of place—a sense of safety.

The eponymously named spatial theme of Traverse Town starts playing instantly as the camera completes its panning shot of the First District and the player regains their agency in movement. What makes the emergence of this musical theme even more striking is the fact that – as mentioned earlier – there is an absolute lack of music in Traverse Town up to that point, making the sudden appearance of musical underscoring all the more noticeable. Hence, the player's attention – if only for a brief moment – is immediately directed towards the music, which further highlights its role in creating this meaningful place and communicating its character to the player.

"Traverse Town" by Yoko Shimomura

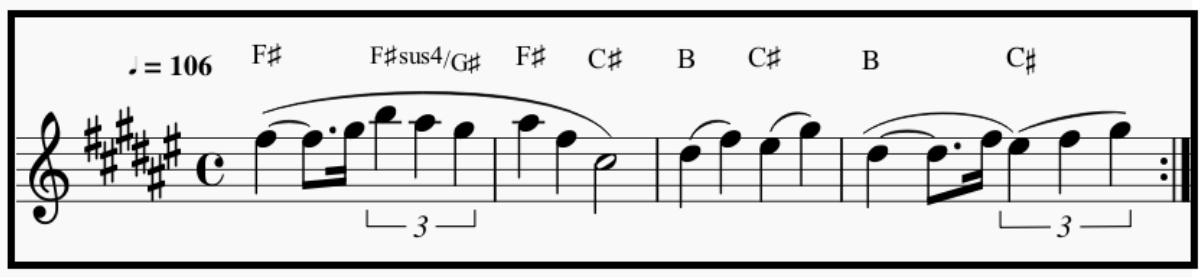

Figure 12. Section-A excerpt from "Traverse Town" by Yoko Shimomura -- Leadsheet Reduction.[26]

Instrumentation/Timbre:

Opposed to Junichi Masuda, Yoko Shimomura and other composers for the PlayStation 2 console had "almost total compositional freedom" due to the system's hardware (Fritsch, "History of Video Game Music" 30), which consequently led to more intricate arrangement using MIDI approximations of real instrument sounds. In the case of "Traverse Town", the main melody is played by an [alto] saxophone accompanied by a piano and an acoustic bass outlining the harmonic structure along with a cymbal. This choice of instrumentation is insofar relevant as in a few of the only comprehensive empirical studies on timbre and affect dimensions to date, the saxophone has

[26] For the sake of traceability of argument, Figure 7 shows a reduced transcription giving only the melody and the harmonic structure in Lead Sheet form.

continuously ranked among the highest – in one experiment even the highest – in terms of emotional valence[27], signifying the perception of happy and joyful affects (Eerola et al.; Wu et al. 670).

Mode/Harmonic Structure:

"Traverse Town" is in the key of F#-major and stays within that tonality throughout the entire A-section (see Fig. 11), thus presumably leading to positive perceived expressions such as joy and happiness (Hevner 105; Gabrielsson and Lindström 384) similarly to the Pallet Town theme. In terms of chord progressions, the A-section consists only of the tonic (I), subdominant (IV) and dominant (V) chords. The specific chord on the third beat of measure 1 (F#sus4/G#) might seem like the odd one out, however, the peculiar looking G# in the bass – just like the fourth (sus4) – serves as a suspension that is resolved back to the root of the key (F#) right at the beginning of the succeeding measure. This resolution presumably enhances the feeling of gravitation towards the tonal center—or "home", speaking in metaphorical terms. This tonal gravitation and related perceptions of happiness and joy are further emphasized by the occurrence of a perfect cadence at the end of the section leading to its repetition.

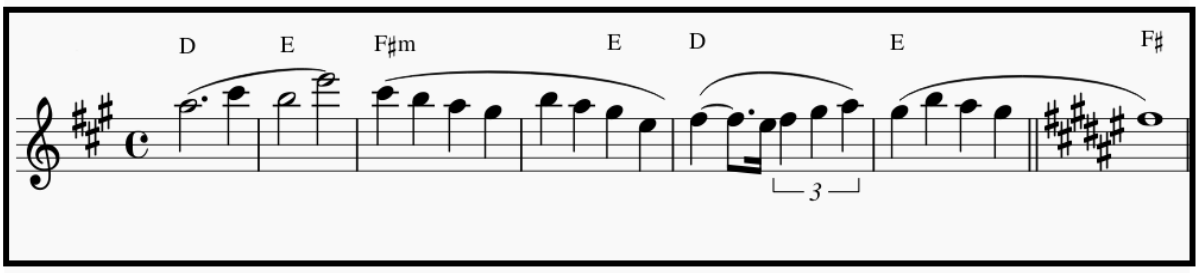

Figure 13. Section-B from "Traverse Town" by Yoko Shimomura -- Leadsheet Reduction.

Section-B initially seems to divert form that tonal gravitation by shifting the tonality to its parallel minor[28], that is, F-sharp minor. This "modulation" contains a stepwise harmonic progression from D-major to E-major leading to F#-minor. At the beginning of measure 5 of Section-B, this progression seems to repeat. However, this time the stepwise progression from D-major to E-major leads back to the original tonic of F#-major. Looking

[27] The term '(emotional) valence' describes a value continuum from 'unpleasant' (low) to 'pleasant' (high), thus gauging if an affect is negative or positive.
[28] Note that in German functional harmony traditions, the translation "Parallele" refers to relative keys, which can cause semantic confusion.

at it from a classical music theory point of view, one might be tempted to shrug this off by assuming the last chord to be a result of the usage of a Picardy Third[29] – common at the end of compositions – which falls short, though, due to the fact that the F#-major does not constitute an end[30], but the (re-)start of Section-A, returning to its original tonal center. Hence, it proves more fruitful to view this progression from the viewpoint of F#-major. In F#-major, the D-major and E-major chords can be analyzed as a modal interchange, thus describing them as borrowed chords from its parallel minor (bVI-bVII-I) or as an alteration of the so-called "backdoor progression" (iv[7]-bVII[7]-I) – common in Jazz – using the relative major of the minor 4 chord. Yet still, an even more accurate description in terms of its function is given by Robert Gjerdingen who – using Riemann's functional theory – describes this stepwise direction as a variation of a perfect cadence using a type of subdominant (sP) to dominant (dP) to tonic (T) progression—"a reading of these chords not without support in late-Romantic cadences" (13), which presumably further strengthens the piece's tonal center—F#-major. In fact, this progression to the tonic has become so prevalent in video game music that it is sometimes dubbed "Mario-Cadence" or "Fanfare-Cadence" due to its common reoccurrence in the *Super Mario* and *Final Fantasy* series' fanfare themes ("How Final Fantasy VII's Victory Theme Defies Expectations").

Melody:

Like the Pallet Town Theme, the melody of "Traverse Town" comprises the interval range of a tenth overall and incorporates a mainly stepwise motion, suggesting a perception of peacefulness (Gabrielsson 220). Additionally, the melody is mostly corresponding to the harmonic structure, landing on chord-tones on strong beats, thus enhancing its consonant character and presumably leading to connotations of happiness (Juslin and Sloboda 56).

[29] A term coined by Jean-Jacques Rousseau; referring to major chord on the first scale degree at the end of a musical piece that is actually in a minor (or modal) key – conventional in music history up to the Baroque period.

[30] Spatial themes usually do not really "end" due to the fact that they constantly loop until the player leaves the related location, for instance.

Tempo:

The spatial theme's tempo lies at around 106bpm (corresponding to the *moderato* range in classical terms), signifying a slightly faster tempo that is again corresponding to mainly positive affects, such as joy and happiness (ibid. 596; Gabrielsson and Lindström 384) in this structural/harmonic context.

Rhythm/Meter:

The track is written in common-time (4/4) and – like Pallet Town's theme – stays within that meter throughout its entirety. Rhythmically, the piece constantly switches from syncopated melodic patterns to very regular ones, constituting a varied rhythm, which "may express joy" (Gabrielsson 221).

Similarly to Pallet Town, the co-occurrence of several markers of perceived expressions of positive affects presumably points towards a musical characterization and construction of the player's sense of place.

Traverse Town's musical underscoring denotation as a place of the player-character's "ordinary" world is eventually confirmed within the game's narrative: Traverse Town is ultimately revealed as a "place where the people whose worlds have been engulfed by Darkness land on" (Clariano 5)—thus effectively serving as a place of refuge and a new home for Sora. Furthermore, it is only after Sora has arrived in Traverse Town that he, and thus also the player, learn of the overarching narrative and the Hero's journey that is about to unfold: In fact, Sora is chosen by the so-called Keyblade, a magical sword-like weapon that not only holds the power to defeat the Heartless but also to seal the Keyholes of all the worlds in the universe, thus shutting down the gateway through which the Darkness and the Heartless enter those worlds. Hence, Sora effectively embodies the archetype of "The Chosen One", who is the only one capable of saving the world, or worlds (plural), in this particular case. While in Traverse Town, Sora teams up with Goofy and Donald, both well-known characters from the Disney universe, as they decide to embark on their Hero's journey. Accordingly, Traverse Town constitutes the actual starting point within *Kingdom Hearts*' monomythical narrative structure and, as such, the new "ordinary" world for Sora and the player. This is further enhanced by the fact that after first arriving there, Traverse Town acts as the diegetic "hub world" of the game. Hub worlds, as the

name suggests, are special locations within games, which the player-character continually returns to and from which they access (most) other areas of the game world. In a way then, hub worlds like Traverse Town constitute perhaps the purest form of ludic representations of the "ordinary" world in a Campbellian sense—and it is the music that plays a significant role in initially deciphering the space as such and thus influencing the player's behavior within its boundaries.

4.2.3 The Elder Scrolls V: Skyrim

The Elder Scrolls V: Skyrim – henceforth referred to as *Skyrim* – is a Western-RPG released on November 11, 2011, by US-American development studio Bethesda Softworks as the fifth installment of the *The Elder Scrolls* series. Being considered one of the most important games in the emergence of the open-world style and claiming its place within the top ten best-selling video games across all genres and platforms (Lamb and Smith 80), it is no wonder that there has been an ample amount of research both within broader game studies as well as ludomusicology dealing with *Skyrim* specifically.

In terms of game design, *Skyrim* makes use of many of the elements distinguishing Western RPGs from those originating in Japan, or more precisely, within Japanese traditions (see chapter 3.1). In stark contrast to *Kingdom Hearts*, for instance, there is no pre-designed character, but the player is allowed full agency in creating the player character's aesthetic upon starting the game. The player's heightened agency is further highlighted by the different ways the player is granted to approach the game. Due to its open-world design, the player is free to wander wherever they like, regardless of narrative progress whatsoever, thus allowing them to "evade" the main plot indefinitely. This inevitably entails an emphasized non-linearity both within the game's spatiality and narrativity. Nonetheless, that does not mean that *Skyrim* does not contain an elaborate storyline and plot, as its narrative elements are in fact part of the constituents that make the game as renowned as it is (ibid.).

The main story – playing out in the 'main quest'-line – revolves around the player-character and their endeavor to save the world from a dragon named Alduin, who was worshipped by the ancient people of the continent and is prophesied to return one day

and be responsible for the looming apocalypse. According to legend, this apocalypse can only be averted by a true hero, a Dragonborn. As one of the many loading screen annotations poignantly summarizes:

> Skyrim legend tells of a hero known as the Dragonborn, a warrior with the body of a mortal and soul of a dragon, whose destiny it is to destroy the evil dragon, Alduin. (see Fig. 13)

Figure 14. Loading screen from *Skyrim*.

This prophesied Dragonborn is eventually revealed to be the player-character who inherited the power to absorb dragons' souls and use magic in form of the Dragon Shouts, a language used to 'manipulate' dragons and defeat them. Hence, the overarching narrative of Skyrim employs similar monomythical tropes like *Kingdom Hearts* in that it is bound on the notion of "The Chosen One" in form of the player-character. Notably, the world of *Skyrim* shows overt references to Campbell's archetypical ideas on a diegetic level: *Skyrim* contains books in the form of attainable items that can actually be read, one of which bearing the title "The Monomyth", obviously referencing Campbell's narratological structure and thus further implying its influence on the game's plot overall.

The game is set in the eponymously named region of Skyrim within the continent of Tamriel. In its visual (and narrative) design, the setting is clearly inspired by Nordic and medieval aesthetics with a mostly wintery landscape featuring mountains covered in snow as well as "castles made of cubic stone, timber houses with thatched roofing, cobblestone marketplaces, limited furnishings, and [...] hearths inside buildings" (Lamb and Smith 81). *Skyrim*'s medieval quasi-Nordic setting is also imprinted on the socio-

cultural sphere of the fictional game world. The socio-cultural group most associated with the region of Skyrim are the "Nords"—a diegetic "race" primarily reminiscent of Norse mythology and popular Viking representations. The in-game description of the Nords reads: "Citizens of Skyrim, they are tall and fair-haired people. Strong and hardy. Nords are famous for their resistance to cold and their talents as warriors" (see Fig. 14).

Figure 15. Visual representation and in-game description of a Nord.

Figure 16. A typical landscape in *Skyrim* featuring a snowy forest pathway and a small timber house.

Regarding the use of musical underscoring in reinforcing *Skyrim*'s Nordic setting and thus its environmental genre (see chapter 3.1), ludomusicologists Michiel Kamp and Michael Sweeney analyzed how Jeremy Soule's musical score incorporates compositional approaches tied the notion of *Klangfläche* (or "sound-sheet") in order to do so. Carl Dahlhaus describes the concept of *Klangfläche* as "outwardly static but inwardly in constant motion" (307), drawing on its "vertical" character. Consequently, Stuart Raphael argues that this style of composition "counteract[s] the principle of teleological progression in music", meaning that there is no end or goal the music is leading into (59). In other words, musical progressions, directions, and resolutions in its parameters such as melody and harmony are averted. Hence, the "character of musical form as process" (Dahlhaus 307) is subverted, which in turn permits a "particular kind of statis" (Kamp & Sweeney 182). In his analysis of the musical oeuvre of Nordic composer Edvard Grieg, Grimley suggests that Grieg's musical depictions of (Nordic) landscape made use of such *Klangfläche* aesthetics by juxtaposing Norwegian folk music elements with classical Western diatonic harmony (8). Consequently – drawing on Grimley's analysis – Kamp and Sweeney argue that Jeremy Soule's score for *Skyrim* utilizes similar

approaches in order to evoke not only Nordic qualities in the sonic depiction of environment, thus creating a *Naturklang*, but also to permit a "static (game-) musical experience" (181).

As such, it is worthwhile noting that the notion of *Klangfläche* bears close conceptual similarities to a term often referred to in ludomusicological literature: ambient music. Ambient music as a term, a genre, if you will, was taxonomically defined by English musician Brian Eno, who, in his accompanying notes to his album *Ambient 1: Music for Airports*, writes:

> Ambient Music must be able to accommodate many levels of listening attention without enforcing one in particular: it must be as ignorable as it is interesting. ("Music for Airports Liner Notes")

On this definition's implications for the musical parameters of ambient music, Axel Berndt further elaborates:

> It [ambient music] can be achieved by an interplay of several musical characteristics such as low density of musical events, soft amplitude envelopes of the sounds and [most importantly] a less memorable formal structure. (200)

In fact, it is the specific usage of such ambient music (also permeating much of Jeremy Soule's soundtrack for *Skyrim* in the form of *Klangfläche*) that constitutes one of the major differences in musical approaches to environmental scoring between recent Western-RPGs and their Eastern relative. This recent development is aptly described by William Gibbons, who points out that:

> There [in WRPGs], the recent tendency has been to largely phase out the use of loops and wall-to-wall music placement in favor of short, ambient cues and increased amounts of silence during gameplay, complemented with cinematically scored cut scenes. The shorter musical cues most often avoid prominent melodic material (in contrast to the melody-dominated JRPG themes), and are often composed first and foremost with the goal of avoiding listener fatigue. (420)

The very last sentence is perhaps of most importance here and reveals a diverging attitude towards musical approaches and immersion across the two poles. While musical themes (both character and spatial themes) in JRPGs focus heavily on musical parameters like melody and harmony and a teleological progression in those, recent WRPGs consciously avoid an overbalance of such characteristics, as game designers and composers are afraid that such overt musical elements actually threaten immersion over time by taking away from the gameplay or even boring the player after them hearing the same theme for several hours at a time. This constitutes perhaps also an inherent consequence of the prevalent focus on non-linear and open worlds in WRPGs compared to JRPGs. As the player in *Skyrim* does not even necessarily have to play through the main quests and is free (and even incentivized) to wander around certain spaces without temporal restrictions, they are exposed to a space's musical theme for a considerable time, which is why composers like Jeremy Soule focus heavily on ambient textures rather than more obtrusive pieces (ibid.).

This divergent approach is further reinforced by the fact that in *Skyrim*, most spatial themes are not inextricably linked with specific in-game locations. Rather, the game engine is programmed so that musical spatial themes play at random upon exploring the vast open-world environment of Skyrim (Lamb and Smith 82). Yet, while this holds true for most of the music in *Skyrim*, the soundtrack still makes use of some themes intrinsically connected to only one location, albeit very sparingly. One striking example with such a musico-spatial congruency lies within the city of Whiterun. In fact, Whiterun and its music constitute a multifold anomaly within the score: Firstly, Whiterun is one of the only places within the fictional game world underscored by its very own spatial theme that only play while traversing this space. Secondly, this very theme is one of the few tracks in *Skyrim* that is not fully ambient in character but – like most JRPGs – rather makes use of a prominent melody and cohesive harmonic structure, thus being more overt to the player and enhancing its interactive and communicative quality. In a way, one can argue that it is indeed the very focus on ambient music in recent WRPGs that makes certain pieces of music that prudently diverge from that pattern, all the more noticeable and signifies them (and their associated spaces) as particularly important.

Within the game world of *Skyrim*, Whiterun is the capital city of a larger area named

Whiterun Hold, which lies in the very center of Skyrim. A description of Whiterun found in the *Skyrim: Official Game Guide* published by game studio Bethesda themselves reads:

> Whiterun is seen as the most 'pure' Nordic city in Skyrim. In Whiterun, Nords live as they have for centuries: their lives are simple, harsh, and rooted in ancient traditions. [...] [I]t is the culture of Whiterun that best exemplifies what it means to be a 'True Nord'. [...] Whiterun is a large city, albeit one that retains the feel of a smaller familiar Nord village. (529)

As such, Whiterun is characterized as the ultimate "ordinary world" and safe haven for the Nords living in the region of Skyrim. Whiterun is also the first major civilization the player encounters after they are initially captured for a presumably illegal crossing of the border and subsequently free themselves after Alduin suddenly appears and attacks the captors. Very similarly to Traverse Town in *Kingdom Hearts*, it is in Whiterun that the player-character learns of their real destiny as the Dragonborn and embarks on their goal-driven journey. While – as mentioned – most of the main quests are avoidable, a lot of the game mechanics closely tied to the gameplay such as spawning dragons, gaining the ability to use Dragon shouts, etc., are not unlocked until one has completed two main quests in Whiterun, which is why most players – regardless of their respective mode of play – will inevitably encounter the city of Whiterun early on in their gameplay. It is undeniable that due to its character, Whiterun constitutes an iteration of the "ordinary world" within *Skyrim*'s embedded narratological structure. Being one of the only safe environments in *Skyrim* the player encounters early on and bearing the diegetic possibility to buy a house within its borders, it can also be assumed that Whiterun constitutes an "ordinary" world, a safe haven, for players who deliberately avoid finishing the main quests, as they know they can return to the city without having to consider contingent dangers. As such, the space becomes a place of safety and familiarity not only in terms of the embedded main plot but also in terms of the individual player's *emergent narrative*. As opposed to the narrative that is embedded into a game's "programmed" storyline, emergent narratives are the narratives that are *not* pre-structured, pre-programmed, nor pre-authored, only "taking shape through the [individual] gameplay" (Jenkins "Game Design" 131). Open-world games like *Skyrim* that afford quasi-infinite non-linear ways of gameplay, without having to "beat" the game, lend particularly well for a variety of modes of emergence. As

Eric Murnane states in his PhD thesis, "*Skyrim* represents ideal candidate [...] because it opens considerable space for emergent narratives to occur" (22).

Figure 17. First View after passing the gate to Whiterun.

Figure 18. The Dragonsreach in Whiterun.

While Whiterun is visually set apart from the environment the player encounters priorly in that it constitutes the first major civilization characterized by a high density of Nordic-inspired timber houses as well as more imposing buildings such as The Dragonsreach in stark contrast to the surrounding natural landscape (see Fig. 17), its character as a place of relative safety is impressively conveyed by its accompanying – and as mentioned considerably more overt (in comparison to other "environmental" tracks) – musical spatial theme titled "The Streets of Whiterun", which highlights Whiterun's important role within *Skyrim*'s spatial and (*emergent*) narrative structure.

“The Streets of Whiterun” by Jeremy Soule

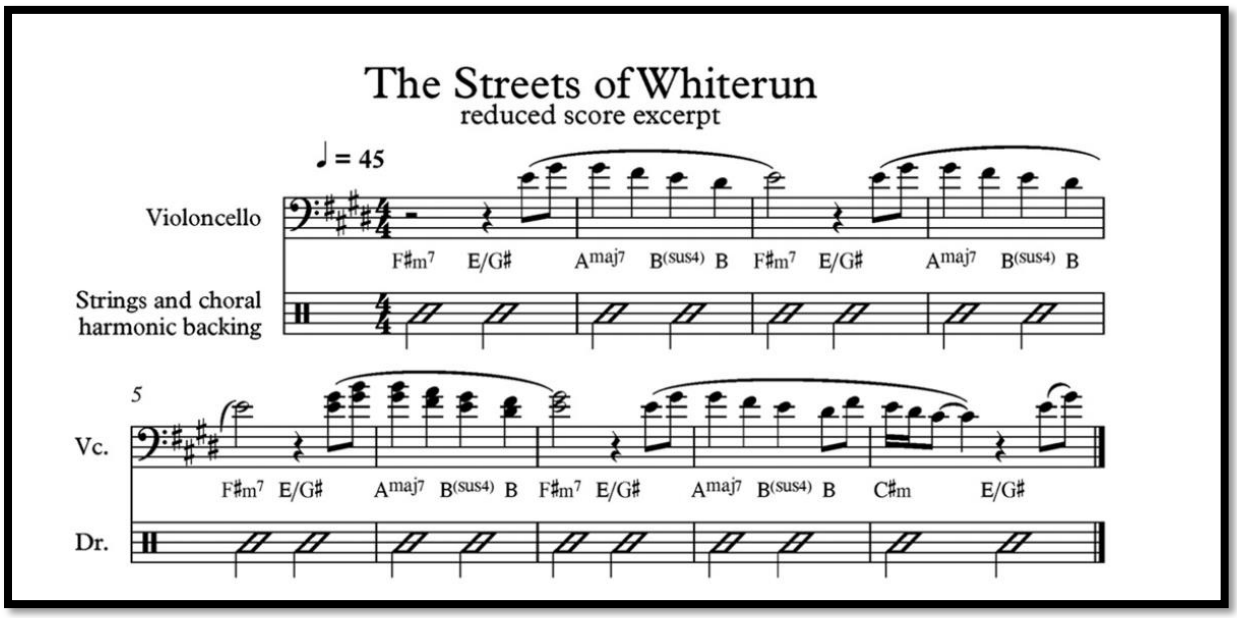

Figure 19. Reduced Score Excerpt of "The Streets of Whiterun" by Jeremy Soule – from “Fantasy Video Game Music within a Neo-Mediaevalist Paradigm”.

Mode/Harmonic Structure:

“The Streets of Whiterun” starts out very minimalistic with a piano and orchestral backing consisting of only two notes for several measures: E and B (not in the figure). This initially gives the track an obscure ambient sounding feel that does not seem to differ too much from the other music in *Skyrim*. As a third (note) is omitted for the first measures, there is virtually no indication as to what key or mode the piece is written in, since the fifth alone is not denoting any specific tonality. However, a G# is added subsequently, thus suggesting an E-major tonality, or initial chord, at least. This is already noteworthy in so far as the vast majority of Skyrim’s non-diegetic music is written in minor modes (Aeolian and Dorian, mostly) with major modes being used very sparingly only. Thus, a subtle difference in this spatial underscoring is presumably already communicated to the player upon entering this new space. The (E-)major key of the piece is fully established after the intro as the main motif (see Fig. 18) in the cello commences, thus inducing perceived positive affects like with previous examples (Hevner 105; Gabrielsson and Lindström 384).

Its major tonality is further emphasized through the harmonic progression and use of cadences. “The Streets of Whiterun” mainly revolves around a diatonically moving chord progression that is Amaj7 (IV(maj7) – B (V) – F#m7 (IIm7) – E (I). What initially upon listening seems like the start of a perfect cadence towards the tonic, is “interrupted” as a II-chord follows the V-chord. However, the II-chord is succeeded by a tonic of E-major in first inversion, as the third of the chord (G#) is in the bass. This prudently leads to a smooth rising stepwise transition from the II-chord to the tonic or “home” in the bass, which then again resolves back to the start of the progression with yet another upward motion from G# to A. This is possibly one of the reasons as to why Lamb and Smith describe this piece’s diatonic progression as “recursively rising” (82), though they do not specify their reasoning. The sole exception to this otherwise looping progression is when in a few variations the E chord is substituted by its relative minor, C#-minor (see measure 9 in Fig. 18), thus constituting a type of deceptive cadence. According to Sears, such a deceptive cadence (where the tonic [I] chord is expected but substituted by another one, most often the vi-chord in major keys) “leaves harmonic closure somewhat open” (53). This merely happens for half a measure in this case, as this C#-minor is ultimately resolved back to the original tonic of E-major. Arguably, this small alteration within the progression makes the subsequent resolution back to the major tonic all the more perceivable, highlighting its constituting role within the piece. This assumption is not without support from empirical research: In a study on perceived emotions of harmonic cadences, for instance, Smit et al. have shown that deceptive cadences lead to higher arousal ratings within listeners and consequently lead to a higher attention as to what comes next, musically speaking (8). Additionally, the strong gravitation towards the tonic of E-major remains constantly prominent as after the tonality has been established through the melody/motif, the piano continues playing its intro motif consisting of the notes E and B (which at that point are decoded as the first and fifth scale degree of the tonic) as an ostinato throughout the piece.

Regarding the actual harmonies used within the progression, the use of 7th chords as opposed to simple triads is conspicuous. The first chord within the looping progressions is an Amaj7 chord that coincides with the first downbeat of the main motif (after a brief anacrusis, or pickup beat), where the 7th is additionally emphasized by its occurrence in the corresponding melody. This is in so far interesting as in one of the only

empirical studies on the emotional qualities of single chords with a focus on 7th, conducted by Imre Lahdelma and leading music-psychologist Tuomas Eerola, revealed the maj7 chord was "rated as the most nostalgic chord" with a statistically significant result (14)—thus tying in with the narrative notion of familiarity and "feeling home" in a place one longs to return to on his quest.

Melody:

In terms of melodic parameters, the main motif incorporates an overall interval range of a seventh, with the melody moving a stepwise fashion, which may be connected to a sense of peacefulness or dullness (Gabrielsson 220). In a similar way to the preceding examples, the melody is mainly corresponding with its harmonic cadence, thus highlighting its diatonic and consonant character arguably leading to the perception of happy and/or peaceful affects in the music (Juslin and Sloboda 56).

Instrumentation/Timbre:

As mentioned, the piece starts out with a piano ostinato and a harmonic backing consisting of a string orchestra. Subsequently, a human choir is added to the chordal soundscape and a violincello takes the major role of playing the main motif/melody. The instrumentation is especially noteworthy in its interaction with the theme's elaborated harmonic structure. As Lahdelma and Eerola found, certain affect dimensions, including the notion of "nostalgia" in maj7 chords, are considerably enhanced when in conjunction with the timbre of strings (9). Hence, this showcases the presumed cross-structural enhancement of the perceived emotion of nostalgia in "The Street of Whiterun"'s harmonic underscoring. The same holds true for its melody occupied by the cello. Juslin and Västfjäll found that the timbres of solo string instruments are particularly effective at expressing emotions compared to other instruments due to their voice-like character (qtd. in Lahdelma and Eerola 13), therefore presumably enhancing the emotional qualities that are perceived through the other structural factors, whether those are positive or negative in terms of emotional valence. Accordingly, the melody's peaceful and consonant character is presumably enhanced by this very choice of instrumentation.

Tempo:

The piece's tempo lies at approximately 75bpm (even though Lamb and Smith give the indicator of 45bpm in their transcription), which corresponds to the classical marking of *andante*, meaning "at a walking pace". The perceived affects of such a moderate tempo are especially ambiguous but "may be associated with expressions of calmness/serenity, and peace" (Gabrielsson 218) depending on its context.

Rhythm/Meter:

Like the spatial themes of Pallet Town and Traverse Town, "The Streets of Whiterun" is composed in 4/4-time and does not leave this metric environment. In terms of rhythm, this theme is eminently regular, pointing to possible connotations of happiness, dignity, majesty, and peacefulness (Gabrielsson 221). Moreover, the motif's regular rhythm mainly revolves around quarter notes that correspond directly to the metric pulse in this case and thus follows Hevner's classification of "firm rhythms", which further enhances associations of seriousness, dignity, and vigor (266).

Dynamics/Articulation:

Possibly owing to a compositional goal of maintaining a cohesive character of the entire score and soundscape, the theme – despite its formal character – is still relatively "ambient" in terms of its dynamics and overall loudness. The instrument's soft articulation and relatively low volume throughout presumably increase perceptions of tenderness and peacefulness (Gabrielsson 219), fitting with the nostalgic character created by the harmonic backing. Furthermore, this is enhanced by the fact that the melody as well as the sound tapestry, if you will, play in a legato manner throughout, presumably strengthening the perceived expression of "longing" in consideration with the other parameters (Gabrielsson and Lindström 384).

Musical Form:

Whiterun's spatial theme is particularly interesting in terms of its form, or rather the lack thereof, as the piece is strikingly repetitive in its overall structural pattern. As mentioned, all spatial themes are inherently repetitive to a degree as they are looped as long as the player roams the corresponding space (see Footnote 27). Nonetheless, there are oftentimes clear dividable melodic (and at times correspondingly harmonic) sections as is seen with both Pattern Town and Traverse Town. However, Whiterun's theme consists

only of the main motif (apart from the brief intro and small sections in which the melody is omitted and only the backing continues), that is repeated as long as the track plays whilst in Whiterun. This particularly low complexity in terms of (melodic and harmonic) form – which makes sense considering Western (RPG-)scoring approaches of averting overly overt musical information – was found to be closely associated with notions of "relaxation, joy and peace", especially when coinciding with "average dynamism" (Gabrielsson 220), as can be seen, or heard rather, in "The Streets in Whiterun".

As elaborated, Whiterun's special role in *Skyrim*'s spatial narrativity is prudently reinforced by its accompanying musical theme, which in itself constitutes a peculiarity within the game's score. By underscoring Whiterun with its own theme that is set apart from the rest of the score, the player decodes this space as a potentially meaningful place. The music's constituting structural factors play a major (pun intended) role in attributing this meaning to the place: they denote Whiterun as a place of safety, a place that is ought to feel like home—despite not being 'scripted' as the player-character's initial home (like in *Pokémon*) nor a place of refugee or hub-world the player inevitably has to return to for narrative progress (like in *Kingdom Hearts*). In their paper on fantasy game music tropes in *Skyrim*, Lamb and Smith also acknowledge Whiterun and the emotional character presumably induced by its associated theme – albeit extremely briefly and without giving any in-depth musical reason as to why – by writing that "the impression is one of quiet and resolute optimism, encouraging the player to explore in safety" (82). In a sense, then, this thorough analysis functions as a more elaborate and systematic approval of their initial presumption.

Ultimately, Whiterun's significance, especially concerning emergent narratives or the player's individual Hero's journey, so to speak, is contingent upon the player and their respective spatial practice emerging from the immersion the place and its music are designed to provide. The fact that music is not to be underestimated in this case is perhaps most aptly demonstrated by focusing upon the actual player base and taking a look at the reception discourse concerning this very track and its impression. Following comment left on a YouTube upload of "The Streets of Whiterun" showcases the profound meaning and decoding as a place of home, players of the game may attribute to Whiterun and its spatial theme:

Figure 20. Most liked YouTube comment on "TES V Skyrim Soundtrack - The Streets of Whiterun" uploaded by Aramil.

YouTube user 'AlmostLover13Chou' states that "For me, this song always feels like returning home", highlighting the semiotic meaning and perceived impression of evoking a feeling of returning home, which conforms to the analysis given. The sheer number of likes – expressing approval from over 6000 other users – points to the fact that they are not alone in their perception. Notably, a response to that very comment by user 'annabelp3013' takes the music's connotations a level further by saying that this piece of music does not only 'feel like' returning home—"it *is* returning home".

4.3 The Unknown World – Case Studies

Opposed to chapter 4.2, this following subchapter will deal with the musical underscoring of spaces associated with feelings of disorientation, lurking danger, that is, rather creepy or mysterious spaces within the fictional game world, using examples from locations that would fall into the category of the "unknown world"—to speak in monomythical terms. Oftentimes, these spaces have a drastically opposing and different feel from ones that are considered safe spaces. As outlined in chapter 3.2, the (player-)character's crossing of the threshold into the unknown world is often coinciding with disorientation, fear, and being lost. As will be analyzed, it is with this type of spaces that music's role in prescribing meaning to them is possibly most pronounced, in that it is able to turn an otherwise ostensibly safe *space* into a *place* of imminent danger, of the

"unknown", through the means of contrapuntal underscoring purposely contradicting other means of communication such as the visuals.

4.3.1 Pokémon Red / Blue

Since this first case study is derived from the same game(s) as the example of Pallet Town given in 4.2.1 – namely Pokémon Red/Blue – an introduction to the game itself is superfluous at this point.

After the player-character receives their first Pokémon – thereby assuming the role of a Pokémon trainer – from Professor Oak in their hometown of Pallet Town, they ultimately embark on their journey to explore Kanto and become Pokémon-Champion. Along this journey, the player-character encounters a variety of areas distinctly differing in terms of topography: *towns*, *cities*, *forests*, as well as *caves*. One of the latter ones*, Mt. Moon*, is of particular significance within the game, not only because it is the first cave the player encounters in the early-game but also due to its position within the game's (spatial) narrative.

Within the game's diegetic map, the location of Mt. Moon is described as "[a] mystical mountain cave that is known for its frequent meteor falls", which already implies part of its character. After gaining their first gym badge, the player must inevitably cross Mt. Moon in order to progress to the location of the next Pokémon arena, Cerulean City. Mt. Moon is not only part of the player-character's "unknown world" due to its mysterious, unknown character (enhanced by the fact it is the first of its kind one has to explore) but also because it marks the very first encounter with mentioned Team Rocket as they try to steal valuable fossils of ancient Pokémon from the inmost area of the cave. This encounter and subsequent inaugural fight with the game's primary antagonists thus also signifies the player's ultimate crossing of the first threshold into his journey of saving the world and becoming a "hero" in Campbell's terms.

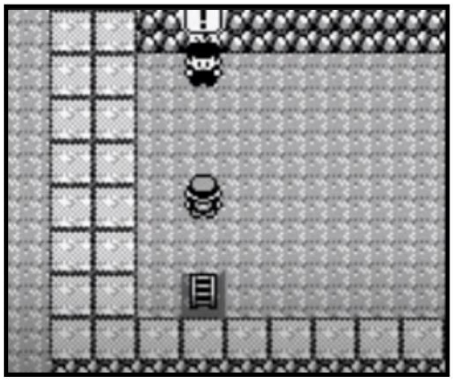

Figure 21. The player's first encounter with Team Rocket.

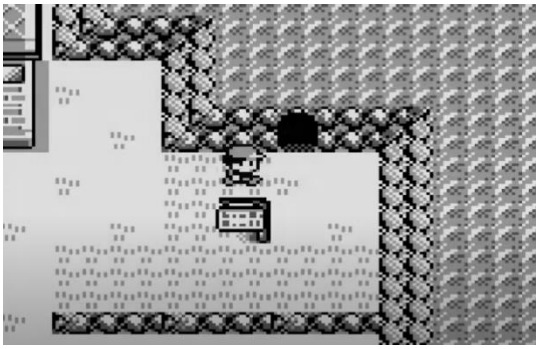

Figure 22. Entrance to Mt. Moon.

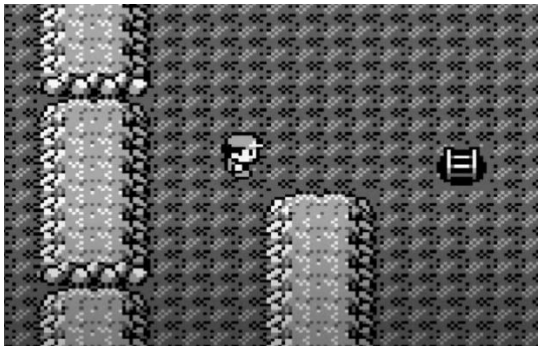

Figure 23. Inner area of Mt. Moon.

Despite the visual limitations, the entrance to Mt. Moon is easily decoded as a cave entrance, giving the player an idea as to what kind of space they might expect. In fact, caves are thought to trigger a variety of cultural associations that have developed over time. As Sanna points out, caves are often associated with a certain "fear of an unknown world" (1)—an image that has been molded especially through cultural representations of caves and their narratives within all kinds of media including (horror) film. Sanna further elaborates on that by writing that "[t]he exploration of a cave often generates many feelings typically experienced by the characters of Gothic narratives, such as disorientation" (ibid.). As such, caves constitute perhaps one of the archetypical spaces of the "unknown world" narrative. It can be argued, then, that players might approach caves with a heightened sense of caution as compared to other locations such as towns.

That a more cautious mode of gameplay is reasonably appropriate for this very cave is immediately communicated to the player by a prudent reinforcement of these associations in the musical spatial theme inextricably connected to Mt. Moon.

“Caves of Mt. Moon” by Junichi Masuda

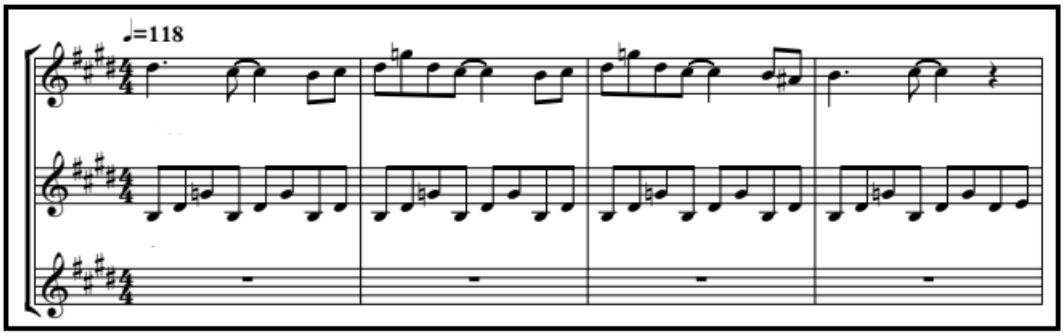

Figure 24. Section-A excerpt from "Caves of Mt. Moon" by Junichi Masuda – Transcription.

Due to its nature (*which is fairly peculiar as will be demonstrated*), this three-part piece (see Footnote 20) does not lend itself well for separate analyses of its harmonic and melodic structure, which is why these parameters will be analyzed in conjunction with each other within a *Tonality* column.

Tonality:

Upon hearing the first measure, one can easily sense that something is weird about this theme. The middle voice appears to outline a harmonic progression by playing an arpeggiated augmented chord (B+) while the melody in the first voice derives from a whole-tone scale, thus obscuring any sense of tonal center or tonality for that matter. This non-tonality stands in direct juxtaposition with the musical examples in chapter 4.2. and was found to be related to perceived emotions of anger and fear (Gabrielsson 220; Juslin and Sloboda 596). On another note, this lack of a tonal center makes sense in a metaphorical way as it “conveys the disorientation often felt in underground spaces”, as Whalen also asserted in his analysis of underground music in the *Mario* series (38). The whole-tone scale presumably makes up the biggest part of this perceived emotions, as it has been said to “correspond to the mental image of floating weightlessly without a deliberate focus” by German music theorists Daniela and Bernd Willimek in their *Theory of Musical Equilibration* (orig.: *Strebetendenz-Theorie*) (22). The augmented triad in the

second voice adds to this feeling due to its dissonant and instable character[31], which correlates to expressions of tension and unpleasantness (Gabrielsson 220). Section-B is introduced by a chromatic ascending motion starting in the bass voice and manifesting itself in the second voice thereafter. Both, heavy chromaticism, and rapid ascending motions in melodies are said to lead to tension and anger (Gabrielsson and Lindström 385-386), thus further adding to the piece's uneasy and presumably negative (in terms of emotions) character. This dissonance reaches its climax right at the last measures before its loop, where two different augmented chords (B+ and E+) – implying two different whole tone scales altogether – are layered between the voices.

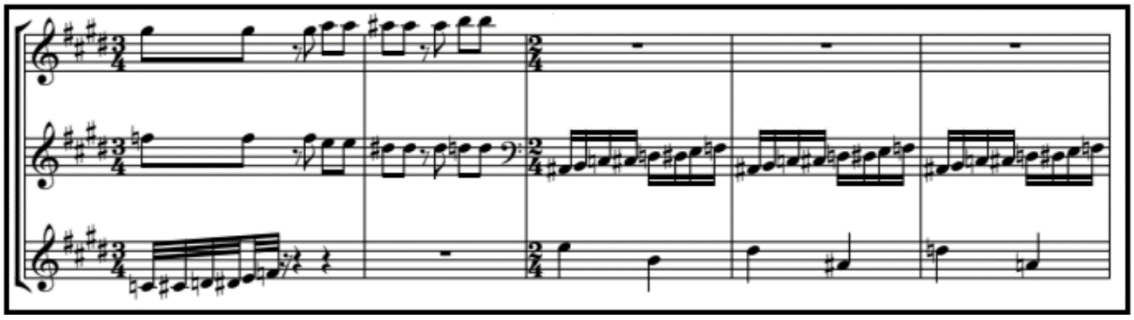

Figure 25. Section-B excerpt from "Caves of Mt. Moon" by Junichi Masuda – Transcription.

Tempo:

Mt. Moon's theme lies at a faster tempo of around 120bpm (*allegretto*), which was found to enhance perceptions of anger, uneasiness, and fear in similar tonal/structural contexts (Gabrielsson 218; Juslin & Sloboda 596).

Rhythm/Meter:

Another major aspect heavily adding to this spatial theme's uneasy and disorientating character lies within its temporal dimension—its meter and rhythm. In terms of meter, this piece starts out in usual 4/4-time but subsequently shifts to 3/4-time for its B-section after a chromatically ascending buildup. After merely two measures in this new meter, this piece surprisingly shifts to a 2/4-meter. This deconstruction of time reaches a climax

[31] Even though music theorists and music psychologists alike regard the augmented triad as "dissonant" and "instable", there is a lack of agreement as to what constitutes this character. For instance, this character is largely said to manifest itself in the interval of the augmented fifth, however, it has not been clarified whether the difference between this interval and its enharmonic consonant shape of the minor sixth is physiological or psychological. For more, see Broyles, *How Dissonant is the Augmented Triad?*.

in measures 24 to 36, in which Masuda freely and continuously changes the time signature from 4/4 to 3/4 to 5/4 and conversely (see Fig. 25). Adding to this irregularity in meter is the fact that the theme consists of large sections that make use of exorbitant ritardando and thus constantly switch between a variety of tempos as well. This fits the character of the space as Juslin and Sloboda found that large variability in tempo and meter is heavily connoted with the perception of emotions of fear (596), whereas Gabrielsson and Lindström further add that rhythmic and metric irregularity frequently arouses perceived expressions of uneasiness (391).

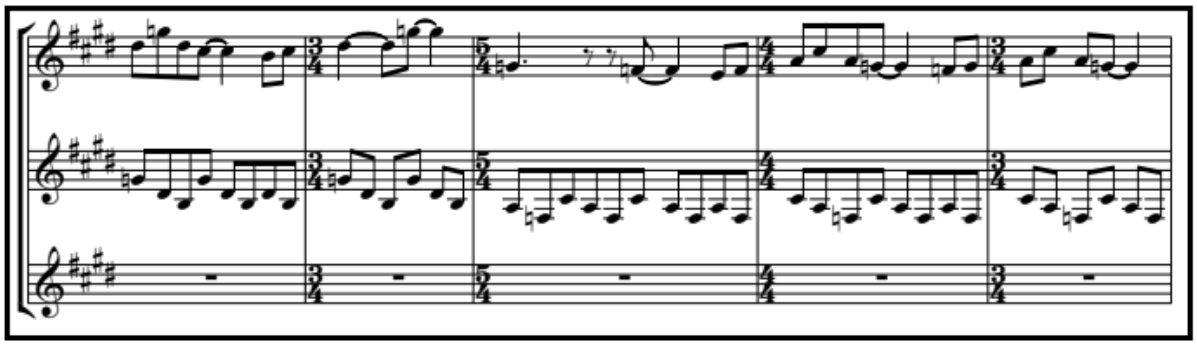

Figure 26. Measures 27-31 from "Caves of Mt. Moon" by Junichi Masuda – Transcription.

In summary. the musical underscoring of Mt. Moon differs greatly from those of the "ordinary world" and overtly utilizes (somewhat "unusual") musical elements that fittingly match associations with the spatial and narrative notions of the "unknown world"—thereby enhancing and reinforcing Mt. Moon' role as a place of disorientation, uneasiness, and mystery.

While Mt. Moon serves as a poignant case study in determining music's role in reinforcing the character of the "unknown" sonically, one cannot conduct an analysis of "creepy" places in the first-generation *Pokémon* games without mentioning Lavender Town and its now infamous spatial theme.

Lavender Town is a small settlement – similarly to Pallet Town – that does not differ too much from other towns in the game environment (see Fig. 1 for a visual juxtaposition of both these places). In fact, the only minor aspect that stands out in terms of its topography is the presence of a cave-like entry that might remind the player of places such as Mt. Moon, they encounter prior to Lavender Town.

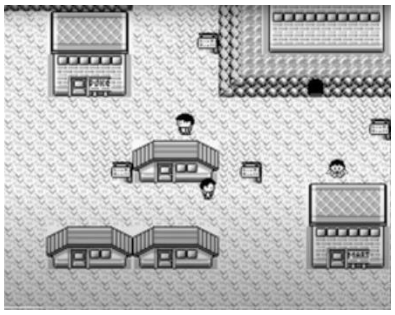

Figure 27. Birds-Eye-View of Lavender Town.

Nevertheless, the fact that this town is indeed not a safe space and thus contrasts with the character of most other towns (not only in *Pokémon* but RPGs overall, as mentioned), is mainly – and infamously – conveyed through its musical underscoring, which starts playing immediately upon being in a certain proximity to the town (without any visible "liminal space" or preceding loading screen). As such, the music constitutes the representation of a spatial threshold, signifying to the player that they are about to enter a new meaningful place.

Notably, Lavender Town's spatial theme is nowadays known in conjunction with the so-called "Lavender Town Syndrome"—a creepypasta [32] about the presumed psychological effects of this very theme which is widely considered "one of the creepiest and most infamous creepypastas in online fiction" (Coello). According to this urban legend,

> [The Lavender Town theme] supposedly contained special 'frequencies', 'binaural beats', or 'high-pitched frequencies' only audible to children that, intently or not, would have caused several psychological disturbances and/or have led them to suicide. (Manzinali 219)

However, as is the case with most creepypastas, this legend is entirely fictitious and lacks any corroborating evidence. Regarding the alleged effects of conveying subliminal messages through certain frequencies, Hauke Egermann et al. found that there is no empirical evidence for such a phenomenon ("Subliminal Messages" 40). The same

[32] „Creepypastas are horror-related legends spread on the internet from anonymous or identified sources" (Manzinali 217).

applies to binaural beats which were found to be virtually effectless (Schamber et al.). Nonetheless, this does not mean that the music in Lavender Town is not creepy or unusual in nature, as it definitely is. Yet, like with previous examples, these characteristics can mainly be attributed to other, more overt, musical parameters and structures.

"Lavender Town Theme" by Junichi Masuda

Timbre/Articulation:

Despite being subject to major sonic limitations, Masuda prudently utilizes certain manipulations in the GameBoy's sound system to create a disjunction between the voices in terms of timbre and articulation. In fact, even though the GameBoy only allowed for 3 sound channels to be used (excluding one noise channel used mainly for percussion purposes) that – unlike later sound chips – were not able to approximate real instruments, those could be somewhat altered in terms of pulse and wavelength—thereby allowing for certain (experimental) musical effects. In Lavender Town, Masuda created an audible *vibrato* effect in the second and third channel by adjusting the pulse width and amplitude. In the main melody, there is a slow vibrato with very noticeable fluctuations in pitch, resulting in the melody sounding ever so slightly out-of-tune, whereas the bass voice makes use of a quick vibrato articulation with a small amplitude, which creates a more harsh and buzzing timbre (Benis 08:73-10:03). Although empirical studies on the psychological/emotional effect of melodies being out-of-tune, that is, contextually outside our Western equal temperament, are virtually non-existent, it is somewhat safe to assume an apparently fitting effect, as a number of studies have linked obvious violations of listener's expectancy (and as audible pitch deviations are avoided in [Western] music, out-of-tune notes certainly constitute such) to low valence ratings, marking connotations with negative emotions (Sauvé et al. 2018; Egermann et al. 2013). The harsh timbre found in the bass voice can be connected to more straightforward associations, most notably "anger" (Gabrielsson & Lindström 596; Juslin 390). Furthermore, as the two voices are conflicting in terms of their timbre, it can be argued that this unique timbre disjunction enhances this harshness and unnerving character.

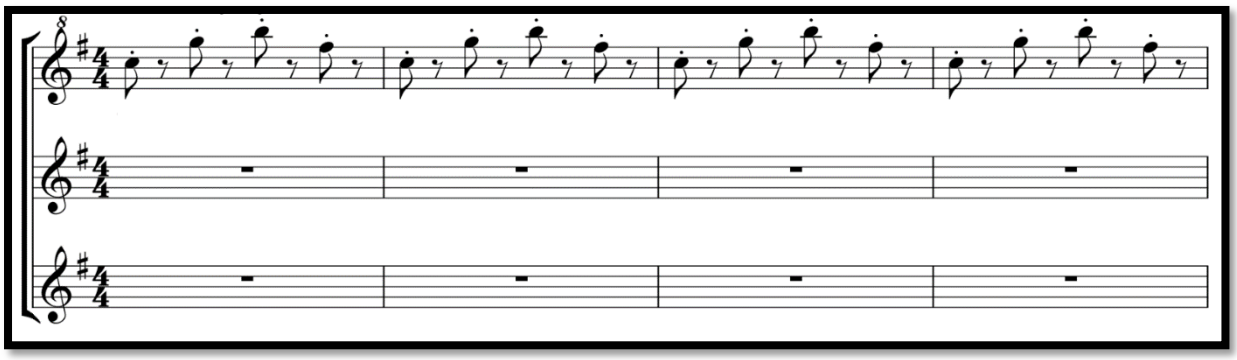

Figure 28. First 4 measures of "Lavender Town Theme" by Junichi Masuda – Transcription.

Tonality:

"Lavender Town Theme" starts out with an ostinato figure in the highest voice outlining the notes C-G-B-F# (see Fig. 27). This is already somewhat peculiar as the figure of a major seventh (C-(G)-B) and a subsequent descending tritone (F#-C) make the initial tonality as ambiguous as with Mt. Moon, thus similarly correlating with the perception of anger and fear (Gabrielsson 220; Juslin and Sloboda 596). In fact, the prevalence of the tritone interval (as an augmented fourth in this case) is a, if not *the*, pivotal factor of this piece's infamously uneasy character. The tritone itself is widely regarded as the most dissonant interval in our Western-tonal paradigm, having led to it even being referred to as "Diabola in Musica" (*Italian for "devil in the music"*) throughout music history. Its character is mostly described as "menacing", "unpleasant", and even – related to its nickname – "devilish" (Donington 31). Empirical studies have linked the prevalence of tritones in melodic lines as an indicator of a sense of instability (Gabrielsson 220). Furthermore, Costa et al. (2004) found that pleasant or agreeable melodies were marked by the exclusion of tritone intervals (qtd. in Gabrielsson & Lindström 381).

As the main melody as well as the bass line commence in the middle voice in measure 5 (see Fig. 28) and more notes are consequently added, the piece audibly seems to be in a Lydian modality, which C being the tonic (though the character is still 'unstabilized' by the tritone). However, this impression is immediately rendered incomplete as the melody does not land on C but – unexpectedly – on D-flat (a note not found within the Lydian mode). By landing on a flattened second degree, the piece's

dissonant character is further amplified and gives almost an atonal melodic feel. As such, a second constituting interval is revealed: the minor second. Being considered the "most sad interval" (Gabrielsson 220), the minor second bears a similar dissonance as the tritone and is responsible for similar perceptions. As Gabrielsson and Lindström write, "instability may be expressed by melodies with a greater occurrence of minor seconds, tritones, and intervals larger than the octave" (390). Notably, "Lavender Town Theme" does not only utilize the first two named. When the melody is finally resolved back to a C in measure 12, this resolution is somewhat disrupted through it coinciding with a low B in the bass channel thus shaping a minor 9th interval—a dissonant interval larger than the octave. Therefore, it is no exaggeration to argue that Lavender Town's spatial theme represents a prime example in utilizing dissonance as the constituting factor of a musical score.

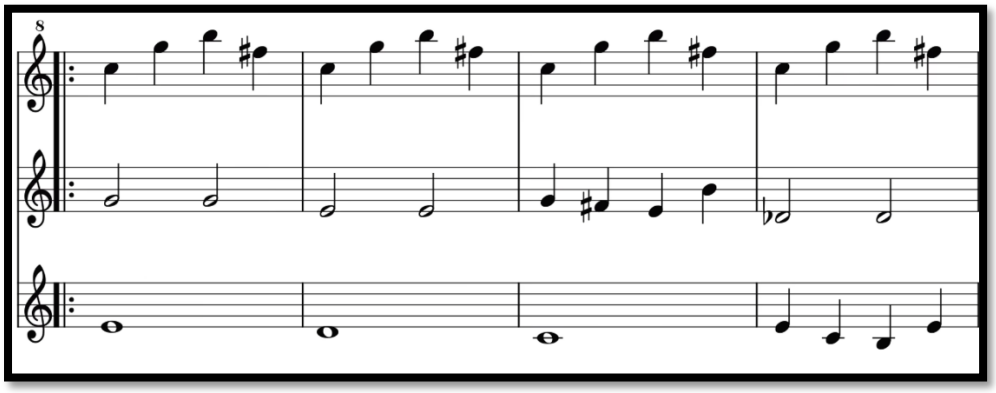

Figure 29. Main Motif of "Lavender Town Theme" by Junichi Masuda – Transcription.

Tempo:

The piece's tempo lies at approximately 130bpm range (*allegro*), presumably further enhancing the affects of uneasiness, fear, and anger, implied by its (non-)tonal structure (Gabrielsson 218; Juslin and Sloboda 596).

Rhythm/Meter (+Form):

As the theme relies on creating discomfort mostly on a harmonic and melodic level, the rhythm seems to play a subordinate role at first glance. The piece starts out in regular 4/4-time and smooth and firm rhythms, seemingly not adding to its eerie character. However,

another aspect of this town's theme that arguably contributes to its unsettling tone lies within its untraditional temporal structure, as Masuda makes use of what Benin calls a "nested loop" structure (08:73-10:03). Each of the sound channels contains an independent loop in terms of length, pitch and rhythm that constantly overlap.[33] However, as those loop every 1, 20, 16, and 1/2 bars, respectively, and the melody and bass voices are "both made up of repeating four-bar phrases, the underlying structure is quite subtle and unobtrusive" (ibid.). Nonetheless, a covert sense of irregularity is increasing over its temporal dimension. As such, this theme's structure is more complex than one realizes at first, thus potentially expressing "anxiety and aggressiveness" (Gabrielsson 221).

While the notion of subliminal messages derived from incorporating binaural beats and frequences altering our perception certainly makes for a thrilling online creepypasta, it is Masuda's prudent use of musical irregularity in terms of dissonance and (harmonic) structure – all parameters related to expressions of unease and disorientation – that creates Lavender Town's infamous atmosphere and communicate to the player that this is indeed not the safe space of a town they might expect at first.

Lavender Town's spatial and narrative function of a place of the "unknown" is later confirmed and exposed through a variety of factors. Upon traversing this little town, the player learns that it is known for being haunted and its frequent ghost sightings. In fact, it is home to the Pokémon Tower (accessible through the cave-like entrance)—a mausoleum and the only Pokémon graveyard in the entire series. As such, Lavender Town is not only the only place where the player can encounter ghost-type Pokémon, but also the sole place where the notion of death (specifically of Pokémon) is explicitly discussed in the diegetic game world—thus creating somewhat of a separation between Lavender Town and the rest of the Pokémon world that is mostly child-like and cheerful in character.

[33] This type of composing is related to the concept of *modularity* in video game music, i.e. the use of discrete modules (bits of music, if you will) that play independently but interact with each other in a broader musical context. For more insight, see Medina-Gray, *Modular Structure and Function in Early 21st-Century Video Game Music*.

4.3.2 Final Fantasy VI

When discussing the use of musical themes (whether those are character- or location-based) in Role-Playing video games and the structural conventions and literacies employed in those, there is no way around Nobuo Uematsu, who – as mentioned in 3.3 – served as the main influence on this type of underscoring. Hence, this case study will examine how Uematsu utilized music in order to convey spatio-narrative notions of the "unknown world" in the immensely popular *Final Fantasy* series—specifically *Final Fantasy VI*.

Final Fantasy VI[34] was released on April 2, 1994, for the SNES system as the sixth installment of the RPG-franchise *Final Fantasy*. Opposed to most other RPGs, *FFVI* does not make the player assume one single role in terms of playable characters. Rather, it makes the player assume the role of an entire group, known as the Returners, who stand in conflict with the Gestahlian Empire, who – similarly to Team Rocket in *Pokémon* – are in the midst of conquering the world by capturing and acquiring the power of the so-called Espers—magical (humanoid) creatures who were at war several decades before the events of the game.

Notably, the distinction between the "ordinary" and "unknown" world of the group (who in this case represent the entity of the "Hero") is a rather straightforward one and overt to the player, since the fictional game world is in fact spatially divided into two separate entities: the human world and the Esper world. The unknown and mysterious Esper world – which was in a literal sense unknown as its existence was a secret up until the ascendency of the Empire and the subsequent war – is connected to the human world via a secret cave. The Esper world and its meaning is non-diegetically underscored by its spatial theme named "Another World of Beasts".[35]

[34] Note that in the United States, *Final Fantasy VI* was released under *Final Fantasy III* due to localization issues and prior titles not being released overseas initially.
[35] Just like with the game title itself, the official names of in-game tracks differ according to localization. While "Another World of Beasts" is the name found in the official North American soundtrack release, the Japanese version is simply titled "幻獣界" which can vaguely be translated to "Esper World".

Figure 30. Part of the Esper world within Final Fantasy VI.

"Another World of Beasts" by Nobuo Uematsu

Instrumentation/Timbre:

This spatial theme by Nobuo Uematsu makes use of mainly two instrument sounds, namely an oboe and a harp—the oboe functioning as the melody instrument and the harp laying out the harmonic structure. In the few psychological studies on timbre and related affects mentioned earlier, the oboe was scored extremely low in terms of emotional valence. It ranked second-lowest both in happiness and joyfulness but extraordinarily high within descriptions such as sad and scary (Eerola et al.; Wu et al. 670), which aligns with Campbell's notions of the "unknown world". The harp was not considered in either study, thus precluding the formulation of any meaningful assumptions about its perceived expressive qualities.

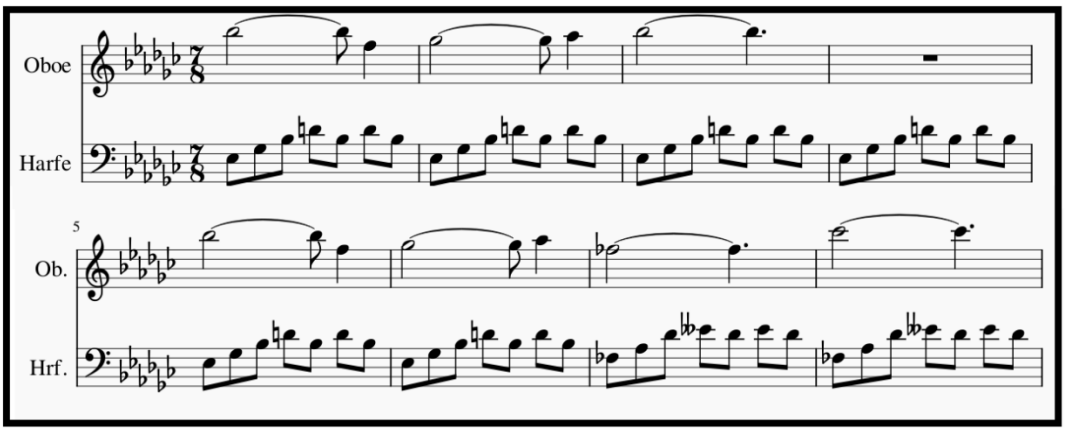

Figure 31. Main motif from "Another World of Beasts" by Nobuo Uematsu – Transcription.

Mode/Harmonic Structure:

The piece commences with an arpeggiated [E-flat] minor major seventh chord—a chord known for its frequent usage in horror movies, particularly in the soundtrack of horror classic *Psycho* from where it earned its nickname "Hitchcock Chord". This chord is associated with a "dark" and "sinister" dissonance (Eerola et al. 256). This dissonance is primarily attributable to the outer major seventh interval as well as the augmented fifth and – just like the augmented chords in "Mt. Moon" (technically, a minMaj7 chord consists of an augmented triad with an added minor third from its lowest note) – presumably elicits perceptions of emotions like tension and unpleasantness (Gabrielsson 220). Furthermore, this chord is somewhat ambiguous in terms of tonality as it is neither part of the natural major nor minor mode but rather derives from the harmonic minor scale. Thus, despite its dissonant and unstable character, it does somewhat imply a tonal center, in this case E-flat (harmonic) minor. The first chord is succeeded by a dominant seventh chord on F-flat with an added thirteenth that, on its first impression, seems to deviate from the implied tonality as neither its root nor thirteenth belong to the original mode. However, since it resolves back to the initial chord, it can be viewed as a tritone substitution of the mode's original dominant chord. Nonetheless, this kind of oscillation between these two harmonies creates the impression of shifting tonalities throughout, as the sense of a stable tonality is not present during the F-flat dominant seventh chord. Consequently, the music constantly switches between a state of tonal center and the lack thereof—thereby possibly enhancing the perception of fear (ibid.; Juslin and Sloboda 596). This is further emphasized in measures 21-22, where Uematsu uses an augmented major seventh chord on F-flat that – in terms of functional harmony – would typically resolve to the chord a fourth above (Benward and Saker 232), but unexpectedly moves back to the initial chord. In a metaphorical sense, one can connotate this circumstance of shifting tonal center with the unknown world's sense of disorientation and being lost, similarly to Mt. Moon's theme.

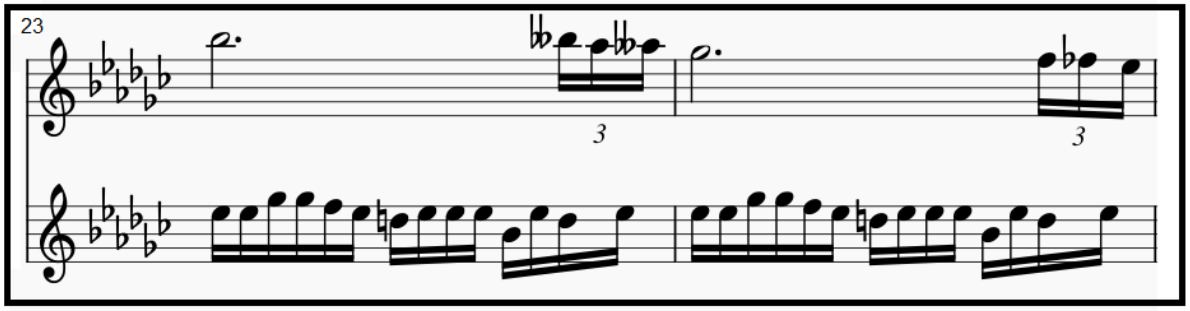

Figure 32. Measures 23-24 from "Another World of Beasts"-- Transcription.

Melody:

The melody is primarily characterized by a descending interval of a fourth followed by an ascending minor second occurring several times, which in similar settings was found to express instability and sadness (Gabrielsson and Lindström 377; Juslin and Sloboda 596). Moreover, it aligns with the piece's peculiar harmonic structure by landing on an F on measure 7 after it starts in an E-flat-minor tonality. A variation of the main motif occurs starting in measure 23 (see Figure 14). The main melody transforms into a chromatic line. As mentioned during the former analysis, chromaticism was found to be perceived with emotions such as anger and sadness (Gabrielsson and Lindström 379) and it also undoubtedly adds to the dissonant character of the piece. Furthermore, instead of the harp outlining the harmonic progression, a second melody, a countermelody so to speak, appears and contributes to the chromatic and dissonant character of this passage through its extensive use of minor second intervals.

Rhythm/Meter:

"Another World of Beasts" is written in a septuple meter of 7/8. This type of uneven time signature which is rare in [classical as well as most popular] music has a disorienting quality and is often associated with perceptions of uneasiness and anger (Gabrielsson 221)—again assorting to the space's character as a place of the unknown. In terms of melodic rhythm, the oboe mostly conforms to a very slow and firm rhythm, which "may be associated with expressions of sadness [and] dignity" (ibid.). This is broken in the aforementioned variation of the motif with the emergence of a countermelody consisting of sixteenth notes in a rapid, staccato-like motion which – in conjunction with all the other

elements mentioned – suggests expressions of uneasiness and fear (Juslin and Sloboda 596; Gabrielsson and Lindström 380).

As can be seen (or heard rather), Uematsu's use of unexpected and irregular musical parameters fittingly underscores the Esper world as the ultimate unknown world in opposition to the ordinary world inhabited by humans. As the unknown world is inextricably linked to its Esper inhabitants, the spatial theme of the world is not only functioning as a mere location-based theme, but as somewhat of a character-theme as well, scoring the Esper's presumed character. As such, it is argued that Nobuo Uematsu prudently utilizes musical parameters that to most listeners seem unusual (*even if they do not know why*) in order to musically convey and reinforce the 'inhuman' character of the Espers and their associated world. As most of the other pieces within *Final Fantasy VI*'s non-diegetic soundtrack imply clear traditional structures in terms of tonality, melody, meter, etc., the Esper world theme serves as a means of musical "othering"[36], that is, the world of the Espers is conveyed through music that seems weird, unusual, disorienting, and unknown—or in one word, *inhuman*.

4.3.3 Diablo

Diablo is a WRPG-series that emerged on 31 December 1996, with its first installment of the same name (nowadays referred to as *Diablo I* due to subsequent sequels) released by Blizzard for the PC. The first *Diablo* game is now widely considered a pioneer within the Western RPG realm, with some even claiming it to be a foundational game in terms of 'creating' the sub-genre of action-RPGs (Brown 3)—RPGs that focus heavily on real-time melee combat. While it is virtually impossible to accurately describe a game as the very first of its kind, *Diablo*'s omnipresent influence is showcased by the fact that similar

[36] "Othering" is a concept central to postcolonial theory and refers to "the process whereby a group of people attribute negative characteristics to other groups of people that set them apart as representing that which is opposite to them" (Rohleder 1306). As such, othering serves as a catalysator for prejudice and stereotypes by creating a binary opposition between the 'We' and the presumed 'Other' and thus 'legitimizes' power constellations. For more insight into the concept othering in terms of postcolonial and feminist theories, respectively, see Said, *Orientalism*; and De Beauvoir, *The Second Sex*.

action-RPGs that followed over the years were often referred to as "*Diablo* clones" (Barton 8).

The first *Diablo* game follows the player-character (represented by a customizable avatar with no pre-written background, name, personality as with other WRPGs), whose objective is to free the diegetic world from evil (monsters) spawned from hell. In order to do so, the player-character has to descend into twelve underground dungeons and ultimately reaching hell itself (represented by the final four levels). It is there, that they have to eventually defeat Diablo, the Lord of Terror, and thus save the world to become the ultimate hero. Though the monomythical structure of Diablo seems straightforward in terms of the Hero's journey narrative, its spatial construction is rather nuanced and unpredictable at first.

The game starts in Tristram village, which also serves as the initial hub and thus as a seemingly archetypical ordinary world. However, Tristram's spatio-narrative character is not that straightforward: In fact, as the hero's journey commences, the player learns that the evil already lurks in Tristram itself as the portal to hell is actually located under a church located in the village. Hence, despite what they initially think, the player already entered the unknown world. This sense of place is poignantly – and immediately – conveyed to the player through the eponymously named musical theme, which is widely considered a staple of WRPG-music due to its mesmerizing character (Fritsch, "History of Video Game Music" 25).

Figure 33. The village square of Tristram.

“Tristram Theme” by Matt Uelmen

Tonality:

As this piece – in true WRPG fashion – is mostly void of dominant melodies and focuses on ambient qualities, its character is mainly established through its particular chordal structures, which prove to be purposely ambiguous in conveying a traditional tonal center from the very beginning, thus again conveying musical expressions of disorientation, anger, and fear (Gabrielsson 220; Juslin and Sloboda 596).

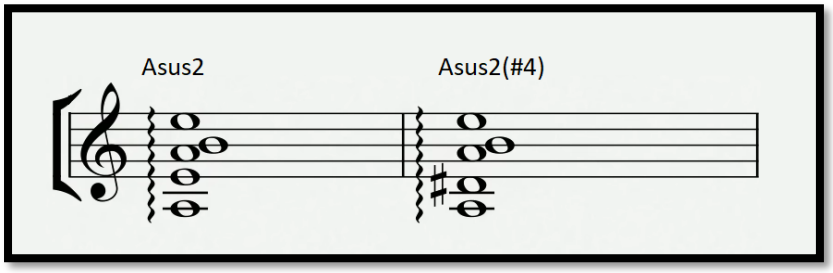

Figure 34. Opening chords of "Tristram Theme" by Matt Uelmen – Transcription.

The theme opens with a progression of two chords that is repeated several times (see Fig. 33). The first chord is an Asus2 chord (with a doubled root and fifth) which suspends the third, thus being neither clearly major nor minor in terms of modal quality. The second chord maintains the major second suspension but lowers one of the doubled fifths by a half-step from E to D#[37], thus creating a dissonant *tritone* in relation to the root, which – similarly to Lavender Town, albeit harmonically in this case – is a constitutive feature of this piece’s character overall. Considering the game’s name, then, the use of the “Diabola in Musica” in its harmonic structure seems more than fitting and is especially prevalent throughout the piece as will be seen. The dissonant character of the second chord is further enhanced by the fact that the D# creates a minor 9th interval with the upper E. This harmonic dissonance within the chord adds to affectional expressions of tension, anger, and fear, for that matter (Gabrielsson and Lindström 384). This harmonic idea of using a sus-chord succeeded by a chord constituted by a tritone interval becomes a motif and is

[37] This is analyzed and transcribed as an additional augmented fourth in this case, since the upper fifth remains unaltered.

continued in a following progression of Dsus2 to a Bb(b5)/A chord before the second section starts. Tristram's B-section is characterized by a chord progression from Fmaj7(b5) to an F#7(11) (see Fig. 34).

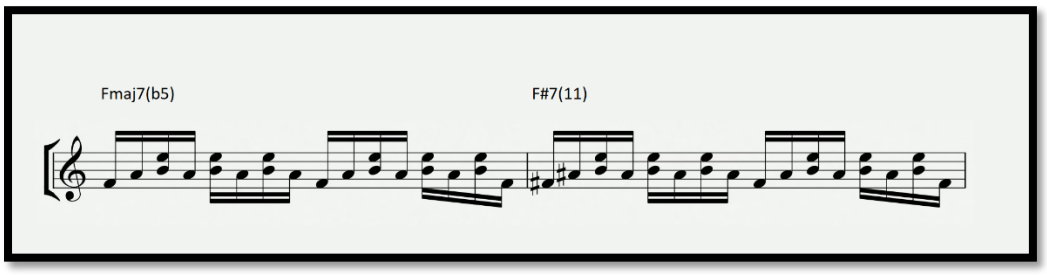

Figure 35. Section-B excerpt from "Tristram Theme" by Matt Uelmen – Transcription.

In addition to the tritones present in each chord individually (F/B and A#/E, respectively), both chords incorporate dissonant consecutive intervals of a minor second in the chromatic root movement from F to F# as well as in the thirds from A to A#. As established, this chromaticism also presumably adds to the perception of negative emotional valence (Gabrielsson 221). The dominant F# chord is resolved into a B-minor chord which yet again marks the start of another musical section (see Fig. 35). This cadential resolution is the first time that there is clear minor tonal center is implied, however, this being B-minor still comes as a surprise as the prominent use of the Asus movement in the beginning does imply A to be a modal root albeit neither clearly minor nor major. These unexpected movements in terms of tonality continue immediately after seemingly establishing a B-minor sonority.

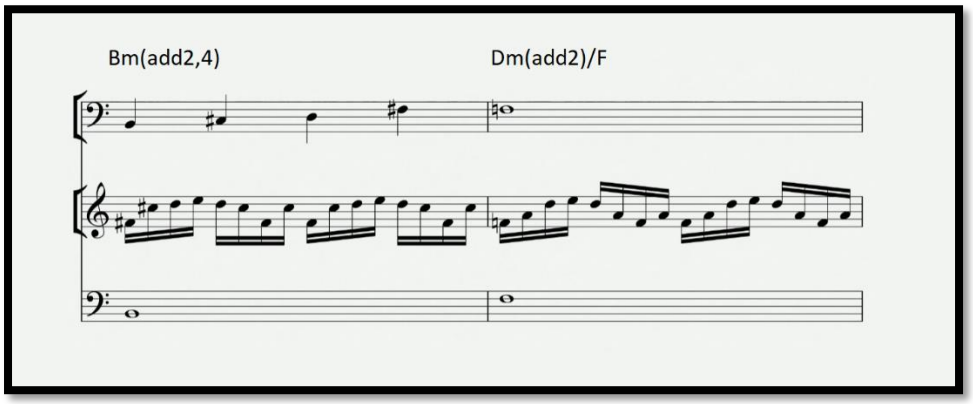

Figure 36. Section-C excerpt from "Tristram Theme" by Matt Uelmen – Transcription.

This third section is also the first time there is a clear melodic motif (B-C#-D-F#-F) added. This motif is once again marked by dissonance. The melody moves from the presumed root of B up to the fifth degree of F# after which it falls down a minor second to F natural—a tritone away from B. This tritone movement is replicated in the bass line as well. In terms of vertical harmony, this section moves from the newly established tonic of Bm to an unexpected Dm, which does not fit into the presumed key. These two chords can be analyzed as so-called 'chromatic mediants', that is, chords of the same quality (major/minor) whose root notes are a third away and thus share one common tone and are not within the same key (Benward and Saker 202). In fact, the use of chromatic mediants has become a central trope of film music[38], with this particular movement from a minor chord up a minor third to another minor chord being described as "strongly uncanny" (Heine 122). Despite there not being empirical evidence as of yet, it can be assumed that this harmonic motion and its uncanny association is decoded by the player thanks to its prevalence in 'creepy' film music and a resulting (film) musical literacy. After this chromatic mediant motion, the third section ends in a progression from Asus2 to a D# diminished 7th chord which is resolved to an E-minor chord. The tritone motion in the bass, melody, and harmonic structure overall is retained and leads into another unexpected resolution. The tonal ambiguity inherent to the chords themselves is thus enhanced by continuously shifting tonalities from implied minor modes of A, B, as well as E, but not really establishing any of these. Eventually, "Tristram Theme" harmonically culminates in a final chromatic progression moving in minor seconds from Bb-major to A-major to an A# diminished 7th resolved to a final B+ (augmented) chord, thereby corroborating harmonic dissonance and diminishing a sense of tonal resolution and closure.

Instrumentation/Timbre:

"Tristram Theme" is particularly well-known for its usage of a 12-string guitar, which is used as the main instrument and responsible for the entire harmonic form of the piece. Research on the perceived expression of acoustic guitar timbres is especially conflicting. While the acoustic guitar scored moderately high regarding emotional valence in Eerola's studies on timbre affect dimensions (Eerola et al. 52), more recent studies exploring

[38] For a thorough analysis of all types of (chromatic) mediants and their use in film music, consult Murphy, "Transformational Theory and the Analysis of Film Music"; and Lehman, *Hollywood Harmony*.

perceived affects of plucked guitar sounds (as opposed to strumming) showed that "the [plucked] guitar [...] [was] highly rated for negative emotional characteristics" (Chau et al. 228). As the 12-string guitar is mostly played in a plucked fingerstyle manner starting from the second section with fast 16th notes, this might enhance the negative emotions perceived through its musical structure. Notably, Uelmen utilizes an abundance of open string sounds with the top two strings (B and E) resonating throughout most of the piece (see Fig. 34, for instance). This strong resonance – which is even further amplified by the guitar being a 12-string rather than a 6-string – arguably enhances the qualities of the chords played. The scarce melodic movements of the piece are played by an (approximated) oboe which as mentioned in 4.3.2 is associated with rather negative emotional affects such as sad and scary (Eerola et al.; Wu et al. 670), thereby matching the elaborated "unknown" and "uncanny" character of this spatial theme.

Tempo + Rhythm/Meter:

"Tristam Theme" has a rather slow tempo of 68bpm, thus lying between the *larghetto* and *adagio* spectrum, which has been found to be mostly associated with "low-arousal sad music" (Van der Zwaag et al. 252). More interestingly though, this theme makes use of drastic changes regarding note density, that is, the number of (horizontal) notes per unit of time (Gabrielsson 218). This changing note density is prevalent in the distinctive rhythms utilized in the opening section compared to subsequent parts. The beginning chords are played as whole notes, occupying the entirety of their respective measures (see Fig. 33). This extremely low note density in terms of a horizontal time axis initially corresponds to the slow tempo. However, the beginning of Section-B marks a pivot point in terms of rhythm and density, as the guitar from there on plays fast 16th notes, thus drastically increasing the note density and perceived speed, while still maintaining the underlying pulse (see Fig. 34). As Gabrielsson points out, slow tempo combined with high note density may result in ambiguity and uncertainty (218), with high note density often being a marker of increased anger and fear (Gabrielsson and Lindström 387). An increase in perceived speed and density is also generally associated with high(er) activation and arousal (Gabrielsson 218), thereby putting the player into an increased state of alertness upon hearing this musical change whilst traversing the village.

Despite starting the game in Tristram and there not being any enemies whatsoever in the initial stages, the music semiotically communicates to the player that danger and the unknown world might already be imminent and that they should rather not roam the village as carelessly as they might think. This musical interaction and the spatio-narrative meaning-making it entails is ultimately reaffirmed once the player reaches the proximity of the village's church and sees a trail of blood and a wounded townsman warning them of the unknown that is lurking in the village.

Figure 37. A trail of blood and a wounded soldier lying in front of the village's church.

4.4 Results – Musical Parameters of the "Ordinary World" vs. the "Unknown World"

A comparison of the given case studies reveals striking similarities in how they use musical elements to convey notions of the "ordinary" and the "unknown" world, respectively. Though it cannot be understated that individual musical parameters by themselves are often rather ambiguous in character, it is their use in conjunction with each other as well as their recurrence across various games that point towards an idiosyncratic approach to spatial scoring.

The spatial themes pertaining to places of the "ordinary" world utilize musical elements mainly in ways that are connoted with perceived expressions that are high in terms of emotional valence, that is, positive, such as happiness and peace: major modes/tonalities; consonant harmony, (perfect) cadences signifying a strong tonal gravitation/center; consonant melodies mainly following stepwise motions; regular and smooth rhythms; common (and non-changing) meters; often faster-paced tempos; and

certain instrumentations and timbres found to be connected to positive affects. Hence, applying van Elferen's ALI model, these musical analyses – showing almost exclusively interplaying utilizations of presumably positive affects – hint towards certain compositional conventions and thus also to a particular ludoliteracy concerning the musical underscoring and creation of positively connoted spaces and places within the game world.

The musical parameters of spatial themes for the "unknown" world are, as might be expected, starkly contrastive. In the RPGs analyzed, the composers make extensive use of elements that are associated with rather negative connotations such as unease, fear, and disorientation—thereby affectively complying with and reinforcing the space's narratological characterizations. These include: dissonance in harmony and melody; a lack of a clear tonal center; chromaticism; sometimes unusual and irregular meters; high variability in rhythm and tempo; and instrumentations low in emotional valence. As with the musical parameters of safe spaces, the use of these elements in conjunction with each other within the individual pieces as well as the occurrence of similar musical conventions in similar locations of different games, once again point towards an overlap of affect and literacy, thus not only making such spaces more immersive but also effectively communicating their role not only in terms of spatial but also narrative worldbuilding.

In essence, the musical underscoring and its resulting meaning-making regarding the spatio-narrative opposition between the "ordinary" and the "unknown" is prudently created through analogous oppositions in its sonic parameters such as tonality vs non-tonality, consonance vs. dissonance, or regularity vs. irregularity. It is noteworthy, though, that some parameters stand out more than others. Perhaps the most divisive characteristic seems to be within *what* specific notes are used rather than *how* they are played necessarily. While the *how* in terms of tempos, rhythms, timbres, and form certainly adds to their perceived character, it is the notes that are used in their harmonies and melodies and resulting tonalities, or the lack thereof, that most dominantly and immediately give those spatial themes their predominant (spatio-narrative) character. Especially the elaborated influence of the presence or absence of a tonal center seems appropriate from a semiotic perspective when considering the tonic to symbolize the "home" of a musical piece and how this notion of "home" pertains to monomythical

structures. This is also in line with musico-psychological research that suggests that it is mainly musical mode (that is, *what* notes are used), which is "associated with differences in valence, positive or negative", while other parameters mostly influence the strength of these perceived emotions in terms of arousal and activation (Gabrielsson 219).[39]

The impact of these musical variables on worldbuilding and the creation of meaningful and evocative places that communicate spatial narrative is particularly evident when a game (composer) decides to alter the musical underscoring of a place in order to convey explicit narrative development. The following chapter will therefore demonstrate how alterations within these musical parameters are able to communicate a spatio-narrative shift of a single location from one Campbellian "world" to another.

5. Switching Worlds: Narrative and Musical Developments in Spatial Themes

While most in-game locations are inherently static regarding the diegetic world's spatial structure, their stories are certainly not. Narrative progress can have obvious implications for the role a certain place takes on within it. A prime example for this leads us back to the example of Lavender Town from the most successful RPG-series of all time, *Pokémon*, and how its infamous theme is altered in the sequel games, thereby opposingly constructing it as a safe place—a typical town of the ordinary world.

Even though the second generation of *Pokémon* games (*Gold/Silver*) released in 2000 for the GameBoy Color is initially set in the fictional region of Johto, the player-character eventually gets the chance to (re-)visit Kanto after they complete the game's main objective of becoming Johto's Pokémon-Champion. Hence, Lavender Town reappears in this iteration of games and yet again becomes a traversable space for the player. However, things are not as they used to be. Although there are no definite time references in the game, certain details indicate that the storyline of this second

[39] There are, of course, a lot of exceptions. For instance, Gabrielsson notes that a piece like *Badinerie* from Bach's Second Suite for Orchestra "may very well sound happy" despite its modal character suggesting otherwise (219), which is why (as with all other parameters) it is not sufficient to only look at a piece's tonal parameters, even if those seem to be the most suggestive in terms of emotional valence.

generation comes occurs approximately three years after the first one. As such, a lot has happened in the intradiegetic meantime. Nevertheless, the game (text) does not explicitly refer to past events, thereby leaving the specifics of those events somewhat unknown. Consequently, the act of conveying the 'trans-generational' narrative, or storytelling, is primarily dependent on the visuals and musical soundscape only, but effectively.

Upon entering Lavender Town in *Pokémon Gold* and *Silver*, some changes in the town's landscape are instantly recognized. Most notably, the ominous and haunted Pokémon Tower graveyard with its cave-like entrance is now gone, having been replaced by a radio tower.

Figure 38. Birds-Eye View of Lavender Town from *Pokémon Gold/Silver*.

Figure 39. Birds-Eye View of Lavender Town from *Pokémon HeartGold/SoulSilver*.

Also, a flowerbed analogous to those observed in other peaceful towns like Pallet Town has been added in front of one of the buildings. The visual change in Lavender Town's character is even more evident in the 2009 remakes named *Pokémon HeartGold* and *SoulSilver* due to the graphically more capable Nintendo DS (see Fig. 39).

Just like with *Pokémon Red* and *Blue*, the accompanying spatial theme immediately plays as the player reaches a particular proximity to the town prior to entering the actual town 'border'. As the player approaches Lavender Town, they start to hear the infamous Lavender theme, which at first does not seem to deviate from its original at all, with the familiar dissonant ostinato figure (C-G-B-F#) commencing the piece. Since this beginning starts playing before necessarily getting a glimpse of this newly shaped town, the player might expect the eerie Lavender Town so infamously known from the original games. However, when the melody in the second voice is finally

introduced, the entire nature of the theme is inverted, telling a story of a new Lavender Town.

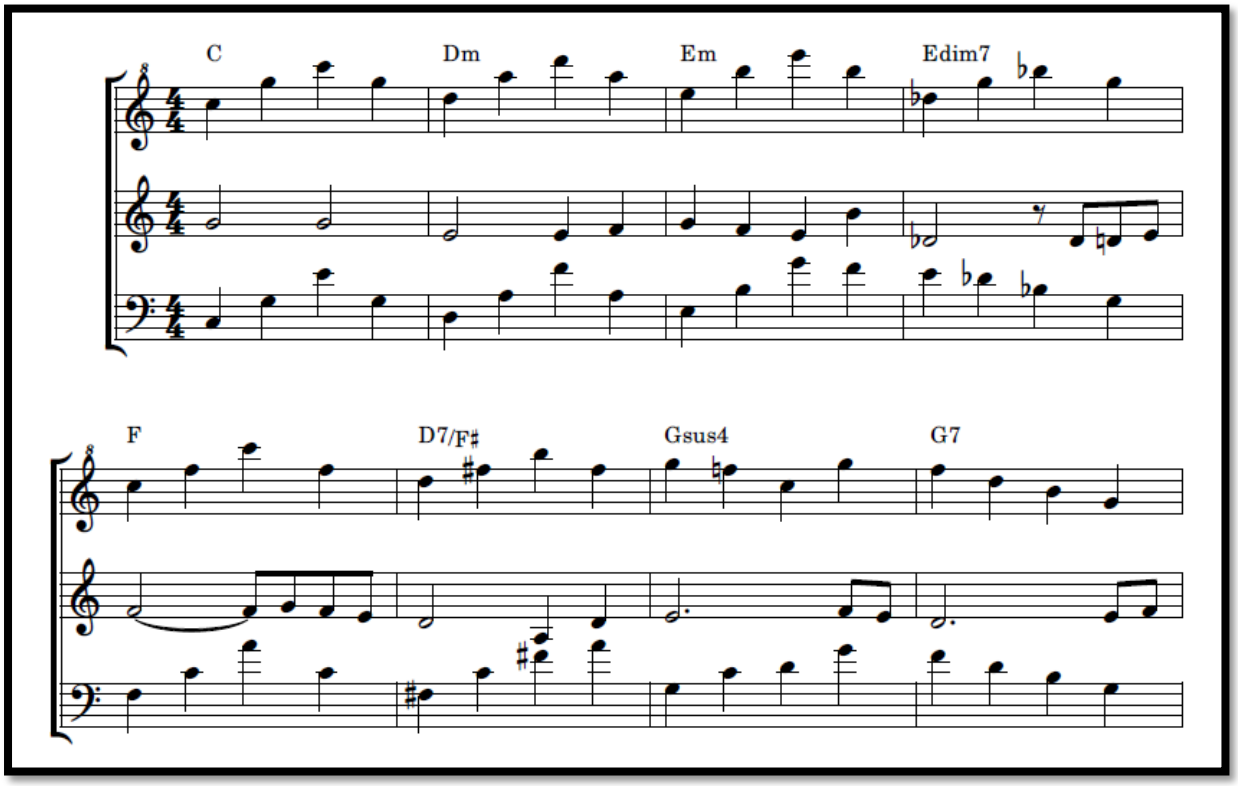

Figure 40. Transcription of Go Ichinose's Arrangement of "Lavender Town" -- Transcription.

The dissonant tritone so prevalent in the original melody is completely averted this time around. The raised fourth degree (F#) found in the original is substituted with a major third (E) in the second measure and an unaltered fourth (F *natural*) in the third, thus consonantly complying with the key of C-major. Yet, the dissonant minor second degree represented by a flattened second degree is kept in the melody. However, its recontextualization through the harmony decreases its sense of instability and dissonance greatly as it is now functioning as a chord tone of an E diminished 7th, which serves as a secondary dominant (substituting a C7b9 without its root according to functional theory) leading to the IV chord of F-major chord thereafter. The new harmonic arrangement is governed by the upper quarter note figure that instead of playing an ostinato of C-G-B-F# now outlines specific chords alongside the bass. Preceding the secondary dominant movement to F-major, the harmonic structure follows an ascending

movement from C-major to D-minor and to-E minor, constituting an I-ii-iii progression in a C-Ionian (major) mode. The succeeding chord progressions continue with a D dominant7th chord serving, again, as a secondary dominant to the following chord, which in this case is a Gsus4 which is then resolved to a final G dominant 7th before the motif is repeated. This final chord leading back to the theme's repetition, and thus the initial chord of C-major, constitutes a perfect cadence, consolidating a strong gravitation towards the tonic – or home – of C and dismissing the sense of tonal ambiguity of the original spatial theme. In terms of melodic movement, this version of "Lavender Town" dismisses a mere repetition of the main motif but instead moves to an entirely new melody starting in the second half of measure 4. This new melody adds a rhythmic layer by adding flowing syncopated eight notes (measures 4 and 5) to the otherwise constant and firm rhythm, thus creating a positively connoted varied rhythm like in Pallet Town, for instance. Furthermore, it conforms to the harmonic structure outlined by the other two channels, thus enhancing its now more consonant and tonal character.

This evolution of Lavender Town's spatial underscoring prudently shifts certain elements, mostly pertaining to its tonal character, from parameters found in themes of the "unknown" to those connected to the "ordinary" world and thereby communicates to the player that this town has changed and is not characterized by imminent death and danger anymore. Hence, the musical re-arrangement of this very spatial theme acts as a means of explicit storytelling, showcasing an analogous re-arrangement in terms of spatio-narrative worldbuilding. Lavender Town is no longer a place of the unknown the player must traverse in an alert manner; it is now a town like others in *Pokémon* and so many RPGs: a safe haven within their Hero's journey.

That such semiotic communication of explicit narrative developments in diegetic places through altering specific parameters in spatial themes is in fact an effective means of worldbuilding becomes apparent when looking at the players' discourse and their interpretations of this re-arrangement:

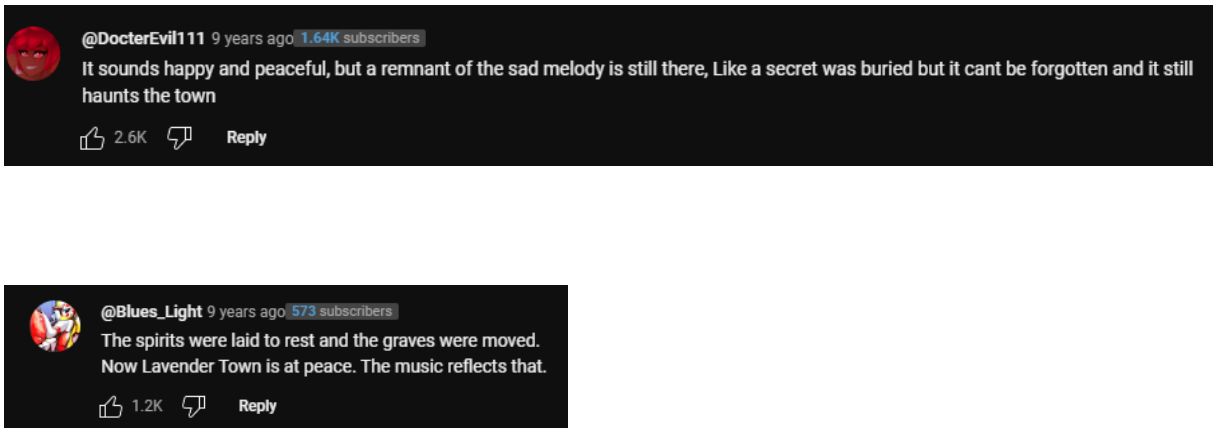

Figure 41. Top liked YouTube comments on "Pokemon- Heart Gold and Soul Silver- Lavender Town- Music" uploaded by dialga328.

YouTube user "DoctorEvil111" describes their listening impression by describing this re-arrangement as "happy and peaceful" – a semantic pool assorting well with its new role as an "ordinary world" – but acknowledges that the "sad melody" of the original is still somewhat present. They continue to narratively transform this impression by writing that it sounds "[l]ike a secret was buried but it cant [sic] be forgotten and it still haunts the town". This narrativization is even more present in another comment by "Blues_Light" who writes: "The spirits were laid to rest and the graves were moved. Now Lavender Town is at peace. The music reflects that." The considerable number of likes for both these comments indicates approval from within this community of practice and supports their viability for the broader discourse surrounding this music. The fact that this change of musical parameters within a spatial theme is accompanied by a collective narrativization of the music highlights that an acquired audio-visual literacy and its interplay with the affective layer of music allows the non-diegetic soundscape to semiotically interact with the player and construct a spatial narrative that extends into a (fictional) temporal dimension.

6. Conclusion

Although it has been acknowledged that music plays a role in the process of video game immersion, this thesis demonstrates that its power extends beyond, actively shaping and constructing the immersible game world in the first place. Music semiotically denotes meaning and connects narratological and spatial structures of the diegetic world—thereby creating a sense of place that is not attainable from the visual and ludic elements alone.

While it is beyond the scope of this thesis to draw clearly representative conclusions as for how an entire genre of video games utilizes specific musical parameters to build a world and spatially immerse the player in it, the analyses conducted do certainly point towards a certain direction. Isabella van Elferen's ALI model proves to be of distinct value, especially due to its notion of a specific game musical literacy that interplays with the affective and interactive dimension of music in making musical communication decodable. While an absolutist formal approach looking at video game music does not prove useful in itself, it is the examination of musical elements in conjunction with each other and the game spaces they underscore – and places thereby created – that point towards a certain semiotic and affective dimension. By looking at musical spatial themes across different games that are similar in regard to the characteristics of the places they are inextricably connected with, one can draw conclusions towards particular musical tropes and compositional conventions that in turn suggest a particular game musical literacy regarding the musical shaping of spatio-narrative structures. Especially in the realm of Role-Playing games with their immense focus on worldbuilding and their usage of explicitly connected leitmotifs in building diegetic spaces, that is, spatial themes, this interlacement and interdependence of affect, interaction, and audio-visual literacy prove to be of rather high importance and a valuable means to conclusively analyze not only game musical immersion, but music's role in worldbuilding altogether. As the analyses demonstrate, the extensive use of certain musical parameters associated with perceived expressions that not only reinforce but at times even initially construct the spatio-narrative characteristics of the spaces they sonically underscore, along with their re- and co-occurrence in several prominent games within the genre, certainly suggests an overlap of perceived affect and literacy—thus

creating more immersive places through non-diegetic music. While ludomusicological research has so far mainly considered location-based music and narrative-based music, i.e. themes intrinsically connected to characters or diegetic events, as somewhat separate categories, the strong interdependence of space and narrative, especially in the inherently non-linear narratological structures found in Role-Playing games, renders this distinction unjustified. Spatial themes can not only paint the diegetic landscape in terms of geographical character and meaning; they tell its story and create spatial narratives traversable – and decodable – by the player.

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