Does Music Matter to Museum Visitors?:
Understanding the Effect of Music in an Exhibit on the Visitor Experience

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Abstract

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The purpose of this study was to examine how music, used as an interpretive tool in a museum exhibit, affects the visitor's experience. The study was a quasi-experimental investigation, utilizing a music condition and a control condition. Visitors were interviewed at the Renton History Museum after experiencing the Little House Exhibit during one of these two conditions. Three key findings emerged from this research. First, visitors stayed in the exhibit longer in the presence of music. Second, visitors noticed a difference between music and no music in the exhibit, but the music did not seem to influence visitor comfort or emotions. Finally, music in the exhibit influenced the nature of visitors' learning, with more in the music condition saying they learned about life in the past. These findings have implications for museum exhibit designers considering the use of music as an interpretive tool.

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Chapter 1: Introduction

Music is an important aspect of everyday life; it is all around us from television and movies to stores to video games. According to Lehmann, Sloboda, and Woody (2007), "music in everyday life is generally used as 'background.' Recorded music will be playing, but the user will usually be doing something else, as well as listening to music" (p. 232-3). They go on to suggest that music has the ability to affect to effect emotions too: "The enjoyment of music in terms of its affective content and mood-modulating effect is what listeners are mostly seeking. Among other things, they want to be moved, reminded, and physically and aesthetically stimulated by music" (Lehmann et al., 2007, p. 217). Music can be used for a variety of reasons and can be found in a wide array of public places. One such place is the museum, more specifically museum exhibits.

However, museum professionals have mixed feelings about the use of music in museum exhibits. In a recent Museum 2.0 Blog post, Nina Simon posed the question "Should museums play music- in public spaces and/or in galleries?" Admitting that she is conflicted on the issue, she reviewed the advantages and disadvantages as she sees them; music can create a certain atmosphere and can help visitors feel more comfortable in a space, but it can also be distracting, annoying, and raises issues of what music to play (Simon, 2011). More than 50 museum professionals commented on Simon's post with either a "love it" or "hate it" response to the issue.

Recent studies have focused on sound and other atmospherics in museum exhibits (Beliveau, 2015; Forrest, 2013; Jakubowksi, 2011; Kottasz, 2006), but there is little research on visitors' reactions to music specifically. Forrest (2013) introduced the concept of atmospherics, a term coined by Kotler in 1973 which refers to the conscious designing of space to create certain

effects in buyers. Forrest (2013) explores the potential for its use in informing the museum field. In referencing multiple atmospheric studies, Forrest points out that "atmospheric factors may operate in concert with one another and this is difficult to elucidate in studies that manipulate atmospheric variables in isolation" (p. 209) due to the fact that many of the studies are laboratory-based and simulated tasks leading "some researchers to call for less experimental research and more field-based, naturalistic inquiry" (p. 203). Kottasz (2006) used the more naturalistic inquiry by having visitors fill out questionnaires about atmospherics. Kottasz states that "research to date has rarely investigated the impact of atmospheric cues on visitor responses and behaviour (sic.) in museums and little is known about this important topic" (p. 97). In both Forrest's and Kottasz's articles, music is included in the study of atmospherics but is not looked at in isolation to the other atmospheric elements.

Jakubowski (2011), on the other hand, looks at three different sounds and their effects in a museum exhibit; those sounds included music, human sounds, and natural sounds. The focus was specifically on dwell times and positive or negative outcomes determined by psychological theory by comparison of each of the three noises. The results of the music specifically are listed more in comparison to each sound rather than listed as its own entity (Jakubowski, 2011). However, by comparison it appears that music had a positive effect on visitor outcomes such as dwell time and perceived knowledge gain.

The purpose of this study is to examine how music, used as an interpretive tool in a museum exhibit, affects the visitor's experience. The research questions are as follows:

1. How does music affect visitors' stay time in the exhibit?
2. How does music affect visitors' comfort in the exhibit?
3. Does music affect visitors' emotions in the exhibit and in what ways?
4. How does music contribute to and/or inhibit visitors' understanding of the exhibit's main ideas?

In the above purpose statement, there are two broad terms: interpretive tool and visitor's experience. What is meant by interpretive tool, the first broad term, is that the music is built into the exhibit in order to help facilitate the visitors' experience. That is to say, the music is related to the exhibit's topic, theme, or time period and is not simply background music unrelated to the exhibit in any way. The visitor's experience, the second broad term, is defined by the research questions; in the case of this study, the visitor's experience is defined by stay time, comfort, emotions, and understanding of the exhibit's main ideas. Knowing visitors' reactions to music in an exhibit could help museum professionals make more informed decisions about whether and how to use music as an interpretive tool in museum exhibits.

Chapter 2: Literature Review

The purpose of this research was to examine how music, used as an interpretive tool in a museum exhibit, affects the visitor experience. In the context of the literature, this can be examined through three main areas: music in the context of retail studies, atmospherics and exhibit design, and previous visitor studies investigating the impact of sound or music. The following chapter will position the research in the context of the literature, and identify what is known and what is not known.

Music in a Retail Context

Bruner (1990) states that "music has long been considered an efficient and effective means for triggering moods and communicating nonverbally" (p. 94). Much of the research on the impact of music on people has been studied in the context of retail settings. Bruner's article provides a review of the marketing literature and surveys relevant literature outside marketing literature. The purpose of his article was to examine the behavioral effects of music, with emphasis on music's emotional expressionism and role as a mood influencer in order to discuss the practical implications of what is currently known about this subject (Bruner, 1990). According to Bruner, the research of Manfred Clynes shows that "appropriately structured music acts on the nervous system like a key on a lock, activating brain process with corresponding emotional reactions" (p. 94).

He goes on to say that the effect of music on consumers can be viewed through three emotional expressions: 1) Time-related, 2) Pitch-related, and 3) Texture-related. Time-related expressions refer to rhythm, tempo, and phrasing. Based on several studies with consumers, time-related findings include: that fast music is considered to be more happy and/or pleasant than

slow music; firm rhythms are judged to be more sacred, serious, and/or robust; and smooth-flowing rhythms are felt to be more happy, playful, and/or dreamy and are characterized as brilliant or animated. Uneven rhythms were perceived to express dignity or exaltation (Bruner, 1990). Pitch-related expressions refer to melody, mode, and harmony. In summarizing the research on pitch, Bruner (1990) states that "the findings are relatively consistent and suggest a strong association between pitch and perceived happiness: music with high pitch is more exciting or happy than low pitched music, which is perceived as sad" (p. 97). Texture-related expressions refer to timbre, orchestration, and volume; these findings show that orchestration can have an effect on the consumer in that "brass instruments carried the melody in songs characterized as triumphant and/or grotesque, woodwinds expressed awkward and/or mournful feelings, melodies on a piano were perceived as brilliant and/or tranquil, and string sounds were associated with pieces characterized as glad" (Bruner, 1990, p. 97). In regard to volume Bruner (1990) states that the loudest pieces were described by consumers as triumphant and/or animated whereas soft pieces were described as delicate and/or tranquil.

Webb (1996) provides a review of music-related consumer literature in order to bring it to the attention of museum professionals. Webb (1996) states that "there seems to be little disagreement that music can create mood" (p. 17). "Viewers may be so absorbed by what they are seeing, that they do not consciously notice the music at all, yet their mood is influenced" (Webb, 1996, p. 17). Webb (1996) states that the purpose of music may be to increase the pleasure of the moment for the hearer and hypothesizes that, if properly applied in a museum setting, the purpose might be the intention to make the visitor experience more pleasurable. The purpose of mood creation may also be bringing a particular affect or feeling to the moment which could enhance the objects or ideas being seen (Webb, 1996). Webb (1996) states that

"advertisers regularly use music to make us care about their products. Their music is not lightly chosen, and they certainly intend it to be a part of their instructional message" (p. 18). Music not only increases affect but it can also direct affect to determine how the visitor feels about what they are seeing. This can be used powerfully by exhibit designers much as it is used in movies and television. "In movies the music often precedes the action, so that we anticipate the action, and feel suspense" (Webb, 1996, p.18). Advertisers and marketers use mood to create affect to increase sensory experiences that accompany retail experiences and influence purchasing habits.

Areni and Kim (1993) studied the influence of background music on shopping behavior in a wine store. They conducted their study in a small wine cellar located in a restaurant where patrons could purchase wine, and played either classical or "Top 40" music to measure the influence of different types of background music on customers' purchasing habits in regard to wine. They found that customers purchased more expensive wines when classical music was playing versus when "Top 40" music was playing. Areni and Kim conclude that "retailers should devote considerable attention to the symbolic meaning underlying each purchase experience. If consumers are seeking sophistication, then in-store cues must suggest, and even facilitate that experience. The same holds for other sought shopping experiences like excitement, relaxation, etc." (p. 338).

Webb (1996) also discusses affective conditioning which is to say "affect associated directly with a stimulus without having to induce a mood" (p. 19). A more recent study conducted by Proverbio et al. (2015) demonstrates the idea that without having to induce a mood, affect was associated directly with a stimulus. In their study, Proverbio et al. investigated how background auditory processing could affect other perceptual and cognitive processes as a function of stimulus content, style, and emotional nature. To do this, Proverbio et al. studied the

effect of listening to music vs. listening to the sound of rain or silence by administering an old/new face memory task, which involved 448 unknown faces, to a group of 54 non-musician university students. The 54 participants listened to joyful or emotionally touching music, rain sounds, or silence while studying hundreds of faces. During the facial encoding session, the researchers measured heart rate and diastolic and systolic blood pressure; this was followed by a memory test. Proverbio et al. found that response times in a facial recognition test were significantly faster and the recognition rate was higher for faces that were studied either in the presence of emotionally touching background music or complete silence as opposed to joyful background music or the sound of rain. According to Webb (1996), "when pairing occurs, for whatever reason, affect is likely to transfer. It means that background music is probably changing the perception of exhibits whenever it is used, whether we intend it or not" (p. 20). Webb (1996) also states that the music could be providing cues to guide behavior: "People are more likely to look for external cues to guide their behavior in places where they are unfamiliar….This means that, because museums are generally unfamiliar places, music might possibly have greater effects there as a cue to behavior" (Webb, 1996, p. 20).

"It has been well documented that background music tends to change people's pace: fast music speeds them up, while slow music slows them down" (Webb, 1996, p. 21). "Time is an important factor in retailing because retailers strongly believe in a simple correlation between time spent shopping and amount purchased" (Yalch and Spangenberg, 2000, p.141). Milliman (1982) found that consumers spent more time in the grocery store when exposed to slow music compared with fast music. "The tempo of instrumental background music can significantly influence both the pace of in- store traffic flow and the daily gross sales volume purchased by customers" (Milliman, 1982, p. 90). Smith and Curnow (1966) reported that shoppers spent less

time in a grocery store when listening to loud music compared with softer music. “In addition to directly affecting how much time shoppers spend in a store, music appears to affect shoppers’ perceptions of the amount of time they spent shopping” (Yalch and Spangenberg, 2000, p.141).

Bailey and Areni (2006) studied how atmospheric music, familiar and unfamiliar, affects perceived wait times while idly waiting or while waiting and partaking in a brand recall test (attempting to remember as many brands of soft drinks as possible). Two hundred and ninety-two undergraduate students studying business at a major Australian university participated in the laboratory experiment which manipulated whether respondents were engaged in a non-temporal task versus waiting for an upcoming event during the target period, whether the atmospheric music played was familiar versus unfamiliar, and whether respondents heard four 3-min songs versus two 6-min songs during the interval. The brand recall test as opposed to waiting idly as well as the presence of familiar versus unfamiliar music reduced the perceived wait times of the participants. Respondents also recalled more music elements when they were engaged in the brand recall task compared to when they were waiting idly. Bailey and Areni found that “familiar music can either expand or contract duration judgments relative to unfamiliar music, depending on whether individuals are otherwise monitoring the passage of time during the interval” (p. 190). Understanding this in the context of museums means that music could alter perceived time in an exhibit.

Webb (1996) introduces music as an attention-getter and states that “all attention-getters must be related to the message or they distract from it as they get stronger,” (p. 22) in other words there must be music-message congruency. Music-message congruency is essential to avoid competition between the parts of an exhibit, says Webb. He also states that “the more that music demands attention, the more information-load it has, and the more distraction it will be

when competing with verbal material" (p. 24). He discusses this in the context of how music may affect the learning of a museum visitor. Cockerton et al. (1997) conducted a study on the effects of background music on test performance. The study included thirty undergraduate students who completed two cognitive tests under two conditions, non-music and music. They found that intelligence test performance, in this case general intelligence, was significantly enhanced as a function of background music (Cockerton et al., 1997).

Atmospherics and Exhibit Design

The term atmospherics refers to the conscious designing of space to create certain effects in buyers and was coined by Kotler in 1973 (Kotler, 1973). According to Kottasz (2006), "Kotler (1973) referred to atmospherics as the intentional control and structuring of environmental cues" (p. 96). Forrest (2013) says that atmospherics, applied to visitor research, offers a possible organizing framework for the study of visitors' affective, cognitive, and behavioral response to the physical cues of the exhibit environment. The importance of atmospherics in the museum context stems from 2 key ideas: 1) atmospherics have been found to influence significantly the learning environment of visitors; and 2) atmospherics, in the museum shop, dining facility, and even the building itself, provide pulling power for visitors who otherwise may not visit a particular exhibition or venue (Kottasz, 2006).

Forrest (2013) provides a review of atmospherics as a potential model for studying how visitors interact with and view exhibit environments in informal learning settings such as museums. She states that there has been a shift in the last 150 years from the unmediated display of objects to the creation of interpretive environments, driven by greater emphasis on the museum visitor, higher audience expectations, and recognition that design has a greater role to play than the creation of a mere container, backdrop, or decoration (Forrest, 2013). Atmospherics

is now widely acknowledged as an important component of experience quality in a wide range of leisure settings, and the term is frequently used by marketers as an umbrella term for the overall design and ambience of a retail, leisure, or service environments such as museums (Forrest, 2013). The purpose of her article was to introduce the concept of atmospherics which has informed considerable research in retail, service, and leisure sectors, and to explore the potential of this concept to inform the research agenda for the museum visitor experience (Forrest, 2013). Forrest (2013) introduces frameworks from atmospheric research that may apply to the visitor studies in the museum field.

One such framework is the Stimulus-Organism-Response (S-O-R) model. This model "derived from environmental psychology, asserts that sensory inputs from the environment (stimulus) combine with personality factors to trigger an internal, primarily emotional reaction (organism); this subsequently results in behavioral outcomes (response)" (Forrest, 2013, p. 207). The behavioral outcomes are characterized as either approach, such as the desire to explore, work or cooperate with others, or avoid, such as retreating, aversion to others, or desire to leave a situation (Forrest, 2013). Pleasure-displeasure, degree of arousal (extent of sensory stimuli), and dominance-submissiveness (extent to which a person feels in control of the environment and situation) are a part of the PAD dimensions which are included in the S-O-R framework. Forrest (2013) states that "the S-O-R model does not take goal congruence into account, therefore understanding this relation necessitates theoretical developments that go beyond this model's constraints" (p. 209). By goal congruence, Forrest is referring to how atmospheric research seldom examines why certain environments were deemed pleasant however that this research shows there is a clear relation between pleasure and avoidance behaviors. The S-O-R model also does not take into account the role of cognition or the influence of context, consumer goals, or

attitudes in moderating responses to environmental stimuli and does not lend itself to the study of multisensory experiences where there are extensive interactions between variables.

Because of these limitations to the model, atmospheric researchers have modified and extended it: "Cognitive appraisal theory is being increasingly applied to consumer settings as it is considered to provide a more robust framework for understanding the causes and consequences of particular emotional states" (Forrest, 2013, p. 210). This theory suggests that affective responses are elicited through cognitive evaluations of stimuli and that emotion elicited by a stimulus depends upon a subjective interpretation of the situation according to a number of appraisal dimensions (Forrest, 2013). For instance, situations are first and foremost appraised based on the extent to which they are congruent with a person's needs, interests, priorities, and goals. The cognitive appraisal theory is important in the museum context as it provides a means for the S-O-R model to fit into the current understanding of the visitor studies within the museum field: "Visitors will be attracted to those exhibits and environments that offer the greatest fit with their needs and goals and respond negatively to environments that confound or frustrate them" (p. 221). The article is concluded with a research agenda for museum atmospherics. Forrest (2013) states that:

> "From a theoretical perspective, museum atmospherics research will extend our understanding of the visitor environment dynamic and its significance to the overall visitor experience. On a practical level, a greater understanding of which kinds of exhibition environments are conducive to different types of visitor experiences will help inform the creation of exhibitions with these characteristics" (p. 212).

However, little is currently known about the effect of atmospherics on different types of museum visitors and museum atmospherics research may help better inform how exhibit design effects different types of visitors. In proposing research questions arising from atmospheric literature she includes the following question: What are the principal dimensions of an exhibition

servicescape as perceived by visitors? Which atmospheric elements (e.g., lighting, audio, color schemes, layout) are most significant in defining an exhibition's overall atmosphere? This question in particular is relevant to the research being presented here. By examining one aspect of the exhibit environment, the field is one step closer to understanding the question at hand.

Kottasz (2006) studied atmospherics in relation to visitor experience in 10 United Kingdom museums in order to understand how visitors respond to atmospherics as well as to test an atmospheric model. The model she proposes includes the S-O-R model including PAD dimensions and approach-avoidance behavior as well as two other factors often found in atmospheric research. The first factor is the list of the five genres of atmospheric cues which includes: 1) the exterior, 2) the interior, 3) layout and design, 4) decoration and 5) human factors (Kottasz, 2006). Each one is described as follows:

1. The exterior: the size and the shape of the building, parking facilities, and the surrounding location;
2. The interior: temperature, cleanliness of the building, lighting, interior colours (sic.), ambient scents, and sounds;
3. Layout and design: object placement, traffic flow, and sectional locations;
4. Decoration: signage and cards and displays of objects;
5. Human Factors: employee characteristics, employee uniforms, and crowding (Kottasz, 2006, p. 98)

The second factor includes other dimensions of the atmospheric environment. The dimensions included are:

1. Complexity: visual richness, ornamentation, the rate at which information is presented;
2. Mystery: that which is secret and inexplicable;
3. Coherence: order, clarity, and unity
4. Novelty: an environment that is different and new;
5. Spaciousness: having ample space to wander around a museum and not feeling crowded (Kottasz, 2006, p. 99)

In order to study visitor responses to atmospherics and test the atmospheric model, a questionnaire was administered to visitors at the 10 UK museums. The questionnaire was meant

to explore the extent to which museum audiences regarded atmospheric variables contributing to their emotional states and approach-avoidance behaviors. It was distributed to 186 visitors as they were leaving one of the 10 museums; only 140 were completed fully. It included questions pertaining to demographic information, visitor perceptions of the museum as a whole, visitor experience at the museum as a whole, the five genres of atmospheric cues, and the dimensions of the atmospheric environment.

Kottasz found that "in general, visitors were satisfied with the decorative features of the museums they visited, but much less so with the interior elements" (p. 114). However, "respondents who appreciated the lighting, special effects, sounds and the layout and design of a museum found the environment to be more novel and more complex" (p. 110). In the test of the model, Kottasz found that the proposed model generally provided a good fit to the data: "The results indicated that many of the atmospheric stimuli that academic research has found to influence the PAD dimensions are equally valid in a museum context" (p. 114). Two of the five genres of atmospheric cues (the interior and decoration) were found to have a significant impact on the pleasure, arousal, and dominance felt be the visitor. As the interior elements are important to pleasure and arousal, museums need to pay particular attention to these aspects in relation to museum and exhibit design: "Clearly there is room for improvement here and museums should re-evaluate their approach to this aspect of the environment if they are to attract and retain audiences" (p. 114).

Visitor Studies of Sound or Music in the Museum Context

While very few visitor studies focus on the impact of music in exhibits specifically, several focus on music or sound in the context of the museum. This body of literature shows several impacts that music might have on the visitor experience. Some of those impacts include

creating a comfortable space for visitors, affecting visitor dwell time in certain music conditions, and understanding that visitors seek variety in the music selections and want the variety to be related to the content of the exhibit. The studies that have been conducted on sound or music in the museum context are presented here.

Beseda (2013) studied music programming in art museums, specifically investigating who attends art music programs, why people go to an art museum for music programming, and how music programming in the galleries influence visitors' perceptions of their art museum experience. The study occurred at the three program offerings Art of Jazz event at the Seattle Art Museum where questionnaires were distributed to adult participants who either filled out a paper version or were emailed an online version. She found that the participants were largely white, older adults who came to hear jazz but not necessarily view the art and that interest may be a leading factor in visitors' decision to attend music programming in art museums. Beseda states that "participants indicated that the music program complemented the museum experience and was the motivating factor to come for others" (p. 3). Although this study was not specific to music and museum exhibits it has implications for how music can impact the visitor experience such as creating a means for getting visitors to attend exhibits and for creating a welcoming, comfortable, and exciting environment where visitors feel more at ease.

Jakubowski (2011) conducted a study of museum soundscapes and the impact on visitor outcomes. The study included an art history and a natural history exhibit where one of three soundtracks (human voice, instrumental classical music, or natural sounds) or no sounds (control) were playing at two different decibel levels (high or low). The outcomes of the study included dwell times and psychological outcomes such as stressors, individual personalities, noise sensitivity, control, sensory pleasure, cognition, and restoration. In regard specifically to

the classical music, in the art exhibit under the Classical (music) High (decibel) condition visitors reported "significantly higher perceived knowledge gain when compared to their Human Voices High [decibel] counterparts" (p. 48). Visitors also rated the Art Exhibition under the Classical High condition significantly higher in restoration compared to the Human Voices High condition. In regard to dwell times in the Natural History exhibit, Jakubowski states that "visitors in the Classical [music] Low [decibel] condition remained in the exhibit significantly longer than visitors in the High and Low [decibel] Human Voices conditions" and that in the "Classical Low condition visitors remained significantly longer than visitors in the natural low condition or the Classical High condition" (p. 52). In the Natural History exhibit, visitors in the Control condition had better visitor outcomes when compared to several other sound conditions including the Classical Low condition. The results of the study are presented as comparisons among the four sound conditions. However there are still implications of this study in relation to music specifically. Jakubowski states that "the fact that the manipulation of sounds had any impact at all suggest that museum soundscapes deserve more than a cursory overview" (p. 80). He also states that the museum environment is a dynamic and complex place and as such, for certain visitors, specific exhibits sounds can have a meaningful impact. "Considerations of the soundscapes continue to be left out of the 'museum environment' in the museum planning literature" (Jakubowski, 2011, p. 80). With more studies being conducted on various aspects of the museum soundscape the literature may improve around adding specific sounds, perhaps music, to the discussion of museum environments.

One such study that focuses specifically on music was conducted by researchers at the Laiho Memorial Museum in Taiwan (Chen & Tsai, 2015). The Laiho Memorial Museum highlights the life of Laiho, the "father" of modern Taiwan literature. The study compared two

music conditions, what Chen and Tsai called “light music” and the “1930s song” playing throughout the museum exhibition. The “light music” was a selection of soft modern piano music that is similar to music that might be found playing in shops, supermarkets, restaurants, cafes, and hotels; the “1930s song” was popular during Laiho’s life and was selected as it related to the exhibit content and contained lyrics which provided more of an information load on visitors than the faster paced “light music”. Overall, the study included 20 participants, nine of which listened to the “light music” and the other eleven of which listened to the “1930s song” while viewing the exhibit. The “light music” was found to evoke feelings of relaxation and comfort but lacked historical relevance whereas the “1930s song” evoked nostalgia for a past era and may have stimulated related emotions or mental images as well as enhanced visitors’ learning motivations. However, the “1930s song” became more of a feature than background music. These tracks were also played on loop so many visitors noted that it was repetitive. The implication of this study on future research may stem from a failing of the exhibit to integrate the music as a complement rather than competition. That is to say visitors would prefer a variety of music that is connected to content but does not have such a large information load that makes it more of a center piece of the exhibit rather than a background enhancer of an exhibit experience.

Summary

Understanding music in the context of retail can help shed light on how music can be used within the museum context. “Music does its work regardless of whether the setting is a museum or a store. The task wherever it is used is the same, namely, to make the effect of the music contribute to the goal of the space” (Webb, 1996, p. 15). The studies of music in a retail context suggest specific impacts on our perceptions, emotions, and decision making which may have impact the same way in a museum exhibit. Although there has been study of atmospherics

in the museum field, little is known about specific aspects of atmospherics such as music. Few visitor studies have been conducted around music in the exhibits. Those that have been conducted seem to suggest that music in an exhibit may impact the visitor experience in various ways including creating a comfortable space for visitors, effect on visitor dwell times, and understanding that visitors seek variety in the music selections and want the variety to be related to the content of the exhibit.

Chapter 3: Methods

The purpose of this study was to examine how music, used as an interpretive tool in a museum exhibit, affects the visitor's experience. The following research questions guided the study:

1. How does music affect visitors' stay time in the exhibit?
2. How does music affect visitors' comfort in the exhibit?
3. Does music affect visitors' emotions in the exhibit and in what ways?
4. How does music contribute to and/or inhibit visitors' understanding of the exhibit's main ideas?

This chapter describes the study's methods, including the research site, data collection procedures, description of the sample, data analysis procedures, and limitations. The study was designed as a quasi-experimental investigation, with a music treatment and a control group.

Research Site

The criteria for selecting a research site was as follows: 1) The site and exhibit had to be non-music related, meaning that the content of the exhibit and/or the museum did not relate to music in any way; 2) The site had to have a well-established relationship with the University of Washington Museology program; and 3) The visitorship to the site had to be high enough that reaching the target number of participants was feasible. A list of such sites was created, and included Renton History Museum (Renton, WA), Issaquah History Museum (Issaquah, WA), The Nordic Heritage Museum (Seattle, WA), and The Frye Art Museum (Seattle, WA). In the end, the research site selected was The Renton History Museum (RHM) and the Little House exhibit because it best fulfilled the criteria.

The Little House exhibit (Photo 1) contains two rooms, a sitting room (Photo 2) and a kitchen (Photo 3). The objects within the exhibit range from ca. 1880 to ca. late 1920s. The music was selected by the researcher and a staff member of RHM; the music had to be

representative of the time period, as defined by the term interpretive tool in the purpose statement of the study thus the selections ranged from 1911 to 1926. The selections include 4 pieces with lyrics and 12 pieces without and included a mixture of slow and fast paced music. Selecting both music with lyrics and without was important to the study as the literature suggests that information load my impact the visitor (Chen and Tsai, 2015). Slow and fast paced music was selected due to the possible impact on visitor stay time as suggested by the literature (Bailey and Areni, 2006; Bruner, 1990; Milliman, 1982; Smith and Curnow, 1966; Webb, 1996; Yalch and Spangenberg, 2000). A playlist of the musical selections can be found in Appendix C. The playlist lasted for one hour and was shuffled and played on loop while the museum was open. The music, for the music condition, was played using a laptop provided by RHM which was turned up to maximum volume and was placed in the cabinet under the phonograph (Photo 4) to give the appearance that the music was coming from it. The cabinet muffled the music but it was still able to be heard in both rooms of the Little House without overwhelming the space. The phonograph was placed in the exhibit before the non-music condition so that the only difference between the two conditions was the music itself.

Photo 1: Little House exhibit exterior

Photo 2: Sitting Room

Photo 3: The Kitchen

Photo 4: The Phonograph

Data Collection Procedures

After approval of the study by the University of Washington Internal Review Board, semi-structured interviews were conducted with 50 visitors: 25 experienced the exhibit during the music condition, while 25 experienced the exhibit without any music at all. Data were collected in February, March, and April of 2016, on weekends and weekdays.

Visitors 18 and older were randomly selected upon entering the exhibit through either of the two entrances. As the visitor entered, the researcher started a timer to record the visitor's stay time. That visitor was then approached upon exiting the exhibit and asked if they had visited the exhibit before. If the answer was yes, then the researcher thanked them and randomly selected the next visitor. If the answer was no, the researcher proceeded to the exit interview, which asked various questions about how the visitor felt while in the exhibition and how he/she perceived of

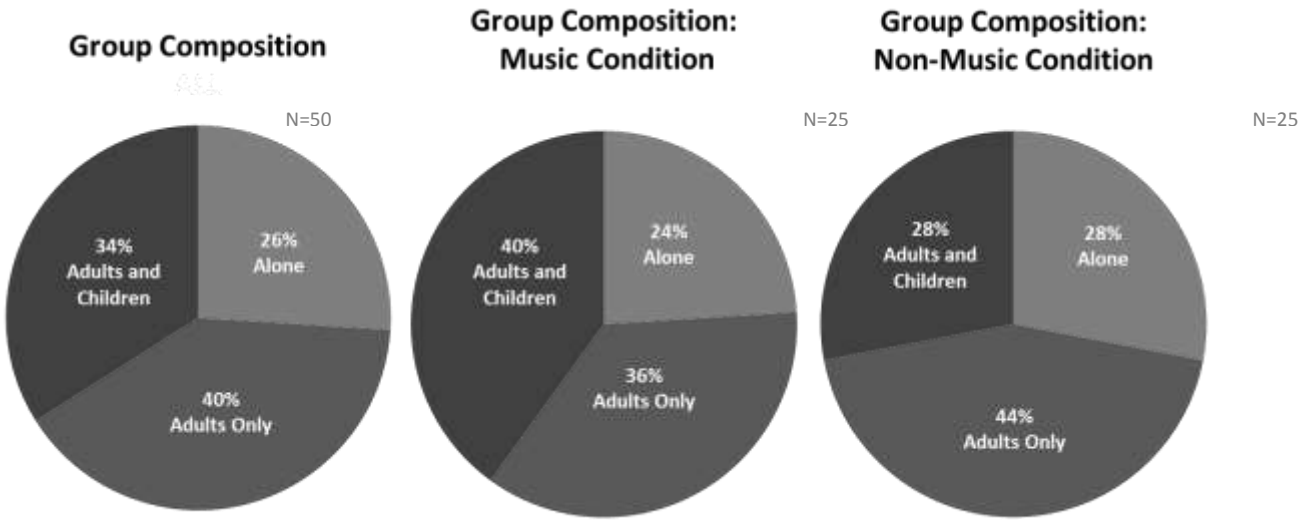
various design aspects of the exhibit (see Appendix A for full interview guide). The interviews were recorded and later transcribed.

Description of the Sample

Fifty visitors participated in the study overall: 25 in the Music condition and 25 in the Non-Music condition (two visitors were excluded having visited the exhibit previously and two visitors declined participation in the study). Visitors were asked their age range and group composition. Figures 1 and 2 below describe this distribution over the whole sample and by each condition.

Figure 1: Age of visitors in the study (N=50).

Figure 2: Group composition of visitors in the study (N=50).



Data Analysis

The researcher analyzed the three open-ended questions using emergent coding and developed a coding rubric (see Appendix B for coding rubric). Multiple codes were allowed for each individual response in the open-ended questions. All data were analyzed using Statistical Package for Social Sciences (SPSS). For the open-ended questions, frequencies were analyzed to indicate trends in the data. For the closed-ended/ranking questions, medians were compared between the music and non-music conditions using the Mann-Whitney test.

Limitations

The main limitation of this study was the sample size. Even though Renton History Museum was chosen based on its qualifications, the number of visitors to the site was small given the size of the institution. This made collecting data on Saturdays, the busiest day at the museum necessary and collecting data on other days difficult. Therefore, data were collected mainly on Saturdays, with the exception of one free first Wednesday. A larger sample may yield different results overall. There were also differences in the sample between the two conditions; there were more adult and children groups in the music condition than the non-music condition. "Routine parenting is going on throughout the visit, with children constantly monitored for physical needs such as trips to the toilet, hunger or tiredness. The needs of children to explore in a new place is likely to take precedence over any chance to indulge a sustained interest on the part of accompanying adults" (Hooper-Greenhill, 1994, p. 102). This may account for some of the differences between the two conditions as adults with children may attend to the exhibit differently than those without children.

Chapter 4: Results &Discussion

This chapter presents the study findings in context of the following research questions: 1) How does music affect visitors' stay time in the exhibit? 2) How does music affect visitors' comfort in the exhibit? 3) Does music affect visitors' emotions in the exhibit and in what ways? and 4) How does music contribute to and/or inhibit visitors' understanding of the exhibit's main ideas?

Research Question 1: How does music affect visitors' stay time in the exhibit?

Visitors were timed upon entering and exiting the exhibit. Table 1 shows the median stay time for both conditions. Visitors who were in the exhibit while music was playing stayed an average of 13 seconds longer than visitors who were in the exhibit without music.

Table 1: Time spent in the exhibit in the music condition and the non-music condition

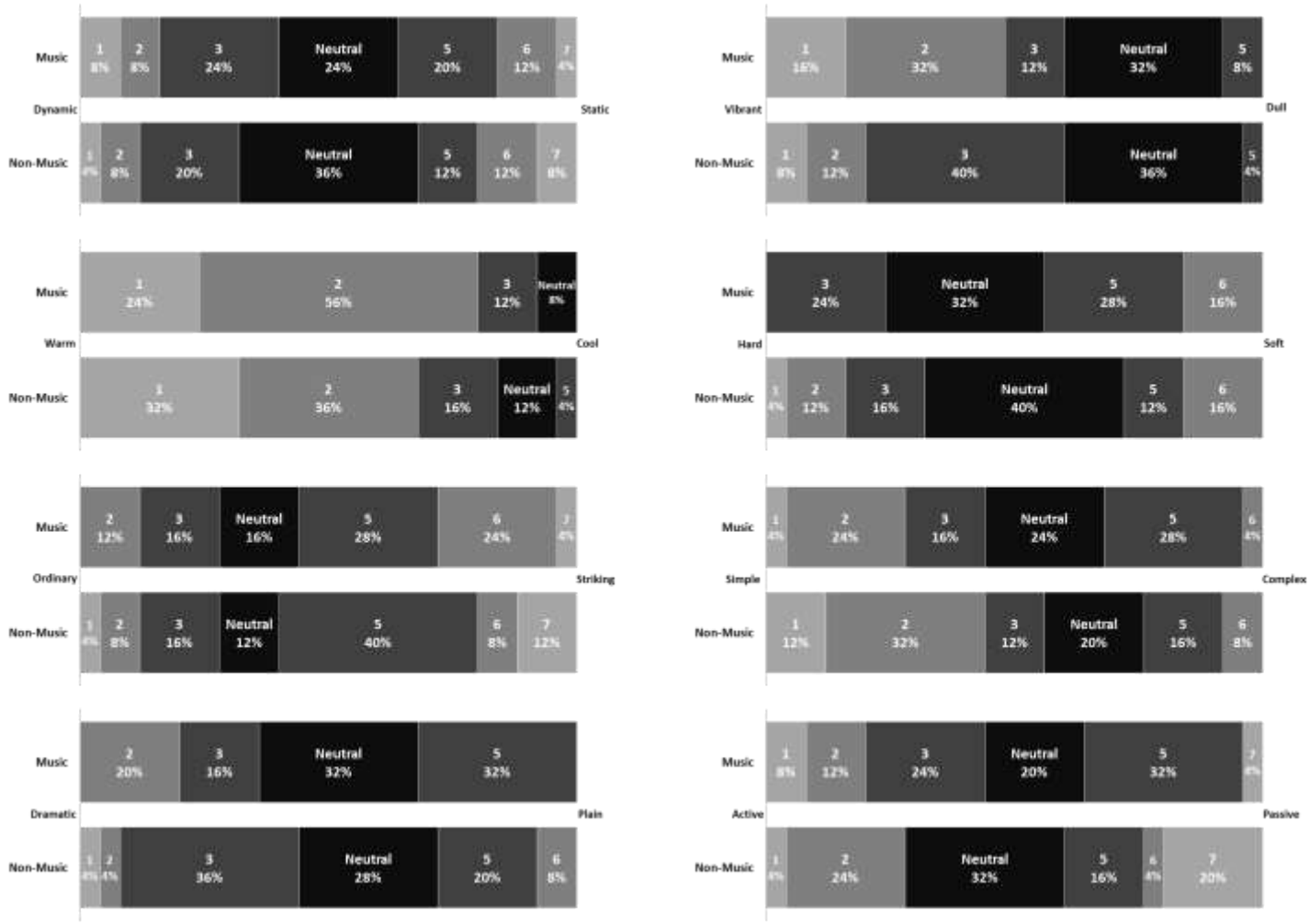
	Mean (mins:secs)
Music (N=25)	2:56
Non-Music (N=25)	2:43

Research Question 2: How does music affect visitors' comfort in the exhibit?

Visitors were asked a series of semantic differentials in order to measure their comfort in the exhibit, including: 1) Dynamic/Static; 2) Vibrant/Dull; 3) Warm/Cool; 4) Hard/Soft; 5) Ordinary/Striking; 6) Simple/Complex; 7) Dramatic/Plain; and 8) Active/Passive. In each pairing, the anchors were mapped to a 7 point-scale and the medians were compared between the music and non-music condition. For all 8 pairings, there was no significant difference in visitors'

comfort between the music and non-music condition. Figure 3 shows the frequencies of the rankings for each of the semantic differential scales.

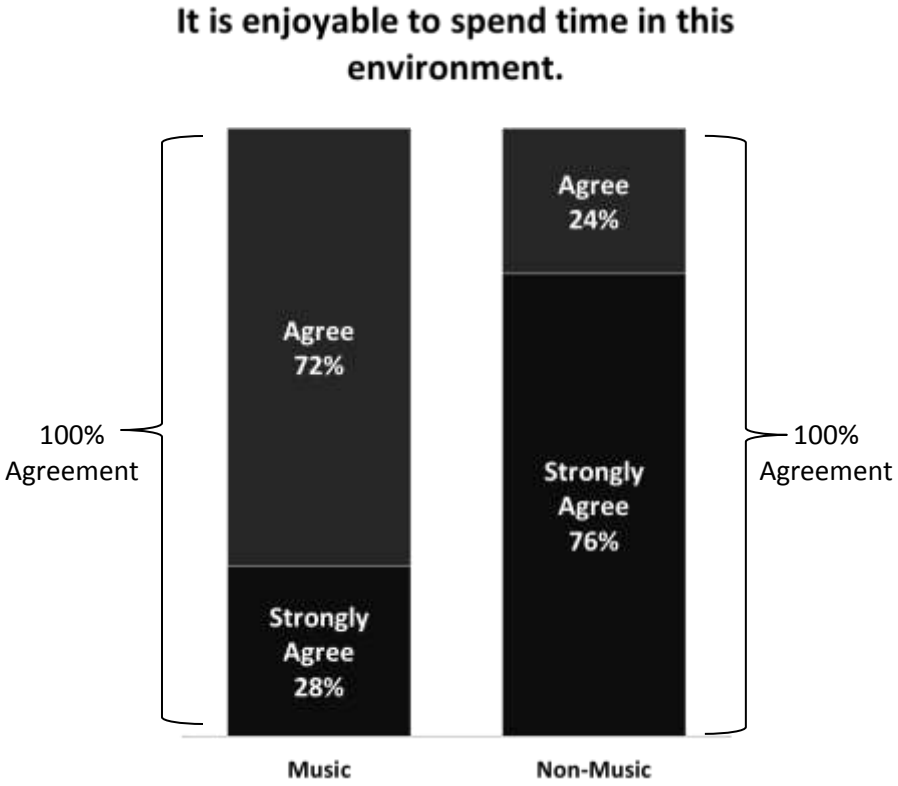
Figure 3: Frequencies of semantic differentials related to visitor comfort in the exhibit. (Music N=25, Non-Music N=25)

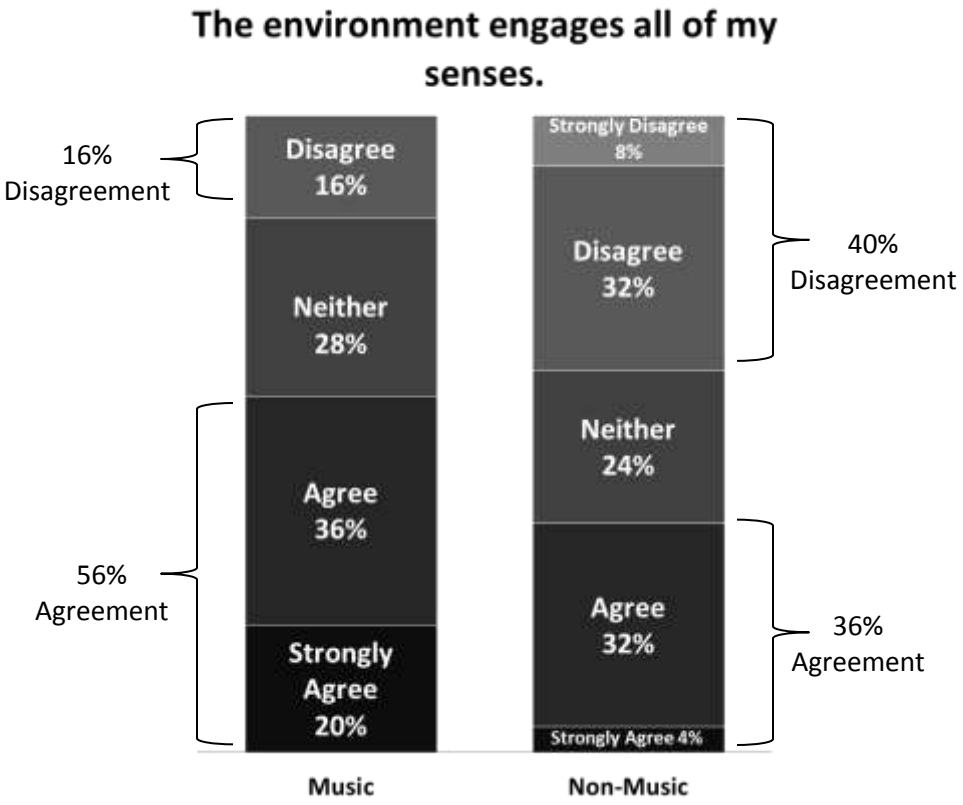


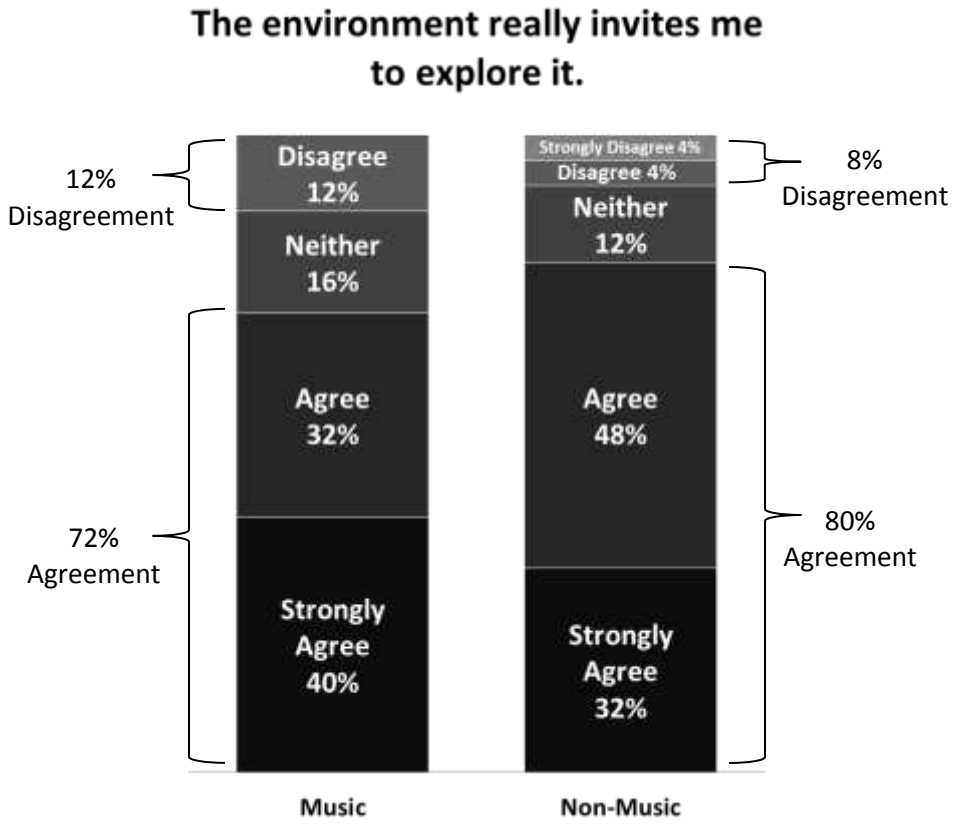
In addition to the above-mentioned semantic differentials, visitors were asked to rate their agreement with a series of four comfort-related statements on a scale where 1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; and 5=strongly disagree. The statements included the following: 1) It is enjoyable to spend time in this environment; 2) The environment

really invites me to explore it; 3) The exhibition's design helped spark my interest; and 4) The environment engages all of my senses. The medians were compared between the music and non-music condition. Only one item was significantly different between the two conditions; visitors who experienced the exhibit with music were more likely to say that the environment engaged all of their senses than were visitors who experienced the exhibit without music. The frequencies of the four comfort-related items are shown in Figure 4. All visitors indicated some level of agreement with the statement "It is enjoyable to spend time in this environment" in both conditions; however, more visitors strongly agreed in the non-music condition (76%) compared to the music condition (28%). With the statement "The exhibition's design helped me make sense of what the exhibition is about," more visitors in the music condition indicated some level of agreement (96%) compared to those that indicated some level of agreement in the non-music condition (80%). Visitors had more diverse answers in both conditions when indicating their level of agreement or disagreement with the statements "The environment really invites me to explore it" and "The environment engages all of my senses."

Figure 4: Frequencies for the four comfort-related items
(Music N=25, Non-Music N=25)




The environment engages all of my senses.
16% Disagreement
Disagree 16%
Neither 28%
Agree 36%
Strongly Agree 20%
56% Agreement
Strongly Disagree 8%
Disagree 32%
Neither 24%
Agree 32%
Strongly Agree 4%
40% Disagreement
36% Agreement
Music
Non-Music


The environment really invites me to explore it.
12% Disagreement
Disagree 12%
Neither 16%
Agree 32%
Strongly Agree 40%
72% Agreement
Strongly Disagree 4%
Disagree 4%
Neither 12%
Agree 48%
Strongly Agree 32%
8% Disagreement
80% Agreement
Music
Non-Music

Research Question 3: Does music affect visitors' emotions in the exhibit and in what ways?

Visitors were asked to indicate their level of agreement with a series of 10 items describing how they might have felt in the exhibit on a scale where 1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; and 5=strongly agree. The 10 items included the following: "This exhibit made me feel..." 1) Irritated; 2) Rested; 3) Bored; 4) Tired; 5) Relaxed; 6) Confused; 7) Restored; 8) Focused; 9) Interested; and 10) Anxious. The medians were compared between the music and non-music condition. There were no significant differences in rankings between visitors in the music condition and visitors in the non-music condition, suggesting that music did not affect visitors' emotions in the exhibit. The frequencies of the responses to each word are shown in Figures 5 and 6. Visitors generally disagreed in both conditions that the exhibit made them feel Irritated, Bored, Tired, Confused, and Anxious (Figure 5). Visitors generally agreed in both conditions that the exhibit made them feel Rested, Relaxed, Restored, Focused and Interested (Figure 6).

Figure 5: Frequencies of visitors' rankings on items that they disagreed with how the exhibit made them feel

(Music N=25, Non-Music N=25)

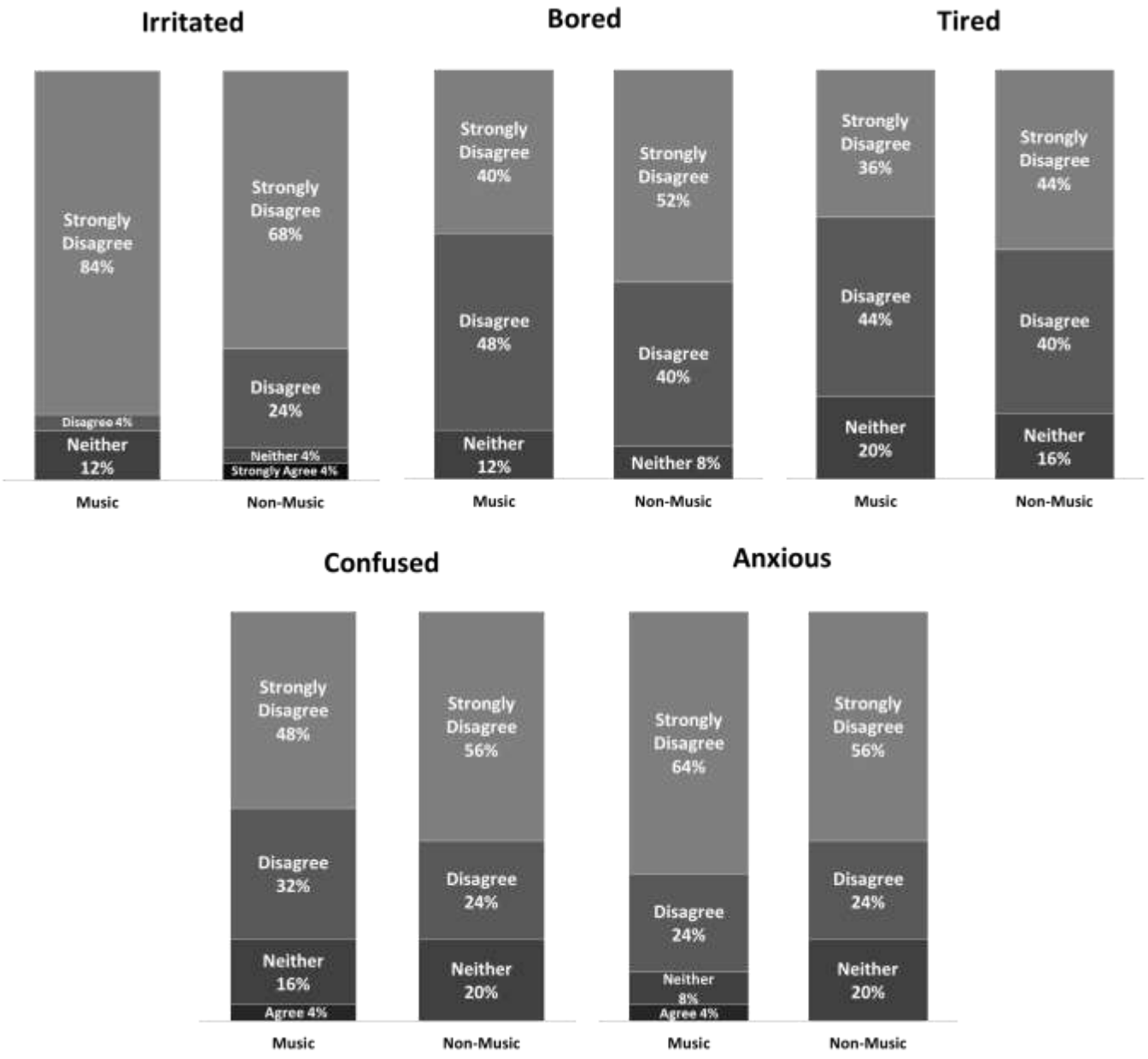
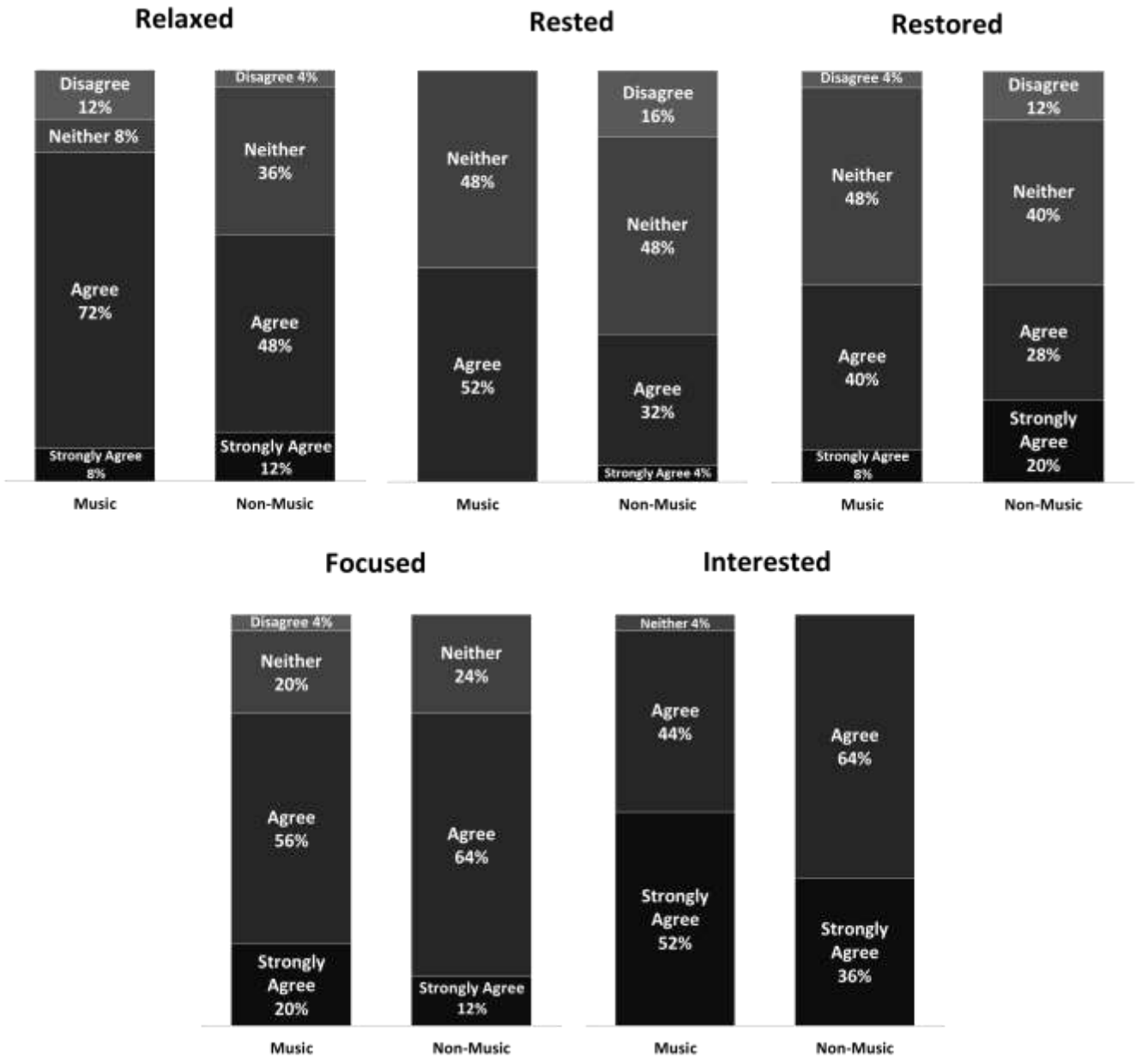


Figure 6: Frequencies of visitors' rankings on items that they agreed with how the exhibit made them feel

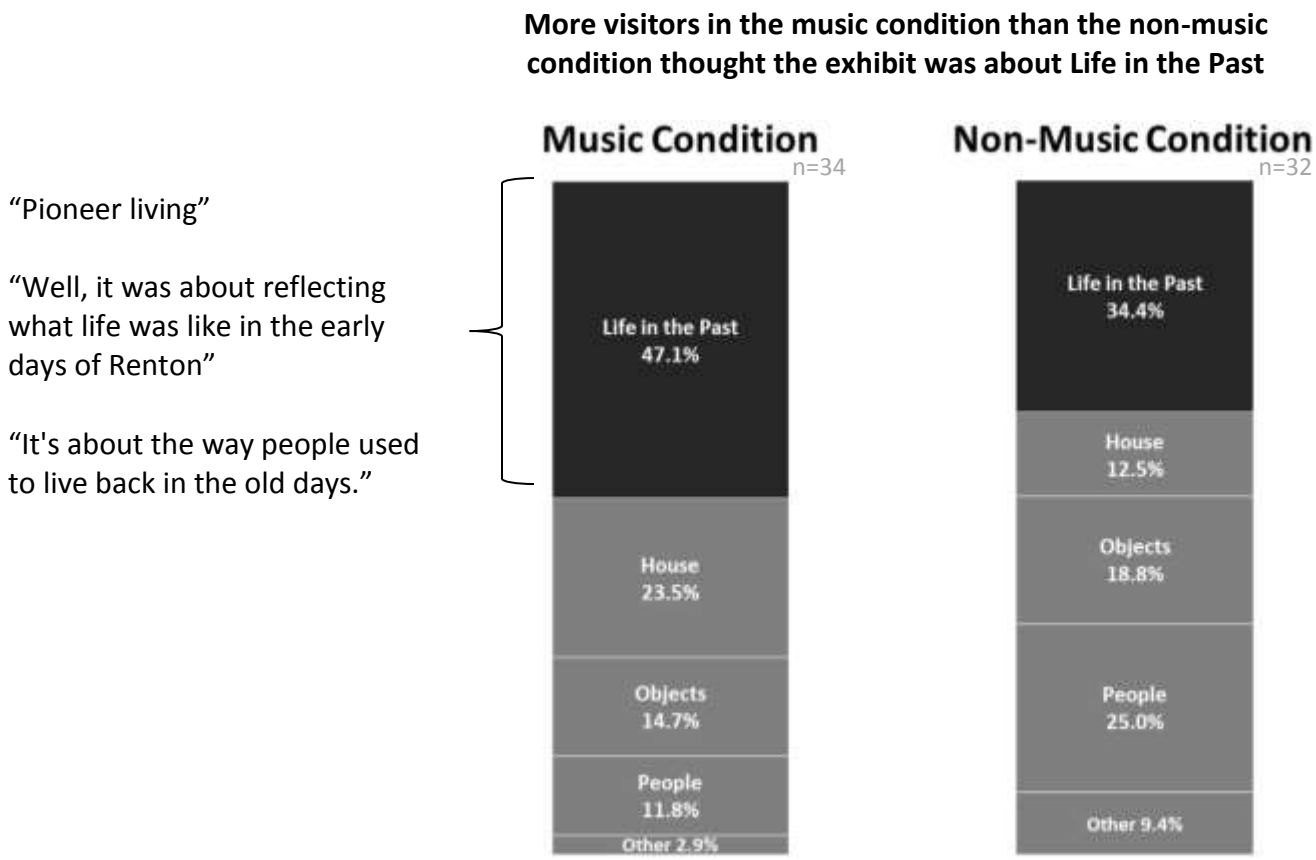
(Music N=25, Non-Music N=25)



Research Question 4: How does music contribute to and/or inhibit visitors' understanding of the exhibit's main ideas?

Visitors were asked three questions to measure how music influenced their understanding of the exhibit's main ideas. The first question was: In your own words, what did you think that this exhibit was about? The responses were coded into five emergent categories: 1) Life in the Past; 2) People; 3) Objects; 4) House; and 5) Other. Multiple codes were allowed for each response. Figure 3 shows the distribution of responses across these categories in both the music and non-music conditions. More visitors in the music condition than the non-music condition thought the exhibit was about Life in the Past. Comments included: "Pioneer living"; "It seemed to be a recreation of a slice of life during the early 1900's or late 1800's"; "Well, it was about reflecting what life was like in the early days of Renton"; and "It's about the way people used to live back in the old days."

Figure 7: Visitor responses to the question: In your own words, what did you think that this exhibit was about?



Visitors were also asked, "What did you learn while visiting this exhibit?" The responses were coded into five emergent categories: 1) Past Living; 2) People and Community; 3) Objects; 4) House; and 5) Other. Multiple codes were allowed for each response. Figure 4 shows how visitors' responses were distributed across these categories in both the music and non-music conditions. More visitors in the music condition than the non-music condition said they learned about people and community, and about the house. They made comments such as: "Well, for one, some of the names of the people that were involved in the early days."; "Well, I learned about multiple people, I can't remember their names right now. Yeah, I just learned a little bit about individual people."; "The house was small. Not a lot of places to put your flat screen TV in

there. A little more cramped. Definitely taken for granted our size nowadays. Bigger, better"; and "That the architecture is still alive. And it is still in use today." More visitors in the non-music condition than the music condition said they learned about objects. Representative quotes here included: "I like the craftsmanship of things. Now everything is plastic. I don't like plastic that much"; "The different old stuff that they used, like for cooking, and how the basic stuff in the house are (sic.). And the (to child) what do you call it? She called it the music player. They have the sewing machine. So they have stuff that we don't have in our house now"; "I didn't read anything. I was looking at all the stuff they had. It's real interesting. It keeps me away from reading stuff, seeing the real thing"; and "There was a lot fewer items to use, just a lot more basic. Everything was smaller, the chairs, stoves, everything."

Figure 8: Visitor responses to the question: What did you learn while visiting this exhibit?

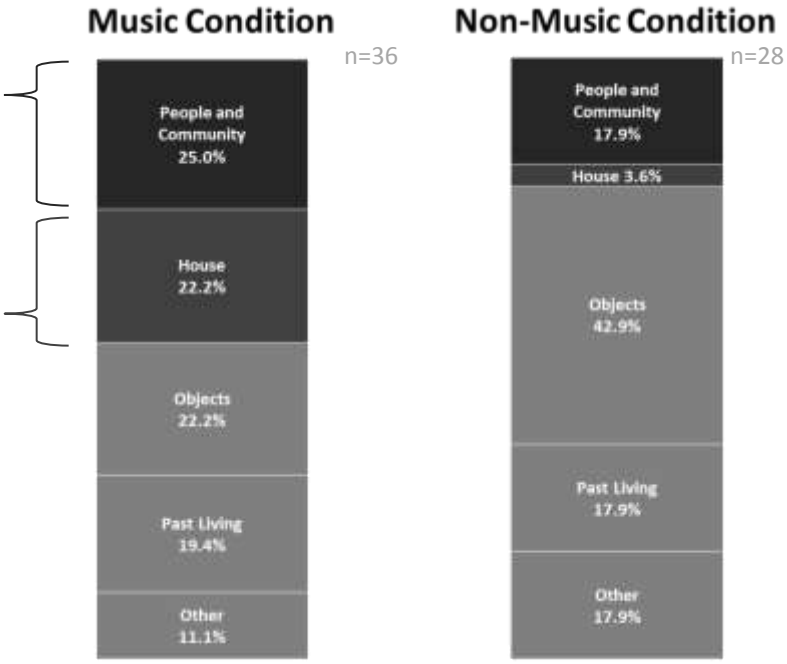
More visitors in the music condition than the non-music condition said they learned about people and community, and about the house.

"Well, for one, some of the names of the people that were involved in the early days."

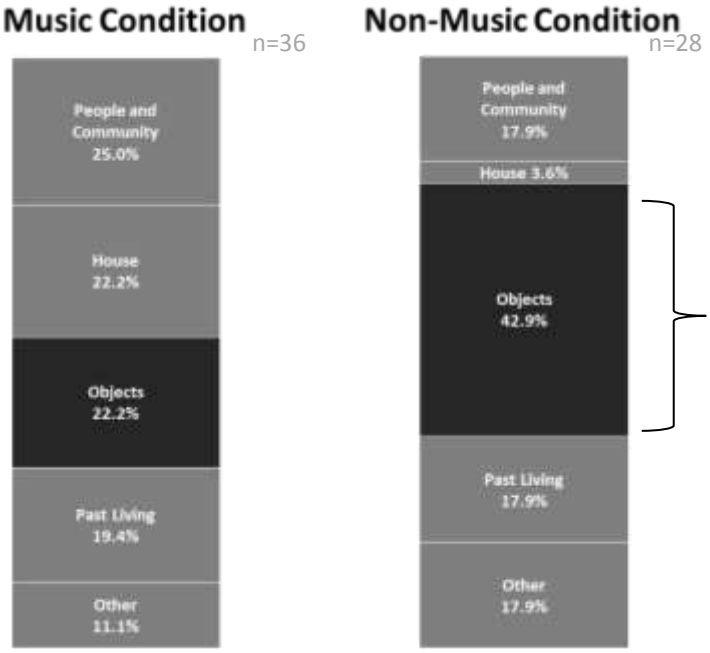
"Well, I learned about multiple people, I can't remember their names right now. Yeah, I just learned a little bit about individual people."

"The house was small. Not a lot of places to put your flat screen TV in there. A little more cramped. Definitely taken for granted our size nowadays. Bigger, better."

"That the architecture is still alive. And it is still in use today."



More visitors in the non-music condition than the music condition said they learned about objects.



"I like the craftsmanship of things. Now everything is plastic. I don't like plastic that much"

"I didn't read anything. I was looking at all the stuff they had. It's real interesting. It keeps me away from reading stuff, seeing the real thing"

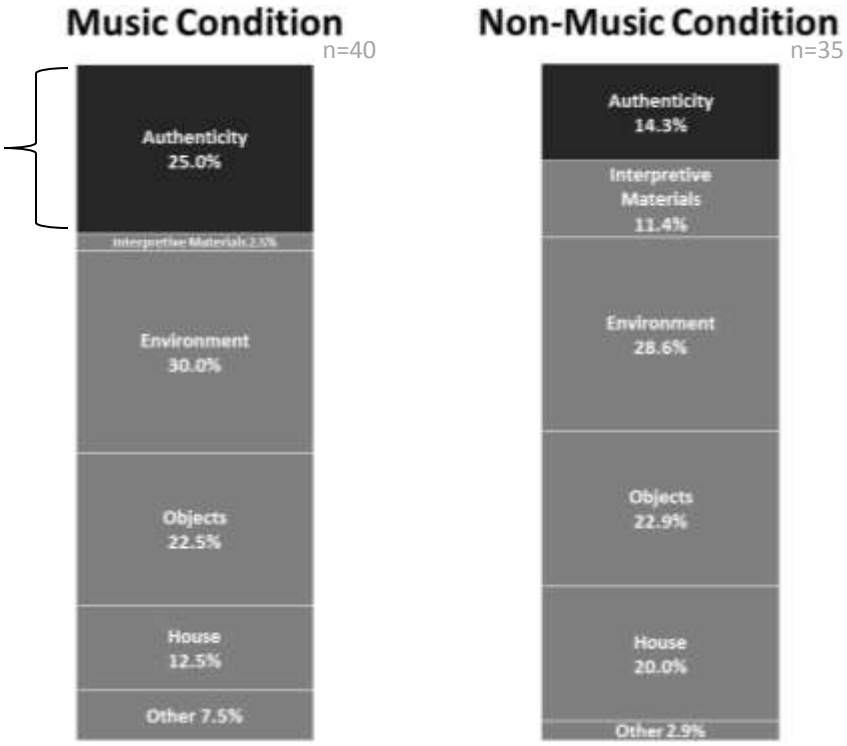
Finally, visitors were asked, “Was there anything about the exhibit’s design that you think contributed to what you learned?” The responses were coded into six emergent categories: 1) Authenticity; 2) Interpretive Materials; 3) Environment; 4) Objects; 5) House; and 6) Other. Multiple codes were allowed for each response. Figure 5 shows the distribution of responses across these categories for visitors who experienced the exhibit with music and those who experienced it without music. More visitors in the music condition than the non-music condition thought the authenticity of the exhibit contributed to what they learned. Authenticity in this context means that the visitors felt that the design was authentically done or that it was real to life. These visitors made comments such as: “I guess it would look real to life, is what it looks like. Just being a small house and how much area you're working with and how you want to say did they over cram it but that was probably just, that was realistic. The rooms were small and what you could put in them was exactly probably what we saw there”; “Yeah, I think that it was designed very representative of the period in time”; “Yeah, I liked that you could walk-in there, I mean, that was huge. It gives you the feeling, see the wallpaper, hear the music, and put you back in that time”; “I think the fact there is actually like a house in this museum was really interesting. It just felt very realistic”; and “I really liked the fact that it was the house in the museum, like you can actually walk through. An example of what the house would actually feel like as opposed to just looking at artifacts.”

Figure 9: Visitor responses to the question: Was there anything about the exhibit's design that you think contributed to what you learned?

More visitors in the music condition than the non-music condition thought the authenticity of the exhibit contributed to what they learned.

"Yeah, I think that it was designed very representative of the period in time"

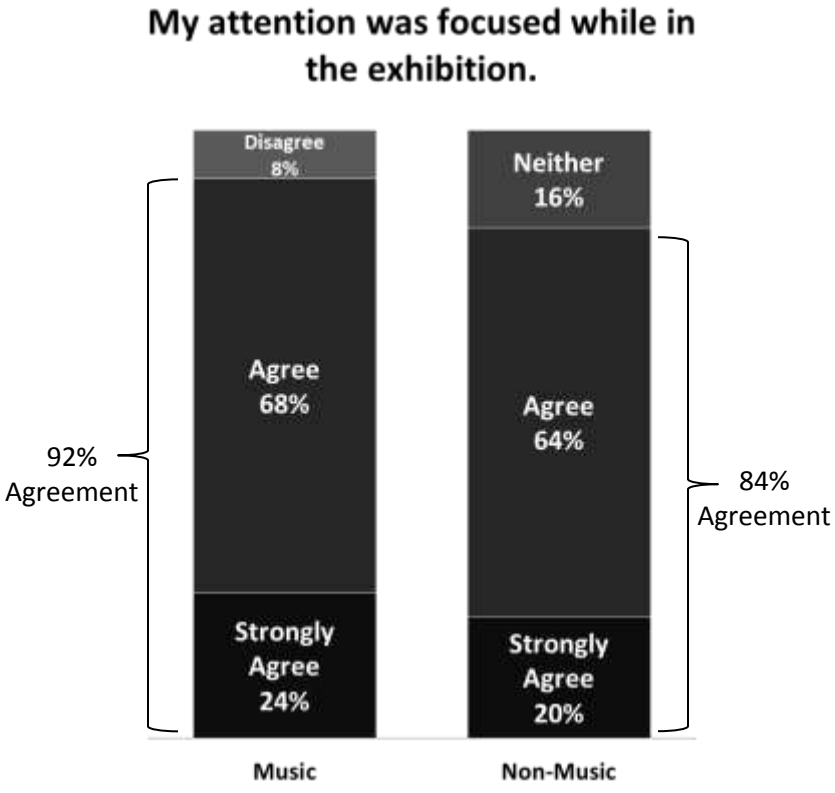
"Yeah, I liked that you could walk-in there, I mean, that was huge. It gives you the feeling, see the wallpaper, hear the music, and put you back in that time"

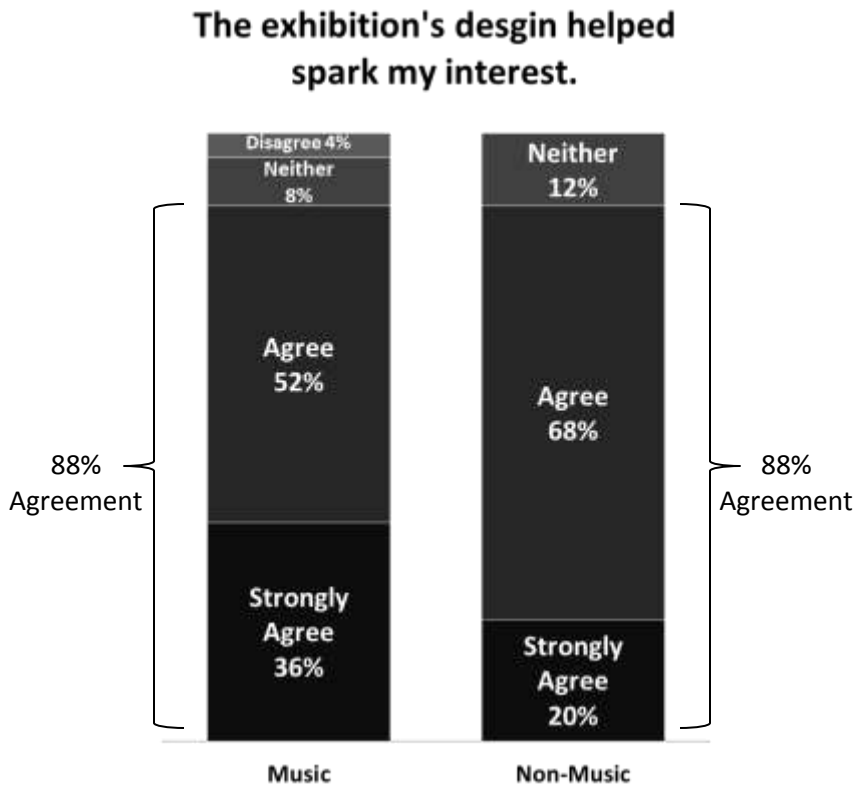


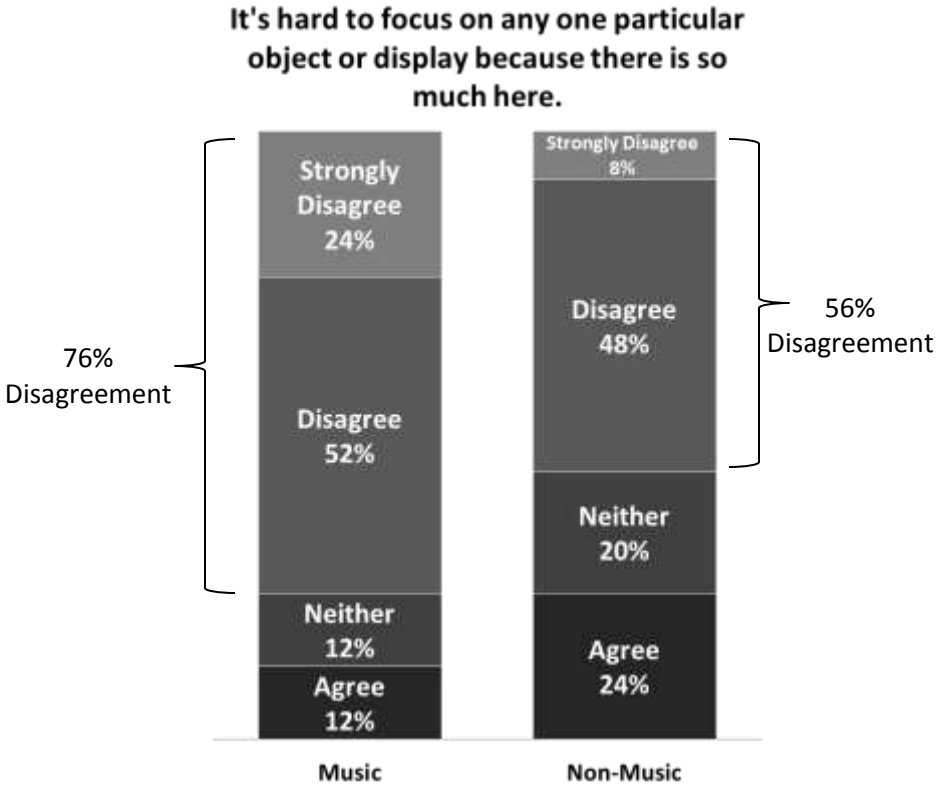
In addition to the three above-mentioned open-ended questions, visitors were asked to rate their agreement with a series of four statements relating to their focus on and/or understanding of the exhibit. Statements included the following, and were rated on a 5-point scale where 1=strongly disagree; 2=disagree; 3=neither disagree nor agree; 4=agree; and 5=strongly agree: 1) My attention was focused while in the exhibition; 2) It's hard to focus on any one particular object or display because there is so much here; 3) The exhibition's design helped me make sense of what the exhibition is about; and 4) It takes a lot of effort to stay focused in this exhibition. The medians were compared between the music and non-music condition. There were no differences in rankings between these two groups, suggesting that

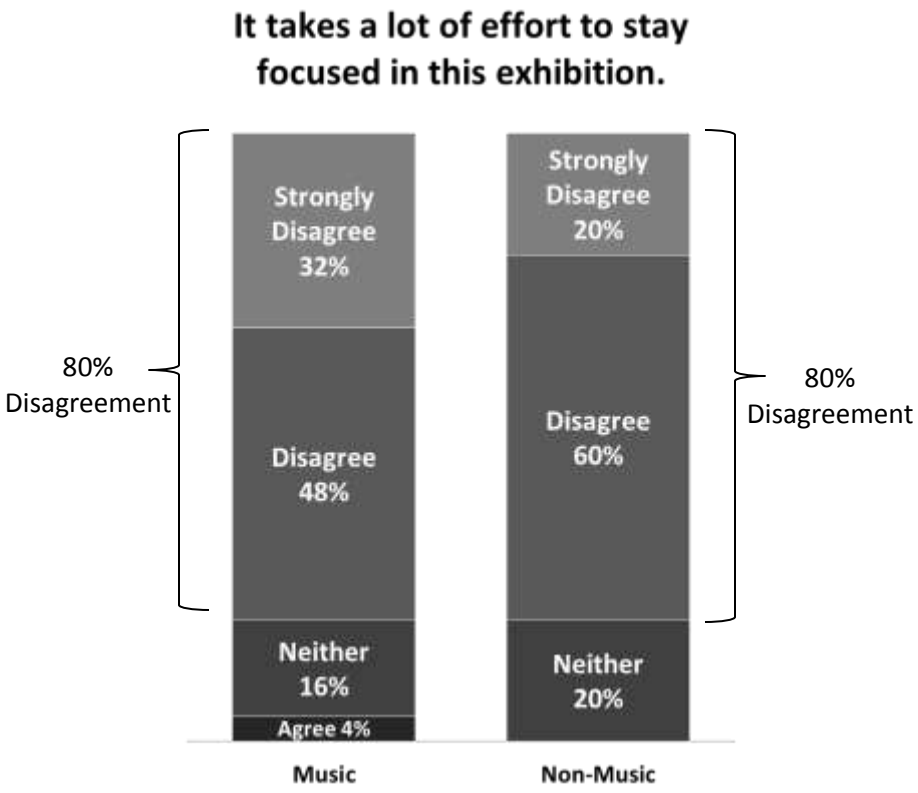
music did not influence visitors' attention in the exhibit or their understanding of and/or interest in the content. The frequencies of the four attention- and interest-based items are shown in Figure 10. Visitors generally indicated some level of agreement with the statements "My attention was focused while in the exhibit" and "The exhibition's design helped spark my interest" in both conditions. With the statements "It's hard to focus on any one particular object because there is so much here" and "It takes a lot of effort to stay focused in this exhibition," visitors generally indicated some level of disagreement in both conditions.

Figure 10: Frequencies of visitors' rankings of attention- and interest-based items (Music N=25, Non-Music N=25)




The exhibition's desgin helped spark my interest.
Disagree 4%
Neither 8%
Agree 52%
Strongly Agree 36%
Neither 12%
Agree 68%
Strongly Agree 20%
88% Agreement
88% Agreement
Music
Non-Music


It's hard to focus on any one particular object or display because there is so much here.
Strongly Disagree 24%
Disagree 52%
Neither 12%
Agree 12%
Strongly Disagree 8%
Disagree 48%
Neither 20%
Agree 24%
76% Disagreement
56% Disagreement
Music
Non-Music


It takes a lot of effort to stay focused in this exhibition.
80% Disagreement
Strongly Disagree 32%
Disagree 48%
Neither 16%
Agree 4%
Music
Strongly Disagree 20%
Disagree 60%
Neither 20%
Non-Music
80% Disagreement

Chapter 5: Conclusions & Implications

The purpose of this study was to examine how music, used as an interpretive tool in a museum exhibit, affects the visitor's experience. Data were collected through 50 interviews with museum visitors to the Renton History Museum, 25 in the music condition and 25 in the non-music condition. Responses to the open-ended questions were emergently coded while the medians of the scale/ranking questions were compared to test for significance. The visitor experience was analyzed through four key aspects: Stay time, Emotions, Comfort, and Understanding of main exhibit themes. This study was conducted to act as a guide for museum professionals in order to make more informed decisions about whether and how to use music as an interpretive tool in museum exhibits.

Conclusions

Visitors stay in the exhibit longer in the presence of music. Visitors in the music condition stayed in the exhibit slightly longer than those in the non-music condition. The retail literature suggests that music impacts stay time. Tempo of musical selections and volume of musical selections impacts both actual time and perceived time spent in retail spaces (Bailey and Areni, 2006; Milliman, 1982; Smith and Curnow, 1966; Yalch and Spangenberg, 2000). This same trend was also seen in the study conducted by Jakubowski (2011) in regard to dwell times in the Natural History exhibit: "Visitors in the Classical Low condition remained in the exhibit significantly longer than visitors in the High and Low human Voices conditions" and in the "Classical Low condition visitors remained significantly longer than visitors in the Natural Low condition or the Classical High condition" (p. 52). The outcomes of these two museum visitor related studies seem to indicate that there may be an impact on visitor stay with the presence of music.

Music in a museum exhibit does not seem to influence visitor comfort or emotions. This conclusion stems from there being no difference between the medians in the scale questions related to emotions and comfort. Webb (1996) hypothesized that the purpose of music may be to increase the pleasure of the moment for the hearer and hypothesizes that, if properly applied in a museum setting, the purpose might be the intention to make the visitor experience more pleasurable. According to Garlin and Owen (2006), "music in service settings can reduce even relatively extreme emotions such as intense anxiety" (p. 756). They conclude that the mere presence of music has a positive effect on patronage as well as on perceived pleasure. Bruner (1990) notes that "structure and expressiveness of background music can evoke different moods and purchase intentions toward advertised products" (p. 98). He offers the following postulates based on his review of consumer literature: 1) Human beings nonrandomly assign emotional meaning to music; 2) Human beings experience nonrandom affective reactions to music; 3) Music used in marketing-related contexts is capable of evoking nonrandom affective and behavioral responses in consumers. However, this study did not support those findings and hypotheses. This may be why museum professionals, such as those that responded to Nina Simon's blog question, have mixed feelings about the use of music in a museum exhibit; visitors appear to not have clear feelings in either direction as well.

Visitors notice a difference between music and no music in an exhibit. The one item that showed a significant difference between the music and non-music condition was "this environment engaged all of my senses" suggesting that those in the music condition were aware of the music and felt it engaged their senses more so than those who didn't experience the music. According to Kotler and Kotler (2000), "generating experiences involves activities in which visitors can directly participate, intensive sensory perception combining sight, sound, and

motion, environments in which visitors can immerse themselves rather than behave merely as spectators, and out-of-the-ordinary stimuli and effects that make museum visits unique and memorable" (p. 276). This may be one reason that visitors perceive a difference between the two conditions. The music allows for a unique sensory experience which the visitor remembers. However, this difference may also stem from the difference in the samples between the two conditions. The music condition had more groups that were comprised of adults and children which may affect how visitors utilize the exhibit space. MacDonald (2007) states that "interactions with other people can be crucial to such matters as whether visitors even notice particular exhibits" and that "interaction does not so much permeate a set of pre-established dispositions or bodies of knowledge, but rather provides the material and interactional circumstances through which people come to see and understand exhibits in particular ways" (p. 156).

Music in a museum exhibit seems to influence visitors' learning. The purpose of mood creation may also be bringing a particular affect or feeling to the moment which could enhance the objects or ideas being seen (Webb, 1996). The music appeared to make a difference in what visitors thought about the main ideas of the exhibit and what they were interacting with within the exhibit. This was seen in the questions asked of visitors: More visitors in the music condition thought that the exhibit was about Life in the Past, said they learned about People and Community and the House, and thought the Authenticity of the exhibit contributed to what they learned whereas more visitors in the non-music condition said they learned about Objects. According to Webb (1996), the purpose of mood creation may also be bringing a particular affect or feeling to the moment which could enhance the objects or ideas being seen. It is possible that the music did just that, provided context for learning. "Background music is probably changing

the perception of exhibits whenever it is used, whether we intend it or not" (Webb, 1996, p. 20). This conclusion may also be related to the idea of music-message congruency, or the idea music must be related to the message or it distracts from it as the music gets louder or provides more information load. The music selection process was important for this reason and it appears that it the music had the desired impact. The exhibit design did not initially include music and the music was selected after the exhibit was already designed. This may have made a difference in the results of the study in that the exhibit was designed without any context of music. However, through the purpose of this study, the music was selected as an interpretive element rather than simply put in the exhibit as random, unrelated background music. "Music-message congruency is thus essential to avoid competition between the parts of an exhibit" (Webb, 1996, p. 22).

Implications

The major implication of this study is that visitors feel their senses are more fully engaged in a museum exhibit with music than in a museum exhibit without music. While Webb (1996) states that "viewers may be so absorbed by what they are seeing, that they do not consciously notice the music at all, yet their mood is influenced" (p. 17), this study did not yield these results. In fact, the opposite appears to have happened: visitors did notice the music and yet it appears to have no effect on their emotions and comfort. This may suggest that exhibit designers would be wise to pay close attention to their music selection and be sure that it is used as an interpretive element rather than simply background music. It may also suggest that music may not have an influence on emotion and comfort and practitioners might consider other, more impactful, interpretive tools in an exhibit.

Another implication of this study is that music appears to affect visitors' understanding of the exhibit's main ideas. Consumer literature seems to have many useful comparisons for

museums. Both museum exhibits and retail spaces are trying to "sell" a product: museum exhibits "selling" a message or idea and retail spaces selling products. However, the outcomes for museum exhibits and retail spaces differ. The outcome of a museum exhibit is defined by the messages or ideas the visitor takes away with them whereas the outcome of a retail space is defined by profit. Even so, Webb (1996) states that the tasks of the advertiser and the exhibit designer are the same: "both have a few seconds to catch the viewer's attention, and to deliver a message, and both hope it will affect future behavior. *No matter the outcome, the process is identical*" (p. 15, emphasis added). Consumer literature seems to provide a useful comparison for the museum exhibit setting as "atmospherics are clearly found in museums as well, and music may be a major player, though the supporting research comes largely from the marketing realm" (Webb, 1996, p. 18). Areni and Kim concluded that "retailers should devote considerable attention to the symbolic meaning underlying each purchase experience. If consumers are seeking sophistication, then in-store cues must suggest, and even facilitate that experience" (p. 338). In this same way, this study suggests that music may influence learning outcomes and that practitioners might want to consider using music to more fully contextualize their learning messages and possibly more fully immerse the visitor in a specific time or subject.

Further Research

Replicate the study in a less immersive environment or non-historical context. This recommendation is based upon the exhibit space used for the study. While this study was conducted in an exhibit space that was very immersive, it would be interesting to see if the results differ in an exhibit space that was less immersive. The historical context of this exhibit may have also influenced the results of this study. In a different context, such as science or art, the results of this study may have differed. Jakubowski (2011) found differences between the

two types of exhibits in his study so replication of this study in different contexts may also yield different results.

Visitor studies that focus more specifically on aspects of the visitor experience in relation to music in exhibit. The inconclusive results about comfort and emotions lead to this recommendation. Webb (1996) states that "there seems to be little disagreement that music can create mood" (p. 17) and Bruner (1990) states that "music has long been considered an efficient and effective means for triggering moods and communicating nonverbally" (p. 94). While this study yielded no conclusive results about comfort and emotion, much of the consumer literature has found distinctions within these two aspects of the consumer experience. It is likely that there may be differences in visitor comfort and emotion between exhibits containing music and those that do not; however, a study that more specifically focuses on either of these aspects is needed to reach a conclusion about the effect on the visitor experience.

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Appendix A: Instrument

Does Music Matter to Museum Visitors?:
Understanding the Effect of Music in an Exhibit on the Visitor Experience
Interview Guide

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Consent Script

Have you visited this exhibit before? (If yes, thank you and enjoy the rest of your visit). If no:

I am asking you to participate in a research study that is part of my Master's Thesis work at the University of Washington. The purpose of this research study is to examine how music, used as an interpretive tool in a museum exhibit, affects the visitor's experience.

Your participation is voluntary. Refusal to participate will involve no penalty or loss of benefits, and you may discontinue participation at any time. This interview will be recorded. However, your responses will be confidential. Your name will not be identified and while I may quote you, that quote will not be attributed to you. If you have any questions now or in the future, you may contact me or my advisor using the contact information on the card I shared with you.

Do you have any questions? Do you agree to participate in this interview?

Time	Date	Crowd Size	Group Composition	Age Range	
		□ 0-3	□ Alone	□ 18-25	□ 26-35
		□ 4-7	□ Adults Only	□ 36-45	□ 46-55
		□ 7+	□ Children and Adults	□ 56-65	□ 66+

Interview Questions

1. In your own words, what did you think that this exhibit was about?

2. What did you learn while visiting this exhibit?

3. Was there anything about the exhibit's design that you think contributed to what you learned?

4. Please describe the characteristics of this environment by choosing one of the circles between each word pair below. The more appropriate a certain word seems, the closer the circle you should choose. If you think neither of the words in a given pair applies, please choose the circle at the mid-point.

				Neutral				
Dynamic	❍	❍	❍	❍	❍	❍	❍	Static
Vibrant	❍	❍	❍	❍	❍	❍	❍	Dull
Warm	❍	❍	❍	❍	❍	❍	❍	Cool
Hard	❍	❍	❍	❍	❍	❍	❍	Soft
Ordinary	❍	❍	❍	❍	❍	❍	❍	Striking
Simple	❍	❍	❍	❍	❍	❍	❍	Complex
Dramatic	❍	❍	❍	❍	❍	❍	❍	Plain
Active	❍	❍	❍	❍	❍	❍	❍	Passive

5. Indicate how much you agree with the following statement by choosing the appropriate circle. **This exhibit made me feel:**

	Strongly Disagree	Disagree	Neither disagree or agree	Agree	Strongly Agree
Irritated	❍	❍	❍	❍	❍
Rested	❍	❍	❍	❍	❍
Bored	❍	❍	❍	❍	❍
Tired	❍	❍	❍	❍	❍
Relaxed	❍	❍	❍	❍	❍
Confused	❍	❍	❍	❍	❍
Restored	❍	❍	❍	❍	❍
Focused	❍	❍	❍	❍	❍
Interested	❍	❍	❍	❍	❍
Anxious	❍	❍	❍	❍	❍

6. Now consider the following statements. Indicate how much you agree with each of them by choosing the appropriate circle.

	Strongly Disagree	Disagree	Neither disagree or agree	Agree	Strongly Agree
It is enjoyable to spend time in this environment.	❍	❍	❍	❍	❍
My attention was focused while in the exhibition.	❍	❍	❍	❍	❍
The environment really invites me to explore it.	❍	❍	❍	❍	❍
It's hard to focus on any one particular object or display because there is so much here.	❍	❍	❍	❍	❍
The exhibition's design helped me make sense of what the exhibition is about.	❍	❍	❍	❍	❍
The exhibition's design helped spark my interest.	❍	❍	❍	❍	❍
It takes a lot of effort to stay focused in this exhibition.	❍	❍	❍	❍	❍
The environment engages all of my senses.	❍	❍	❍	❍	❍

Appendix B: Coding Rubric

Question 1: In your own words, what did you think that this exhibit was about?

Code	Description	Example(s)
Life in the Past	The exhibit is about life in the past or past living.	"It's about how people live in the past, their lifestyle, kind of." "Well, it was about reflecting what life was like in the early days of Renton."
People	The exhibit is about people or specific people or family life.	"It was a compilation of stories of different immigrant families, well, different families that lived in Renton in early 1900's, late 1800's. So little vignettes about certain people and families."
Objects	The exhibit is about the objects.	"Historical representation of everyday items."
House	The exhibit is about the house.	"A house from the 1920's or 30's" "I'd say a craftsman home."
Other	I don't know or answers relating to flu/quarantine.	"Well, seeing the old placard on the door by the other side, to me it said, ok, this was where a person was sick and so this is what they had to live with. So that's what I was kind of expecting."

Question 2: What did you learn while visiting this exhibit?

Code	Description	Example(s)
Past Living	Learned something about life in the past or past living.	"Definitely how raw their life was. You never realize, you know, you see Little House on the Prairie and you never realize that it's, it's really not glamorous but it's cozy but at the same time you can tell there's a lot of hard work that goes into it."
People and Community	Learned something about the people, specific people or Renton Community.	"Well, for one, some of the names of the people that were involved in the early days." "Just more about our community of Renton in particular."
Objects	Learned about the objects.	"I like the craftsmanship of things. Now everything is plastic. I don't like plastic that much."
House	Learned about the house.	"That the architecture is still alive. And it is still in use today."
Other	I don't know or answers relating to flu/quarantine.	"Well, I've got a good memory, I remember a lot of that stuff."

Question 3: Was there anything about the exhibit's design that you think contributed to what you learned?

Code	Description	Example
Authenticity	It was authentically done or is real to life.	"It was pretty much a full functional house, as it would have been lived in." "No, I love the design actually, you know, everything is kind of to period piece with the wall paper and flooring and stuff like that so. Yeah, it is kind of like walking back into time, I think we all like to do that once in a while."
Interpretive Materials	The interpretive panels or brochures.	"I liked reading the stories of the people, so like, the person with their face and where they grew up and then what they did in association to a piece of furniture I guess is kind of how you guys set it up."
Environment	The layout and/or aesthetics of the space. This includes music.	"It was just homey. What I picture homey was like then." "Yes, good lighting and having you close to stuff that's not locked off."
Objects	The objects	"Probably the furniture. I like that it was personal things that they used in their lives." "When I originally walked in I didn't know it was a house in there. I just saw things and went into it."
House	The house space itself.	"It's in a house, I don't know if this is an actual house or not, but being able to walk through an actual house."
Other	I don't know.	"I wouldn't say the design had anything to do with it."

Appendix C: Playlist of Musical Selections

- **At Peace with the World**- Jack Stillman's Orchestra with vocal refrain by James Doherty
- **A Perfect Day**- Metropolitan Quartet
- **Babes in the Wood**- Jaudas' Society Orchestra
- **Beautiful Ohio Waltz**- Jaudas' Society Orchestra
- **Black Diamond Rag**- New York Military Band
- **Blue Rose Waltz**- Jaudas' Society Orchestra
- **Evening Breeze**- National String Quartet
- **Home, Sweet Home**- Florence Ethel Smith
- **It Takes a Little Rain with the Sunshine**- DeLos Becker
- **Just Blue**- The All Star Trio
- **Ladybug's Review**- U.S. Symphony Orchestra
- **Light Cavalry Overture**- Edison Concert Band
- **Maytime Waltz**- Jazzarimba Orchestra
- **The Memphis Blues**- National Promenade Band
- **Pucker Up and Whistle**- H. Raderman's Jazz Orchestra
- **Swingin' Down the Lane**- P. Victorin's Orchestra