Music Stimuli in Retail Environments: A Cross-Cultural Comparison

by
Yuliya Lunina

A THESIS

submitted to

Oregon State University

Honors College

in partial fulfillment of
the requirements for the
degree of

Honors Baccalaureate of Science in Merchandising Management
(Honors Associate)

Presented May 21st, 2018
Commencement June 2018

AN ABSTRACT OF THE THESIS OF

Yuliya Lunina for the degree of Honors Baccalaureate of Science in Merchandising Management presented on May 21st, 2018. Title: Music Stimuli in Retail Environments: A Cross-Cultural Comparison

Abstract approved:_____

Ryann Reynolds-McIlnay

This project aims to determine if the relationship between shopping behavior and the tempo of in-store music is impacted by shoppers' cultural orientation. Companies that expand their business overseas need to better understand not only the demographics of the market they are entering into, but also the cultural beliefs and behavior. Through this understanding, companies will be able to manipulate their store environment to positively influence consumers. This includes increasing purchase likelihood, shopping satisfaction, and retailer perception. Through an experimental design that manipulated auditory stimuli, participants were exposed to one of three music tempos (slow, control, and fast). The cultural orientation scale used was the individualism vs. collectivism spectrum with horizontal and vertical measurements of each. The results suggest that those who are low in horizontal collectivism and collectivism, in general, respond more positively to both the slower and faster in-store music tempos in comparison to the control. Additionally, individualistic cultures perceive the shopping experience as more negative when exposed to the slower tempo music. The results support that cultural orientation moderates the impact of in-store music tempo on shopping behaviors.

Key Words: Individualism, Collectivism, Music, Culture, Retail, Consumer Behavior

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I understand that my project will become part of the permanent collection of Oregon State University, Honors College. My signature below authorizes release of my project to any reader upon request.

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Yuliya Lunina, Author

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1. Introduction

Music stimuli has been proven to affect in-store shopping times (Sherman, Mathur, Smith, 1997), the speed at which consumers shop (Milliman, 1982), as well as their mood before-and-after entering the store (Sherman et al., 1997). Prior research suggests that consumers tend to shop faster when there is high-tempo music playing and slower when there is slow-tempo music playing (Andersson, Kristensson, Wastlund, Gustafsson, 2012). While much is known in the marketing literature regarding in-store music, little is known about how a shopper's cultural orientation interacts with in-store music.

Cultural orientation has been prominent in the marketing and social psychology world for decades. The application of cultural orientation to consumer behavior in terms of stimuli has not been as prominent. Through the understanding of how consumers behave when exposed to different stimuli, companies will better understand and define their consumers which ultimately leads to a more efficient retail strategy. This is especially important for international companies who are dealing with multiple regions and thus, multiple cultures. A business cannot take the exact same retail model it operates by in one area and expect it to perform the same in another area. The understanding of differing beliefs and psychological behaviors will ease the transition of expanding and help retain customers from their initial experience with the retailer.

In addition to the consumer, a retailer's knowledge of how stimuli affects different cultures can also help the retailer manipulate behavior into their own favor. Playing a certain speed of music or providing an attractive scent that has been proven

to increase shopping time and purchase probability puts power in the retailer's hands of how their consumer will behave. This could also result in better business-customer relationships and a thorough understanding of the retailer's target market. The more a company knows about their consumer, the better personalization techniques they can incorporate in their marketing strategy.

This research aims to analyze the comparison of individualistic vs. collectivistic cultural orientation in retail environments with manipulated music stimuli. First, the literature review will look at previous work done on music stimuli in retail environments, as well as how different cultures behave differently in those environments. The hypotheses will be stated in that section. Next, the procedure of this study will be discussed, including the participant experience and the systems used to analyze the data. Then, the results section will provide significant and marginally significant findings, as well as the measures used. The discussion section will share study limitations, possible implications, and future recommendations for research. Finally, the conclusion section will summarize the study.

2. Literature Review

The information in this section will outline previous data regarding music stimuli and shopping behavior. It will also include data about cultural orientation, and the impact it has on people's beliefs, daily lives, and shopping behavior. This section will provide a hypothesis for the study on the effects of music stimuli in retail environments depending on an individual's cultural orientation.

2.1 In-store Music

A study done in 1982 found that in-store traffic flow was slower when slower tempo music was played rather than fast tempo music. The slower music also made shoppers move slower than having no music playing in the store at all. However, the traffic flow of no music was still slower than the traffic flow of fast music. This study ultimately suggests that there is significant data to support that a customer's pace as they are walking through a store can be manipulated by in-store background music (Milliman, 1982).

The same study also analyzed the effects of music tempo on sales volume. It found that slower tempo music did not only make consumers shop slower, but it was also associated with higher sales when compared to the sales volume during the fast tempo variable. The music was instrumental, which means that it had no lyrics to compete with the tempo or beat of the song itself (Milliman, 1982).

It should be noted, however, that this study only analyzed this behavior in one supermarket. The data should not be generalized especially when changing retail formats, consumer demographics, and product types.

2.2 Store Atmosphere

Research expanding upon previous work done by Mehrabian & Russel (1974) found there is significant support that when customers encounter a certain retail environment or stimuli within that environment, their response to that will be to approach or avoid (Donovan & Rossiter, 1982). In addition, this research suggests that retailers may be able to explain changing shopping behavior based on changes to the in-store environment. Having control over these changes allows the retailer to better control the customer experience and behaviors. According to Mehrabian and Russel (1974), the three emotional responses that facilitate approach/avoid behaviors are: pleasure/displeasure, arousal/nonarousal, and dominance/submissiveness.

In research published in 2010, findings showed support that "arousal induced by music and aroma results in increased pleasure levels, which in turn positively influences shopping behaviors" (Dubelaar, Gan, Morrison, Oppewal, 2010, pg. 562). This suggests that changes in music can be used to stimulate positive shopping behavior, as well as affect time spent in stores, money spent in stores, and overall satisfaction (Dubelaar et al., 2010).

This study will aim to analyze how cultural orientation interacts with the manipulation of music tempo and the further result of arousal and shopping behavior. The model below illustrates the application of cultural orientation to previous models of stimuli-behavior relationships (originally from Mehbrian and Russel, 1974).

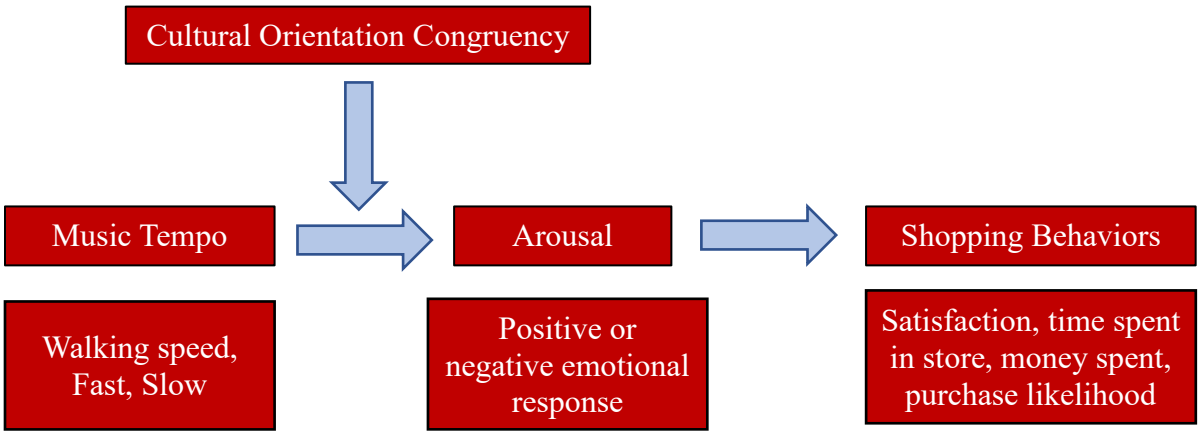

Figure 2.1: Modified Mehrabian & Russell Model (1974); Dubelaar et al., 2010; Donovan et al., 1994

2.3 Cultural Orientation

The individualism vs. collectivism spectrum (Hofstede, 2011) was introduced to deeper analyze cross-cultural communication. Individualism is defined as "the habit or principle of being independent and self-reliant" (Singelis, Triandis, Bhawuk, & Gelfand, 1995). It favors freedom of action for individuals over collective control. Individualistic cultures advocate for oneself and focus on self-realization. In addition, individualistic cultures believe that they should pursue what ultimately fulfills their life goals the most, and should live life exactly how they want to live it. According to Hofstede (2011), individualistic individuals are "I"-conscious, and they believe that speaking one's mind is healthy. Most Western nations tend to be individualistic, including the U.S., Denmark, and Australia (Sivadas, Bruvold, Nelson, 2008).

Collectivism shifts the focus from the individual to a group or community of which that the individual is part. In collectivistic cultures, individuals work toward the greater good for the group they are a part of. The individual should put personal needs after the needs of their group, whether that be their family, community,

political group, or even social class. According to Hofstede (2011), collectivistic cultures put stress on belonging, and agree that "harmony should always be maintained."

Within collectivism and individualism, there are horizontal and vertical orientations of each. This results in four dimensions: Horizontal Collectivism (HC), Vertical Collectivism (VC), Horizontal Individualism (HI), and Vertical Individualism (VI). Each have their own set of characteristics and they help categorize cultures on the cultural orientation scale.

The horizontal orientation emphasizes equality among individuals and are egalitarian. Those who fall under the HI spectrum perceive themselves still as independent individuals, but they also believe that there should be equality among all individuals. According to Sivadas et al. (2008), Denmark is an exceptional example of a HI culture. Individuals focus on bettering themselves first, but are not trying to reach a much higher status or stand out from a group.

In contrast, VI cultures, such as the United States, focus on independence while also trying to achieve differentiation. The vertical orientation suggests hierarchy, especially emphasizing social and political hierarchy. Individuals "strive to be distinct and desire special status" (Triandis & Gelfand, 1998). There is a competitive nature in VI cultures, as the mindset is to be the most distinct among many others who are also trying to do the same thing.

As collectivistic cultures tend to focus on groups, HC cultures do that while also emphasizing the equality among groups. Within HC, individuals within groups perceive everyone else in that group as equal (Triandis & Gelfland, 1998). An

example of an HC culture is China. As most Asian cultures tend to be collectivist, China stands out with a horizontal orientation due to emphasis on team responsibility (Sivadas et al., 2008).

A VC culture still focuses on groups and community, but also accepts inequality. They value being distinguishable, but also put a heavy weight on family responsibility. VC individuals are willing to "sacrifice their own self-interest for the benefit of [their] group" (Sivadas et al., 2008, pg. 203). An example of a heavily VC orientated culture is India. Family is extremely important, but social class is too.

It is also important to note that these four cultural orientations (HC, VC, HI, and VI) are continuums. Cultures can have mixes of these orientations, or they can vary among them. They do not necessarily have to be one or the other, and different groups within countries or cultures can also differ from the overall orientation of the country itself.

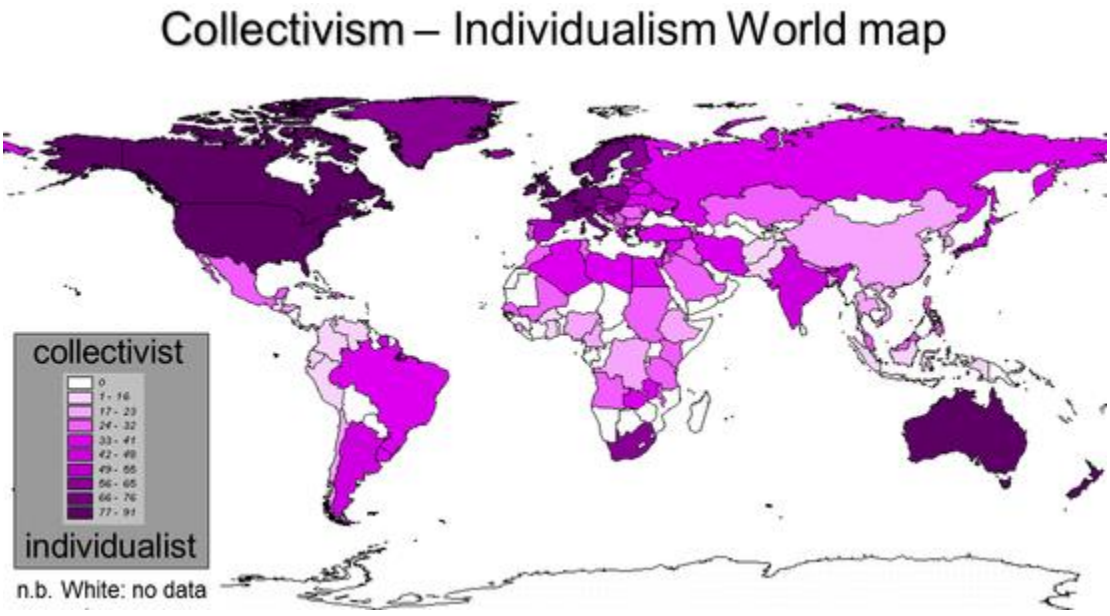

Figure 2.2: Collectivism-Individualism World Map. GeertHofstede.com

	Individualistic	Collectivistic
Horizontal	Denmark	China
Vertical	United States	India

Figure 2.3: Examples of countries of each cultural orientation dimension. Sivadas et al., 2008

2.3.1 Effect of Cultural Orientation on Shopping Behavior

Different cultures have different shopping behaviors, including where they like to shop, what kind of products they like to buy, and at what price (Thomas & Carraher, 2014). It is important to understand these behaviors in order to analyze attributable strategies for differing retail environments.

Prior reseach analyzed how cultural orientation influences impulse purchasing. It found that individualistic cultures have a higher buying impulsiveness trait than collectivist groups, proving that there is a relationship between cultures and shopping behavior (Kacen & Lee, 2008).

Thomas & Carraher (2014) analyzed the shopping behaviors of individuals from six countries around the world (USA, India, Germany, Belgium, UAE, and China). Individuals from India, which has been characterized as a VC culture, put more emphasis on time consciousness, and local shopper orientations. Thus, travel time is important to consumers in India (Thomas & Carraher, 2014).

2.4 Cultural Orientation and Music Stimuli

As stated above, individualism is associated with a higher likelihood of competitiveness. In addition, it has been supported that fast tempo music leads to faster shopping times (Milliman, 1982). As the fast pace of the music is more

congruent with faster paced competitive nature of individualism (Figure 2.1), I hypothesize:

Hypothesis 1a: Consumers higher (vs. lower) in individualism, will respond more positively to fast tempo music (vs. slow tempo).

Hypothesis 1b: The effect will be greater for those consumers who are higher in VI (vs. general individualism and HI).

HC cultures emphasize group equality and low-competitiveness. As shorter-tempo background music is associated with longer shopping times, and the slower tempo is more congruent with the slower paced group-focused, and desire to be undistinguishable nature of collectivism (Figure 2.1), I hypothesize:

Hypothesis 2a: Consumers higher (vs. lower) in HC will have less purchase likelihood in the fast tempo (vs. slow tempo).

Hypothesis 2b: The effect will be to a lesser extent for those consumers who are higher in VC (vs. HC and general collectivism).

3. Experiment

3.1 Study Design and Sample

To test the hypotheses, a three (music tempo: slow, control, fast) × continuous (cultural orientation) design experiment was conducted in which participants (n = 156, 49% female, ages 19-44 years old, median age = 21, 21% international students who were non-native English speakers) recruited from Oregon State University's College of Business student subject pool were randomly assigned to condition. Three participants reported that they had a hearing impairment but were retained in the analysis.

An instrumental track was selected as the in-store music to control for familiarity with music and prior associations. We manipulated the tempo of the track in GarageBand music software to match normal walking speed (180 bpm; Franěk, van Noorden, and Režný, 2014) as the control tempo. The control track was then manipulated to create the slower (120 bpm) and faster (240 bpm) in-store music conditions. Each music track was then paired to the same video stimuli in iMovie video software. The video stimuli consisted of a recording taken while walking through a supercenter retail store. It is also important to note that the music, or audio, was independent of the video; thus, the speed of the video did not impact the tempo of the music. Background noise - such as footsteps, other customer's conversations, and miscellaneous noise - could not be heard over the music. In addition, the volume for each participant was set at the same level in order to retain consistency.

3.2 Procedure

After completing the consent process, participants were first asked to put on headphones. They then read the prompt, “We would like you to imagine that you are going to shop in a store. You go to the store, walk through the door, grab a shopping cart, and select the items that you want to buy. As you watch the video below, imagine that you are doing the actions. Click on the Play button located in the middle of the video to watch it now.” After watching the video with the randomly assigned music tempo condition, participants were told they could remove their headphones. They then answered a series of questions pertaining to their experience within the store. This includes three measures of shopping experience satisfaction (“I am satisfied with my shopping experience,” “I enjoy shopping in the store,” and “overall, I am satisfied with the store experience;” 1 = strongly disagree, 5 = strongly agree; van Ittersum et al., 2013; 3-item $\alpha = .73$), purchase likelihood (“How likely are you to do the following? purchase a product from the store, visit the retailer later, search the retailer for other products, purchase other products from the retailer; 1 = very unlikely, 7 = very likely; 4-item $\alpha = .86$), perceived shopping time (“how much time would you spend shopping in this store [in minutes]?”; sliding scale representing 0-100 minutes), and 29 descriptors of the shopping experience (“To what extent to do you disagree or agree that the shopping experience was the following?, 1 = strongly disagree, 7 = strongly agree). Participants then completed measures of trustworthiness of the retailer (“Please rate the retailer on the following descriptors based on your hypothetical transaction experience,” very undependable to very dependable; very incompetent to very competent; very low integrity to very high integrity; very

unresponsive to customers to very responsive to customers; 4-item α = .78) and of the checkout experience (5-item α = .92) on a seven-point scale. Five measures adapted from Hahn and Kim (2009) measured perceived confidence in the retailer. However, two-items were excluded and the mean of three items measure was utilized due to higher reliability ("I feel confident… browsing products, making a purchase from this retailer, making a payment transaction with this retailer"; 1 = strongly disagree, 7 = strongly disagree; 3-item α = .82).

The next part of the survey asked participants about their own personal behavior and emotions - not necessarily pertaining to their retail experience. This includes how they work with others, and how they feel about themselves and their relationships. These measures were included to analyze cultural orientation (Sivadas, Bruvold, and Nelson, 2008; collectivism 8-item α = .66, individualism 6-item α = .69, HC 4-item α = .64, VC 4-item α = .58, HI 3-item α = .69, and VI 3-item α = .73).

Finally, they were asked about the music they listened to during the video, how they felt it matched with the retailer, if they have any kind of hearing impairments, and demographics. They were then asked to guess what the study was about, and then submitted their answers to the study.

Analyses were conducted in SPSS, with moderation analyses conducted with Hayes (2013) PROCESS Macro (Version 2.16.3, Model 1). Analyses examining negative shopping experience satisfaction, typical, and warmth were not significant (p's > .09) and are not discussed further. Significant and marginally significant results are reported next.

4. Analyses and Results

4.1 Shopping Experience Satisfaction

The moderation analysis of shopping experience as a function of fast music tempo, slow music tempo, individualism, and the resulting interaction between individualism and the fast tempo and interaction between individualism and the slow tempo ($F(5, 152) = 2.27$, $p = .05$) was significant. The main effects of individualism, the slow and fast tempo, and the fast music interaction with individualism were not significant ($p > .10$). However, the marginally significance interaction between slow tempo and individualism ($b = .26$ $SE = .15$, $t = 1.73$, $p = .08$) suggests that shopping experience satisfaction increased with slow tempo music in those with increasing individualism. There is marginally significant effect ($b = -.41$, $SE = .25$, $t = -1.69$, $p = .09$) that people low in individualism had a more negative shopping experience when there was slow tempo music ($\hat{y}_{slow} = 3.13$, $\hat{y}_{control} = 3.54$, $\hat{y}_{fast} = 3.72$) than when hearing the control or fast tempo music.

4.2 Shopping Experience Descriptors

A factor analysis of the 29 shopping experience descriptors was conducted with Varimax rotation. An eight-factor solution was supported, but five-factors were analyzed as three of the items were single-item factors. See Appendix (Table 4.1). The five factors that were analyzed included perceptions of a positive shopping experience (3-item $\alpha = .80$), a negative shopping experience (3-item $\alpha = .59$), a beneficial shopping experience (3-item $\alpha = .75$), warmth (2-item $\alpha = .52$), and a typical shopping experience (2-item $\alpha = .64$). Analysis examining negative, warmth,

and typical perceptions of the shopping experience were not significant (p's > .22) and are not discussed further.

The model examining HC is a moderator of perceptions of the shopping experience being beneficial ($F(5, 152) = 4.15$, $p < .01$) was significant. However, only the main effect of collectivism was significant ($b = .47$ $SE = .15$, $t = 3.16$, $p < .01$; other effect p's > .49) with individuals higher in HC perceiving the shopping experience as more beneficial. The similar model examining VC as a moderator was significant ($F(5, 152) = 3.21$, $p < .01$) with VC as the only significant predictor ($b = .31$ $SE = .12$, $t = 2.72$, $p < .01$), and the model examining HC as a moderator was significant ($F(5, 152) = 2.32$, $p < .05$) with HC as the only significant predictor ($b = .42$ $SE = .16$, $t = 2.66$, $p < .01$).

The moderation analysis of positive shopping experience perception as a function of collectivism, fast tempo music, slow tempo music, and the interactions ($F(5, 152) = 3.18$, $p < .01$) was significant. The main effect of collectivism was significant ($b = .54$, $SE = .14$, $t = 3.78$, $p < .001$) which suggests that those with increasing collectivism perceived the shopping experience as more positive. The main effect of the fast and slow tempo was not significant (p >.10). The interaction between fast music and collectivism was marginally significant ($b = -.39$, $SE = .22$, $t = -1.79$, $p = .07$), and the interaction of slow music and collectivism was significant ($b = -.49$, $SE = .20$, $t = -2.43$, $p < .05$). This suggests that those low in collectivism are less likely to have a positive shopping experience, but have a more positive experience with the slow ($b = .58$, $SE = .30$, $t = 1.89$, $p = .06$; $\hat{y} = 4.76$) or fast tempo ($b = .64$, $SE = .28$, $t = 2.27$, $p < .05$; $\hat{y} = 4.82$) compared to the control ($\hat{y} = 4.18$).

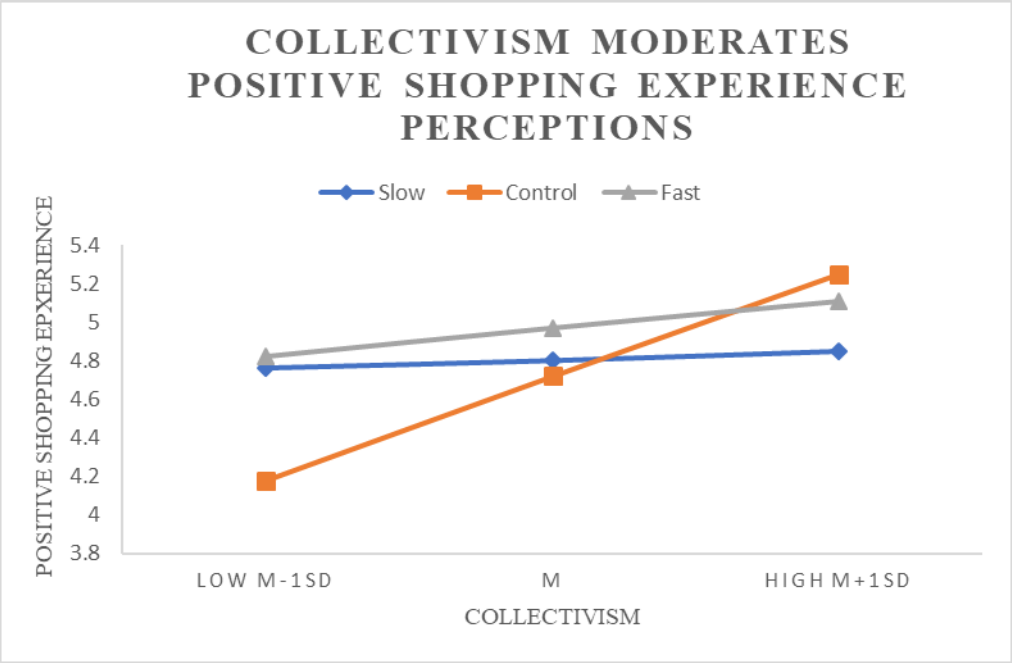

Figure 4.1: Collectivism Moderates Positive Shopping Experience Perceptions

The moderation analysis of HC on positive shopping experience perception ($F(5, 152) = 4.61$, $p < .001$) was significant. The main effect of HC was significant ($b = .66$, $SE = .14$, $t = 4.64$, $p = 0$), suggesting that those with increasing HC are more likely to have a positive shopping experience. The main effects of the slow and fast tempo on positive shopping experience were not significant ($p > .10$). The interaction of fast tempo music with HC ($b = -.62$, $SE = .20$, $t = -3.06$, $p < .01$) and of slow tempo music with HC ($b = -.56$, $SE = .19$, $t = -3.01$, $p < .01$) were significant, suggesting that those with higher in HC perceived having a less positive shopping experience. Those low in HC were more likely to have a positive shopping experience in the slow ($b = .73$, $SE = .30$, $t = 2.45$, $p < .05$) and high ($b = .94$, $SE = .29$, $t = 3.25$, $p < .01$) tempo scenarios than in the control. There is also marginally significant effect that those who are high in HC experienced a less positive shopping experience while listening to the slow tempo ($b = -.47$, $SE = .26$, $t = -1.79$, $p = .08$). While

individuals higher in HC experienced a more positive shopping experience with the control tempo (ŷlow = 3.96, ŷM = 4.67, ŷhigh = 5.38) perceptions of the shopping experience did not change with HC for the slow (ŷlow = 4.96, ŷM = 4.80, ŷhigh = 4.91) or fast tempo (ŷlow = 4.89, ŷM = 4.93, ŷhigh = 4.98).

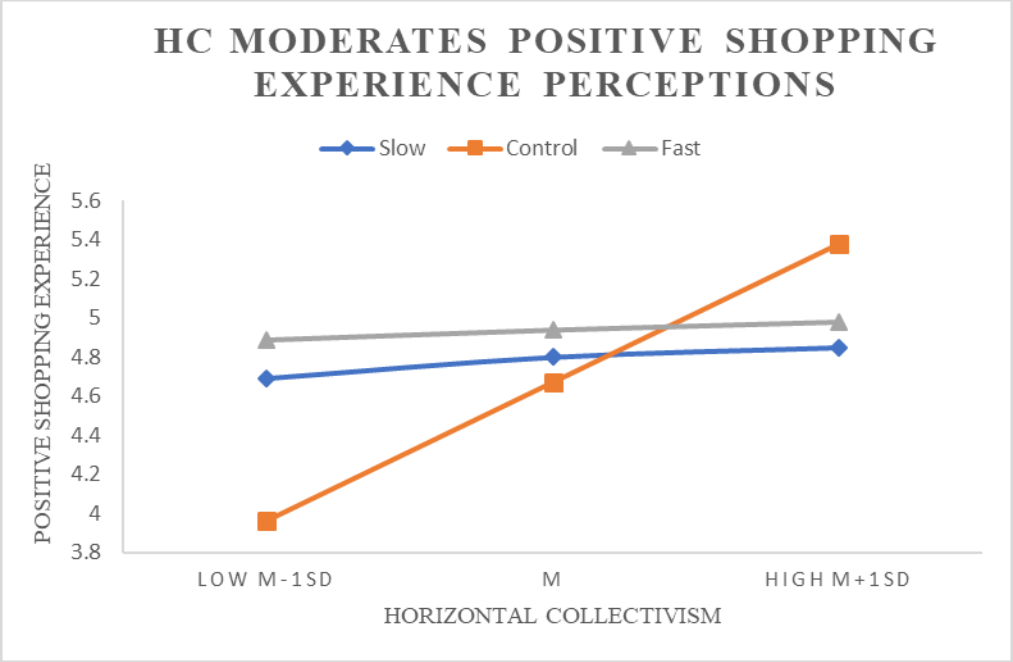

Figure 4.2: HC Moderates Positive Shopping Experience Perceptions

4.3 Purchase Likelihood

The analysis examine HC as a moderator of purchase likelihood was marginally significant ($F(5, 152) = 1.91$, $p < .10$). The main effect of HC was significant ($b = .47$ $SE = .17$, $t = 2.89$, $p < .01$) suggesting that purchase likelihood increased with increasing HC. The main effects of the slow and fast tempo were not significant ($p > .10$). There were significant interactions of fast tempo music with HC ($b = -.66$, $SE = .24$, $t = -2.79$, $p < .01$) and of slow tempo music with HC ($b = .47$, $SE = .22$, $t = -2.16$, $p < .05$), suggesting that those with high in HC are less likely to make a purchase when exposed to the slow and fast tempo music compared to the control

tempo. Those low in HC are more likely to make a purchase when there is fast tempo music (b = .68, SE = .34, t = 2.03, p < .05) and when there is slow tempo music (b = .73, SE = .36, t = -2.02, p < .05).

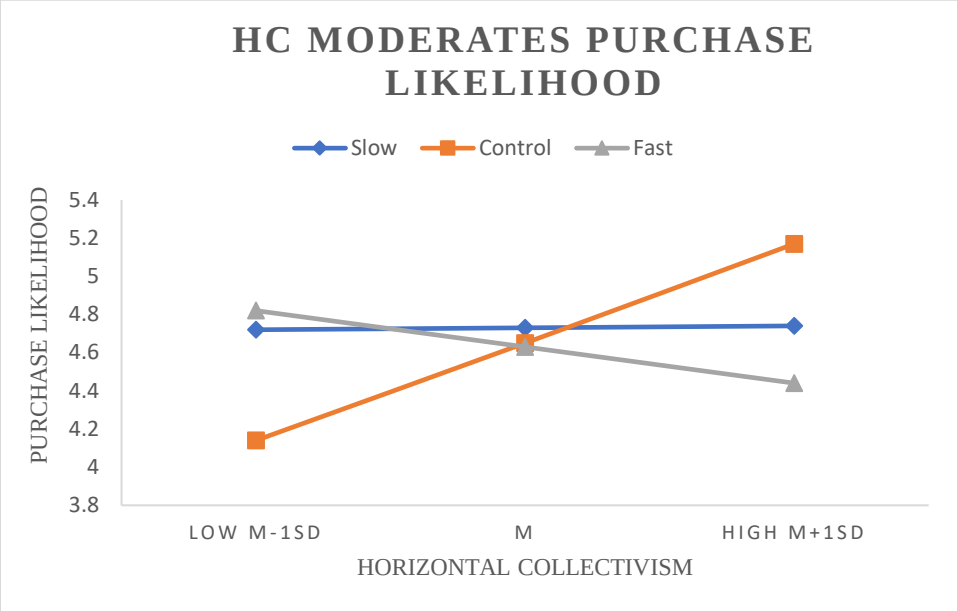

Figure 4.3: HC Moderates Purchase Likelihood

4.4 Retailer Trustworthiness

The moderation analysis of trustworthiness in the retailer (F(5, 152) = 2.21, p = .05) was significant. The main effect of collectivism was significant (b = .54, SE = .17, t = 3.12, p < .01), suggesting that those higher in collectivism trust the retailer more. The main effects of the slow and fast tempo, and the interaction of fast tempo with collectivism were not significant (p > .10). The interaction of the slow tempo music with collectivism was significant (b = -.58, SE = .24, t = - 2.40, p < .05), suggesting that those with higher in collectivism are less likely to trust the retailer when the slow tempo music was playing. When those low in collectivism were exposed to either a fast (b = .60, SE = .34, t = 1.76, p = .08) or slow (b = .68, SE =

.37, t = 1.86, p = .06) tempo, they trusted the retailer more in comparison to the control tempo.

Figure 4.4: Collectivism Moderates Retailer Trustworthiness

The moderation analysis of trusting the checkout process was marginally significant (F(5, 122) = 2.17, p = .06). The main effect of HC was significant (b = .55, SE = .19, t = 2.88, p < .01), suggesting that those with increasing HC tend to trust the checkout process more. The main effect of the fast and slow tempo, along with the interaction of the fast tempo with HC, was insignificant (p > .10). However, there was marginal significance (b = -.46, SE = .25, t = -1.84, p = .07) in the interaction between the slow tempo music and HC. This suggests that those higher in HC tend to trust the checkout process less when there is slower tempo music. In addition, there is significant data (b = .83, SE = .40, t = 2.09, p < .05) that those lower in HC tend to trust the retailers checkout process more when there is slow tempo music playing.

4.5 Shopping Time

The moderation analysis of shopping time ($F(5, 152) = 2.51$, $p < .05$) was significant. The main effect of HI was marginally significant ($b = -3.42$, $SE = 1.84$, $t = -1.86$, $p = .07$), suggesting that those higher in HI spend less time (minutes) in a retail store. The main effects of fast and slow tempo music, along with the fast tempo music interaction with HI, were not significant ($p > .10$). However, there was significance in the interaction between slow tempo music and HI ($b = 7.76$, $SE = 2.42$, $t = 3.21$, $p < .01$). Those high in HI spend more time in the store with slow tempo music ($b = 11.62$, $SE = 4.02$, $t = 2.89$, $p < .01$; $M = 32.9$ minutes). Additionally, those low in HI spend less time in a store when there is slow tempo music playing ($b = -8.06$, $SE = 4.43$, $t = -1.82$, $p = .07$; $M = 21.9$ minutes)

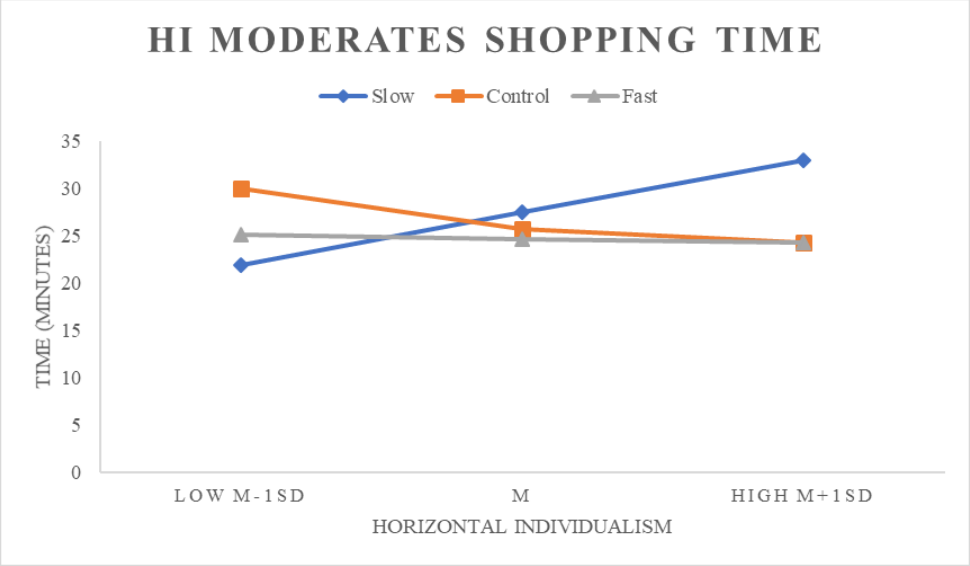

Figure 4.5: HI Moderates Shopping Time

HORIZONTAL COLLECTIVISM	Low	High
Slow Tempo	➢ Positive shopping experience ➢ Trust checkout experience	➢ Less likely to have positive shopping experience
Fast Tempo	➢ More likely to make a purchase ➢ Positive shopping experience	➢ Unlikely to make a purchase

Figure 4.6: Summary of Horizontal Collectivism Findings

5. Discussion

5.1 Implications

There were no significant findings on VI, suggesting Hypothesis 1b is not supported. Since there was marginal significance that those who are lower in individualism have a higher likelihood of negative shopping experience when there is slow tempo music, Hypothesis 1a is partially supported, but needs to be further tested.

There is support for Hypothesis 2a as those with increasing HC were less likely to make a purchase when stimulated by fast tempo music. As HC cultures tend to avoid distinguishability and are less-competitive in nature, it suggests that being stimulated by competitive, fast-paced tempo music leads to lower purchase likelihood. There was no significant data found in the interaction between VC and purchase likelihood, suggesting that Hypothesis 2b is not supported. The vertical orientation of individualism and collectivism did not produce much significant data, which could be due to the sample size; thus, further testing is still encouraged and should not be immediately dismissed.

The results from this study indicate that there is some relationship between the tempo of music and on differing cultures in terms of individualism and collectivism, and specifically in their horizontal and vertical orientations on shopping behaviors and consumer perceptions of shopping experiences. This information can be helpful for companies attempting to enter new markets, especially ones that differ significantly in values from ones they are currently in. Understanding the surrounding culture is important to understand the consumer and what stimulates their shopping behavior. For example, if a company decides to expand its stores internationally, they

must collect data in order to smoothly enter in the new market. The general data that is collected has to do with demographics, i.e. income level, family size, gender, etc. However, utilizing data that has to do with actual cultural beliefs can further specify a target demographic and develop an understanding of what stimuli can impact positive shopping behavior.

As Figure 4.6 suggests, those low in HC respond more positively to the fast and slow tempo in comparison to the control. Thus, if a retailer operates or plans to operate a store in an area that has been proven to hold individuals low in HC, they can manipulate the music accordingly. In this case, they can make the tempo faster or slower than normal walking speed (180 bpm; Franěk et al., 2014). In addition, they can choose between slower or faster tempo by deciding what kind of behavior they are hoping to instill. If the retailer wants to increase purchase likelihood, they may use faster tempo music (240 bpm). If the retailer decides they want to gain the trust of the customer during the checkout process, they may play slower tempo music (120 bpm).

5.2 Limitations

The primary limitation to this study was the sample size. A larger sample size of over 200 participants would have increased statistical power, along with a much more diverse pool of participants would have more variance in cultural orientation. Since Oregon State University's College of Business is such a specific pool of participants, it was difficult to obtain individuals from each type of cultural orientation.

Another limitation was that the participants simply went through a virtual walk through a store, rather than experience it physically. If they were physically in a store, there would be much more stimuli impacting their shopping experience. The music was also listened to through headphones, whereas in a retail environment it would be more like background noise, potentially impacting the shoppers subconscious.

In addition, this study analyzed only how music impacted the participants in a particular superstore format. Changing the retailer format will be extremely important in order to generalize the data, and so additional testing would be needed.

5.3 Suggestions for future direction

This study featured the retailer Fred Meyer in order to obtain this data. Fred Meyer is a superstore with groceries and general merchandise, but the video clip shown was only a small portion of its general merchandise department. Thus, future studies should analyze what happens when the retailer format is changed, and how different retail formats attract different cultural orientations as well.

Another finding that was interesting was that most of the significant results had to do with the manipulation of the slow tempo, or the manipulation of the slow and fast tempos in relation to the control walking speed tempo. Again, this may have to do with the sample size and could be further investigated with a much larger sample size. Most of the significant findings had to do with those low in horizontal collectivism, which makes sense because of the demographics of the study sample. Since most participants were English-speaking individuals, they are mostly likely leaning towards the individualistic side of the cultural orientation spectrum. This can

be addressed by conducting the study in varying locations, preferably globally where the most diverse cultures could be analyzed.

Many of the results focused on the low end of the spectrum of each cultural orientation (i.e. those low in HC). Future research in social psychology could examine what cultures fall under that spectrum, as most research already suggests which cultures are dominant in each cultural orientation. Since being low in HC does not necessarily mean that a culture is automatically high in VI, more research needs to be done to define which cultures are actually low in each cultural orientation in order for data to be more applicable.

6. Conclusion

The purpose of this research was to examine the relationship between cultural orientation and shopping behavior when music stimuli was manipulated by its tempo. There were various significant or marginally significant findings for almost every cultural orientation, excluding VI. Most of the findings came from the lower end of HC, although not much prior research has been done to identify what groups or cultures full under the lower end of each cultural orientation. Retailers can utilize this information when they expand their operations, or even when they are attempting to further define their target market. The manipulation of music, and eventually other stimuli, will allow retailers to better control the shopping behavior of their consumers, including time spent in stores, purchase likelihood, and shopping experience satisfaction.

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9. Appendix

Figure 9.1: Factor Analysis of 29 Shopping Experience Descriptors

Descriptor	Factor 1 α = .80	Factor 2 α = .59	Factor 3 α = .75	Factor 4 α = .64	Factor 5 1-item	Factor 6 1-item	Factor 7 α = .52	Factor 8 1-item
Expected	.052	.004	.152	**.802**	.095	.186	-.031	.009
Unusual	-.192	.257	-.044	-.488	.387	-.015	-.012	-.143
Familiar	.564	-.073	-.036	.450	-.038	.154	.216	-.354
Warm	.362	-.092	.286	.075	.051	.190	**.615**	.022
Cool	.208	.045	**.762**	.005	.055	.042	.207	-.024
Good	**.774**	-.111	.370	.063	.023	.014	-.024	.187
Bad	-.565	.390	-.193	-.095	.342	.172	-.141	-.128
Annoying	-.249	.444	-.325	-.172	.472	.151	-.076	-.075
Pleasant	**.663**	-.228	.414	.051	.057	.002	.146	.137
Arousing	.039	.122	.577	-.191	.246	-.027	-.018	.253
Purposeful	.110	-.207	**.611**	.315	-.017	.365	.031	.160
Intentional	.170	-.112	.239	.145	-.003	**.712**	-.116	.077
Accidental	-.358	.374	-.070	-.031	.294	-.304	-.051	.175
Distracting	-.300	**.637**	-.012	.087	-.155	-.038	.075	.263
Competent	.301	-.107	.128	.029	-.114	.141	.079	**.645**
Beneficial	.365	-.190	**.600**	.160	-.026	.219	.240	.046
Reliable	.609	-.172	.108	.119	-.093	.420	.046	.203
Friendly	**.733**	.094	.034	.147	.066	.105	-.114	.233
Random	.239	**.696**	-.057	-.118	.162	-.215	-.025	-.111
Typical	.357	-.099	-.182	**.681**	-.015	-.063	.110	.314
Dominant	.009	.105	.161	.118	**.731**	.025	.113	-.092
Masculine	.029	-.232	.119	.147	.543	-.306	-.447	-.026
Feminine	-.086	.010	.147	.051	.122	-.138	**.793**	.105
Confusing	-.246	**.688**	-.014	-.132	.082	-.094	.025	-.083
Courteous	.205	.195	.174	.302	.057	-.018	.118	.574
Empathetic	.228	.042	.086	-.199	.559	.021	.299	.204
Credible	.566	-.293	.081	.226	.209	.352	.130	-.021
Certain	-.009	-.312	.158	.179	.269	.465	.295	.331
Uncertain	-.146	.484	.158	.100	.080	-.478	-.107	.142

Notes. Extraction method was principal component analysis with Varimax rotation and Kaiser Normalization (K-M-O cutoffs > .60). The rotation converged in 20 iterations. Factor components are bolded.