Seeking Others' Sounds: Predictors of Voluntary Exposure to Outgroup Music

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Abstract

Intergroup contact research demonstrates that contact with outgroups (including mediated contact) improves attitudes about those groups. However, people often avoid such contact, including avoiding outgroup media messages. In two studies, we investigated voluntary exposure to outgroup media. Our research builds on intergroup contact theory and the reactive approach model. The latter suggests (counterintuitively) that, sometimes, anxiety can motivate people to engage with the unfamiliar. Both studies measured potential predictors of voluntary contact, provided musical options for respondents, and measured which options people chose as well as their engagement with and enjoyment of those choices. Study 1 provided a simple choice between two musical options (ingroup versus outgroup); Study 2 used a more extensive array of ingroup and outgroup options, including ingroup-outgroup collaborative music. Findings suggest a limited role of personality traits in determining seeking outgroup media, but a more powerful role for diversity-related attitudes and past exposure to outgroup media. Some evidence supported reactive approach models (e.g., self-expansion motives drove time spent listening to outgroup media in Study 1, but only for people who reported high levels of intergroup anxiety).

Keywords: intergroup contact, selective exposure, media, music, reactive approach model

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Encountering members of other social groups (e.g., a different race or religion) is called intergroup contact (Allport, 1954). Such contact can occur in direct face-to-face encounters, or indirectly via, for instance, media portrayals (Vezzali et al., 2014). Intergroup contact has salutary effects on intergroup attitudes: assuming the contact is not negative, it typically results in reduced prejudice (Pettigrew & Tropp, 2006). Experimental exposure to positive outgroup media portrayals has positive effects on dominant group members' perceptions of outgroups (Joyce & Harwood, 2014; Mazziotta et al., 2011).

However, people's media consumption is selective (Knobloch-Westerwick, 2014). They often selectively expose themselves to *in*group and avoid *out*group portrayals (Harwood, 1999; Knobloch-Westerwick & Hastall, 2010). The selective exposure self and affect management (SESAM) model has explored this idea, with work demonstrating preferences for messages supporting pre-existing attitudes and featuring personally salient topics (Knobloch-Westerwick, 2015). A valid criticism of many mediated contact studies is that they use manipulated (i.e., non-voluntary) exposure to media and thus do not represent "real world" intergroup media exposure. This discontinuity between a key paradigm in mediated contact studies and real-world media use leads to our key question. What predicts *voluntary* exposure to outgroup media? We examine this question by looking at people's voluntary music-listening choices.

Intergroup Contact through Media

Direct intergroup contact can provoke anxiety and is often avoided. Informal segregation persists (Dixon & Durrheim, 2003), and people stick with "their own kind" (Al Ramiah et al., 2015). Mass media contact—one form of indirect contact—has high potential for prejudice-reduction, due to the ability of a single message to reach a very large audience, and the potential for

media contact to overcome geographical segregation. Media contact can reduce (but not eliminate) anxiety concerns typically associated with face-to-face contact (Schiappa et al., 2005).

However, people can *decide* whether to consume outgroup media stimuli (Harwood, 2021), and tend to prefer ingroup over outgroup media (despite the low anxiety typical of mediated contact situations: Harwood, 1999; Weaver, 2011). Relatively little is known about who decides to voluntarily engage with mediated *outgroup* portrayals (Joyce & Harwood, 2020) — the selective exposure literature has tended to focus on attitudinal rather than demographic congruence between viewer and content (e.g., Weeks et al., 2017). *Music* is largely free of semantic content, and thus appears exempt from attitude-related selective exposure. We investigate the characteristics of people who willingly engage with outgroup music.

Music is interesting for intergroup media exposure research, in part because it models both cross-cultural commonality and the value of diversity. Music is a "universal language" in many respects (Higgins, 2012): music from all cultures involves melody, rhythm, and timbre, and often includes vocals (e.g., song). Exposure to other cultures' music illustrates their engagement in "human" cultural activities, thus resisting dehumanization of the other (Haslam, 2006). Simultaneously, cultural styles of music exemplify the richness that different groups bring to our world and illustrate in a tangible way the benefits of culturally diverse experiences.

What Predicts Approaching the Outgroup?

The literature on seeking contact with the outgroup has grown exponentially in recent years. A variety of epistemic (learning), emotional (e.g., empathy), personality (e.g., openness), and experiential (e.g., past intergroup contact) determinants of seeking contact have been uncovered (see Paolini et al., 2021 for review). However, the contact-seeking literature has neglected *mediated* contact. Following Paolini et al.'s (2021) strategy, we adopt a multi-layer-multivariate framework by examining clusters of variables at the intrapersonal (e.g., personality), interpersonal (e.g., need

for uniqueness), interactional (e.g., past intercultural contact experiences), and intergroup (e.g., diversity attitudes) levels. We organize our predictors into three categories of variables likely to predict approaching outgroup media: personality, attitudinal, and past contact experiences.

First, we anticipate that personality characteristics could predict exposure. In Study 1, we examine the Big 5 personality dimensions – a set of factors that have demonstrated explanatory power across many social contexts (Gosling et al., 2003). Among these, we specifically predict that openness should be associated with seeking outgroup stimuli, given its links to traits such as curiosity and originality. In addition, we measure two traits particularly relevant to seeking outgroup media: self-expansion and novelty-seeking. Outgroup music *sounds* different from ingroup music, and most people have some implicit awareness that outgroup music may be unusual or challenging to listen to. Hence, outgroup music should appeal to people who score high on variables such as self-expansion and novelty-seeking, as those variables reflect personality tendencies towards seeking new experiences and desiring to be distinctive among one's peers. Self-expansion also relates to motivations to "grow" as a person by expanding the self, a tendency with clear associations to seeking unusual stimuli (Paolini et al., 2016).

H1: Outgroup music selection, consumption, and liking are higher among people who are high in (a) self-expansion, (b) novelty-seeking, and (c) openness.

RQ1: Do the remaining Big 5 personality dimensions predict outgroup music selection, consumption, and liking?

Second, we anticipate that attitudes concerning diversity will influence choices to approach outgroup media. People with an interest in intergroup experiences, and who personally value diversity in their lives should be more inclined towards experiences that reflect such values. On the other hand, people who do not value diversity or who experience anxiety in relation to intergroup experiences will presumably be unlikely to actively expose themselves to culturally diverse stimuli.

Such patterns are clear in the interpersonal contact literature (e.g., Paolini et al., 2021), but have not

been examined with media contact. We also predict that past intergroup experiences will influence

outgroup media exposure choices. People with more (and more *positive*) intercultural and

intergroup experiences should be more likely to expose themselves to outgroup musical stimuli,

while those with fewer or negative prior contact experiences will be less likely to do so. For

example, Paolini et al. (2021) found that non-Muslim Australian women with past positive contact

experiences sought opportunities to learn about the hijab from Muslim women, while those with

negative prior contact avoided those situations (see also Rozich et al., 2018). Likewise, given its

aversive nature, anxiety is likely to direct people away from seeking intergroup experiences

(Bettencourt et al., 2019).

> H2: Outgroup music selection, consumption, and liking are higher among people who are
>
> high in (a) pro-diversity attitudes, (b) prior positive contact, and (c) prior intercultural
>
> experiences.

> H3: Outgroup music selection, consumption, and liking are lower among people who are
>
> high in (a) intergroup anxiety, and (b) prior negative contact experiences.

Across these levels, we examine the theoretical model of "reactive approach" (McGregor et

al., 2010). This model suggests that anxiety (typically thought of as associated with avoidance

motives), may encourage one to *approach* unfamiliar or threatening stimuli, *when* this approach is

seen as having the potential to reduce anxiety or expand one's self concept. Various studies now

show, for instance, that people who are high in self-expansion (a desire to grow oneself) are more

likely to approach outgroups when anxious than when not anxious (e.g., Kauff et al., 2021). Recent

field work (Paolini et al., 2021) supports this idea, demonstrating that White Australians'

willingness to engage with a Muslim cultural event is at times *facilitated* by both individual and

intergroup apprehension. To our knowledge, no work has examined such processes in a mediated

context, but mediated contact is well-tailored to reducing anxiety and providing a place for "low risk" outgroup exposure (Schiappa et al., 2005). We explore whether anxiety and related variables *facilitate* approaching outgroup media messages among people who are otherwise cognitively open (e.g., have high self-expansion motives, score high on personality measures of openness). Reactive approach models are concerned with approaching and engaging with stimuli for anxiety-reduction purposes, but they need not necessarily involve enjoyment (i.e., liking). Hence, we expect such effects to only occur with outgroup music seeking and consumption.

> H4: The effect of self-expansion on outgroup music seeking and consumption is moderated by anxiety such that the effect is more strongly positive for those high in anxiety.

We conducted two studies to explore these ideas. In both, we first measured potential predictors of outgroup media seeking (personality variables, anxiety, prior outgroup contact), then offered a choice to listen or not listen to outgroup music, and measured subjects' choices, consumption time, and liking of the stimuli. Study 1 aimed to discover the predictors of who engages with outgroup music. Study 2 also examined interest in intergroup collaborative music (music involving *both* ingroup and outgroup musicians).

Study 1

Method

Sample

Participants (total $N = 358$) were recruited from (a) a large southwestern public U.S. university ($N = 154$ who got course credit) and (b) an online recruitment tool (Prolific: $N = 204$ who got monetary compensation). One of the musical stimuli was in Arabic, so 3 people from Arab countries were excluded, as were 9 people who failed attention checks. The final sample was 346 people (female: $N = 206$, 59.5%; male: $N = 135$, 39%; other: $N = 5$, 1.5%). Respondents were mainly White (84.4%; Hispanic 8.4%, Black 5.8%; Asian 3.8%; Native American 0.9%; Other

1.2% – total exceeds 100% due to selection of multiple ethnicities). Respondents averaged 30.71 years old (*SD* = 12.89). Age was a control variable in our analysis because musical taste and engagement are substantially influenced by age (Bonneville-Roussy, et al., 2013) and our sample was quite age diverse. Age was highly positively skewed, so a square-root transformation was performed (transformed *M* = 5.43, *SD* = 1.09).

Procedure

The survey occurred in two waves. A week before the main study, subjects completed a pretest measuring our predictors (personality traits, attitudes, past contact experiences). In the main study, subjects chose to listen to either "a song by an American Musician" or "a song by a Middle Eastern Musician" for at least 20 seconds (longer if they wished). We recorded their music choice and listening time, and subjects rated their liking of the music while listening. Both songs were from the EDM (electronic dance music) genre—a style popular among our respondents. They featured male vocalists and were similar in tempo and tone. The American song had typical U.S. pop song features with English lyrics; the Middle Eastern music had Arabic lyrics and distinctive Middle Eastern instrumentation and vocal style. We examined Middle Eastern music because it has distinctive cultural markers and hence we believed it would be quickly perceived as culturally-consistent with our description. Also, EDM is popular in the Middle East and hence it was relatively easy to find music with similar beat and tempo to the US equivalent. Attitudes towards people from the Middle East are ambivalent in the US (Hawkins et al., 2022), and hence this was a promising target group for the current investigation.

Measurement

All responses were on 1 (*strongly disagree)* to 5 (*strongly agree)* scales, and all multi-item scales were averaged unless otherwise stated.

Personality

Gosling et al. (2003)'s ten-item personality inventory (*TIPI*) assessed five personality dimensions (extraversion $M = 2.91$, $SD = 1.21$; agreeableness $M = 3.70$, $SD = .80$; conscientiousness $M = 4.02$, $SD = .90$; emotional stability $M = 3.40$, $SD = .98$; openness to experience; $M = 3.77$, $SD = .86$). Per Gosling et al. (2003), we do not report reliability coefficients here as the TIPI's two-item measures maximize validity, not reliability (Greenberg et al., 2021). *Self-expansion* was measured with seven items from Paolini et al. (2021) ($M = 3.99$, $SD = .66$, α = .84; e.g., "I gain knowledge through my relationships with others"). *Novelty-seeking* was assessed with three items adapted from Gocłowska et al. (2017; $M = 3.83$, $SD = .73$, α = .62; e.g., "I usually seek out new opportunities or experiences").

Attitudes

Six items from Stephan and Stephan (1985) measured *intergroup anxiety* ($M = 2.09$, $SD = .78$, α = .87; e.g., "When interacting with members of other ethnic groups, I would feel *awkward*"). *Pro-diversity attitude* was measured with four items adapted from Tropp and Bianchi (2006), Bahns et al., (2015), and Kauff et al. (2019) ($M = 4.31$, $SD = .76$, α = .85; e.g., "I value racial and ethnic diversity in education"). This measure was highly negatively skewed. Squaring the scores mitigated the skewness (transformed $M = 19.16$, $SD = 5.91$).

Past Contact Experiences

Positive and *negative prior contact* were measured with two items each (*Positive M* = 3.73, $SD = 1.02$, α = .86; e.g., "I have enjoyable experiences with members of other ethnic groups" *never – often; Negative M* = 1.78, $SD = .75$, α = .75; e.g., "I have upsetting experiences with members of other ethnic groups"). These were adapted from Kauff et al. (2019). Seven items were adapted from Narvaez et al. (2010) to assess *intercultural experiences* ($M = 3.35$, $SD = .80$, α = .70; e.g., "I have traveled extensively outside of the United States").

Selection, Consumption, and Liking of the Music Options

The measure of music *selection* was a dichotomous choice: American or Middle Eastern. *Consumption* was assessed by the survey system recording the total time spent listening to the selected music ($M = 69.62$ seconds, $SD = 94.10$). It was highly positively skewed, and a square root transformation was ineffective; however, a log-10 transformation mitigated the skewness (post-transformation $M = 1.70$, $SD = .32$). *Liking* was measured with four items ($M = 2.63$, $SD = 1.07$, $\alpha = .91$; e.g., "Please grade this music in terms of how much you liked it").

Results and Discussion

What Did People Select, Consume, and Enjoy?

Participants selected the American ($N = 278$) significantly more than Middle Eastern ($N = 68$) music, $\chi^2(1) = 127.46$, $N = 346$, $p < .001$, $w = .61$. Oneway ANCOVAs (with age as a covariate) tested difference in consumption and liking based on music selection (American vs. Middle Eastern). Consumption (log transformed) did not differ between music types, $F(1, 344) = .004$, $p = .95$, $\eta^2 = .00$ (American $M = 1.70$, $SD = 0.29$; Middle Eastern $M = 1.73$, $SD = 0.39$). However, respondents liked the Middle Eastern music ($M = 3.05$, $SD = 0.90$) more than the American music ($M = 2.53$, $SD = 1.08$), $F(1, 340) = 15.95$, $p < .001$, $\eta^2 = .05$.

What Predicts Seeking Different Forms of Music?

We ran hierarchical logistic regression models to understand what predicted people choosing American (0) or Middle Eastern (1) music, and hierarchical OLS regression to examine predictors of consumption and liking of each type of music. In all analyses, we entered our control variable (age) in the first block, the personality traits (TIPI, self-expansion, novelty-seeking) in the second block, and attitudinal variables and past contact experiences (intergroup anxiety, pro-diversity attitude, positive/negative prior contact, intercultural experiences) in the third block. We ran

analyses separately for American music and Middle Eastern music when consumption and liking were the outcomes. Table 1 summarizes the results.

Age significantly predicted music selection: older people were more likely to select Middle Eastern music. Age also predicted consumption positively and liking negatively for American music. Older people listened longer to American music but liked it less than younger people. Among the personality traits, people high on openness listened to the American music longer than less open respondents. People who were extraverted and conscientious were less likely to choose Middle Eastern music (both effects marginally significant). Extraversion also *marginally* and *negatively* predicted consumption (listening time) for Middle Eastern music. Among the attitudinal variables, people with stronger pro-diversity attitudes were significantly more likely to select Middle Eastern music. Neither past contact variable predicted the music outcomes. Overall, our predictors had limited effects on seeking others' sounds, with only pro-diversity attitudes significantly predicting outgroup music seeking in a manner consistent with our expectations. Of 52 total significance tests in Table 1, only five were fully significant and three were marginally significant. H1 received no support, H2 is supported for pro-diversity attitudes, and H3 is not supported.

Is There Support for Reactive Approach?

Reactive approach models suggest that anxiety can drive outgroup contact seeking when people are high in self-expansion or openness motivations. We investigated the potential for these models by examining moderator effects in regression using Hayes's (2018) PROCESS model 1. These models were tested using either self-expansion or TIPI-openness as the predictor, intergroup anxiety or TIPI-emotional stability as the moderators, and Middle Eastern music selection or consumption as the outcomes. Age was always controlled. Eight analyses were run: four for selecting and the other four for consumption. No significant effects emerged for selecting.

However, two significant and one marginally significant moderator effects emerged involving

consumption, providing partial support for H4.

A significant interaction was observed between self-expansion and intergroup anxiety ($B =$

0.14, $R^2_{change} = .06$, $p = .04$). The simple slopes and accompanying statistics in Figure 1a (McCabe et

al., 2018) show that self-expansion had a positive effect on consumption for the Middle Eastern

music *only* when intergroup anxiety was high. The interaction between TIPI openness and

intergroup anxiety in predicting consumption for the Middle Eastern music was significant ($B =$

0.13, $R^2_{change} = .07$, $p = .04$; see Figure 1b). Openness had a positive effect on consumption of

Middle Eastern music, again only when intergroup anxiety was high. The interaction between TIPI

openness and TIPI emotional stability in predicting consumption of Middle Eastern music was

marginally significant ($B = -0.09$, $R^2_{change} = .04$, $p = .09$; see Figure 1c). TIPI openness had a

negative effect on consumption when emotional stability was high. These results provide some

preliminary support for reactive approach processes in media consumption. Self-expansion and

openness positively predicted outgroup media consumption most strongly for people who were

higher in anxiety and lower in emotional stability. That said, although the slopes on the left side of

Figures 1a and 1b (low scores on the moderators) were not statistically significant, the general

pattern there is *in*consistent with reactive approach processes. People who were *low* in self-

expansion or openness, *and* low in anxiety listened longer to outgroup music. A parallel pattern is

apparent on the *right* side of Figure 1c, where people who are high in emotional stability (a proxy

for low anxiety) and low in openness spent more time with outgroup music. We discuss this pattern

further in the General Discussion.

As a robustness check, all analyses were re-run excluding the age covariate. Only one

effect's significance level changed: the self-expansion by anxiety interaction on Middle Eastern

music consumption became marginally significant ($p = .058$) when age was not included.

Study 2

The second study expands on Study 1 theoretically by exploring people's interest in *intercultural-collaborative* music. The intergroup contact literature has noted that *witnessing positive intergroup contact* (seeing or hearing about members of different groups interacting) can have powerful effects in both mediated (vicarious contact: Joyce & Harwood, 2014) and non-mediated (extended contact: Wright et al., 1997) contexts. In such scenarios, one is not only exposed to the outgroup, but also to a model (Bandura, 2001) of positive ingroup-outgroup contact. However, little research has examined when people are inclined to engage with such stimuli (Joyce & Harwood, 2020). For those motivated to engage with the outgroup, but anxious about doing so (i.e., the core of reactive approach models), an option involving both ingroup *and* outgroup might offer a gateway of some familiarity combined with some novelty. People might be willing to engage with foreignness when ingroup familiarity is also present.

Intergroup musical collaborations provide a useful case-study here. They illustrate contact that is creative, typically positive, synchronized, emotionally engaged, and peaceful (Cross & Morley, 2009; Harwood et al., 2016). As such, cross-cultural musical collaborations model many "ideal" features of successful intergroup contact, reflecting Allport's (1954) prescriptions that contact be equal status and cooperative. Some intergroup musical collaborations also offer the possibility of a "foot in the door" towards understanding and appreciating outgroup music. Such collaborations often include a "mash-up" of the participating cultures' musics, thus providing an accessible version of the outgroup music which includes enough ingroup elements to make it feel familiar. Intergroup musical collaborations are relatively common (Vollmer, 2016), and include entire genres that intentionally and explicitly merge cultural-musical traditions (e.g., Ska, Latin jazz, Zydeco, Norteño). Thus, in addition to continuing to test the hypotheses/questions from Study 1, Study 2 examines what drives exposure to *intergroup musical collaborations*:

RQ2: Do personality traits, attitudes, and past contact experiences predict intercultural-collaborative music selection, consumption, and liking?

In addition to the theoretical extension, Study 2 offers methodological advances, including introducing additional predictors, albeit within the same three-tier framework. We explore participants' histories of music listening. Study 2 includes overall music listening as a control *and* examines effects for prior "*world music*" listening. We know that prior (face-to-face) contact with the outgroup predicts interest in future contact (Rozich et al., 2018). Our first study suggested that past contact is not associated with desire for intergroup musical experiences. But outgroup musical contact is more specific than general outgroup exposure, and so in Study 2 we predict that previous consumption of foreign music (i.e., *prior intergroup mediated contact*) positively predicts seeking similar experiences (H5).

We add a measure of *uncertainty anxiety*, which replaces the measure of intergroup anxiety. Uncertainty anxiety is a more general form of anxiety than intergroup anxiety. Therefore, it aligns more closely with the reactive approach model, which conceptualizes and examines anxiety in the broadest sense of the term. We predict that high uncertainty anxiety should be associated with avoiding outgroup music. A significant appeal of music is its predictability: too much predictability is boring, but repetition is very much the norm in both the content of almost all popular music and in our consumption patterns (Huron, 2006). Music from our own cultural traditions is fairly predictable, and this predictability is a significant contributor to music's enjoyment (Margulis, 2014). Other cultures' musics on the other hand provide fewer such rewards, and hence should be less appealing for individuals seeking to reduce uncertainty in their environment (our earlier H3a). We also add a measure of *need for uniqueness* with the expectation that it will positively predict seeking outgroup music (H6). Outgroups represent novelty, so using (and being seen to use) unusual or obscure music is a means for marking personal distinctiveness (MacDonald et al., 2005).

We retain *openness* and *pro-diversity attitudes* from Study 1 given that they yielded some fully significant effects, and we retain a self-expansion measure to assess reactive approach issues.

Study 1 involved a single outgroup musical stimulus from a single outgroup (Middle Eastern). This limited our conclusions: preexisting perceptions of that culture and its music could have influenced responses. In Study 2, we use more stimuli, allow more choices, and provide options from multiple outgroups. This design decision has implications for our sample. Featuring only one outgroup in Study 1 allowed us to have a diverse sample because participants only needed to identify Middle Eastern as an outgroup. However, having more musical stimuli (e.g., African, Latin, Middle Eastern) requires limiting the sample to people who identity any of those as outgroups. Hence, in Study 2, we use only White American participants.

Method

Respondents were U.S. residents who received communication course credit at a large southwestern public U.S. university ($N = 343$). Because one of the musical options was in Spanish, 27 fluent Spanish speakers were excluded from analysis. The musical stimuli represented various international cultures with connections to US non-White ethnic groups, and so non-White respondents were removed from the sample ($N = 46$), as were 21 people who failed attention check questions embedded in the questionnaire (final $N = 249$). Respondents were 70% female ($N = 174$), and typical college age ($M = 21.23$ years, $SD = 3.38$). Age was not controlled because our respondents were much more homogeneous on this measure than in Study 1.

Participants first reported their general music listening preferences, their attitudes about diversity, and various dimensions of personality. They then made a music listening choice from a menu of options. Nine choices were available, presented in a randomized list (see supplementary Table S1 for the labels). The list featured (a) three descriptions indicating that the music was clearly culturally *foreign*; (b) three descriptions of *intercultural-collaborative* (henceforth just

collaborative) music featuring collaboration between an American and someone from another

culture; and (c) three saying nothing about the cultural origins of the music (*control*).

Respondents were then required to listen to their chosen music for at least 20 seconds

(longer if they wanted: median listening time = 55 seconds). They evaluated liking of the music

while listening. This process of selecting, listening, and evaluating a piece of music was repeated

two additional times, with respondents returning to the list of options to make additional selections.

Given that we had a total of nine musical clips in a more complex design, our ability to control

musical content across conditions was lower in this study. However, the musical content was

consistent with the conditions. Language (English versus non-English) and musical style (Western

versus non-Western melodic, harmonic, and instrumental features) were carefully examined to

ensure that participants' experiences reflected their choices. Collaborative musical stimuli featured

clear "hybrid" elements (e.g., African instrumentation with American-accented English vocals). To

test whether the musical content matched the description of each song, we conducted a post-hoc

manipulation check (*N* = 58) and confirmed that people broadly perceived the songs in line with the

descriptions (see Table S1 for details).

Measurement

Personality

Individual difference measures were assessed prior to music listening on five-point Likert

scales. Two items assessed *uncertainty anxiety* (α = .72: e.g., "I do not like to go into a situation

without knowing what I can expect from it": Paolini et al., 2021). Two items assessed *need for*

uniqueness (α = .66: e.g., "I like being distinguished from the crowd": Realo et al., 2002). Four

items assessed *openness to new ideas* (e.g., "I am always interested in finding new things to try": α

= .68; derived from Paolini et al., 2021). Four items assessed *self-expansion desires* (α = .84: e.g., "I

enjoy expanding my sense of who I am": adapted from Paolini et al., 2021).

Attitudes

Valuing diversity was assessed with eight items adapted from Tropp and Bianchi (2006) and Bahns et al. (2015; α = .87, e.g., "I value racial and ethnic diversity in education").

Past Contact Experiences (Musical) and Overall Music Consumption (Control)

A series of items asked how many days in a typical week (from 0-7) respondents listened to various musical styles (e.g., pop, R&B, jazz, classical). Embedded in these, a single item asked about "world music." This category typically includes music from other countries featuring instrumentation or stylistic elements outside of traditional Western music, as well as music produced collaboratively between domestic and international artists featuring similar elements. This item was highly positively skewed; attempts to transform it using natural log and cube root transformations were unsuccessful, so it was reduced to a dichotomous variable (0 = never listen to world music, 1 = do listen to world music). We treated this as a measure of "prior intergroup musical contact." The remaining musical items were averaged to assess the respondents' overall interest in music listening; this was included as a control measure in all analyses, thus allowing our analysis to differentiate between music seeking behavior that is driven by general musical interest versus intergroup concerns (Sanatkar et al., 2018).

Selection, Consumption, and Liking of the Music Options

We recorded how many control, foreign, and collaborative pieces of music each respondent selected. Respondents made three music selections, so the measures of *selection* ranged from 0-3 (e.g., from none of their choices being foreign, to all of them being foreign). The data collection system recorded the total amount of time (in seconds) that respondents spent listening to each type of music. Extreme positive skewness on the listening time variable was corrected with a natural log transformation. *Liking* of the music that respondents selected was self-reported with the same four items as Study 1 (across three rounds of listening, α = .73–.77). Choice patterns were

heterogeneous, with most respondents (69%) selecting two types of music (e.g., foreign and

control), versus selecting only one type (10%), or all three (21%).

Data Structure

Measures of consumption (listening time) and liking were repeated across the three listening

choices. Thus, they are nested within subjects. Hence, analyses involving these measures used a

"long" format data structure, with observations of each listening trial as level 1 variables, nested

within research subjects (level 2; all pre-test measures are level 2). We analyzed these with

multilevel linear models (grand-mean centering continuous predictors).

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Results and Discussion

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What Did People Select, Consume, and Enjoy?

Descriptive statistics for music measures are in Table 2. Comparisons for music selection

were pursued using repeated measures ANCOVAs, with prior world music and general music

consumption as controls. Each pairwise comparison of music types was examined in a separate

analysis because the three selection scores are linearly dependent (i.e., they always sum to 3).

People selected the control music more than foreign music (F (1, 246) = 6.99, p = .009, partial η^2 =

.03), and much more than the collaborative music (F (1, 246) = 25.09, p < .001, partial η^2 = .09).

They selected foreign music marginally more than collaborative music, F (1, 246) = 3.62, p = .06,

partial η^2 = .02. These are relatively large differences—10% of people chose zero *control* options,

23% chose no *foreign* options, but 57% chose no *collaborative* options.

Analyses of the consumption (time listening) and liking measures were performed using

multilevel modeling of responses to each listening trial (level 1) nested within respondents (level 2).

The type of music that respondents chose (control, foreign, or collaborative) was a fixed factor, and

prior general music and world music listening were controlled. Listening *time* did not differ based

on the type of music the respondents chose (F (2, 484.57) = 1.53, p = .22), but *liking* did (F (2,

613.54) = 4.13, p = .02). Liking for collaborative music was significantly higher ($p < .01$) than for both foreign and control music (which had almost identical means; see Table 2). In sum, people chose the control music most and collaborative music least. Once they had made their selection, they tended to like the collaborative music more than the other two options.

What Predicts Seeking Different Forms of Music?

We ran statistical models predicting selection, consumption, and liking of each music type. Overall music listening (not including world music) was a control variable. The key predictors (see left column in Table 3) were the personality traits (uncertainty anxiety, need for uniqueness, openness to new ideas, self-expansion desires), pro-diversity attitudes, and our measure of prior *world music* listening. For music selection, we predicted the frequency of selection of each type of music (scored 0-3 as described earlier) in OLS regression models. For liking and consumption, the same predictors were used to predict the outcomes, but in multilevel models. All predictors were level 2 variables; liking/consumption scores were level 1 outcomes. Separate analyses were performed for control music, foreign music, and collaborative-intergroup music (see Table 3).

Partially supporting H3a, uncertainty anxiety negatively predicted selection of and liking for intergroup-collaborative music. Exposure to intergroup collaboration appeared to be aversive for people high in anxiety, perhaps due to the tendency for such music to blur boundaries and hence reduce the certainties that come from fixed categories. In line with H1c, openness to new ideas was positively associated with liking for foreign and intergroup-collaborative music. Need for uniqueness was *negatively* associated with consumption of intergroup-collaborative music, contrary to H6 (a finding we return to in our General Discussion).

Supporting H2a, pro-diversity attitudes were a consistent predictor, being positively associated with selection and consumption of foreign music, and (marginally) liking of intergroup-collaborative music. People who are generally pro-diversity were more likely to listen to

international music (and, less so, the collaborative music options). Interestingly, pro-diversity

attitudes also *negatively* predict selection of the control music. Those *less* positive about diversity in

their lives extended that ideology to their music choices and were more likely to opt for the non-

intergroup choices and avoid outgroup options. In support of H5, prior world music listening

predicted a positive orientation to foreign music, significantly predicting liking, and marginally

predicting selection and consumption. It also predicted consumption of intergroup-collaborative

music. Curiously, it also predicted liking of the control music. As a universal language, music can

appeal to cultural universalism, and intergroup contact could evoke more liberal mindsets (Higgins,

2012; Hodson et al., 2018). Hence, people who listened to world music before could have affinities

for both ingroup and outgroup music. Study 2 revealed more effects than Study 1, although many

effects were also nonsignificant: Of 49 total significance tests in Table 3, 13 were fully significant

and four were marginally significant.

Is There Support for Reactive Approach?

Paralleling Study 1, we investigated whether uncertainty anxiety interacted with self-

expansion desires or openness to predict music selection and consumption (but not liking). These

models were tested using PROCESS model 1 for the selection measures, and multilevel moderated

regression models for consumption (using all the same procedures described above). In all analyses,

we controlled prior listening to both world music and other music, self-expansion or openness were

the predictors, and uncertainty anxiety was the moderator. Selection (0-3) and consumption of the

foreign or intergroup-collaborative music options were the outcomes.

Among eight analyses (i.e., four for foreign and four for collaborative music), only one

significant moderator effect emerged. Uncertainty anxiety and self-expansion interacted to predict

consumption of collaborative (ingroup-outgroup) music ($B = 0.26$, $p = .02$). This effect was

decomposed using Preacher et al.'s (2006) tools for probing multi-level interactions (see:

). The pattern is illustrated in Figure 2. When uncertainty

anxiety was high, the effect of self-expansion on collaborative music listening was positive and

significant (simple slope $B = 0.26$, $p < .05$), but when uncertainty anxiety is at the mean ($B = 0.05$, p

$> .05$), or low ($B = -0.16$, $p > .05$), the effects are nonsignificant. This broad pattern is consistent

with RAM—a combination of high anxiety and high expansion motives leads to approach-

motivated behavior. The left side of Figure 2, however, is not entirely consistent with our

predictions in that it shows relatively high approach-motivated behavior among those who are low

on both anxiety and self-expansion, a general pattern we also observed in Study 1.

General Discussion

In two studies, we investigated people's tendency to select, consume (in terms of time), and

enjoy outgroup music. Overall, interest in outgroup music was low in both studies: approximately

80% of participants in Study 1 chose the American music, and 90% of participants in Study 2

selected control (non-outgroup) music for at least one of their three choices. Familiarity strongly

influences people's music choices—even people who express a preference for unfamiliar music will

often choose to listen to familiar music (Ward et al., 2014). People possess general favoritism

toward seeking ingroup (vs. outgroup) contact both in interpersonal (e.g., Al Ramiah et al., 2015)

and other mediated contexts (e.g., Weaver, 2011). Even though these results were not surprising,

they imply that contact *opportunities* do not spontaneously make people engage in intergroup

contact. Therefore, our study demonstrates the value of understanding when and why intergroup

contact happens—and our results provide some new insights into that process.

Limited evidence emerged for personality as a predictor of outgroup music seeking.

Surprisingly, both studies contained suggestive evidence that openness predicted selection of

ingroup over *outgroup* music, but more predictably Study 2 did show openness positively

associated with liking of outgroup music. Similarly, traits traditionally associated with avoiding

uncertainty or spontaneity (conscientiousness, uncertainty anxiety) were negatively associated with outgroup music seeking and enjoyment. Pre-existing positive attitudes about diversity and prior consumption of world music positively predicted outgroup music seeking.

While not widespread, a handful of results across the two studies suggest that reactive approach processes might drive some portion of outgroup media selection and consumption: individuals high on anxiety-related constructs as well as openness or self-expansion displayed some increased tendencies to engage with outgroup media. We discuss two areas in more detail. First, we overview our findings concerning what predicts outgroup musical contact, and then we focus on some surprising findings surrounding intercultural-collaborative music in Study 2.

Outgroup Music Seeking

What drives people to seek intergroup media contact? Preexisting attitudes and behaviors were the strongest predictors of outgroup music consumption in our data. Unsurprisingly, pro-diversity attitudes in both studies strongly and positively predicted *selecting* outgroup music. Moreover, prior world music consumption and pro-diversity attitudes predicted more outgroup music *consumption* in Study 2. These effects mirror the (non-mediated) intergroup contact literature. People with positive past contact experiences seek future contact in interpersonal settings—seeking and enjoying intergroup experiences are in part habitual tendencies, and this appears to extend to mediated aesthetic contexts (Kauff et al., 2021). Study 1 also revealed an unexpected finding that age was a positive predictor for outgroup music selection. This finding is consistent with existing literature about "open-earedness" (Hargreaves & Bonneville-Roussy, 2018), in which older people tend to be more open in their music choices than younger people.

Even though there was limited support for the reactive approach model (RAM), both studies provided suggestive findings. Particularly, high levels of anxiety enhanced the effects of openness (Study 1) and self-expansion motives (Studies 1 and 2) on outgroup music listening time (ingroup-

outgroup collaborative music in the case of Study 2). Hence, we provide some preliminary evidence

that people might seek outgroup music (and perhaps other outgroup media), as a function of

converging affective and epistemic needs: feeling anxious while also (explicitly or implicitly)

understanding that exposure to the outgroup might reduce that anxiety.

Curiously, both studies displayed some trends wherein people *low* in both anxiety and

expansion/openness spent more time with outgroup music. Listening time was shortest for people

low on only *one* of those two variables. A potential explanation here stems from the fact that the

outgroup music we selected in Study 1 featured familiar elements for Western listeners (a steady

beat, and a general sound reflecting the popular EDM style), and the relevant effect in Study 2 was

for the collaborative listening option (which was inherently a cultural mash-up, and so also featured

familiar elements). It is plausible that listening was driven by different components of the music for

people with different anxiety-openness/expansion profiles. For those with a reactive approach

mindset, the "foreign" elements in the music perhaps drove listening as an attempt to reduce

intergroup anxiety by approaching the source of that anxiety (to prepare oneself for future

challenges, expand one's self-concept, and the like). For those high on *only* anxiety, these same

foreign aspects might be aversive. In contrast, for those high in self-expansion but low in anxiety,

the *familiarity* of the Western elements in the music might have been a disappointment, and the

music was seen as insufficiently unusual to meet their needs. For those with low epistemic and

affective needs, they enjoyed the familiar aspects of the music and (given their low anxiety) were

not deterred by its foreign elements, thus resulting in longer listening. Put more generally, we need

to attend carefully to the balance of familiar (ingroup) and unfamiliar (outgroup) elements in media

stimuli, and the extent to which listeners might selectively attend to one or the other of those. Future

work could examine this post hoc explanation more systematically by measuring perceptions of the

relative familiarity-foreignness of intercultural media offerings (something we did not do).

Intergroup Collaborative Music

The intergroup contact literature has noted the value in witnessing intergroup contact both in mediated (vicarious contact; Harwood & Joyce, 2014) and non-mediated contexts (extended contact; Wright et al., 1997). Based on this, we predicted that intercultural-collaborative music would be appealing, providing a low-anxiety "gateway" to outgroup musical contact. Surprisingly, interest in collaborative music in Study 2 was low, particularly among those high in uncertainty anxiety. Building on our points above, a desire for cultural *authenticity* might be behind this. Specifically, participants might want "pure" cultural experiences, and find hybrid forms to be uncertainty-evoking. Hybrid music might sound like an awkward mash-up or be seen as "culture-lite." People often prefer to see clear differences between ingroups and outgroups that provide groups with clear entitativity (Brewer, 2003). This interpretation is in line with the negative effect of need-for-uniqueness on collaborative music consumption: those who sought uniqueness apparently did not want a "watered-down" cultural experience.

We also should not ignore power perception issues relevant to intercultural-collaborative or hybrid music. Those who identify as liberals may perceive collaborative music as exploitative or neo-colonialist; hence, they reject collaborative sounds and instead prefer to listen to original voices. Prior work on vicarious and extended contact has examined media featuring characters from multiple groups interacting and found that such stimuli can be effective contact vehicles. However, "merging" aesthetic cultures in music represents a qualitatively different form of vicarious stimulus, and one that might be aversive for multiple reasons.

Limitations and Conclusion

Our design provided only a limited number of musical stimuli—only two music choices in Study 1, and only three of each kind in Study 2. Future research would benefit from offering a

wider range of choices. For instance, researchers could provide a playlist that includes more music,

genres, and languages, allowing respondents to skip through to whatever they preferred.

Overall, we explained relatively little variance in any of our analyses. This is in part because

of the broader social functions served by music consumption. Musical choices are partly driven by

self-presentation goals (MacDonald et al., 2005)—people express *who they are* through their music.

Music also serves social relatedness functions (e.g., Wallace & Harwood, 2018; Schäfer et al.,

2013). People use music to feel connected to "others" (e.g., peers and family). Hence, a research

study featuring private and largely non-consequential choices removes some potential motives for

consuming specific stimuli, *and* removes one source of anxiety (i.e., self-presentational concerns

from others knowing about one's music). We might see more effects for variables such as need-for-

uniqueness, self-expansion, or novelty-seeking with "real world" music choices that could serve

self-presentation functions ("I am culturally aware and open-minded!"). Such effects reflect how

peers influence consumption and appreciation of outgroup music—an environmental influence

within Paolini et al.'s (2021) multilayer-multivariate framework of contact seeking. Future work

could explore this by examining music choices and consumption in public or relational settings

(e.g., sharing playlists).

The low level of selection of foreign music contributes to some patterns of null results. In

Study 1, for instance, examinations of consumption and liking of foreign music have less statistical

power ($N = 68$) as compared to the parallel analyses for domestic music ($N = 278$). This is less of a

concern with the multi-choice design and multi-level analysis in Study 2 where, interestingly,

substantially more effects emerge for consumption and liking of non-domestic music. Last, not

everyone perceived the musical stimuli in Study 2 in ways that perfectly aligned with their

descriptions (see Table S1). Specifically, respondents in our post hoc manipulation check often

mixed up collaborative and non-collaborative music; this might contribute to the lack of predicted

findings for collaborative music. Including video content with audio could strengthen this type of manipulation (i.e., allowing viewers to *see* intergroup collaboration).

        To conclude, we examined what makes people voluntarily choose outgroup (Studies 1 and 2) and intergroup (Study 2) musical stimuli over ingroup stimuli. We confirmed the idea that pre-existing attitudes and behaviors (e.g., pro-diversity attitudes and prior-intergroup musical contact) drove selection and consumption. These effects reflect similar findings in interpersonal contact research. We also demonstrated some (limited, and sometimes counter-intuitive) effects of personality and reactive approach drivers of outgroup music consumption. Humans are selective in their media consumption—they are rarely forced to listen to certain music or watch specific TV shows. Our findings do, however, suggest that non-elective exposure might be productive in the musical context—people in Study 1 *enjoyed* the foreign music more than the domestic music, despite selecting the domestic music much more frequently. Of course, as with most studies of media selection, we cannot understand consumption and evaluation independent of selection in our studies. Researchers should explore creative ways to examine both in the same designs (e.g., perhaps via "inadvertent" exposure to an unselected stimulus following the selection activity). Understanding when and why people actively seek intergroup media experiences will help us understand how to create stimuli that increase people's interest in outgroups, and hopefully ultimately their broader attitudes about diversity. Given the ubiquity of music, we hope to see additional studies examining the potential for audio stimuli to contribute to such positive effects.

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Table 1

Predictors of Selection, Consumption, and Liking of U.S. and Middle Eastern Music (Study 1)

	Selection	Consumption		Liking	
	(of Middle Eastern over U.S.)	U.S.	Middle Eastern	U.S.	Middle Eastern
Control Variable					
Age	.62**	.24**		-.18*	
Personality Traits					
TIPI – Extraversion	-.24†		-.28†		
TIPI - Agreeableness					
TIPI - Conscientiousness	-.33†				
TIPI - Emotional Stability					
TIPI - Openness		.20*			
Novelty-Seeking					
Self-Expansion					
Attitudinal Variables					
Intergroup Anxiety					
Pro-Diversity Attitudes	.09*				
Past Contact					
Positive Contact					
Negative Contact					
Intercultural Experiences					

† *p* < .10   * *p* < .05   ** *p* < .01

Note. Numbers for selection are unstandardized logistic regression coefficients; Numbers for time spent and liking are standardized regression coefficients (betas). Blank cells indicate nonsignificant coefficients, omitted for clarity of viewing but available from the authors.

Table 2

Descriptive Statistics for Music Consumption and Liking (Study 2)

	Control	Foreign	Collaborative
	M (SE)	*M (SE)*	*M (SE)*
Selection	1.39 (0.05)	1.09 (0.05)	0.51 (0.04)
Consumption time (natural log)	4.04 (0.04)	4.00 (0.04)	3.96 (0.05)
Liking	2.34 (0.06)	2.34 (0.06)	2.58 (0.08)

Note. For consumption and liking, means are estimated marginal means from multilevel modeling.

All means are covariate-adjusted (covariates: prior general music and world music listening).

Table 3

Predictors of Selection, Consumption, and Liking of Control, Foreign, and Foreign-US Collaborative Music (Study 2)

|	Selection			Consumption			Liking		
	Control	Foreign	Collab.	Control	Foreign	Collab.	Control	Foreign	Collab.
Control Variable									
Overall music listening					-.08*				
Personality Traits									
Uncertainty anxiety			-.21**					-.17*	-.29*
Need for uniqueness						-.21**			
Openness	.15†							.30*	.43*
Self-Expansion									
Attitudinal Variable									
Pro-Diversity Attitudes	-.18*	.13*			.27**				.28†
Past Contact									
Prior intergroup musical contact (world music)		.11†			.22†	.50**	.39*	.70**	

† $p < .10$ * $p < .05$ ** $p < .01$

Note. Numbers for selection are standardized regression coefficients (betas); Numbers for consumption and liking are multilevel parameter estimates. Blank cells indicate nonsignificant coefficients, omitted for clarity of viewing but available from the authors. Collab. = Intercultural Collaborative Music.
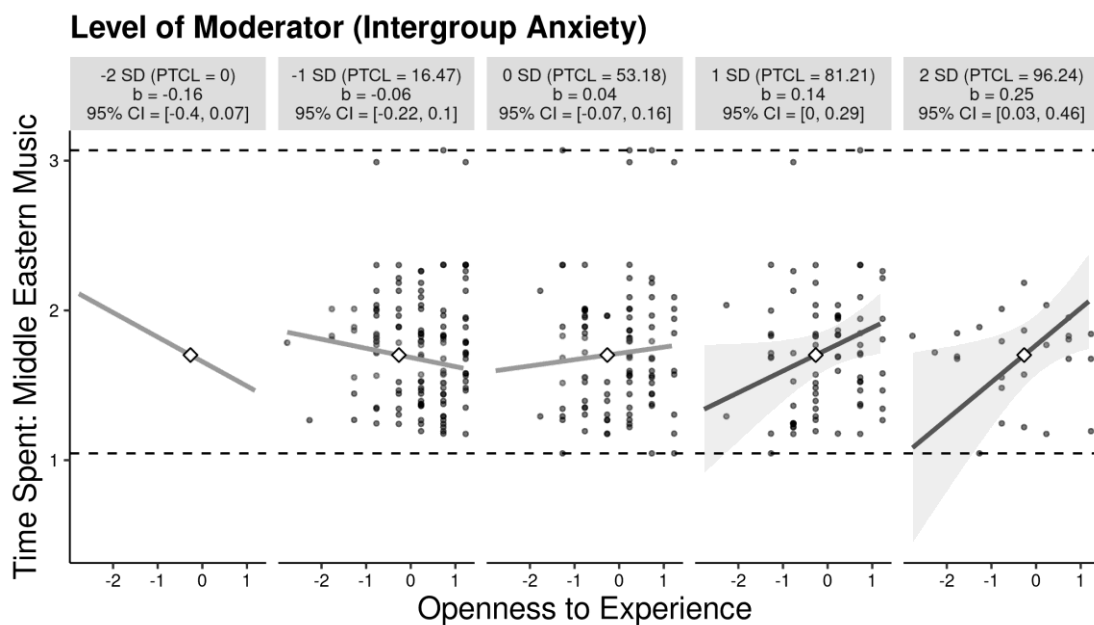
Figure 1

Illustrations of RAM-Based Moderator Effects Predicting Consumption of Middle Eastern

Music: Simple Slopes Plots (Study 1)

a) Interaction of Intergroup Anxiety and Self-Expansion (p = .04)
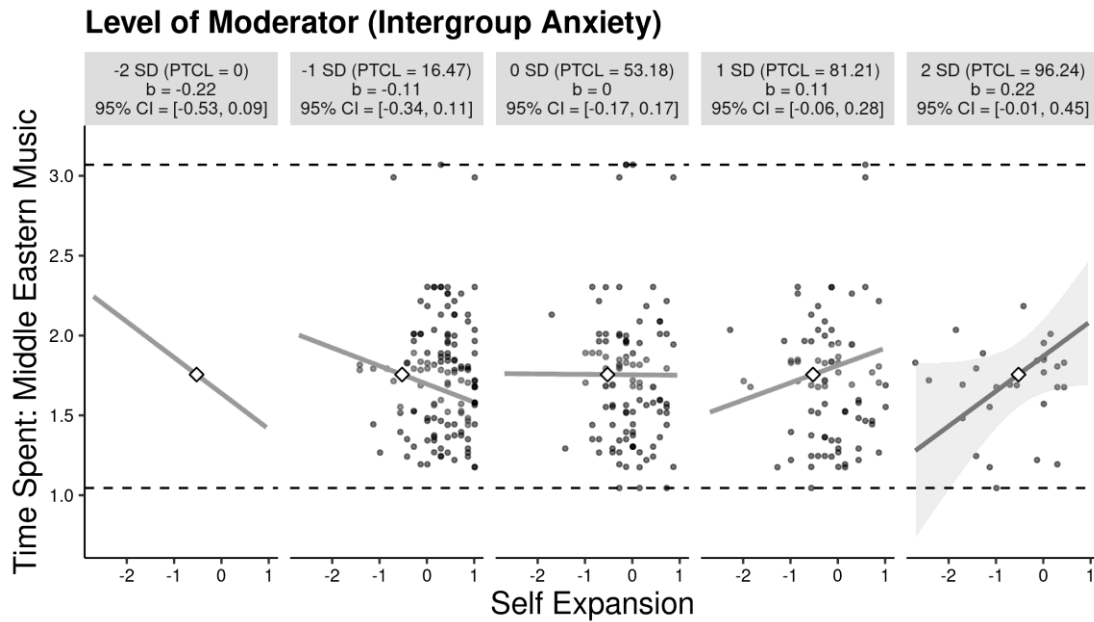
b) Interaction of Intergroup Anxiety and TIPI Openness to Experience (p = .04)

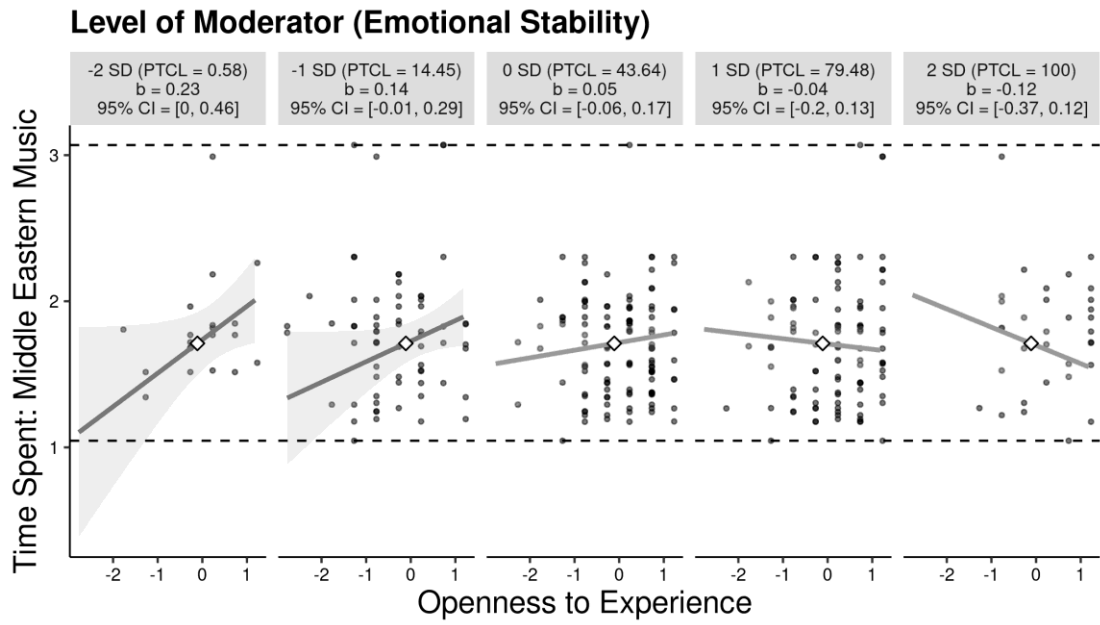*c) Interaction of TIPI Emotional Stability and TIPI Openness to Experience (p = .09)*

Level of Moderator (Emotional Stability)

-2 SD (PTCL = 0.58)	-1 SD (PTCL = 14.45)	0 SD (PTCL = 43.64)	1 SD (PTCL = 79.48)	2 SD (PTCL = 100)
b = 0.23	b = 0.14	b = 0.05	b = -0.04	b = -0.12
95% CI = [0, 0.46]	95% CI = [-0.01, 0.29]	95% CI = [-0.06, 0.17]	95% CI = [-0.2, 0.13]	95% CI = [-0.37, 0.12]

Time Spent: Middle Eastern Music

Openness to Experience

Figure 2

Interaction of Uncertainty Anxiety and Expansion in Predicting Time Spent Listening to

Intercultural-Collaborative Music (p = .02) (Study 2: Multilevel Moderation Analysis)
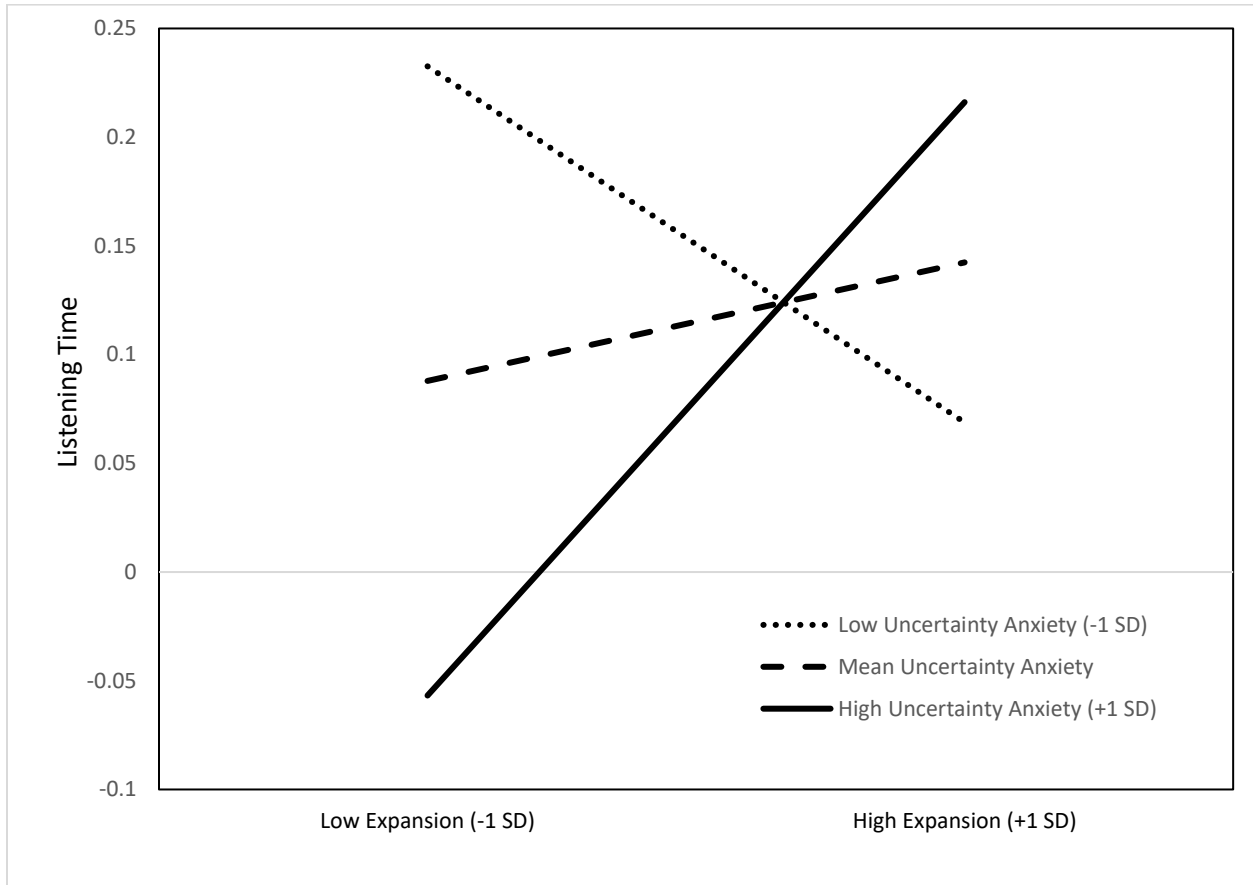
Supplementary Materials

Table S1

Results of Manipulation Check for Music Stimuli in Study 2 (N = 58)

Song Label	Correctly Identified	Placed First	Most Frequent Incorrect Guess
A song by an American and South African musician	78%	48%	A South African pop song
A South African pop song	76%	69%	A song by an American and South African musician
A joint performance by American and Middle Eastern musical artists	69%	24%	A pop song by a Middle Eastern band
A pop song by a Middle Eastern band	48%	33%	A South African pop song
An American and Latin American Song	66%	24%	A Latin American pop song
Latin American popular music	78%	60%	An American and Latin American song
An "alternative" rock song	91%	88%	An American and Latin American song
A piece of modern classical music	55%	33%	A piece of ambient/atmospheric music
A piece of ambient/atmospheric music	93%	66%	A piece of modern classical music

Note. Subjects (*N* = 58) listened to each sample from Study 2 and selected up to three "labels" from a menu of all nine labels available in the main study. The first column above represents selecting the correct label as any of their (up to three) choices. The second indicates cases where the correct label was their first choice. The final column represents the most common incorrect choice. Sample Demographics for pilot: Age range: 18-34 (*M* = 20.43, SD = 2.43); 43 women, 15 men. Full details available from authors.