Does the Music Matter? Examining Differential Effects of Music Genre on Support for Ethnic Groups

Article *in* Journal of Broadcasting & Electronic Media · February 2012
DOI: 10.1080/08838151.2011.648683

CITATIONS
7

READS
169

3 authors, including:

Heather L. Lamarre
Temple University
13 PUBLICATIONS **249** CITATIONS

SEE PROFILE

Gregory J. Hoplamazian
Loyola University Maryland
7 PUBLICATIONS **116** CITATIONS

SEE PROFILE

BEA
Educating for Tomorrow's Media

Routledge
Taylor & Francis Group

Does the Music Matter? Examining Differential Effects of Music Genre on Support for Ethnic Groups

Heather L. LaMarre, Silvia Knobloch-Westerwick, and Gregory J. Hoplamazian

Using data from a post-test only experiment with random assignment, this article examines whether differing music genres influence socially relevant decisions made by listeners. A sample of White college students was exposed to1 of 3 music genres during an ostensible waiting period, and was then asked to allocate funding to projects for different ethnic groups. Three music conditions—radical White power rock, mainstream rock, and Top 40 pop music—were examined to determine whether differential allocations to ethnic groups would emerge following music exposure. As expected, Top 40 pop music exposure led to equal allocations to the various ethnic groups. After listening to mainstream rock, participants allocated significantly higher budgets to White Americans compared to all other race groups. After listening to radical White power rock music, participants also allocated significantly higher budgets to White Americans, but changes in allocations to ethnic minority groups also emerged. Namely, African Americans and Arab Americans received particularly low funding from participants exposed to radical White power rock music.

Music consumption accounts for as much as 28% of Americans' media use (Papper, Holmes, Popovich, & Bloxham, 2005). Yet little is known regarding how music influences socially relevant behaviors (Shevy, 2008). Early music research addressed concerns regarding adolescents' anti-social behaviors (Timmerman et al.,

Heather L. LaMarre *(Ph.D., The Ohio State University) is an assistant professor in the School of Journalism and Mass Communication, University of Minnesota-Twin Cities. Her research centers around media psychology, focusing on message processing and persuasion with a primary interest in the social influence of political, heath and science stories consumed through mass entertainment, and social media.*

Silvia Knobloch-Westerwick *(Ph.D., University of Music, Drama & Media Hanover, Germany) is an associate professor at the School of Communication, The Ohio State University. Her research interests include media effects and selective exposure to media messages in the contexts of news, health information, entertainment, political communication, and new communication technologies.*

Gregory J. Hoplamazian *(Ph.D., The Ohio State University) is an assistant professor in the Department of Communication at Loyola University Maryland. His research interests include cultural cues in advertising with a focus on the effects of character, race, and social status.*

Journal of Broadcasting & Electronic Media 56(1), 2012, pp. 150–167
DOI: 10.1080/08838151.2011.648683 *ISSN: 0883-8151 print/1550-6878 online*

2008), while more recent work focused on negative effects of rap music including increased sexism (e.g., Cobb & Boettcher, 2007), teen dating violence (e.g., Johnson & Adams, 1995), stereotype attribution (e.g., Johnson, Trawalter, & Dovidio, 2000), and academic aspirations (e.g., Johnson, Jackson, & Gatto, 1995). Conversely, little research investigated potential pro-social effects of music exposure (Greitemeyer, 2011) or a wider spectrum of music genre effects. Compared with the attention devoted to other forms of media messages, the limited amount of research investigating music's potential influence on attitudes and behaviors is surprising given the extent and ubiquity of music exposure.

There is little argument among scholars that music contains ample social and cultural messages pertaining to the alteration and stabilization of power and cultural value. For instance, music lyrics commonly deal with social issues such as violence, aggression, and war, as well as gender roles, norms, and stereotypes of various social groups (e.g., Hansen & Hansen, 2000; North & Hargreaves, 2008). Despite public concerns regarding radical and defiant music (e.g., American Anti-Defamation League [ADL], 2009), extant music effects literature says little about the broader social influence of music genre, such as impacts on treatment of ethnic minorities. Rather, existing literature tends to focus on specific elements such as lyrics, without regard to the larger picture of music genre (e.g., Rubin, West, & Mitchell, 2001).

Several studies pertain to individual-level effects such as interpersonal attractions and perceptions, defiant behavior, aggression, sexuality, and gender stereotypes (e.g., Anderson, Carnagey, & Eubanks, 2003; Dillman Carpentier, Knobloch-Westerwick, & Blumhoff, 2007; Gan, Zillmann, & Mitrook, 1997; Hansen & Hansen, 2000; North & Hargreaves, 2008). A recent meta-analysis of music's influence on attitudes identified six priming studies, which concluded that music exposure influences subsequent ''social actions and beliefs of the consumers'' consistent with the content of the music (Timmerman et al., 2008, p. 317). These studies establish clear connections between one's consumption of targeted lyrics and judgments about topics and groups related to such lyrics. However, little research examines alternative variables such as music genre or listener perceptions. Likewise, extant literature stops short of specifying processes through which lyrics affect listeners' socially relevant behaviors. The present study begins to redress these gaps by examining the potential for both music genre and content to influence socially relevant attitudes, as well as expanding current theory to include a heuristic processing model in which music is thought to cue associations that play a role in subsequent judgments.

Moving beyond individual-level effects, a few studies examined the potential for music to influence attitudes or behaviors toward groups. Rudman and Lee (2002) found an association between violent, misogynistic rap music exposure and more negative judgments of African Americans. A study by Zillmann and colleagues (1995) also examined the broader social implications of music, finding White participants more supportive of African American candidates and less supportive of White American candidates after exposure to political rap. These studies demonstrate that music consumption may influence socially relevant attitudes and behavior intentions toward entire sub-groups, yet remain focused on the lyrics as the key process

variable. Closer examination, though, reveals important differences. Rap music consumption led to both, more favorable (Zillmann et al., 1995) and less favorable (Rudman & Lee, 2002) treatment of African Americans. This inconsistency could be attributed to differences in lyric valence or context, but additional factors such as listener differences or music associations also may interact with lyric impacts. Also, the observed effects extended beyond those targeted in lyrics, as exposure to violent rap led to more negative attitudes toward African Americans in Rudman and Lee's (2002) study, although this group was not targeted. Hence, underlying processes appear more complex than a simple lyric-response model.

While existing literature primarily focused on lyrics, the present study offers an alternative explanation. Specifically, a heuristic processing framework was applied to music genres associated with how different ethnic or racial groups cue one's own social group status, which subsequently biases related judgments. Under this theoretical framework, lyrics are thought to moderate this effect. To test these assumptions, an experiment was conducted wherein participants thought they were voting on funding for campus student groups (dependent variable). Before the voting, participants were exposed to one of three randomly assigned music genres (i.e., mainstream rock music, radical White power rock music, and Top 40 pop music) in an ostensible waiting period (independent variable) to test whether music genre exposure led to differential treatment of ethnic groups.

Music Genre and Minority Group Associations

Different genres of music are associated with different social and ethnic groups. Roberts, Foehr, and Rideout (2005) observed that 7th–12th graders' self-selection of music genre aligned with their own racial background. Whites were more likely to report self-selected exposure to Alternative, Hard Rock, Classic Rock, Country/Western, and Ska/Punk than were African Americans and Latino Americans. African Americans listened to Rap/Hip Hop, Reggae, and Rhythm & Blues/Soul more often than White Americans. Latino Americans favored Latin/Salsa more than the two other ethnic groups. Literature also confirmed that associations between music genres and ethnic groups reflect one's perceptions of the genre's artists and audience base (Shevy, 2008). Further, social identity theory explained that music selection is thought to reflect one's social group memberships, (Shevy, 2008). Tajfel conceptualized social identity as ''that part of an individual's self-concept which derives from his [sic] knowledge of his [sic] membership of a social group (or groups) together with the value and emotional significance attached to that membership'' (1978, p. 63). The theory claims that people structure their social worlds into groups and categorize themselves into selected groups, a process that was described as self-categorization (Turner, 1985). Processes pertaining to social identity and self-categorization involve self-serving motivations: ''Individuals strive to achieve or to maintain positive social identity. Positive social identity is based to a large extent on favorable comparisons that can be made between the in-group and some relevant

out-groups'' (Tajfel & Turner, 1986, p. 15). As individuals belong to several groups, different social identities may be activated by environmental cues such as music.

Coupling the close alignment between individual music genre selection and one's own ethnicity with the knowledge that individuals tend to hold more favorable opinions of their in-group than that of out-groups (Tajfel & Turner, 1979; Turner, 1987; Wolfe, Loy & Chidester, 2009), music genre exposure may increase awareness of in-group or out-group status (in relationship to the group associated with the music being consumed). It is also likely that such awareness influences subsequent judgments of groups associated with such music. Thus, it stands to reason that music genre serves as a cognitive shortcut for race and ethnicity associations, and exposure to music genres influences subsequent treatment of ethnic in- and out-groups based on those associations. When evaluating social information, people engage in analytic processing that focuses on the informational content of some communication or context, or in more heuristic processing which focuses on evaluation of *cues* in the communication or context (Chaiken, 1980; Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1986). When a prototypical in-group member's attitude is known in advance of his/her arguments, it is often adopted as sufficiently representative of the group norm without further in-depth processing (Mackie, Gastardo-Conaco, & Skelly, 1992; Van Knippenberg, Lossie, & Wilke, 1994). Hence, research rooted in social categorization theory demonstrated the persuasive relevance of information from in-group relative to out-group sources for in-group members. The authors suggest that activation of social identities through music cues may alter support of social groups.

Shevy (2008) proposed that music genres act as cues, linking music exposure with specific racial group cognitions. The link between music genre and associated ethnic groups is thought to influence thoughts and behaviors after music exposure suggesting, ''these activated concepts may enter working memory and influence subsequent message processing'' (Shevy, 2008, p. 479). This perspective assumes that listeners connect the music with a particular genre. Shevy (2008) demonstrated that music listeners associated Hip Hop music with ''ethnic minority'' more than country music, and called for further research on implications of these associations.

Given that music genres often are associated with specific ethnic groups and music consumption is related to socially relevant attitudes, this study assumes that music consumption also may influence subsequent behaviors toward similar and dissimilar ethnic groups. For instance, if a White American listens to mainstream rock music (conceptually defined as songs classified as ''popular rock'' by Billboard charts and played on radio stations that use popular rock platforms), activation of the White American's social identity through the mainstream rock music cues should occur and alter the individual's behavior toward racially similar and dissimilar social groups in a manner consistent with in-group/out-group bias. Accordingly, it predicts that when White Americans listen to mainstream rock music their positive association with White Americans increases, as does their favorable treatment toward other White Americans. On the other hand, diverse music genres such as Top 40 pop music (conceptually defined as songs classified as popular hits by Billboard's

Top 40 chart and played on radio stations that use popular or Top 40 platforms) are not easily associated with any one race or ethnicity. Because Top 40 pop music contains messages, artists, and cultural references non-specific to a single ethnic group, exposure to this non-descript genre should not result in significantly different support for any particular ethnic group by White listeners (nor should it for minority listeners, which needs testing in subsequent studies). To address these predictions, the following hypothesis will be tested:

H_1: After exposure to mainstream rock music, White Americans support organizations associated with White Americans more than organizations associated with minority groups, when compared to White Americans who were exposed to Top 40 pop music.

Music and Lyrics: Does the Message Matter?

Although the study primarily focuses on music's social influence at the broadest level (i.e., genre), it would be remiss to ignore the potential for incendiary lyrics to moderate this process. The authors previously hypothesized that exposure to an ethnically identifiable type of music (e.g., mainstream rock) would lead to in-group favoritism among Whites, but what happens when radical lyrics conveying negative out-group messages are embedded in the music (i.e., radical White power rock music)? They argue above that strong associations between music genres and ethnic groups can also influence one's subsequent judgments. More specifically, listening to a particular music genre should cue own ethnic social identity, which biases subsequent treatment of the associated ethnic groups (Chaiken, 1980; Chaiken et al., 1989; Petty & Cacioppo, 1986). However, the complex relationship between specific lyrics and overall genre is also of key importance.

Extant literature points to a connection between radical music consumption and negative attitudes toward ethnic groups associated with such music (e.g., Rudman & Lee, 2002). Coupling this finding with Timmerman et al.'s (2008) conclusion that a strong consistency between lyric content and listener attitudes exists, the authors presume that radical lyrics moderate the heuristic process hypothesized above (H_1). Specifically, they examine whether exposure to incendiary music also influences subsequent treatment of race or ethnic groups targeted by the lyrics. While cognitive schemas (Shevy, 2008) were offered as one potential explanation for lyric effects, it is quite possible that lyrics contribute to the heuristic processing outlined above. Accordingly, lyrics are conceptualized as moderating the genre effect. Relatively benign lyrics may do little to influence the process, but incendiary lyrics may significantly influence treatment of groups targeted by the lyrics. Comparing exposure effects from genres that represent a continuum ranging from mainstream popular music (i.e., mainstream rock music and Top 40 pop music) to extremist music (i.e., radical White power rock music), offers a way to examine the potential for incendiary lyrics to moderate the process outlined above. Because

mainstream rock music is associated with White Americans (Roberts et al., 2005), an extreme form of rock music that is produced, sold, and consumed by White Americans was selected for comparison. Known as radical White power rock (WPR) music, this sub-genre of music is closely associated with extremist groups such as the Ku Klux Klan (KKK) and Aryan Nations (ADL, 2009; Southern Poverty Law Center [SPLC], 2009). WPR music concerns itself with perceived social and political injustices affecting White Americans. Lyrics target minorities, blaming them for larger social concerns (e.g., poverty, welfare, unemployment, and terrorism) and advocate political aggression against minority groups and policies (Young & Craig, 1997). Although the radical WPR genre exists outside the mainstream, recent studies found increasing access to this sub-genre of music through the Internet. Brown (2004) and Clay (2006) found that White power groups (e.g., Aryan Nations and KKK) fund radical WPR bands, albums, and concerts, then use the Internet to advertise, sell tickets, organize music events, and distribute songs. The Southern Poverty Law Center (2009) and ADL (2009) report over 30 new radical WPR music groups gaining traction with adolescent and young adult audiences since 2001. Considering the use of a predominantly White American sample coupled with the association between mainstream rock music and White Americans (Roberts et al., 2005), this operationalization provides a valid means for comparing exposure effects from the relatively benign mainstream rock genre with one having similar racial associations but increased incendiary lyrics targeting out-groups. Thus, a contributory effect is predicted wherein the groups directly targeted by the lyrics (i.e., African Americans) will be treated more negatively than other groups. Likewise, it is expected that the in-group (i.e., White Americans) will be treated more favorably than all other groups.

H_2: After exposure to radical White power rock music, White Americans support organizations associated with White Americans more than organizations associated with minority groups, when compared to White Americans exposed to mainstream rock music and Top 40 pop music.

H_3: After exposure to radical White power rock music, White Americans support organizations associated with African Americans less than after exposure to mainstream rock music and Top 40 pop music.

Method

Overview

A post-test only experiment with random assignment to one of three music exposure conditions (i.e., mainstream rock music, radical WPR music, and Top 40 pop music) was conducted. Because the relationship between music genre exposure and treatment of racial/ethnic minority groups was examined, participants' allocation

of funding to four different racial/ethnic groups (i.e., African American, Latino American, Arab American, and White American student organizations) served as the dependent variables. Participants ($N = 148$) were exposed to one of the three music conditions for 7 minutes while they ostensibly waited to begin their research session. They were then asked to distribute a given sum of money to groups of different ethnicities, before data about their attitudes, exposure recollection, and habitual music use were collected.

Participants

Recruitment was conducted through the communication department at a large mid-western university. The sample included 148 undergraduate students, 44% male and 56% female. The age range was 19 to 29, with 21.93 as average age ($SD = 1.67$).

Procedure

Undergraduates were invited to participate in a research study supposedly concerned with funding student groups using undergraduate tuition. Only one participant was scheduled for each session. When a participant arrived, s/he was greeted by the experimenter and asked to wait for the alleged beginning of the session. Participants (randomly assigned to one of three conditions) were placed in a waiting room where music was playing softly in the background. The volume level on the CD player was set at level 3 (ranging from 0 to 10). This ensured that the music was soft but audible and consistent for each participant (see results section for information on music recall). Although the music was audible, the researchers made no references to the music and participants were unaware that music exposure was part of the study. This deception was used to reduce demand and social desirability effects. Once the participant was seated in the waiting room with the music playing and no access to other forms of media or other stimuli, the experimenter made an excuse for the wait by saying ''I'm sorry about the wait, we are running a little behind. Do you mind waiting for a few minutes while I finish up with my previous appointment? I should be with you shortly.'' All 148 participants agreed and waited for the supposed beginning of the experiment.

Participants were assigned dates and times for participation. As such, there was a possibility that they would encounter different researchers upon arrival. To control for this possibility and balance any potential biases, two researchers were used. One researcher was a male with dark features (brown hair, eyes, skin tone) and the other researcher was a female with light features (reddish-blonde hair, blue eyes, pale skin tone). Both researchers were from the same age group and dressed in similar, casual attire. Neither researcher offered any personal information or engaged participants in social exchanges. All other aspects of the experimental protocol (e.g., timing, procedures, and script) were identical regardless of researcher.

The listening period lasted 7 minutes and the participant was alone in the waiting room without access to any media or other distractions (e.g., cell phones and school work which they were asked to leave in another room). Once 7 minutes had elapsed, the participant was taken to a private room to complete a university funding allocation task. The researcher explained that the study sought student opinions regarding funding for groups on campus, and that participants would be asked to read about the groups and anonymously ''vote'' for how the money should be allocated. The researcher explained to participants that ''many student groups on campus generally engage in similar activities such as organizing events, and offering social or professional networking opportunities. All of the groups requesting funding are among these types of student organizations.''

After completing the funding allocation task, the researcher ''mentioned'' that another researcher was trying to collect information for a project about music and asked participants to also complete a final questionnaire about attitudes, music exposure recollection, and habitual music consumption. Once participants completed the allocation and the music questionnaires, they were taken into another private room for debriefing.

Dependent Variables

Four measures of funding support for student groups served as dependent measures. The purpose of the task was explained verbally and provided in writing as follows:

> Every year student organizations compete for funding at the university. Since this money comes primarily from undergraduate student tuition, this year the committee is seeking student opinions during the decision-making process. Our goal is to collect feedback regarding which groups you believe should receive funding support and what proportion of the available funds ($500,000) they should receive. We are asking that you read a brief description about each student group seeking funding, and then anonymously vote on how the funds should be distributed. Although your vote will be counted, no one will have access to how you personally voted.

Each participant read about the different campus groups requesting funding. The groups were described in a narrative format including their racial/ethnic makeup and a vague description of the activities and events they sponsor. The only differences offered in the student organization descriptions were references to race or ethnicity. This was done to ensure that race/ethnicity was manipulated clearly and to reduce the potential for confounds. The racial/ethnic descriptors were: African American, Latino American, Arab American, and White American. To reduce any participant suspicion regarding the similarities between descriptions, the researcher stated that student groups on campus ''generally engage in similar activities such as organizing events, and offering social or professional networking opportunities'' when s/he introduced the task. After reading about the four groups, participants were instructed to allocate the total funding ($500,000) by assigning a percentage of this

sum to each group (in percent, not dollars). The scale format was 0 to 100% where the total of all four allocations had to equal 100%. No minimum allocation was required for any of the four groups. The directions for allocating the money stated, ''In the column to the left, please indicate the percentage (%) of the total budget that you want each group to receive from 0 to 100% so that the sum of your allocations to all groups does not exceed 100%.'' The order in which the groups appeared to participants (first, second, third, fourth) was randomized to avoid order effects.

Experimental Stimuli and Exposure

Separate music CDs were created for each condition (Appendix 1). Because songs vary in length, balancing the total amount of time required using a slightly different number of songs in each CD. Specifically, the mainstream rock music CD included seven songs, the radical WPR CD included six songs, and the Top 40 pop music CD included eight songs (see Appendix 1 for a full list of songs and artists used). The CDs played continuously on a repeating, randomized loop in the three conditions to ensure that participants arriving at varying times would hear the songs in random order. The mainstream rock music condition included music from Billboard's Top Rock Song Chart including Foo Fighters, Radiohead, Bruce Springsteen, and The White Stripes. The radical WPR condition included the bands Prussian Blue, Bound for Glory, Max Resist, and Skrewdriver, which all self-identify as WPR bands and are categorized by ADL and SPLC as radical WPR bands (ADL, 2009; SPLC, 2009). The Top 40 pop music condition consisted of Top 40 music from recent top charts songs (Billboard's Top 100), including Gwen Stefani, Justin Timberlake, Fergie, Akon, and Rihanna. Since the radical WPR music listening condition was not available through Billboard ratings, these songs were selected using Web site song rating systems from a radical WPR music Web site that monitors downloads, album sales, and concert ticket sales (http://www.micetrap.net). Additionally, songs similar in musical style to those in the mainstream rock condition were selected (see Appendix 1).

Recipient Characteristics and Manipulation Check

A short questionnaire was administered immediately after participants finished the funding allocation task. Music recall was measured by asking, ''Do you remember hearing music in the waiting room?'' The response options were ''yes,'' ''no,'' and ''not sure.'' A second question, only answered by those who remembered the waiting room music asked, ''Can you recall the type of music (music genre) you heard?'' The response options were country, jazz, hip-hop, rock, top 40, classical, radical White power rock, and not sure. These questions provided information for evaluating the strength of the manipulation. An open-ended response option asked participants who recalled hearing music to write down any specific lyrics they remember from the music. Unfortunately, less than 5% of the sample provided responses. As such this information was not used as part of the analysis. Perhaps,

though, the lack of response indicates that lyrical content was less memorable than music genre itself (see discussion section).

Experimental groups did not differ regarding respondent age or sex (*ns*). Male participants made up 44% of the sample, and females, 56%, proportions that remained consistent across all three groups. Examination of manipulation check items revealed no significant differences across experimental groups regarding music consumption habits or recall of music (*n*s, see results below).

Results

Preliminary Analyses

Sample Composition.

Only data from White participants were included in the analysis. Utilizing an exclusively White sample was desirable because minority group members are likely to differ from Whites in a race-based funding allocation task independent of music exposure, adding noise to the data. The total remaining cases ($n = 125$) had the following characteristics: the mainstream rock music listening condition was 32.8% ($n = 41$) of the sample, radical WPR music listening condition comprised 34.4% ($n = 43$) of the sample, and the Top 40 pop music listening condition was 32.8% ($n = 41$).

Treatment Check.

The treatment was successful, with 93.9% of participants recalling the music from the waiting room. Of those 93.9% who could recall hearing music, over three-fourths (79.9%) also correctly identified the genre. Not surprisingly, the radical WPR group had the lowest accuracy in genre identification, with almost one-fifth (19.3%) reporting ''not sure.'' The researchers suspect that participants were unfamiliar with this underground music and thus did not select the ''radical White power rock'' response option. This confirms, however, that the radical WPR participants still heard the music and did not improperly identify it as mainstream rock or Top 40 pop music. Because an accurate identification is not a precondition for being affected by the music, participants who misidentified the genre were not eliminated from the sample.

Descriptives.

The average reported music consumption time was 113.15 ($SD = 83.77$) minutes per day, with an average weekly consumption of 6.45 ($SD = .95$) days per week. Subjects reported most frequently selecting Top 40 pop music ($M = 5.55$, $SD = 3.26$), followed by mainstream rock music ($M = 4.14$, $SD = 2.33$), and alternative music ($M = 3.01$, $SD = 2.84$). A very strong majority of participants (81%) reported

using an MP3/iPod as primary means of music listening with CDs (11%), radio (7%), and other formats (1%) trailing far behind. Finally, music consumption of nearly 2 hours a day, 6 days a week was by far the largest form of personal media use among the participants. Internet was a close second at 70 minutes per day ($SD = 1.21$), 6 days a week ($SD = 1.09$), and TV trailed with only 45 minutes per day ($SD = 1.01$), 5 days a week ($SD = 1.42$).

Regarding the variable of funding allocation, all participants correctly allotted the funds such that each correctly totaled 100%.

Effects of Music Exposure on Support for Ethnic Groups

For hypotheses testing, an analysis of variance (ANOVA) was conducted with music-listening condition (i.e., mainstream rock music, radical WPR music, and Top 40 pop music) as a three-step between-group factor and funding allocations to the White American student group as dependent variable. Significant effects were further probed using pairwise comparisons with Bonferroni's adjustment for multiple comparisons.

A significant main effect for music condition on allocation to the White American student group ($F(2, 122) = 17.73$, $p < .001$, $\eta^2 = .23$) emerged. Closer examination of means revealed that participants in both the mainstream rock music condition ($M = 35.00$, $SD = 1.90$, $p < .001$) and the radical WPR music condition ($M = 39.47$, $SD = 1.86$, $p < .001$) allocated more money to the White American student group than those in the Top 40 pop music condition ($M = 24.02$, $SD = 1.90$) in line with H_1 and H_2. Further details are presented in Table 1.

To address H_3, a repeated measures mixed-model ANOVA with music genre listening condition as between-group factor and minority student group funding allocation (i.e., African American, Latino American, and Arab American) as within-

Table 1
Impact of Music Exposure on Funds Allocation Across Ethnic Groups (*M*, *SD*)

	Music Condition		
Campus Group	Mainstream Rock	Radical White Power Rock	Top 40 Pop Music
White American	35.00 (1.90)^{ax}	39.47 (1.86)^{ax}	24.02 (1.90)^{bx}
African American	21.39 (0.91)^{cy}	16.09 (0.89)^{ay}	25.49 (0.91)^{bx}
Arab American	20.54 (1.07)^{cy}	14.58 (1.05)^{ay}	24.02 (1.07)^{bx}
Latino American	20.90 (0.88)^{by}	25.58 (0.85)^{az}	24.76 (0.88)^{ax}

Note: Means in same row with a different a-c superscript are significantly different (at least $p < .05$). Means in same column with a different w-z superscript are significantly different ($p < .001$).

group factor was conducted. It yielded a significant interaction between funding allocation and music genre listening condition (Wilks' Lambda F (6, 240) = 21.09, $p < .001$, $\eta^2 = .35$). The interaction confirmed funding allocation to the student organizations associated with minority groups varied as a function of music condition (Table 1). An examination of means employing the Holm's sequential Bonferroni procedure revealed that participants in the radical WPR music condition allocated significantly more funding to the Latino American group ($M = 25.58$, $SD = .85$) than to the African American group ($M = 16.09$, $SD = .89$) or the Arab American group ($M = 14.58$, $SD = 1.05$), which did not significantly differ from each other ($p < .001$). In contrast, the mainstream rock music and the Top 40 pop music conditions allocated relatively equal amounts to each minority campus group ($p > .05$). When looking just at differences in treatment of student groups between the mainstream rock music listening condition and the radical WPR music listening condition, the between-group comparison showed that the radical WPR music listeners allocated significantly less to African Americans ($M = 16.09$, $SD = .89$) and Arab Americans ($M = 14.58$, $SD = 1.05$) than did mainstream rock music listeners (African American $M = 21.39$, $SD = .91$, $p < .001$; Arab American $M = 20.45$, $SD = 1.07$, $p < .001$). Thus, the African American group was treated more negatively by the radical WPR music listeners than by the mainstream rock music listeners. This finding provides partial support for H_3. However, the more negative treatment toward Arab Americans (but not Latino Americans) by the radical WPR music listeners is somewhat puzzling. The discussion includes a deeper examination of this finding that outlines a priming process as a potential explanation.

Discussion

Summary of Findings

This study examined whether music genre exposure significantly influences subsequent treatment of minority groups. Additionally, it investigated whether incendiary lyrics targeting specific ethnic out-groups (i.e., radical White power rock) would moderate the hypothesized genre effect. As suspected, treatment of ethnic minority groups varied as a function of music genre exposure. While participants in the Top 40 pop music listening condition provided relatively equal funding support for each ethnic/racial group, participants in the mainstream rock music and radical WPR music listening conditions provided increased financial support for the ethnic/racial group associated with the participants' own ethnicity/race (i.e., White Americans treated the White American group more favorably). This in-group bias appears to be evident even at the broad level of genre, indicating that there is more to music's influence than lyrical content.

Additionally, mainstream rock music listeners favored White Americans while equally reducing allocations across the minority groups. In contrast, the radical WPR listeners targeted the funding more specifically, resulting in some minority groups

receiving more favorable treatment than others. While radical WPR music overtly targets African Americans and Jewish people most often (SPLC, 2009), the incendiary lyrics attack other races and ethnicities (e.g., Hispanics, Muslims) implicitly through coded references to policy topics such as immigration and terrorism. As such, it is quite interesting that the Arab and Latino American minority groups were treated differently from one another. Considering media priming as a potential explanation, it is possible that the radical WPR music primed previously held attitudes toward minority groups, which resulted in differential treatment (e.g., relatively more negative for African and Arab Americans than Latino Americans). Possibly, different processes were at work for genre and lyric effects. To further examine this possibility, theoretical implications of the study are discussed below.

Theoretical Implications of Findings

The findings reveal what appears to be a combination of a genre-level heuristic processing effect and a content-level priming effect. Although the study's theoretical explanation shifted to include both heuristic processing and media priming, it should be noted that a heuristic process producing a genre effect and a priming process producing a lyric effect are not necessarily competing rationales. For instance, the genre itself may serve as heuristic cue that makes one's social group status more salient and, in turn, leads to more positive attitudes and behaviors toward that group. Meanwhile, lyrics prime existing attitudes that affect one's judgments related to the music content. Presumably, these processes work together to produce music consumption effects.

In the present study, it appears music genre served as a social group cue that led to in-group favoritism among White Americans. Given that mainstream rock music is known to be associated with White Americans (Roberts et al., 2005), the researchers suspect that consuming the mainstream rock music cued participants' own association with this social group. Because one's in-group status is known to positively bias perceptions of the group (Tajfel & Turner, 1986), it is reasonable to conclude that this process led to more favorable treatment of the White American student group among the mainstream rock music listeners. Presumably, this heuristic cue was limited to the group associated with the music (i.e., White Americans), and therefore no specific targeting of out-groups occurred. This in-group/out-group effect is thought to be the result of heuristic processing that occurred in response to the music genre.

Music content processing seems to work a bit differently. It appears incendiary lyrics primed listeners' attitudes in the radical WPR listening condition. Conceptualizing media priming as ''the effects of the content of the media on people's later behavior or judgments related to that content'' (Roskos-Ewoldson, Roskos-Ewoldson, & Dillman Carpentier, 2008, p. 74), the researchers believe that the lyrics primed general hostility and/or fearful attitudes toward Arab Americans in a post 9/11 world. Considering that radical WPR music is known to incite fears and raise hostilities

toward perceived threats facing White Americans (SPLC, 2009), it makes sense that latent attitudes and existing fears regarding perceived threats to one's own social group might be primed. Perhaps then the results indicate that participants held relatively more fears and hostilities toward Arab Americans than Latino Americans (and Hispanics). This added priming effect might widen the disparity of treatment between the groups, as evidenced in the radical WPR music listening condition.

Although it was suspected that the lyrics led to a media priming effect, the present study stops short of content analyzing the music or holding music genre constant while manipulating lyrics. As such the researchers can only speculate about the results. To further probe the role of lyrics, a future study could hold the genre constant while manipulating the lyrics. An ideal design would expose participants to rock music stimuli that vary in lyrics only—once with incendiary lyrics in the radical WPR music style, once with innocuous lyrics in the mainstream rock style, while sung by the same artist—to disentangle the role of music genre versus music lyrics for socially relevant responses. In sum, future studies should focus more on the processing mechanism through which such effects occur.

Practical Implications of Findings

From these results, it appears that consuming different music genres has socially relevant consequences. Although it is important to understand the role lyrics play, relatively few people regularly consume radical lyrics while many often self-select mainstream music genres (Roberts et al., 2005). As such, understanding genre influences will go far in explaining how, when, and why music influences treatment of minorities and underrepresented groups. Yet, the ability for lyrics to prime existing attitudes and associations appears to have consequential effects that should not be overlooked. Considering the use of music in a variety of contexts such as political events, workplaces, and public spaces it is clear that music has the potential to significantly influence how one reacts to their daily environment.

As with any study there were limitations, the most apparent being a predominantly White student sample. Although the intention was to examine changes in support for ethnic groups among White Americans, it would be beneficial to replicate this with a more diverse sample. Future research should vary the race/ethnicity of participants and genre of the stimuli. Replication could use mainstream genres with strong ethnic associations (e.g., Latin-fusion, country, hip-hop) with participants from a variety of races/ethnicities. Additional studies could also test specifically whether music exposure affects accessibility of attitudes toward ethnic groups by using response latencies for attitude measures.

Another limitation results from the experimental design. Potential co-variants were not measured to avoid sensitizing participants to the issue of race/ethnicity. Because including such measures would require a two-session design and participant attrition was a potential issue, the study did not include these measures. Short-term exposure to the music and pre-determined genres also represent limitations. Daily music use

is often much more frequent than one 7-minute exposure and people generally self-select which music they consume. However, people often come into contact with pre-selected music (e.g., radio play lists, shopping, dining, and entertainment facilities, movies, etc.). Therefore, it is important to understand how people react to background or pre-selected music.

Despite these limitations, the current results for short-term exposure to background music may reveal only the tip of an iceberg. Finding significant effects from limited exposure suggests that general listening patterns should create stronger associations and elicit stronger effects. Additionally, the repetitive usage of music increases salience and accessibility through entertainment, which results in ''chronic accessibility'' (Holbrook & Hill, 2005, p. 277). Thus, these observed effects should be considered minimal compared to real world effects.

Finally, broad implications for this research merit discussion. Music is used in many social settings. For instance, music is a popular component of political rallies, social change movements, and campaign events, and used for generations. Without exaggeration, one may imagine music influencing individuals' attitudes, behaviors, and judgments in most every aspect of society. With access to music continually increasing due to Internet listening and purchasing, it appears that music has the potential to significantly influence behavior. This study affirms the importance of understanding music's influence on individual-level attitudes, behaviors, and judgments, as well as extending present understanding of music effects to include behavioral outcomes. The findings suggest that the race and ethnicity associations made with music genres do not go unnoticed, and can influence listeners' subsequent attitudes or behaviors toward members of similar and different racial/ethnic groups. Overall, these findings set the stage for examining the underlying social-psychological processes individuals use to process music messages, as well as the broader sociological implications of music as a form of social influence.

Appendix

Stimuli Song List

Music Condition	Artist	Title	Chart Position
Mainstream Rock	The White Stripes	*Icky Thump*	2*
	Bon Jovi	*It's My Life*	33*
	Bruce Springsteen	*Radio Nowhere*	102*
	Van Morrison	*Tupelo Honey*	47*
	Foo Fighters	*Long Road To Ruin*	89*
	Radiohead	*Jigsaw Falling Into Place*	69*
	Foo Fighters	*The Pretender*	37*

(*continued*)

Appendix

Stimuli Song List (*Continued*)

Music Condition	Artist	Title	Chart Position
Radical White Power Rock	Prussian Blue	*Not a Problem*	23**
	Prussian Blue	*Ocean Warriors*	7**
	Screwdriver	*Live and Kicking*	5**
	Bound for Glory	*Hate Train Rolling*	45**
	Max Resist	*Johnny Rebel*	1**
	Max Resist	*Ghost*	11**
Top 40 pop music	Justin Timberlake	*Summer Love*	5*
	Justin Timberlake	*What Goes Around*	1*
	Justin Timberlake	*Sexy Back*	1*
	Fergie and Akon	*Glamorous*	1*
	Fergie and Akon	*Fergilicious*	16*
	Fergie	*London Bridge*	1*
	Gwen Stefani and Akon	*Sweet Escape*	3*
	Gwen Stefani	*Wind It Up*	5*
	Gwen Stefani	*Four in the Morning*	40*
	Rihanna	Umbrella	1*

Note: *indicates highest chart position reached on Billboard's Top 200 Chart.
**indicates highest chart position reached on www.micetrap.net's Internet downloading popularity rating.

References

American Anti-Defamation League (ADL) (2009). Hate music on the Internet [online document]. Retrieved June 26, 2009, from *http://www.adl.org/hatemusic.htm*

Anderson, C. A., Carnagey, N. L., & Eubanks, J. (2003). Exposure to violent media: The effects of songs with violent lyrics on aggressive thoughts and feelings. *Journal of Personality & Social Psychology*, *84*(5), 960–971.

Billboard Music (2007). Top charts music from 2007 [online document]. Retrieved April 19, 2007, from *http://www.billboard.com/top100.htm*

Brown, T. (2004). Subcultures, pop music and politics: Skinheads and ''Nazi rock'' in England and Germany. *Journal of Social History*, *38*(1), 157–178.

Clay, A. (2006). ''All I need is one mic'': Mobilizing youth for social change in the post-civil rights era. *Social Justice*, *33*(2), 105–123.

Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, *39*(5), 752–766.

Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic information processing within and beyond the persuasion context. In J. Uleman & J. Bargh (Eds.), *Unintended thought* (pp. 212–252). New York: Guilford.

Cobb, M. D., & Boettcher, I. A. (2007). Ambivalent sexism and misogynistic rap music: Does exposure to Eminem increase sexism? *Journal of Applied Social Psychology*, *37*(12), 3025–3042.

Dillman Carpentier, F., Knobloch-Westerwick, S., & Blumhoff, A. (2007). Naughty versus nice: Suggestive pop music influences on perceptions of potential romantic partners. *Media Psychology*, *9*(1), 1–17.

Gan, S. L., Zillmann, D., & Mitrook, M. (1997). Stereotyping effect of black women's sexual rap on white audiences. *Basic and Applied Social Psychology*, *19*(3), 381–399.

Greitemeyer, T. (2011). Exposure to music with prosocial lyrics reduces aggression: First evidence and test of the underlying mechanism. *Journal of Experimental Social Psychology*, 47(1), 28–36.

Hansen, C. H., & Hansen, R. D. (2000). Music and music videos. In D. Zillmann & P. Vorderer (Eds.), *Media entertainment: The psychology of its appeal* (pp. 175–196). Mahwah, NJ: Lawrence Erlbaum Associates.

Holbrook, A., & Hill, T. (2005). Agenda-setting and priming in prime time television: Crime dramas as political cues. *Political Communication*, *22*(3), 277–295.

Johnson, J. D., & Adams, M. S. (1995). Differential gender effects of exposure to rap music on African American adolescents' acceptance of teen dating violence. *Sex Roles*, *33*(7/8), 597–605.

Johnson, J. D., Jackson, L., & Gatto, L. (1995). Violent attitudes and deferred academic aspirations: Deleterious effects of exposure to rap music. *Basic & Applied Social Psychology*, *16*(1/2), 27–41.

Johnson, J. D., Trawalter, S., & Dovidio, J. F. (2000). Converging interracial consequences of exposure to violent rap music on stereotypical attributions of Blacks. *Journal of Experimental Social Psychology*, *36*(3), 233–251.

Mackie, D. M., Gastardo-Conaco, M. C., & Skelly, J. J. (1992). Knowledge of the advocated position and the processing of in-group and out-group persuasive messages. *Personality and Social Psychology Bulletin*, *18*(2), 145–151.

North, A. C., & Hargreaves, D. J. (2008). *Music and social psychology*. Oxford: Oxford University Press.

Papper, R. A., Holmes, M. E., Popovich, M. N., & Bloxham, M. (2005). *Middletown media studies*. Muncie, IN: Ball State University.

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, 19 (pp. 124–203). New York: Academic Press.

Roberts, D. F., Foehr, U. G., & Rideout, V. (2005). *Generation M: Media in the lives of 8–18 year olds*. Washington, DC: Kaiser Family Foundation.

Roskos-Ewoldson, D., Roskos-Ewoldson, B., & Dillman Carpentier, F. (2008) Media priming: An updated synthesis. In J. Bryant & M. B. Oliver (Eds.) *Media effects: Advances in theory and research* (3rd ed., pp. 74–93). New York: Routledge.

Rubin, A. M., West, D. V., & Mitchell, W. S. (2001). Differences in aggression, attitudes toward women, and distrust as reflected in popular music preferences. *Media Psychology*, *3*(1), 25–42.

Rudman, L. A., & Lee, M. R. (2002). Implicit and explicit consequences of exposure to violent and misogynous rap music. *Group Processes & Intergroup Relations*, *5*(2), 133–150.

Shevy, M. (2008). Music genre as cognitive schema: Extramusical associations with country and hip-hop music. *Psychology of Music, 36*(4), 477–498.

Southern Poverty Law Center (SPLC) (2009). *Hate watch* [online document]. Retrieved May 2, from http://www.splc.org/hatewatch.htm.

Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London, UK: Academic Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks-Cole.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of inter-group behavior. In S. Worchel & L. W. Austin (Eds.), *Psychology of intergroup relations*. Chigago, IL: Nelson-Hall.

Timmerman, L. M., Allen, M., Jorgense, J., Herrett-Skjellum, J., Kramer, M. R., & Ryan, D. J. (2008). A review and meta-analysis examining the relationship of music content with sex, race, priming, and attitudes. *Communication Quarterly*, *56*(3), 303–324.

Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In E. J. Lawler (Ed.), *Advances in group processes: Theory and research* (Vol. 2, pp. 77–121). Greenwich, CT: JAI Press.

Turner, J. C. (1987). *Rediscovering the social group: A self-categorization theory*. New York: Basil Blackwell.

Van Knippenberg, D., Lossie, N., & Wilke, H. (1994). In-group prototypicality and persuasion: Determinants of heuristic and systematic message processing. *British Journal of Social Psychology*, *33*(3), 289–300.

Wolfe, A., Loy, M., & Chidester, P. (2009). Mass communication and identity construction: Theory and a case study of song-recordings by a popular musician. *Journalism & Communication Monographs*, *11*(1), 67–113.

Young, K., & Craig, L. (1997). Beyond White pride: identity, meaning, and contradiction in Canadian skinhead subculture. *Canadian Review of Sociology and Anthropology*, *32*, 175–206.

Zillmann, D., Aust, C. F., Hoffman, K. D., Love, C. C., Ordman, V. L., Pope, J. T., ... Gibson, R. (1995). Radical rap: Does it further ethnic division? *Basic and Applied Social Psychology*, *16*(1), 1–25.