Social Influence in Rating Music

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Abstract

The goal of this study was to examine the social influence on music liking with respect to individual musical taste. To measure musical taste, participants ($N = 95$, mean age 20.4 years) filled in the STOMP scale. They were then asked individually to listen to 16 musical excerpts from different genres using a computer program and rate how much they liked them. They were divided into three groups that were shown different information about other participants' ratings of the same excerpts. The first group was shown ratings allegedly based on others' positive judgments, the second group was shown ratings allegedly based on others' negative judgments, and the third group was given no information. The results showed that the participants' ratings were susceptible to social influence, i.e., they conformed towards the shown group norm. As expected, musical taste was related to the ratings of the music excerpts, but did not moderate the effect of social influence. Thus, the results show that social comparison, which has been confirmed by research in various areas of human judgment, also exists in rating music.

Keywords: social influence, conformity, musical preferences, experiment

Introduction

Aesthetic responses to music contain both cognitive and affective components (Hargreaves & North, 2011; Juslin & Västfjäll, 2008). Immediate aesthetic responses to music in a particular situation may show distinctive patterns of preference, which over time and across situations accumulate and combine to form longer-term taste patterns. Hargreaves et al. (2006) defined musical *preference* "as a person's liking for one piece of music as compared with another at a given point in time, and *taste* to refer to the overall patterning of an individual's preferences over longer time periods" (p. 135). Even though the musical taste is fairly stable, the preference patterns continually develop and change as listeners hear new pieces and encounter new music styles (Hargreaves & North, 2011).

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In the reciprocal feedback model of responses to music, Hargreaves and North (2011) proposed that aesthetic responses to music depend on the characteristics of the listener, the music, and the listening situation. For example, listener's characteristics such as age (LeBlanc et al., 2006), personality (Higdon & Stephens, 2008; Rentfrow & Gosling, 2003; Schwartz & Fouts, 2003), and expertise (Lundy & Smith, 2017) were found to affect musical preferences. The liking of a certain musical piece is affected by familiarity (Pereira et al., 2011; Schubert, 2007) and subjective complexity of the piece (Güçlütürk & van Lier, 2019). The appropriateness of different genres can be judged according to particular listening situations and may depend on the physical environment (e.g., work vs. leisure time settings) and social environment (Oakes & North, 2008). Social factors like individual's similarity to stereotypical music fans (Lonsdale & North, 2017) or the individual's desire to conform with the opinions of valued social groups in order to enhance the status within those groups can also play an important role in musical preferences (Hargreaves & North, 1999).

One of the many psychological functions of music is also its social function. Music serves in the management of self-identity and interpersonal relationships (Hargreaves & North, 1999). Self-identity may be constructed during listening to music, and according to the social identity theory (Tajfel & Turner, 1979), the identification with social groups that listen to a certain music genre may strengthen in-group favouritism and out-group derogation and also affect self-esteem (Rentfrow, 2012). A desire for acceptance into particular social groups can affect conformity and prestige effects in musical preference judgements (Hargreaves & North, 1999). People use music in the service of self-expression and social bonding via conveyed value similarity (Boer et al., 2011; Rentfrow, 2012; Schäfer et al., 2016).

Social influence on music preference has been documented in several studies. For example, in a study by Radocy (1975) which was similar to Asch (1956) experiments on conformity, naive music students were put in a group where other members were confederates of the experimenter and they had to compare pitch or loudness of a three tones with a standard tone. Large overall conformity rates were found for both sensory modalities, both when participants provided responses publicly and privately. Furman and Duke (1988) studied how statements of group preferences can affect the preference for altered and unaltered excerpts of the same music presented in pairs. They found that non-music students publicly stated preferences that were significantly affected by the preferences of others, but only in the case of unfamiliar music. In an internet-based study, Egermann et al. (2009) presented musical excerpts to two large groups of participants who needed to rate their emotional arousal and valence during listening to the excerpts. The experimental group received feedback allegedly based on emotional ratings of preceding participants which was higher or lower than the median of the unbiased control group. Participants were conforming to the provided ratings in the

manipulated direction, so the authors concluded that the social feedback, i.e. emotion felt by the majority of peers, seemed to change the subjective feeling component of emotion induced by the music. In a study by Koehler and Broughton (2017), participants listened to unfamiliar music from various genres. Those who listened to music with another participant provided similar ratings of emotional valence and liking to those who listened to music alone. However, the presence of another person resulted in emotional arousal ratings changing in the direction of manipulation, and participants also reported lower concentration and higher familiarity of music compared to the group who listened to music alone.

Listeners who adjust their music appraisals according to the opinion of others may be described as socially conforming. Conformity can be either informational or normative (Cialdini & Goldstein, 2004). Information influence describes reliance on others' judgments caused by the lack of information needed for one's own evaluation, while the normative influence occurs when people do not truly change their attitudes or perceptions, but publicly comply with a group and follow group norms in order to be included in that group. In another online study done by Egermann et al. (2013), the social feedback condition, in which two groups received feedback allegedly based on the ratings of preceding participants, was complemented by the informational feedback condition, in which the feedback was allegedly based on a computational analysis of the excerpts. Results showed that social feedback was more influential than informational (even though the effect size was small), indicating that group norms might present an important factor in music ratings. Even though people are usually motivated to form accurate perceptions of reality, they also want to bond socially and maintain a favourable self-concept (Cialdini & Goldstein, 2004) and this may affect their ratings of subjective experience during listening to music.

The findings of the listed previous studies were consistent in showing social influence on at least one dimension of affective response to music. However, not all studies showed that music's emotional valence and liking can be affected. Music preference could be resistant to social influence depending on its strength. One could reason that social influence may be smaller in cases where music preferences are stronger. To our knowledge, the role of an individual's existing preferences (musical taste) in social influence on the affective response to auditory musical content has not yet been studied. Previous studies examining the role of social influence on affective responses to music did not take musical taste into account, but mostly tried to control for individual music preferences, e.g. by selecting unfamiliar music excerpts balanced across a range of genres (Koehler & Broughton, 2017) or by choosing the excerpts of different music styles randomly (Egermann et al., 2013). We have decided instead to take an individual's musical taste into account and examine if social influence is different for music from the preferred and not preferred genres.

Based on the presented background, the current study aimed to investigate social influence on affective responses to unfamiliar music of different genres, taking into account the musical taste of the participants. We hypothesized that manipulation by normative social influence will affect music preferences, resulting in the increase of emotional valence during listening to the musical excerpts when the normative music evaluation would be positive and in the decrease of emotional valence when the normative music evaluation would be negative. We also wanted to examine whether musical taste moderates the effect of such manipulation. There is a lack of specific studies that would examine the joint effect of musical taste and normative social influence on music preferences. In such a context we assume that social influence will be larger when a person does not convey the liking or disliking of a certain music genre, whereas, in the case of strong preference or strong dislike for a certain type of music, the normative social influence will be weaker or absent, because when a person has a strong preference for something, other people's opinion will be less relevant.

Method

Participants

The study was conducted on a convenience sample of 93 students of social studies with an average age of 20.4 years (minimum 18 and maximum 29 years). Although the gender distribution was balanced in different experimental conditions (Group 1 included 6 male and 25 female participants, Group 2 had 9 male and 24 female participants, and Group 3 included 7 male and 24 female participants, $\chi^2(2) = 0.57$, $p = .57$), the overall ratio was in favour of female respondents, with 71 (76%) female and 22 (24%) male participants. This ratio corresponds to the general ratio of students in social studies. The average age in the groups was very similar (Group 1 $M = 20.4$, $SD = 1.43$; Group 2 $M = 20.5$, $SD = 1.63$; Group 3 $M = 20.4$, $SD = 2.16$).

Instruments

The revised version of Short Test of Music Preferences (STOMPR; Rentfrow & Gosling, 2003) was used to measure musical preferences. STOMPR covers 23 genres. Since most names of musical genres have identical English loanword forms in the Croatian language, the original (US) version of STOMP-R was used. It was also used under further assumption that the student population is sufficiently familiar with and exposed to the English language, names of musical genres as well as the music they represented. Nevertheless, with certain musical genres not being locally specific, we have given instruction to omit answers if examinees were not familiar with the genres. These answers were omitted from the analysis and their absence statistically neutralized. A small number of participants omitted answers for locally

unspecific or unknown genres. For instance, bluegrass genre which is not very popular locally, maybe even unknown to a large percentage of the general population in Croatia was omitted by 16.8% of participants. For other genres, the percentages were smaller, dominantly in the range between 2.1% and 11.6%. Instructions, as well as the meaning of the rating scale, were translated into the Croatian language. Participants estimate on a 7-point Likert-type scale how much they like or dislike each of the listed genres (1 = *dislike strongly* to 7 = *like strongly*). Based on its factor structure, the questionnaire measures four dimensions of musical taste where different genres are grouped into the *Reflective-Complex, Intense-Rebellious*, *Upbeat-Conventional*, and *Energetic-Rhythmic* dimensions (Rentfrow & Gosling, 2003). The individual scores on each factor were formed by averaging the preferences for each of the genres composing a certain dimension. Correlations among the results on factors in this study are shown in Appendix A.

Stimuli

Excerpts from 16 music pieces of different genres were selected to be presented in this study, four from each of the music-preference dimensions as defined by Rentfrow and Gosling (2003). The list of music pieces is available in Appendix B. Fifteen-second excerpts from each piece were recorded.

Procedure

The research was conducted in psychological experimental laboratory at Faculty of Humanities and Social Sciences, University of Zagreb. Students were invited to participate in the research by direct contact. The first author came to regular classes and asked students to participate in the study. They received student credits for participation. All participants underwent the same procedure except for differences in the experimental manipulation across groups. Participants first filled in a paper-and-pencil form of STOMPR. Each participant then entered an isolated room for individual testing. The room was equipped with a computer and Sennheiser HD-25 audio headphones. The experimenter started the experiment using the E-prime software (version 2.0, Schneider et al., 2012) and then left the room. First, the instructions were shown on a computer screen. When ready, the participants listened to 16 music excerpts in random order. After each excerpt was played for 15 seconds, they had to rate on a scale from 1 to 100 how much they liked the excerpt, with rating 1 denoting extremely strong disliking and rating 100 denoting extremely strong liking. Before and during the listening of each excerpt, information about the music title, author's name and genre was shown on the screen. This information was displayed 5 seconds before an excerpt started and was shown on the screen for the entire duration of the excerpt.

Participants were assigned randomly to one of the three groups: two experimental groups and a control group. In the two experimental groups, the

presentation of the music title, author's name and genre was accompanied by additional information on the alleged average liking of the excerpt, for which initial instructions stated they were based on previous research with students. In one of the experimental groups (Group 1, i.e., the "*high norm*" group) the values from the set of numbers between 66 and 81 were presented randomly with the average value being 73.5. In the other experimental group (Group 3, i.e., the "*low norm*" group) the values from the set of numbers between 18 and 33 were presented randomly with the average value being 25.5. The sequence of music clips, as well as the order of the information on the alleged group liking was random, and each liking value was shown only once per participant. In the control group (Group 2) the procedure was the same as in the experimental groups with the exception that the control participants did not receive any information on group liking.

The local ethics committee approved this study. All participants gave informed consent before the start of the experiment. They were debriefed on the aim of the study after the study was completed.

Results

For each of the four music-preference dimensions, we calculated average scores (Table 1). The comparison of these scores showed that the groups did not differ notably in any dimension.

Table 1

Differences among the Groups in the STOMP Scores for Preferences of Specific Musical Genres

	Low norm group (n = 31)		Control group (n = 33)		High norm group (n = 31)		Results of ANOVA	
Genres	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(2, 92)	*p*
Upbeat Conventional	4.45	0.81	4.22	0.93	4.55	0.95	1.14	.32
Reflective Complex	4.64	0.82	4.42	0.99	4.71	0.95	0.86	.43
Energetic Rhythmic	4.62	1.26	4.82	1.11	4.57	1.01	0.45	.64
Intense Rebellious	4.32	1.43	4.59	1.39	4.23	0.88	0.68	.51

For each of the four music-preference dimensions, the ratings of liking assigned to the four excerpts by each participant were averaged. Pearson correlation coefficients between the averaged liking ratings for each dimension and the four STOMPR factor scores were calculated for each of the three groups (Table 2). In all three groups, the correlations between the STOMPR factor scores and the liking scores related to the same music-preference dimension (presented in bold in the diagonal fields of Table 2) were positive, moderate to high and statistically

significant at the 5-percent alpha error rate (except the correlation in the domain of the *Energetic Rhythmic* genres in the *low norm* group which was low and did not reach statistical significance). This means that the dimensions of musical taste measured by STOMPR predicted well the liking of groups of music genres. Large correlations were observed for the *Reflective Complex* and *Intense Rebellious* factors, and moderate correlations were found in the case of the *Upbeat Conventional* and *Energetic Rhythmic* factors.

Table 2

Correlations between the Ratings of Musical Excerpts Liking and STOMPR Factor Scores for the Three Groups

STOMPR score	Liking ratings			
	Upbeat Conventional	Reflective Complex	Energetic Rhythmic	Intense Rebellious
Low norm group				
Upbeat Conventional	**.38***	-.02	-.20	.05
Reflective Complex		**.60****	.18	.08
Energetic Rhythmic			**.24**	.28
Intense Rebellious				**.58****
Control group				
Upbeat Conventional	**.39***	.39*	.13	-.12
Reflective Complex		**.74****	.19	-.02
Energetic Rhythmic			**.38***	.13
Intense Rebellious				**.62****
High norm group				
Upbeat Conventional	**.57****	.22	.48**	.24
Reflective Complex		**.67****	.19	.19
Energetic Rhythmic			**.45***	-.01
Intense Rebellious				**.63****

Note. Values in bold are those of interest, i.e., the correlations between the STOMPR questionnaire scores and the liking scores related to the same music-preference dimension across experimental groups. $^*p < .05.$ $^{**}p < .01.$

The central research question of this study was whether there exists an interaction between the experimental manipulation (groups) and scores of the STOMPR questionnaire in their influence on the ratings of liking music from a specific category of genres. The existence of such an interaction would imply that the manipulated social influence on the liking ratings was not the same for different categories of music genres and that musical taste could moderate the effect of social influence on preference for certain music pieces. To check this hypothesis, we examined the relation between the STOPMR scores and liking ratings in different groups, i.e., we checked if the regression slopes differed between groups. For different music-preferences dimensions, the slopes in different groups were similar and none of the tested interaction effects was statistically significant: *Upbeat*

Conventional $F(2, 92) = 0.31$, $p = .74$; *Reflective Complex* $F(2, 92) = 1.87$, $p = .16$; *Energetic Rhythmic* $F(2, 92) = 0.52$, $p = .60$; *Intense Rebellious* $F(2, 92) = 0.73$, $p = .49$. Therefore, musical taste measured by STOMPR had the same role in the liking ratings in all three groups and it cannot be considered a moderator of the social influence on music preferences.

Since the results showed that the effect of music taste on the liking ratings was not different in the three groups, we next performed ANCOVA to examine the manipulated social norm effect on the liking ratings. Four ANCOVAs were performed, one for each music preference dimension (genres). In the analysis, the average liking rating of four excerpts belonging to a certain dimension was used as an outcome variable. The group was entered as an independent variable and the relevant STOMPR score was used as a covariate. Including the STOMPR score as a covariate in the prediction of the liking ratings increased the statistical power of the test for the effect of social influence (see Huitema, 2011, for the advantages of using ANCOVA over ANOVA). Adjusted means of the liking ratings for each group and musical taste dimension are shown in Figure 1 (original/unadjusted means are shown in Appendix C). A trend of social influence on the liking ratings can be seen clearly – the ratings were higher in the high norm group than in the control group and they were lowest in the low norm group. The only exception to this trend was observed in the case of the *Intense Rebellious* excerpts where the high norm group used lower liking ratings than the control group. When controlling for the effect of musical taste, all the tested differences in the liking ratings among the three groups were statistically significant: for the group of *Upbeat Conventional* musical excerpts, $F(2, 92) = 9.77$, $p < .001$, $\eta_p^2 = .18$; for the group of *Energetic Rhythmic* excerpts, $F(2, 92) = 6.88$, $p < .01$, $\eta_p^2 = .13$; for the group of *Reflective Complex* excerpts, $F(2, 92) = 3.59$, $p < .05$, $\eta_p^2 = .08$; and for the group of *Intense Rebellious* excerpts, $F(2, 92) = 6.95$, $p < .01$, $\eta_p^2 = .14$. Post hoc analysis (Sidák test) revealed a statistically significant difference in the liking ratings between the high norm group and the low norm group in all four categories of genres. In two categories of genres, i.e. the *Reflective Complex* group and the *Intense Rebellious* group, there was also a statistically significant difference between the low norm group and the control group. The obtained results convincingly confirm that the manipulation with group norm had an effect on participants' ratings, and that this effect was similar for all four categories of genres. These results indicate that there is a substantial effect of social norming on music preferences and that this effect is independent of whether one shows a general preference for a certain type of music or not.

Figure 1

Adjusted Means of the Liking Ratings for Each Category of Musical Genres for Three Experimental Groups
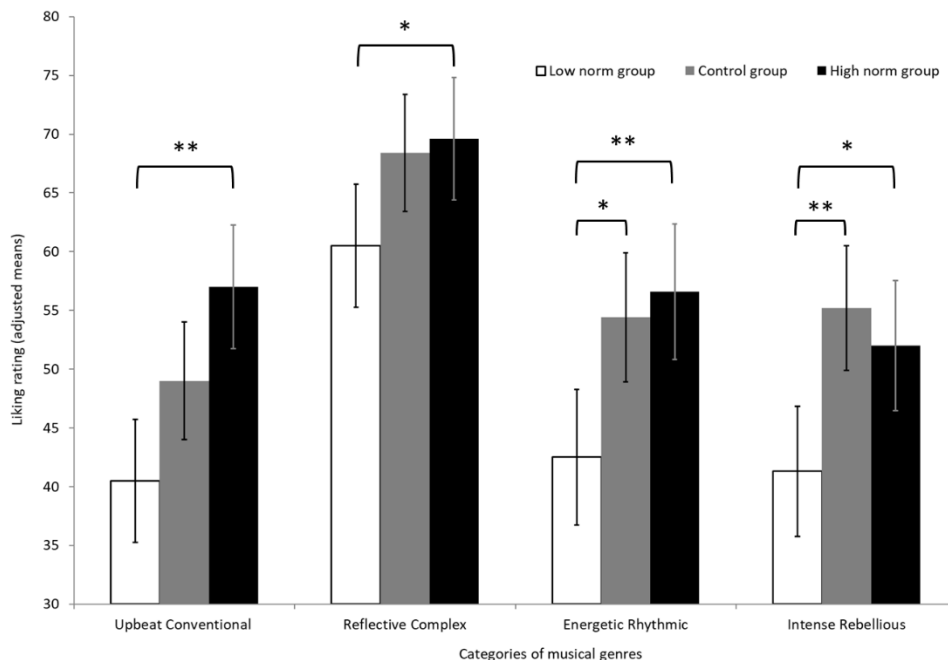
Note. Error bars represent 95% confidence interval of adjusted mean. Sidák test was used for *post hoc* analysis. $^*p < .05$. $^{**}p < .01$.

Discussion

The obtained results show relatively clearly that there is a general social effect on the emotional evaluation of music, i.e., liking ratings. As we hypothesised, information about how a population similar to our participants (other students) evaluated a particular music excerpt affected liking ratings. These results are in line with a large number of studies in the field of social psychology, which have shown that the general normative effect is present often in a wide range of group processes (Brown & Pehrson, 2019) and also in the field of experiencing music (Egermann et al., 2013; Furman & Duke, 1988; Schäfer et al., 2016).

However, the social effect is not universal, and its presence and magnitude may depend on diverse contexts (Van Avermaet, 2001; North & Hargreaves, 1996). This is why we hypothesised that the normative effect might depend on participants' musical preferences. Although no specific research was done on this topic, research by Lynn et al. (2016), in a somewhat broader context, showed that music quality

ratings depend slightly on the informational social effect. Music that was nominally labelled as more popular was also rated as having higher quality. However, this effect was observed only for music that was nominally declared to be of lower quality. Moreover, in the study by Liljeström et al. (2013), participants experienced more positive emotions when they listened to music that they had selected themselves and more negative emotions when they listened to music that had been selected by the experimenters. This is why we assumed that the social effect would be lower for the preferred excerpts of music. It seemed logical that in such a case, participants would be more resistant to the normative opinion of others. However, this hypothesis was not confirmed in our study. A possible explanation for these results can be found in the role that music plays in people's lives: (i) it evokes both specific and general emotions associated with certain music genres, and (ii) it helps to strengthen social relationships, i.e., it facilitates social bonding in groups that are similar to each other (Boer & Fischer, 2012; Raghunathan & Corfman, 2006). As our results show, the specific emotions evoked by the preferred genres (with probably stronger valence) did not override the general motive to be similar to the reference group. The music excerpts used in our study were relatively unfamiliar and likely did not elicit strong general or specific emotions or moods, so no influence of musical taste on conforming behaviour was observed.

On the other hand, the general social effect (in the form of a difference between experimental groups) was relatively clear and stable. This effect was probably normative rather than informational. The fact that the music excerpts in our study were relatively unfamiliar to the participants could be a reasonable basis for the occurrence of a normative effect (Cialdini & Goldstein, 2004). This effect likely occurred in the form of external conformity, i.e., participants strived to be as similar as possible to the group to which they belonged (Abrams & Hogg, 1990). It is likely that there was no lasting change in preference for any of the musical genres presented and rated. The normative effect was likely primarily private and not public, as participants were alone in the room and aware that their ratings would not be visible and accessible to their reference population. This could also imply that the students' ratings in this study were likely poorly informed, i.e., there was no clear conflict between the norm offered and the "perception before the norm." Perhaps this is also why there was no specific interaction between the social effect and preferences for the music excerpt. However, we cannot say with absolute certainty that the source of the general effect obtained was exclusively normative. Koehler and Brougthon (2017) showed that listening to unfamiliar music clips in an artificial environment (and these were the conditions in our study) can lead to a social effect on the affective component of music that is informational in nature and not necessarily normative. The informational effect usually occurs in the presence of private acceptance, that is, it represents a change in ratings based on the belief that the feedback of others can be used as a valuable source of information when the individual lacks one. This implies that in such a case we are dealing with top-down processes in which cognitive factors influence affective ones. The social effect, which is private in nature, is in

principle smaller and weaker and is usually observed in situations where individuals do not have to give their ratings in front of a group or other individuals (Ng et al., 2017), or when participants are not presented with norms or information of a social nature, but instead with information about the quality of music rated by a computer, such as in Egerman et al. (2013) study. Such an interpretation of our results can be supported by the fact that in our study the "interaction with others" was virtual, i.e., participants were not directly in a real social contact.

Our research has several limitations. First, our conclusions are limited because of the sample we used. Our participants were young people, students of social sciences. They were likely to have certain attitudes in general, but also certain attitudes, views, and preferences toward certain genres of music. Therefore, our findings that music preferences are not a moderator of the social effect in music liking should not be generalized to another (e.g., general) population. A future study on a far larger sample could shed more light on the true nature of this independence as preference might still have a small effect size that our relatively small size sample study could not have grasped. Apart from larger sample studies, future studies could also examine real social context in similar or even smaller samples than ours. Second, the study participants listened to and rated relatively unfamiliar pieces of music. This likely resulted in the absence of stronger emotions. Stronger emotions could be the basis for a possible relationship between the preference for certain genres and liking the music. Unfortunately, we did not measure or ask about the level of emotions elicited by listening to music in an experimental environment. Such additional information would be valuable. However, our intention was to have a relatively strong control of the naivety of the participants in relation to the aim of our study, so we tried to eliminate all possible signs of our manipulation, not to ask too much, and not to give any signs or information about what was going on in this study. It would be interesting to examine in future studies whether social influence or group norms might affect the emotional evaluations of music in the case of extreme music preference, i.e., when participants were exposed to the social norm while listening to music excerpts they strongly preferred (adored) or did not prefer at all (could not stand). Further studies are needed to examine whether stronger emotions are actually more resistant to conformity.

To summarize, this study has clearly shown that social comparison, which is actually intrinsic to human behaviour and has been confirmed by research in various areas of human judgment, also exists in the evaluation of music preferences. In psychological evaluations, people generally tend to show their belonging to a certain social group and to identify with that group. People from similar populations share many common goals and values, and this is the basis for the manifestation of social influence. Moreover, people are never completely sure of their own judgments and attitudes, and being exposed to the judgments of others may lead them to conform to those judgments. As in our study, such an effect is more or less the same regardless of the affinity to the object of evaluation. When the normative effect occurs, it does not automatically mean that people will actually or permanently change their

attitudes or preferences, but it is more likely that they will simply adhere to group norms. For our participants, future ratings of music genres will most likely not be influenced by the social norms used in this study, nor will they change their musical tastes. However, it has been clearly shown in this study that when they indicate their liking of preferred and non-preferred music genres, they tend to temporarily conform to the group norm.

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Appendix A

Correlations among Results of STOMPR Factors (N = 93)

	2	3	4
1. Upbeat Conventional	.26[*]	-.09	.03
2. Reflective Complex		.07	.16
3. Energetic Rhythmic			.18
4. Intense Rebellious			

[*]$p < .05$.

Appendix B

List of 16 Excerpts in Four Musical Genres

Energetic & Rhythmic genres

Leo The Lionheart - Electro
Magic Dingus Box - The Way It Goes
Mykill Miers - Immaculate
Preston Middleton - Latin4

Intense & Rebellious genres

Five Finger Death Punch - White Knuckles
Squint - Michigan
Straight Outta Junior High - Over now
The Tomatoes - Johnny Fly

Reflective & Complex genres

Bruce Smith - Sonata A Major
Herb Ellis and Joe Pass - Cherokee (Concept 2)
Louise Farrenc - Piano Quintet No_1 in A Minor
Oscar Peterson - The Way You Look Tonight

Upbeat & Conventional genres

Ace of Base - Unspeakable
Golden Bough - The Keel Laddie
Tracy Lawrence - Texas Tornado
Walter Legawiec and His Polka Kings - Bohemian Beer Party

Note. Excerpts were taken from Rentfrow and Gosling (2003).

Appendix C

Descriptive Statistics of Liking Ratings of All Genres by Groups (Original/Unadjusted Data)

Genres	Low norm group (*n* = 31)		Control group (*n* = 33)		High norm group (*n* = 31)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Upbeat Conventional	40.55	15.68	47.59	16.09	58.44	16.09
Reflective Complex	61.69	22.11	66.21	20.21	72.18	13.74
Energetic Rhythmic	42.15	16.95	55.18	18.12	56.05	14.74
Intense Rebellious	41.37	20.18	57.00	19.12	50.59	17.29