

The content and validity of music-genre stereotypes among college students

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ABSTRACT The present research examined the content and validity of stereotypes about fans of 14 different music genres (e.g. country, rap, rock). In particular, we focused on stereotypes concerning fans' personalities (e.g. extraversion, emotional stability), personal qualities (e.g. political beliefs, athleticism), values (e.g. for peace, for wisdom), and alcohol and drug preferences (e.g. wine, hallucinogens). Previous research has shown that music is linked to a variety of psychological characteristics, that music is used to convey information about oneself to observers, and that observers can infer personality on the basis of music preferences. Guided by such research, we predicted and found that individuals have robust and clearly defined stereotypes about the fans of various music genres (Study 1), and that many of these music-genre stereotypes possess a kernel of truth (Study 2). Discussion focuses on the potential role of music-genre stereotypes in self-expression and impression formation.

KEYWORDS: *interpersonal perception, music, preferences, personality*

The man that hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils;
The motions of his spirit are dull as night
And his affections dark as Erebus;
Let no such man be trusted.

William Shakespeare, *The Merchant of Venice*

According to Shakespeare's Lorenzo, music preferences have much to say about a man. Everyday observations from more contemporary (and gender-sensitive) contexts would seem to agree. Individuals actively solicit

sempre :

information about others' music preferences in order to learn something about them; witness, for example, the numerous online dating services that ask users to list their favourite styles of music, or the common cocktail-party challenge to list one's all-time top-10 records. The prevalence of such phenomena suggests that the music people listen to may reveal something about who they are.

In this work, we aim to evaluate the validity of the belief that music preferences can serve as a clue to a person's character. To this end, we examine the content and validity of stereotypes about fans of various music genres. This work seeks to address three specific questions:

- Are there stereotypes about fans of different music genres?
- What is the content of the stereotypes?
- Are they accurate?

By examining these questions, this research has the potential to inform our understanding of the role that music plays in interpersonal perception as well as the reasons why individuals prefer certain styles of music.

Music as a vehicle for self-expression

Music is commonly used in the service of self-expression (DeNora, 1999, 2000; Frith, 1981; North and Hargreaves, 1999; North et al., 2000; Rentfrow and Gosling, 2003; Tarrant et al., 2000, 2002). People wear T-shirts emblazoned with their favourite band's name, decorate their homes and offices with pictures of their favourite musicians, and blare their music loudly where it will be heard by others. People even solicit information about each other's music preferences in their interactions. For example, a recent analysis of the topics strangers discussed as they became acquainted revealed that music was the most popular conversation topic (Rentfrow and Gosling, 2006). Why are individuals, particularly young people, compelled to use music in the service of self-expression? What personal information might they be trying to communicate?

There are at least two types of information that individuals may be communicating through their music preferences. First, they may be conveying information about their personal qualities. Research on the links between music preferences and personality suggests that individuals prefer styles of music that reinforce and reflect aspects of their personalities and personal identities. For example, individuals high in sensation seeking prefer intense and stimulating music (e.g. rock, heavy metal and punk music) more than calm and conventional music (e.g. sound tracks and religious music; Little and Zuckerman, 1986), extraverts prefer energetic party music (e.g. dance music; McCown et al., 1997), individuals with high resting arousal and

antisocial characteristics prefer arousing styles of music that emphasize themes of rebellion (e.g. heavy metal, rock, alternative and rap music; McNamara and Ballard, 1999), and individuals high in openness to experience prefer complex and sophisticated music (e.g. classical and jazz music) more than conventional styles of music (e.g. pop and country music; Rentfrow and Gosling, 2003).

Another form of information that may be communicated through music preferences is one's membership in a particular group. Indeed, several researchers have proposed that music serves as a badge symbolizing one's membership in a peer group or social category (Bryson, 1996; Dolfsma, 1999; Frith, 1981; North and Hargreaves, 1999; Tarrant, et al., 2002). Among adolescents and young adults, for example, music is used to differentiate oneself from individuals in other groups, which, in turn, can contribute to identity development. Therefore, by expressing one's music preferences, individuals are essentially saying that they share similar attitudes, values and beliefs with the other members of their group (North and Hargreaves, 1999). Research in sociology also suggests some links between music preferences and membership in certain groups. For instance, social class has been linked to music preferences, such that upper-class and well-educated individuals tend to prefer 'highbrow' music (e.g. classical, opera and big band), whereas working-class and less educated individuals tend to prefer 'lowbrow' music (e.g. country, gospel and rap; Katz-Gerro, 2002; Mark, 1998; Van Eijck, 2001). Additionally, individuals living in urban environments tend to prefer jazz, classical and contemporary rock music, whereas individuals in suburban and rural environments tend to prefer classic rock, country, folk and oldies (Fox and Wince, 1975; Katz-Gerro, 2002).

Whether to communicate information about personal qualities or membership in a particular group (or both), using music in the service of self-expression clearly could reveal a wide variety of information about who a person is. What is less clear, however, is whether music preferences really do communicate information about one's character.

The few studies that have examined this issue suggest that music-preference information can influence how an individual is perceived. In a study of the characteristics of potential dating partners, Zillmann and Bhatia (1989) found that male participants perceived female targets who preferred classical music as attractive and sophisticated, but perceived female targets who preferred heavy metal music as rebellious and aggressive. Additional evidence comes from work by North and Hargreaves (1999), which indicated that individuals have normative beliefs about the psychological characteristics of fans of various music genres – pop music fans were thought to be physically attractive, conventional and enthusiastic, whereas classical-music fans were thought to be intellectual, traditional and conservative. These studies indicate that music-preference information can influence how individuals are perceived and that genre-specific stereotypes may be one of

the perceptual processes underlying those impressions. The results from these studies are stimulating and raise a further question about whether the impressions elicited by music preferences are accurate.

To date, the only research that has examined the accuracy of music-based personality judgements was conducted by Burroughs et al. (1991) and Rentfrow and Gosling (2006). Burroughs et al. (1991) examined impressions based on personal possessions (e.g. favourite clothing, favourite records) and found that independent observers were able to develop consensual and accurate impressions of target individuals on the basis of their top-10 records. Specifically, observers formed accurate impressions of targets' levels of enthusiasm, optimism, inhibition and wastefulness. Rentfrow and Gosling (2006) also found converging evidence for the diagnosticity of music-preference information in judgements of personality. In that study, independent observers were able to form similar and accurate impressions of targets' personalities, values and moods solely on the basis of targets' top-10 favourite songs. To form their impressions, observers appeared to rely on specific aspects of the music (e.g. the amount of singing, emotional valence) and music-genre information (presumably using music-genre stereotypes).

The results from these investigations are provocative, but even taken together, the information they provide is limited. The studies focused on a small number of music genres (North and Hargreaves, 1999; Zillmann and Bhatia, 1989), examined impressions on a small number of personality traits (Burroughs et al., 1991, North and Hargreaves, 1999; Zillmann and Bhatia, 1989), or did not examine music stereotypes directly (Burroughs et al., 1991; Rentfrow and Gosling, 2006). Understanding the role that music stereotypes play in interpersonal perception, therefore, requires an examination of music genres and personality traits that are broad enough to represent the genres and traits that individuals encounter in their daily lives.

Overview of current research

The primary goal of the current research was to examine the information communicated through music preferences, with a particular interest in music-genre stereotypes. We were interested in determining (1) whether individuals share similar stereotypes about people who listen to certain styles of music; (2) the content of the music-genre stereotypes; and (3) whether the stereotypes about the fans of the different music genres are accurate.

Two studies were conducted to examine these questions. Study 1 was designed to examine the content of various music-genre stereotypes and the extent to which individuals agree about which characteristics are associated with fans of particular music genres. Study 2 extended the work from Study 1 by examining the validity of each of the music-genre stereotypes.

ESTABLISHING A BENCHMARK FOR EVALUATING THE FINDINGS

In both studies, we used correlational analyses to measure the level of consensus and accuracy of the music-genre stereotypes. Given the well-documented problems associated with significance testing (e.g. Bakan, 1966; Cohen, 1988, 1994; Gigerenzer, 1993; Harlow et al., 1997; Hemphill, 2003; Kline, 2004; Krueger, 2001; Lykken, 1968; Rozeboom, 1960; Wilkinson and the APA Task Force on Statistical Inference, 1999), we focused on effect sizes (e.g. r), not levels of statistical significance. To evaluate the magnitude of the effect sizes appropriately, it was necessary to identify a benchmark with which they could be compared.

Perhaps the most widely used guidelines for interpreting the magnitude of correlation coefficients in the behavioural sciences was provided by Cohen (1988); accordingly, correlations in the order of .10 are considered 'small', .30 are considered 'medium' and .50 'large'. However, a recent meta-analysis of correlation coefficients in social science research suggests that Cohen's theoretical benchmarks are too conservative (Hemphill, 2003). According to this empirically derived standard, correlations in the order of .10 should be considered 'small', .20 'medium' and .30 or greater as 'large'. An alternative strategy for evaluating our results is to compare them with findings from similar research rather than with research in the social sciences in general. The aims and procedures of the present research are similar to those of previous interpersonal perception studies, making that field the most appropriate for comparisons with the present findings. The most appropriate estimate of likely effect sizes would be provided by Kenny and colleagues' meta-analysis of 32 interpersonal perception studies (Kenny et al., 1994). They found that the average levels of agreement among judges' ratings of targets on the Big Five personality traits ranged from zero to approximately .30. Specifically, the average level of consensus for zero-acquaintance, first encounter and long-term acquaintance studies was .12, .07 and .27, respectively.¹ In a separate meta-analysis examining the levels of accuracy across 13 interpersonal perception studies, Kenny (1994) found mean accuracy correlations of .15 and .50 in zero-acquaintance and long-term acquaintance studies, respectively.

Of the various interpersonal perception conditions, zero-acquaintance has the most similarities with the present research. Indeed, most zero-acquaintance research examines the extent to which judges form similar and accurate impressions of targets on the basis of minimal information (e.g. a photograph) and the present work focuses on the degree to which judges form similar and accurate impressions on the basis of music-preference information. Thus, the effect sizes from previous zero-acquaintance research offer the best comparison standards for our analyses. Therefore, the benchmarks for the current studies were set at .12 and .15 for consensus (Study 1) and accuracy (Study 2), respectively.

Study 1: Agreement about the content and uniqueness of music stereotypes

The aim of this study was to examine agreement about the content and uniqueness of stereotypes associated with the fans of various music genres. To this end, we examined college students' stereotypes about the fans of 14 music genres. We were interested in whether individuals associate different psychological characteristics with the fans of various music genres. Therefore, we examined the stereotypes about music fans' personalities, personal qualities and values. Additionally, since it is fairly common for certain musicians and bands to advocate the use of intoxicating substances (e.g. marijuana, LSD) in their music, we examined the stereotypes about the drug and alcohol preferences of the various music fans.

METHOD

Participants

The sample was comprised of 206 University of Texas at Austin undergraduates who volunteered in exchange for partial fulfilment of an introductory psychology course requirement. In the sample, there were 120 (58.3%) women and 86 (41.7%) men; 40 (19.4%) were Asian, 2 (1.0%) were African American, 19 (9.2%) were Hispanic, 124 (60.2%) were white, and 21 (10.2%) were of other ethnicities. The age of participants ranged from 17 to 27 ($M = 18.9$, $SD = 1.3$).

Selection of genres

The selection of music genres was based on previous research, which indicated that music genres are the optimal level at which to study music preferences (Rentfrow and Gosling, 2003). In that research, we presented a group of participants with 14 broad music genres and 66 sub-genres, and asked them to indicate their preference for the music categories and to skip any category with which they were not familiar. Our analyses indicated that very few participants (7%) were familiar with all of the specific sub-genres, but nearly all of them (97%) were familiar with the broader music genres. Thus, in that research and in the present study, we examined the following music genres: alternative, blues, classical, country, electronic, folk, heavy metal, jazz, pop, rap, religious,² rock, soul and sound tracks. Findings from previous research indicate that these music genres account for 89 percent of individuals' music collections (Rentfrow and Gosling, 2003).

Procedure

Participants were run in groups of 5 to 30 people in large classrooms. Upon arrival, they were introduced to a study on the beliefs associated with various music fans. Participants were randomly assigned to rate the prototypical music fan of one of the 14 music categories. Ratings were made on

personality descriptors, personal qualities, values and alcohol and drug preferences. To eliminate possible contrast effects each participant rated the prototypical music fan of only one genre. Due to scheduling difficulties, the number of raters for each group differed in size with 15 judges for each style of music except blues, rock and sound tracks, which had 9, 14 and 10 judges respectively.

We were interested in the associations that individuals naturally make about the fans of different styles of music, therefore no prompts or definitions of the genres were provided to participants. This strategy was selected for two reasons: first, if we provided definitions or listed names of prototypical bands for the genres, we would have provided our own set of associations and communicated information about the music (and the individuals that perform and consume it) that could have inadvertently influenced the associations made by participants. Second, results from our previous research suggest that preference ratings for music genre labels (e.g. jazz and heavy metal) and musical excerpts representing the music genres (e.g. 'Time Out', by Dave Brubeck, and 'Fight Song', by Marilyn Manson) are highly correlated (mean convergent $r = .51$, mean off-diagonal $r = .09$).³ These results suggest that people tend to have similar referents in mind when they are presented with undefined music genres.

Instruments

Judges rated the music prototype to which they were assigned on each of the Big Five personality dimensions, and a list of descriptive adjectives, values and drug and alcohol preferences. Each of the items was preceded by a sentence of the following form: 'The average *X* music listener tends to be . . .', where *X* was the music genre assigned to the participant.

To obtain information about the personality traits associated with the various music fans, ratings on the Big Five were made using the Five-Item Personality Inventory (FIPI; Gosling et al., 2003). The FIPI consists of five items that correspond to each of the Big Five personality dimensions. Each item is defined by two central descriptors (e.g. extraverted, enthusiastic) and further elaborated by six adjectives reflecting positive and negative poles of the dimension (e.g. sociable, assertive, talkative, active, *not* reserved or shy). Items were rated on a seven-point rating scale ranging from 1 (extremely uncharacteristic) to 7 (extremely characteristic).

Ratings of personal qualities were made using four items (artistic, athletic, intelligent, physically attractive) from the Self-Attributes Questionnaire (SAQ; Pelham and Swann, 1989) and three items related to political and religious orientation (politically conservative, politically liberal, religious). Fans of each genre were rated on a seven-point rating scale ranging from 1 (extremely uncharacteristic) to 7 (extremely characteristic).

We assessed values with Rokeach's Values Survey (RVS; Rokeach, 1973). The RVS is a 36-item questionnaire designed to assess two value orientations:

terminal values, which refer to idealized modes of living, and instrumental values, which refer to idealized behavioural characteristics (Rokeach, 1973). Each value orientation is assessed with 18 items in which respondents rank order each value-item in terms of its personal importance. To reduce the burden on participants in the present study, value ratings were made on a subset of 12 of the terminal values and six of the instrumental values. These value items were consensually selected by two judges who made their selection with the goal of fairly representing each of the value domains. Value ratings were made for: a comfortable life, a world at peace, a world of beauty, ambition, an exciting life, courage, family security, forgiveness, imagination, inner harmony, intellect, love, national security, salvation, self-respect, social recognition, true friendship and wisdom. Prototypical fans of each genre were rated on a seven-point rating scale ranging from 1 (extremely unimportant) to 7 (extremely important).

Drug and alcohol preferences were made for: beer, cocktails, wine, amphetamines, barbiturates, cocaine, ecstasy, hallucinogens, heroin, marijuana and prescription drugs (to the level of abuse). Fans of each genre were rated in terms of their likelihood to use each drug using a seven-point rating scale ranging from 1 (extremely unlikely) to 7 (extremely likely).

RESULTS AND DISCUSSION

Do people agree about the content of the music stereotypes?

Based on past research suggesting that there are stereotypes associated with fans of various music genres, we predicted that judges would agree about the content of the music stereotypes. To test this prediction, we calculated interobserver agreement using intraclass correlations (ICC; Shrout and Fleiss, 1979), ICC (2, 1) among the eight judges. These indexes reflect the degree to which judges agreed about the characteristics of the prototypical fans of each of the music genres.

The ICCs are shown in Table 1. For presentational clarity, the music genres were divided into four categories: reflective and complex, intense and rebellious, upbeat and conventional, and energetic and rhythmic, which correspond to the four music-preference dimensions identified in previous research (Rentfrow and Gosling, 2003). As can be seen in Table 1, 46 of the consensus correlations reached or exceeded the empirically derived effect-size benchmark of .12, thus suggesting that the judges' ratings for several of the stereotypes were similar for the different music-genres across the four construct types.

The results suggest several general and specific conclusions. In general, judges agreed more about the content of certain music stereotypes than others. For example, as shown in the fifth data column of Table 1, judges agreed most strongly about the content of the religious, classical and rock music stereotypes (mean ICCs = .50, .40, and .33, respectively) and least about the content of the pop, blues and sound track music stereotypes (mean

TABLE 1 *Consensus among judges about each of the music-genre stereotypes*

Music stereotype	Inter-judge consensus				Mean
	Big Five	Personal qualities	Values	Drug preferences	
Reflective and complex genres					
Blues	.16	.20	.14	.02	.13
Classical	.27	.53	.28	.51	.40
Folk	.07	.21	.17	.39	.21
Jazz	.12	.42	.12	.27	.24
Intense and rebellious genres					
Alternative	.16	.11	.04	.32	.16
Heavy metal	.31	.40	.12	.25	.27
Rock	.37	.43	.16	.33	.33
Upbeat and conventional genres					
Country	.27	.19	.21	.57	.32
Pop	.26	.00	.20	.12	.15
Religious	.34	.71	.48	.40	.50
Sound tracks	-.01	-.08	-.04	.28	.04
Energetic and rhythmic genres					
Electronic	.28	.39	.14	.09	.23
Rap	.29	.40	.29	.21	.30
Soul	.06	.41	.19	.31	.25
Mean	.21	.32	.18	.30	

Note: Consensus was computed using ICCs (2, 1). Mean ICCs were computed using Fisher's *sr-to-z* transformation. Categorization of genres based on Rentfrow and Gosling (2003). Correlations $\geq .12$ are in boldface type.

N = 206

ICCs = .15, .13, and .04, respectively). In addition, as shown in the last data row in Table 1, judgements about the content of the music stereotypes varied across the construct types. For instance, judges agreed most about the personal qualities of the music prototypes (mean ICC = .32), followed by drug preferences (.30), personality (.21) and values (.18).

Examination of the ICCs for each music stereotype within each construct type suggests some specific conclusions. The patterns of agreement about the content of the music stereotypes varied considerably across the various genre-construct combinations. For the folk-music stereotype, agreement was lowest for personality but highest for drug preferences, whereas for the pop-music stereotype, agreement was highest for personality and lowest for personal qualities. Furthermore, as can be seen in Table 1, agreement varied within each of the construct types. For example, there was considerable agreement about the personality characteristics of all the music prototypes except sound tracks.

Are the music stereotypes genre-specific?

One of the primary goals of this study was to examine the content of the music stereotypes. To do this, we computed the average ratings for each of the constructs within each music genre. We then performed 4 between-genre multiple analyses of variance (MANOVAs), one for each set of constructs. The results revealed large main effects of stereotype content as a function of music genre (mean $F = 5.12$, mean $\eta^2 = .30$). Power analyses indicated that the probability of detecting an effect was 100 percent in all but eight (out of 41) comparisons. These results provide strong evidence for the uniqueness of each of the stereotypes and suggest that the specific stereotypes associated with the genres are very different from one another. For illustrative purposes, we have plotted only the stereotypes for the four music genres with the highest ICCs within each music-preference dimension: classical, rock, religious and rap. The stereotypes for all 14 genres are available from the first author.

Figure 1 displays the personality stereotypes associated with the music genres. As can be seen, the classical and religious music prototypes are similar: both are high in agreeableness, conscientiousness and emotional stability, but classical music fans are believed to be lower in extraversion and higher in openness than are religious music fans. Rock and rap fans are also seen somewhat similarly: both are high in extraversion, moderate in agreeableness and low in conscientiousness, but rock fans are believed to be lower in emotional stability and higher in openness than rap fans.

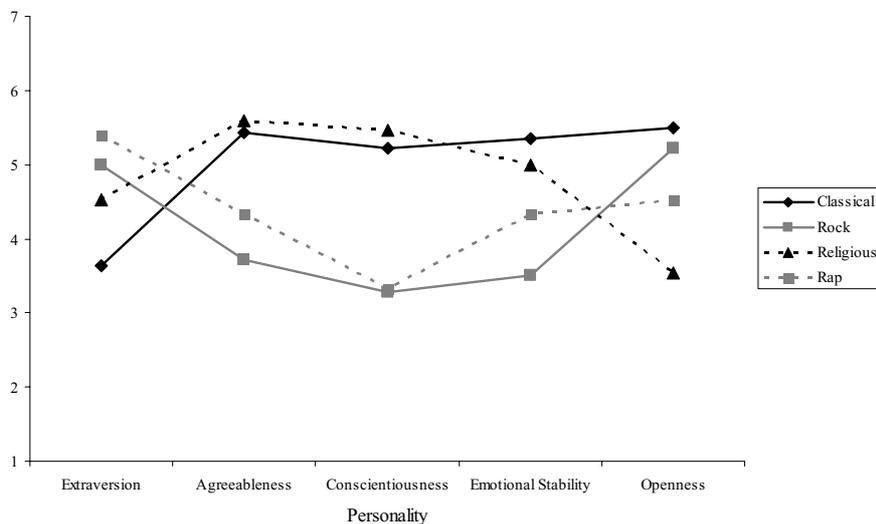


FIGURE 1 *Stereotypes about the personalities of fans of four music genres.*

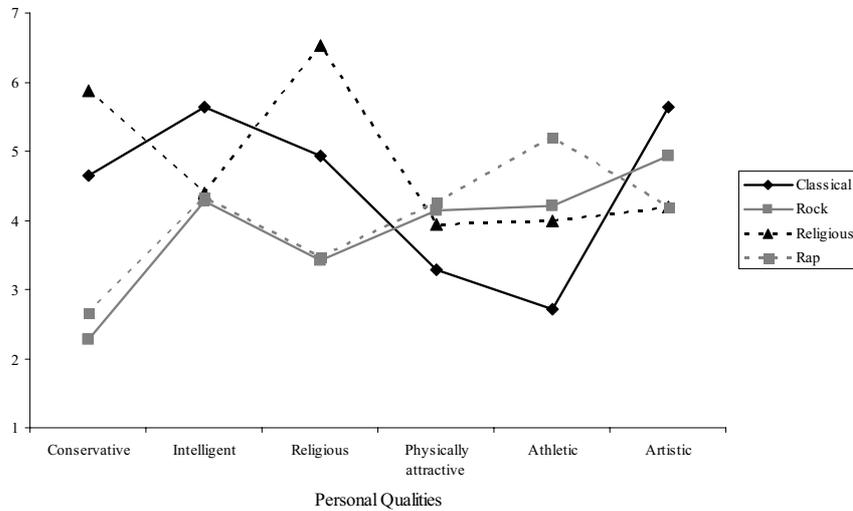


FIGURE 2 *Stereotypes about the personal qualities of fans of four music genres.*

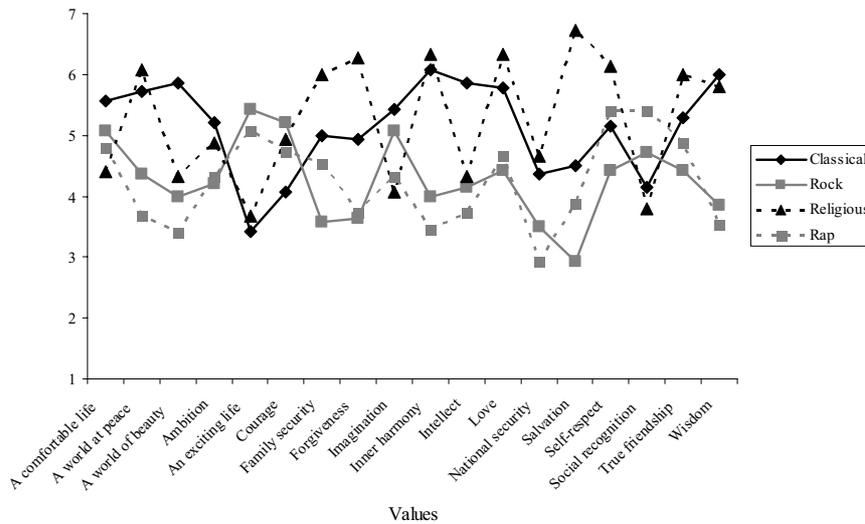


FIGURE 3 *Stereotypes about the values of fans of four music genres.*

As displayed in Figure 2, the music stereotypes about personal qualities were very different. Whereas classical music fans are seen as politically conservative, intelligent, physically unattractive, un-athletic and artistic, rock music fans are seen as politically liberal and not religious. Religious music fans are regarded as politically conservative and, of course, religious, while rap fans are seen as politically liberal and athletic.

Figure 3 shows the stereotypes about the values associated with the music genres. There is wide variation in what the prototypical fans of the various

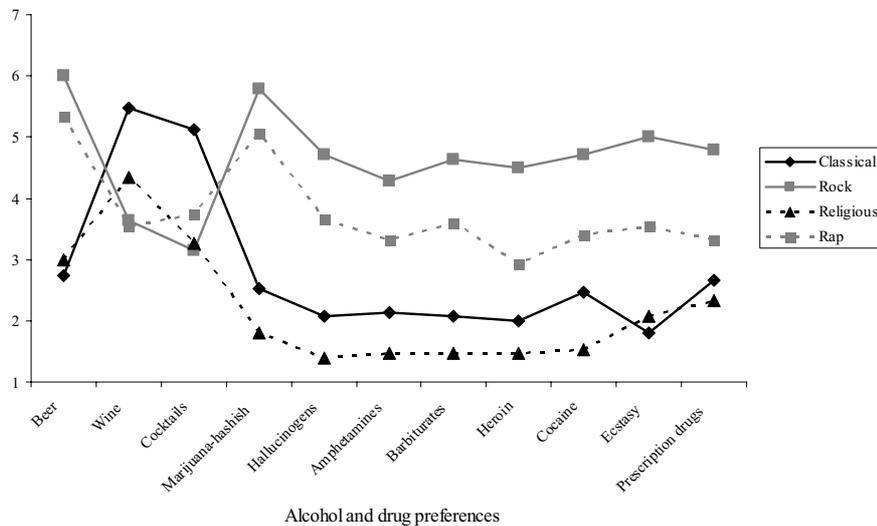


FIGURE 4 Stereotypes about the drug and alcohol preferences of fans of four music genres.

music genres are believed to value. Classical fans are believed to value comfort, beauty, wisdom, imagination, intellect and love, and rock fans are believed to value excitement and courage. Moreover, religious music fans are believed to value peace, family security, forgiveness, love, and, not surprisingly, salvation, whereas rap fans are believed to value self-respect and social recognition.

The alcohol and drug preferences are plotted in Figure 4. The means reveal striking differences among the music prototypes. Whereas rock and rap fans are believed to drink more beer than wine or cocktails, classical music fans are believed to drink more wine and cocktails than beer. Although religious music fans are seen as least likely to drink alcohol, apparently they are thought to drink wine if they do drink (perhaps for communion). As for drug preferences, rock music fans are believed to abuse any and all types of drugs, followed by rap fans. In contrast, with the exception of prescription drugs, classical and religious music fans are not seen as likely to consume most drugs.

SUMMARY

In this study, we examined college students' stereotypes about fans of various music genres. The results revealed that, by and large, there are robust and specific stereotypes associated with different music genres. Indeed, the level of inter-judge agreement was, in many instances, higher than what would be expected on the basis of past research on interpersonal perception. Thus, individuals appear to agree considerably about the personalities, personal qualities, values, and alcohol and drug preferences of the different music

fans. These findings are important because they are among the first to document the content of music stereotypes and offer some insight into the impressions that are elicited by music preferences.

It should be pointed out that because the music genres were not defined for participants at the outset, there could have been some inconsistencies in how they defined the music genres. Perhaps one person's conception of rock music was the same as another person's conception of heavy metal. If so, the examples of people called to mind by the judges to represent rock and heavy metal fans would not be as distinct as they would have been had the genres been explicitly defined for them. Of course, there may also be genuine similarities in the conceptions of fans of various genres. However, the results from the MANOVAs indicate that the stereotypes are indeed different from one another, which suggests that participants had similar referents in mind when they were presented with an undefined music genre and that the referents were different for each of the music genres.

Now that we have provided evidence for the existence of music stereotypes, an important question arises: are they valid? Is there a kernel of truth to the music stereotypes? Study 2 was designed to address this question.

Study 2: Are the music stereotypes accurate?

The goal of Study 2 was to test the validity of the music stereotypes identified in Study 1. To examine this issue, we used the stereotype data collected in Study 1 and compared them to the personalities, personal qualities and values of a college-student sample of actual music fans. Based on past research indicating that music-based personality judgements tend to be accurate (Burroughs et al., 1991; Rentfrow and Gosling, 2006), and on the results from Study 1, we predicted that some of the music stereotypes would be valid. An additional goal was to test whether validity would vary across the music genres.

METHOD

Participants

The sample was comprised of 87 University of Texas at Austin undergraduates who volunteered in exchange for partial fulfilment of an introductory psychology course requirement. Of those who indicated, 51 (59.3%) were women and 35 (40.7%) were men, 16 (23.2%) were Asian, 3 (4.3%) were Hispanic and 50 (72.5%) were white. The age of participants ranged from 17 to 40 ($M = 18.9$, $SD = 2.5$).

Procedure and instruments

On arrival, participants were introduced to a study on personal preferences and everyday behaviour. They were then asked to complete a questionnaire packet with measures designed to assess their personality on each of the Big

Five dimensions, personal qualities, values and music preferences, in that order. Due to confidentiality concerns, data on participants' alcohol and drug preferences were not collected.⁴

Personality was assessed using the Ten-Item Personality Inventory (TIPI; Gosling et al., 2003). The TIPI is a 10-item measure of the Big Five personality dimensions, with two items (one reverse scored) assessing each dimension. Each item was rated on a seven-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). Personal qualities were assessed with the set of descriptors used in Study 1: artistic, athletic, intelligent, physically attractive, politically conservative, politically liberal and religious. Participants indicated the extent to which each one was characteristic of themselves using a seven-point rating scale with endpoints at 1 (extremely uncharacteristic) and 7 (extremely characteristic). Participants' values were assessed with a list of the same values used in Study 1, from the RVS (Rokeach, 1973). Using a seven-point rating scale ranging from 1 (extremely unimportant) to 7 (extremely important), participants indicated the extent to which each value was important to them. Music preferences were assessed with the Short Test of Music Preferences (STOMP; Rentfrow and Gosling, 2003). Using a 1 (strongly dislike) to 7 (strongly like) rating scale, participants indicated the extent to which they liked each of 14 different music genres (alternative, blues, classical, country, electronic, folk, heavy metal, jazz, pop, rap, religious, rock, soul and sound tracks).

RESULTS AND DISCUSSION

Are the music stereotypes accurate?

We predicted that some of the music stereotypes would be accurate. Specifically, we expected that the convergence between a participant's personality and the stereotypical personality associated with a music genre would predict the extent to which the participant actually likes that music genre. For example, if an individual's personality profile resembles the stereotypical personality associated with rock music (i.e. high extraversion and openness, low agreeableness, conscientiousness and emotional stability) then we would expect that person to express a preference for rock music. To test this prediction, we first created indexes of stereotype validity for each participant, for each of the 14 music genres. Specifically, we computed profile correlations between participants' self-ratings and the average of judges' ratings for each of the music genres assessed in Study 1 for each of the constructs measured in this study (personality, personal qualities and values) and also across all of the construct types. This produced a total of 56 stereotype-validity variables, which reflect the extent to which participants' self-ratings correlate with a particular music stereotype. We then transformed these correlations using Fisher's *r*-to-*z* formula. Finally, we correlated participants' music preferences for each of the 14 music genres with each of the *z*-transformed stereotype-validity variables.

TABLE 2 *Stereotype validity for each music-genre stereotype*

Music stereotype	Validity of stereotypes for			
	Big Five	Personal qualities	Values	Combined
Reflective and complex genres				
Blues	.33	.11	.17	.17
Classical	.01	.14	.23	.23
Folk	.23	.12	.09	.18
Jazz	.16	.18	.27	.21
Intense and rebellious genres				
Alternative	-.01	-.09	.23	.07
Heavy metal	.23	-.01	.15	.14
Rock	.25	.04	.19	.18
Upbeat and conventional genres				
Country	-.04	.25	.22	.24
Pop	.00	.04	-.09	-.01
Religious	.16	.31	.26	.33
Sound tracks	-.06	.01	.10	.11
Energetic and rhythmic genres				
Electronic	.15	.15	.02	.12
Rap	-.07	.11	-.02	-.05
Soul	-.09	-.03	-.12	-.15

Note: Results are correlation coefficients between (1) target music preferences for each music genre and (2) the convergence between target self-ratings and stereotype-ratings for each music-genre stereotype. Categorization of genres based on Rentfrow and Gosling (2003). Correlations $\geq .15$ are in boldface type.

$N = 85$

As in Study 1, to evaluate the magnitude of the stereotype validity results we used a benchmark provided by previous research on interpersonal perception (e.g. Kenny, 1994). In this case the mean accuracy correlation of .15 obtained in previous zero-acquaintance research was used to evaluate the results from the present study. As shown in Table 2, a number of the validity correlations reached this threshold, lending support to our predictions. Many of the music stereotypes were valid in the sense that greater convergence between participants' self-ratings and a particular music stereotype was positively related to preference for that particular music genre. For presentational clarity, the music stereotypes are again divided into four categories representing each of the four music-preference dimensions identified in previous research (Rentfrow and Gosling, 2003).

The correlations in Table 2 suggest several conclusions. First, the music stereotypes vary in their degree of validity. Whereas the stereotypes associated with the religious, country, classical and jazz music genres displayed the highest validity, the stereotypes associated with pop, rap and soul were

not valid. Furthermore, the validity of the stereotypes varies by construct. Whereas the religious and jazz music stereotypes show some validity for all of the constructs, the classical music stereotype is most valid for values, and the heavy metal stereotype is most valid for personality traits.

Second, examination of the correlations across the music dimensions suggests that the stereotypes associated with the reflective and complex dimension are most valid, followed by the upbeat and conventional, and intense and rebellious dimensions. Surprisingly, very few of the stereotypes in the energetic and rhythmic dimension reached our validity benchmark.

SUMMARY

We evaluated the validity of each of the music stereotypes examined in Study 1 using a new sample of college students. Overall, the results indicated that many of the music stereotypes contain a kernel of truth. These findings suggest that, under some circumstances at least, music stereotypes could promote accuracy in music-based personality judgements. Moreover, the present work identifies the specific psychological characteristics about which music stereotypes provide the most accurate information, and therefore provide useful information about how music stereotypes could be used to form valid impressions of others.

General discussion

Previous research indicates that music is linked to a variety of psychological and social characteristics, that music is used to convey information about oneself to observers, and that observers can infer information about one's psychological character on the basis of such preferences. The research reported here examined one of the mechanisms that may guide these inferences: music-genre stereotypes. Two studies showed that individuals have robust and genre-specific stereotypes about the fans of different styles of music and that some of the music stereotypes contain a kernel of truth.

Although we believe these findings are compelling and important, it is worth considering how specific psychological characteristics come to be linked to different music fans in the first place. The fact that observers associate similar psychological and social characteristics to fans of different music genres, which are valid, suggests that these beliefs are pervasive and have some basis in reality. How do beliefs about the associations between psychological characteristics and music preferences develop? What are they based on?

The links that individuals perceive between music preferences and psychological qualities are very likely influenced by their own personal experiences with music, social interactions and the media. For example, several studies suggest that one reason why individuals, particularly adolescents, like the music they do is because it facilitates identity development and

the construction of social identities (DeNora, 2000; Tarrant, Hargreaves et al., 2001; Tarrant, North et al., 2001; Tarrant et al., 2002). According to DeNora (2000), individuals engage in a reflexive process of remembering and constructing their identities while listening to music, which can serve as a form of self-affirmation and discovery. That is, the themes and images evoked by preferred styles of music may resonate with individuals because they recognize these qualities in themselves. This is consistent with research revealing links between music preferences and personality. For example, extraverted individuals prefer styles of music that are upbeat, energetic and have lots of vocals, and athletic individuals enjoy styles of music that are intense and stimulating (Rentfrow and Gosling, 2003, 2006). Thus, people might develop lay theories about the links between music preferences and personal qualities based on their own personal experiences with music.

Exposure to popular media is another likely variable that influences which psychological characteristics are ascribed to fans of different styles of music. In many ways, music performers embody and reinforce the image associated with a particular style of music and, as such, communicate information about the psychological qualities of the fans of the music. Tarrant and colleagues (2002) have proposed that the 'meta-information' associated with a style of music may be one of the factors that young people find appealing. To the extent that individuals find a style of music appealing, they may align their personal self-image with the perceived characteristics associated with that music.

The precise mechanisms governing the associations that individuals perceive between music preferences and psychology have yet to be studied in detail. However, with the basic links between psychology, music preferences and impressions of personality now established, future research should focus on illuminating the processes underlying these links.

Limitations

The present research is subject to two limitations regarding the potential generalizability of the findings. One limitation is based on the fact that this research focused almost exclusively on young people, raising the question of whether the findings would generalize to older adults. We suspect the findings would generalize to other demographic groups but even if they do not, the findings are significant in providing insight into a population that ascribes considerable importance to music and commonly use it as a vehicle for self-expression (DeNora, 1999, 2000; Frith, 1981; LeBlanc et al., 1996; North and Hargreaves, 1999; Rentfrow and Gosling, 2003; Tarrant et al., 2002).

Perhaps a more serious limitation is that the studies were conducted in one geographic location. Clearly, culture and environment affect music preferences – individuals growing up in Texas (where the studies were conducted),

are exposed to very different styles of music from individuals living in other countries or even in different parts of the USA. Therefore, it is possible that the music-genre stereotypes studied here may not generalize to other geographic locations. However, evidence from our own research on the structure of music preferences and the links between music preferences and personality suggests that the music findings do tend to generalize from Texas to other locations (e.g. Australia, Canada and UK, and other regions in the USA: Rentfrow and Gosling, 2003). Nevertheless, future research in other countries will shed some light on the geographic parameters of the music-genre stereotypes.

Conclusions

We empirically examined the content and validity of 14 music-genre stereotypes. Guided by research on person-environment interactions, interpersonal perception and music psychology, we predicted and found that there are robust and clearly defined music-stereotypes associated with a range of music genres. Many of these stereotypes also possess grains of truth. In the most basic sense, these findings indicate that music-preference information communicates accurate information about the psychological characteristics of individuals. Thus, Shakespeare's Lorenzo appears to have been right – music preferences have much to say about individuals.

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NOTES

1. In zero-acquaintance studies, judges' ratings of targets are typically based on photographs or video recordings of the target individuals. In first encounter studies, participants usually interact briefly in a laboratory setting and then make ratings of each other's personalities. Long-term acquaintance studies involve participants who have known each other for several months or years.
2. The religious music genre covers a broad range of musical styles, from requiems to Christian metal. Thus, it is not entirely clear how participants conceptualized religious music. However, because this research was conducted in the Southern US, a centre for American Christian culture, it is likely that participants conceptualized religious as contemporary Christian, as this style of religious music is most common on the local radio stations.
3. Two samples of undergraduates made self-reported preference ratings for 14 music genres, then approximately 5 weeks later, listened to excerpts of songs representing each of the 14 music genres. Analyses of the convergent and

discriminant validity of the music ratings suggested that participants' preferences generalized across methods of assessment. For Samples 1 and 2 the convergent correlations across the 14 music genres averaged .49 and .53, and the means of the discriminant correlations across the 91 off-diagonal correlations were .09 and .08.

4. The Internal Review Board at the University where the research was conducted was reluctant to permit research where participants could provide potentially self-incriminating information. This prevented us from asking participants questions about their drug and alcohol consumption.

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